Proposed VESA and Industry Standards and Guidelines
for Computer Display Monitor Timing (DMT)

Version 1.0, Revision 12p, Draft 3

10/17/08

This document includes all current VESA Monitor Timing Standards & Guidelines. 'Guidelines' are subjected to the same VESA review and approval process as 'Standards', but are designated as 'Guidelines' to ease concerns on the part of some VESA members that VESA is 'endorsing' these timing standards. 'Guidelines' designations are typically used for lower resolutions or lower refresh rates that are in common industry use in lower-performance systems. For reference, this document also includes a number of industry standard timings (de-facto standards) for the computer industry.

This document is the primary means of distribution for all VESA Monitor Timing Standards and Guidelines. The standards and guidelines covered by this document are outlined on the following page.
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Intellectual Property

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Support
If you have a product that incorporates any of the standards in this document, you should ask the company that manufactured your product for assistance. If you are a display or controller manufacturer, VESA can assist you with any clarifications you may require. All comments or reported errors should be submitted in writing to VESA using one of the following methods:

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Revision History

Version 1.0 Revision 0.0  Sept. 12, 1994  Initial Release of the Standard
Version 1.0 Revision 0.1  Oct. 10, 1994  Fixed sync polarity of 1024x768 @ 60 & 70 Hz. Removed page numbers so new timings could be added.
Version 1.0 Revision 0.2  Nov. 4, 1994  Added notes & comments to clarify timing of interlaced modes.
Version 1.0 Revision 0.3  Feb. 16, 1995  Fixed miscellaneous typos
Version 1.0 Revision 0.4  May 4, 1995  Added EDID IDs for DDC, fixed 1024x768 interlace vertical times.
Version 1.0 Revision 0.5  June 14, 1995  Added BIOS mode #s, fixed miscellaneous typos
Version 1.0 Revision 0.6  April 10, 1996  Added new modes from VDMTPROP V1.0, R0.6 passed in March 1996 (85 Hz stds, 1152x864@75, 1280x960@60).
Version 1.0 Revision 0.6a  Sept. 8, 1996  Reformatted to Word 6 for electronic distribution
Version 1.0 Revision 0.7  Dec. 18, 1996  Added new modes from VDMTREV V1.0, R0.8 passed in Dec. 1996 (1280x1024@60, 1600x1200@60, 65, 70, 75, 85)
Version 1.0 Revision 0.8  July 22, 1998  Added 1792x1344, 1856X1392 & 1920x1440 all @60, 75 Hz. Corrected EDID code for 1600x1200@85 Hz.
Version 1.0 Revision 0.9  Aug. 21, 2003  Added 848x480@60 Hz, CVT 1280x768 timings, 1360x768@60 Hz, CVT 1400x1050 timings, & CVT 1920x1200 timings based on US & Japan workgroup requests.
Version 1.0 Revision 10  July 14, 2004  Added CVT 1.30MA (1440x900) & CVT 1.76MA (1680x1050) formats.
Version 1.0 Revision 11  May 1, 2007  Added several DMT CVT Reduced Blanking Timings, 1280x800@60/75/85 Hz timings, 2560x1600@60/75/85 Hz and DMT IDs.
Version 1.0 Revision 12  TBD  Added timing definitions for 1280x720 @ 60Hz, 1366x768 @ 60 Hz (Normal & Reduced Blanking), 1600x900 @ 60 Hz (Reduced Blanking), 1920x1080 @ 60 Hz and 2048x1152 @ 60 Hz (Reduced Blanking). Updated Tables 1-1 and 2-1.
1. DMT Standards and Guidelines Summary

Table 1-1 contains a summary of display monitor timings (DMT) that are defined in this standard. All DMTs listed in Table 1-1 are non-interlaced video timing modes - unless otherwise specified using the symbol “(Int.)”. The symbol “(Int.)” means that this DMT is interlaced. All DMTs listed in Table 1-1 include normal video blanking - unless otherwise specified using the symbol “(RB)”. The symbol “(RB)” means that this DMT includes Reduced Blanking. Complete timing specifications for these DMTs are defined in section 4.

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<th>Pixel Frequency</th>
<th>Standard Type</th>
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<td>72 Hz</td>
<td>37.9 kHz</td>
<td>31.500 MHz</td>
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<td>12/2/92</td>
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<td>3/4/03</td>
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<tr>
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<td>108.000 MHz</td>
<td>VESA Standard</td>
<td>VDMTREV</td>
<td>TBD</td>
</tr>
<tr>
<td>1600 x 1200</td>
<td>60 Hz</td>
<td>75.0 kHz</td>
<td>162.000 MHz</td>
<td>VESA Standard</td>
<td>VDMTREV</td>
<td>12/18/96</td>
</tr>
<tr>
<td></td>
<td>65 Hz</td>
<td>81.3 kHz</td>
<td>175.500 MHz</td>
<td>VESA Standard</td>
<td>VDMTREV</td>
<td>12/18/96</td>
</tr>
<tr>
<td></td>
<td>70 Hz</td>
<td>87.5 kHz</td>
<td>189.000 MHz</td>
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<td>VDMTREV</td>
<td>12/18/96</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>93.8 kHz</td>
<td>202.500 MHz</td>
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<td>VDMTREV</td>
<td>12/18/96</td>
</tr>
<tr>
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<td>85 Hz</td>
<td>106.3 kHz</td>
<td>229.500 MHz</td>
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<td>VDMTREV</td>
<td>12/18/96</td>
</tr>
<tr>
<td></td>
<td>120 Hz (RB)</td>
<td>152.4 kHz</td>
<td>268.250 MHz</td>
<td>CVT Red. Blanking</td>
<td>n/a</td>
<td>5/1/07</td>
</tr>
<tr>
<td>1680 x 1050</td>
<td>60 Hz(RB)</td>
<td>64.7 kHz</td>
<td>119.000 MHz</td>
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<td>CVT1.76MA-R</td>
<td>7/14/04</td>
</tr>
<tr>
<td></td>
<td>60 Hz</td>
<td>65.3 kHz</td>
<td>146.250 MHz</td>
<td>CVT</td>
<td>CVT1.76MA</td>
<td>7/14/04</td>
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<td>75 Hz</td>
<td>82.3 kHz</td>
<td>187.000 MHz</td>
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<td>CVT1.76MA</td>
<td>7/14/04</td>
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<tr>
<td></td>
<td>85 Hz</td>
<td>93.9 kHz</td>
<td>214.750 MHz</td>
<td>CVT</td>
<td>CVT1.76MA</td>
<td>7/14/04</td>
</tr>
<tr>
<td></td>
<td>120 Hz (RB)</td>
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<td>n/a</td>
<td>5/1/07</td>
</tr>
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<td>204.750 MHz</td>
<td>VESA Standard</td>
<td>VDMTREV</td>
<td>9/17/98</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>106.3 kHz</td>
<td>261.000 MHz</td>
<td>VESA Standard</td>
<td>VDMTREV</td>
<td>9/17/98</td>
</tr>
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<td></td>
<td>120 Hz (RB)</td>
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<td>5/1/07</td>
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<td>1856 x 1392</td>
<td>60 Hz</td>
<td>86.3 kHz</td>
<td>218.250 MHz</td>
<td>VESA Standard</td>
<td>VDMTREV</td>
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<td>75 Hz</td>
<td>112.5 kHz</td>
<td>288.000 MHz</td>
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<td>VDMTREV</td>
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<td>120 Hz (RB)</td>
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<td>356.500 MHz</td>
<td>CVT Red. Blanking</td>
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<td>5/1/07</td>
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<td>60 Hz</td>
<td>67.5 kHz</td>
<td>148.500 MHz</td>
<td>CEA Standard</td>
<td>CEA-861</td>
<td>TBD</td>
</tr>
<tr>
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<td>60 Hz(RB)</td>
<td>74.0 kHz</td>
<td>154.000 MHz</td>
<td>CVT Red. Blanking</td>
<td>AddDMT</td>
<td>3/4/03</td>
</tr>
<tr>
<td></td>
<td>60 Hz</td>
<td>74.6 kHz</td>
<td>193.250 MHz</td>
<td>CVT</td>
<td>AddDMT</td>
<td>3/4/03</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>94.0 kHz</td>
<td>245.250 MHz</td>
<td>CVT</td>
<td>AddDMT</td>
<td>3/4/03</td>
</tr>
<tr>
<td></td>
<td>85 Hz</td>
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<td>281.250 MHz</td>
<td>CVT</td>
<td>AddDMT</td>
<td>3/4/03</td>
</tr>
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<td>317.000 MHz</td>
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<td>5/1/07</td>
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<td>90.0 kHz</td>
<td>234.000 MHz</td>
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<td>VDMTREV</td>
<td>9/17/98</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>112.5 kHz</td>
<td>297.000 MHz</td>
<td>VESA Standard</td>
<td>VDMTREV</td>
<td>9/17/98</td>
</tr>
<tr>
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<td>120 Hz (RB)</td>
<td>182.9 kHz</td>
<td>380.500 MHz</td>
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<td>n/a</td>
<td>5/1/07</td>
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<td>Pixel Format</td>
<td>Refresh Rate</td>
<td>Horizontal Frequency</td>
<td>Pixel Frequency</td>
<td>Standard Type</td>
<td>Original Document</td>
<td>Date</td>
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<td>--------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>----------------------</td>
<td>-------------------</td>
<td>---------</td>
</tr>
<tr>
<td>2048 x 1152</td>
<td>60 Hz (RB)</td>
<td>70.992 kHz</td>
<td>156.750 MHz</td>
<td>CVT Red. Blanking</td>
<td>VDMTREV</td>
<td>TBD</td>
</tr>
<tr>
<td>2560 x 1600</td>
<td>60 Hz (RB)</td>
<td>98.7 kHz</td>
<td>268.500 MHz</td>
<td>CVT Red. Blanking</td>
<td>CVT4.10MA-R</td>
<td>5/1/07</td>
</tr>
<tr>
<td></td>
<td>60 Hz</td>
<td>99.5 kHz</td>
<td>348.500 MHz</td>
<td>CVT</td>
<td>CVT 4.10MA</td>
<td>5/1/07</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>125.4 kHz</td>
<td>443.250 MHz</td>
<td>CVT</td>
<td>CVT 4.10MA</td>
<td>5/1/07</td>
</tr>
<tr>
<td></td>
<td>85 Hz</td>
<td>142.9 kHz</td>
<td>505.250 MHz</td>
<td>CVT</td>
<td>CVT 4.10MA</td>
<td>5/1/07</td>
</tr>
<tr>
<td></td>
<td>120 Hz (RB)</td>
<td>203.2 kHz</td>
<td>552.750 MHz</td>
<td>CVT Red. Blanking</td>
<td>n/a</td>
<td>5/1/07</td>
</tr>
</tbody>
</table>
2. DMT Standard Codes & IDs Summary

Table 2-1 includes a list of Display Monitor Timing Identification (DMT ID) codes, Standard (STD) Timing 2 byte codes and Coordinated Video Timing (CVT) 3 byte codes. A display may use these codes to indicated support for the associated DMT. Refer to the latest version of VESA’s Enhanced Extended Display Identification (E-EDID) Standard for an explanation of how to derive the STD 2 byte codes and the CVT 3 byte codes. The letters “n/a” (not applicable) indicates that a STD 2 byte code and/or a CVT 3 byte code (DMT is not CVT compliant) cannot be created.

<table>
<thead>
<tr>
<th>Pixel Format</th>
<th>Refresh Rate</th>
<th>DMT ID Codes</th>
<th>STD 2 Byte Codes</th>
<th>CVT 3 Byte Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>640 x 350</td>
<td>85 Hz</td>
<td>01h</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>640 x 400</td>
<td>85 Hz</td>
<td>02h</td>
<td>(31, 19)h</td>
<td>n/a</td>
</tr>
<tr>
<td>720 x 400</td>
<td>85 Hz</td>
<td>03h</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>640 x 480</td>
<td>60 Hz</td>
<td>04h</td>
<td>(31, 40)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>72 Hz</td>
<td>05h</td>
<td>(31, 4C)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>06h</td>
<td>(31, 4F)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>85 Hz</td>
<td>07h</td>
<td>(31, 59)h</td>
<td>n/a</td>
</tr>
<tr>
<td>800 x 600</td>
<td>56 Hz</td>
<td>08h</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>60 Hz</td>
<td>09h</td>
<td>(45, 40)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>72 Hz</td>
<td>0Ah</td>
<td>(45, 4C)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>0Bh</td>
<td>(45, 4F)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>85 Hz</td>
<td>0Ch</td>
<td>(45, 59)h</td>
<td>n/a</td>
</tr>
<tr>
<td>848 x 480</td>
<td>60 Hz</td>
<td>0Eh</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>1024 x 768</td>
<td>43 Hz (Int.)</td>
<td>0Fh</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>60 Hz</td>
<td>10h</td>
<td>(61, 40)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>70 Hz</td>
<td>11h</td>
<td>(61, 4A)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>12h</td>
<td>(61, 4F)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>85 Hz</td>
<td>13h</td>
<td>(61, 59)h</td>
<td>n/a</td>
</tr>
<tr>
<td>120 Hz (RB)</td>
<td>14h</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>1152 x 864</td>
<td>75 Hz</td>
<td>15h</td>
<td>(71, 4F)h</td>
<td>n/a</td>
</tr>
<tr>
<td>1280 x 720</td>
<td>60 Hz</td>
<td>55h</td>
<td>(81C0)h</td>
<td>n/a</td>
</tr>
<tr>
<td>1280 x 768</td>
<td>60 Hz (RB)</td>
<td>16h</td>
<td>n/a</td>
<td>(7F, 1C, 21)h</td>
</tr>
<tr>
<td></td>
<td>60 Hz</td>
<td>17h</td>
<td>n/a</td>
<td>(7F, 1C, 28)h</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>18h</td>
<td>n/a</td>
<td>(7F, 1C, 44)h</td>
</tr>
<tr>
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<td>85 Hz</td>
<td>19h</td>
<td>n/a</td>
<td>(7F, 1C, 62)h</td>
</tr>
<tr>
<td></td>
<td>120 Hz (RB)</td>
<td>1Ah</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>1280 x 800</td>
<td>60 Hz (RB)</td>
<td>1Bh</td>
<td>n/a</td>
<td>(8F, 18, 21)h</td>
</tr>
<tr>
<td></td>
<td>60 Hz</td>
<td>1Ch</td>
<td>(81, 00)h</td>
<td>(8F, 18, 28)h</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>1Dh</td>
<td>(81, 0F)h</td>
<td>(8F, 18, 44)h</td>
</tr>
<tr>
<td></td>
<td>85 Hz</td>
<td>1Eh</td>
<td>(81, 19)h</td>
<td>(8F, 18, 62)h</td>
</tr>
<tr>
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<td>120 Hz (RB)</td>
<td>1Fh</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
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<td>20h</td>
<td>(81, 40)h</td>
<td>n/a</td>
</tr>
<tr>
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<td>85 Hz</td>
<td>21h</td>
<td>(81, 59)h</td>
<td>n/a</td>
</tr>
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<td>120 Hz (RB)</td>
<td>22h</td>
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<td>n/a</td>
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<td>Pixel Format</td>
<td>Refresh Rate</td>
<td>DMT ID Codes</td>
<td>STD 2 Byte Codes</td>
<td>CVT 3 Byte Codes</td>
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<td>--------------</td>
<td>--------------</td>
<td>------------------</td>
<td>------------------</td>
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</tr>
<tr>
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<td>75 Hz</td>
<td>24h</td>
<td>(81, 8F)h</td>
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</tr>
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<td>25h</td>
<td>(81, 99)h</td>
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</tr>
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<td>120 Hz (RB)</td>
<td>26h</td>
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<td>n/a</td>
</tr>
<tr>
<td>1360 x 768</td>
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<td>27h</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
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<td>120 Hz (RB)</td>
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<td>n/a</td>
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<td>51h</td>
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<td>56h</td>
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<td>60 Hz (RB)</td>
<td>29h</td>
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<td>(0C, 20, 21)h</td>
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<tr>
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<td>60 Hz</td>
<td>2Ah</td>
<td>(90, 40)h</td>
<td>(0C, 20, 28)h</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>2Bh</td>
<td>(90, 4F)h</td>
<td>(0C, 20, 44)h</td>
</tr>
<tr>
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<td>85 Hz</td>
<td>2Ch</td>
<td>(90, 59)h</td>
<td>(0C, 20, 62)h</td>
</tr>
<tr>
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<td>120 Hz (RB)</td>
<td>2Dh</td>
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<td>n/a</td>
</tr>
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<td>2Eh</td>
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<td>(C1, 18, 21)h</td>
</tr>
<tr>
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<td>60 Hz</td>
<td>2Fh</td>
<td>(95, 00)h</td>
<td>(C1, 18, 28)h</td>
</tr>
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<td>30h</td>
<td>(95, 0F)h</td>
<td>(C1, 18, 44)h</td>
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<td>31h</td>
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<td>(A9, 40)h</td>
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</tr>
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<td>34h</td>
<td>(A9, 45)h</td>
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<td>(A9, 59)h</td>
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<td>120 Hz (RB)</td>
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<td>3Ah</td>
<td>(B3, 00)h</td>
<td>(0C, 28, 28)h</td>
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<td>3Bh</td>
<td>(B3, 0F)h</td>
<td>(0C, 28, 44)h</td>
</tr>
<tr>
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<td>85 Hz</td>
<td>3Ch</td>
<td>(B3, 19)h</td>
<td>(0C, 28, 68)h</td>
</tr>
<tr>
<td></td>
<td>120 Hz (RB)</td>
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<td>n/a</td>
</tr>
<tr>
<td>1680 x 1050</td>
<td>60 Hz (RB)</td>
<td>39h</td>
<td>n/a</td>
<td>(0C, 28, 21)h</td>
</tr>
<tr>
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<td>60 Hz</td>
<td>3Ah</td>
<td>(B3, 00)h</td>
<td>(0C, 28, 28)h</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>3Bh</td>
<td>(B3, 0F)h</td>
<td>(0C, 28, 44)h</td>
</tr>
<tr>
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<td>85 Hz</td>
<td>3Ch</td>
<td>(B3, 19)h</td>
<td>(0C, 28, 68)h</td>
</tr>
<tr>
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<td>120 Hz (RB)</td>
<td>3Dh</td>
<td>n/a</td>
<td>n/a</td>
</tr>
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<td>1792 x 1344</td>
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<td>3Eh</td>
<td>(C1, 40)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>3Fh</td>
<td>(C1, 4F)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>120 Hz (RB)</td>
<td>40h</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>1856 x 1392</td>
<td>60 Hz</td>
<td>41h</td>
<td>(C9, 40)h</td>
<td>n/a</td>
</tr>
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<td></td>
<td>75 Hz</td>
<td>42h</td>
<td>(C9, 4F)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>120 Hz (RB)</td>
<td>43h</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>1920 x 1080</td>
<td>60 Hz</td>
<td>52h</td>
<td>(D1, C0)h</td>
<td>n/a</td>
</tr>
<tr>
<td>1920 x 1200</td>
<td>60 Hz (RB)</td>
<td>44h</td>
<td>n/a</td>
<td>(57, 28, 21)h</td>
</tr>
<tr>
<td></td>
<td>60 Hz</td>
<td>45h</td>
<td>(D1, 00)h</td>
<td>(57, 28, 28)h</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>46h</td>
<td>(D1, 0F)h</td>
<td>(57, 28, 44)h</td>
</tr>
<tr>
<td></td>
<td>85 Hz</td>
<td>47h</td>
<td>(D1, 19)h</td>
<td>(57, 28, 62)h</td>
</tr>
<tr>
<td></td>
<td>120 Hz (RB)</td>
<td>48h</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Pixel Format</td>
<td>Refresh Rate</td>
<td>DMT ID Codes</td>
<td>STD 2 Byte Codes</td>
<td>CVT 3 Byte Codes</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
<td>--------------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>1920 x 1440</td>
<td>60 Hz</td>
<td>49h</td>
<td>(D1, 40)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>4Ah</td>
<td>(D1, 4F)h</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>120 Hz (RB)</td>
<td>4Bh</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>2048 x 1152</td>
<td>60 Hz (RB)</td>
<td>54h</td>
<td>(E1, C0)h</td>
<td>n/a</td>
</tr>
<tr>
<td>2560 x 1600</td>
<td>60 Hz (RB)</td>
<td>4Ch</td>
<td>n/a</td>
<td>(1F, 38, 21)h</td>
</tr>
<tr>
<td></td>
<td>60 Hz</td>
<td>4Dh</td>
<td>n/a</td>
<td>(1F, 38, 28)h</td>
</tr>
<tr>
<td></td>
<td>75 Hz</td>
<td>4Eh</td>
<td>n/a</td>
<td>(1F, 38, 44)h</td>
</tr>
<tr>
<td></td>
<td>85 Hz</td>
<td>4Fh</td>
<td>n/a</td>
<td>(1F, 38, 62)h</td>
</tr>
</tbody>
</table>

Notes for Table 2-1:

1. The CVT 3 Byte Codes listed in Table 2-1 are unique and are assigned to one video timing mode that was generated using the CVT Formulas. A source may decode the CVT 3 Byte Code and determine the number of vertical lines, the aspect ratio, the number of horizontal pixels (calculated), the preferred vertical refresh rate, a single supported refresh rate and the blanking style.

   For example, a source can decode the CVT 3 Byte Code, (7F, 1C, 44)h, with the following results: the number of vertical lines is 768, the aspect ratio is 15 : 9 AR, the number of horizontal pixels (calculated) is 1280, the preferred vertical refresh rate is 75 Hz, the supported vertical refresh rate is 75 Hz and the blanking style is standard (CRT style). Refer to VESA’s E-EDID Standard (Release A, Revision 2) for an explanation on how to derive a CVT 3 Byte Code from the video timing mode parameters.

2. A display (receiver) manufacturer may use the CVT 3 Byte Code to indicate support for a fixed pixel format and one or more vertical refresh rates.

   For example, a display may contain a CVT 3 Byte Code which indicates support for 1280 x 768 and support for 50 Hz, 60 Hz, 75 Hz & 85 Hz vertical refresh rates with 60 Hz being the preferred vertical refresh rate. In this case the CVT 3 Byte code would be (7F, 1C, 3E)h. When the source decodes the CVT 3 Byte code, (7F, 1C, 3E)h, it knows that the display supports 1280 x 768, along with 50 Hz, 60 Hz, 75 Hz & 85 Hz vertical refresh rates with 60 Hz being the preferred vertical refresh rate. The source should output 1280 x 768 at 60 Hz (standard CRT style blanking). The source also knows that the 60 Hz (reduced blanking) is not supported in the display. Refer to VESA E-EDID Standard (Release A, Revision 2) for an explanation on how to derive a CVT 3 Byte Code from the video timing mode parameters.
3. DMT Video Timing Parameter Definitions:
Section 3 includes a list of drawings that define the video timing parameters for all DMTs defined in this standard. There are four drawings based on the possible combinations of positive and negative horizontal and vertical syncs.

3.1 DMT Video Timing Parameter Definitions - Positive H & Positive V Syncs:

Definition of Terms

3.2 DMT Video Timing Parameter Definitions - Positive H & Negative V Syncs:

Definition of Terms

3.3 DMT Video Timing Parameter Definitions - Negative H & Negative V Syncs:

Definition of Terms
3.4 DMT Video Timing Parameter Definitions - Negative H & Positive V Syncs:

Definition of Terms

<table>
<thead>
<tr>
<th></th>
<th>&quot;Active&quot; Video</th>
<th>Blanking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSync</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VSync</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.5 DMT Video Timing Parameter Definitions - Total Frame Timing:

Vertical Retrace Interval

Note:
All syncs shown as active high. For active low invert the waveform as shown below

Active High  ⇒  Active Low
4. DMT Timing Specifications

Section 4 includes a list of detailed timing parameters for all DMTs defined in this standard.
Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>640 x 350 @ 85Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>640;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>350;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>37.861; kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>85.080; Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>31.500; MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>26.413; (usec)</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>20.317; (usec)</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>20.317; (usec)</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>6.095; (usec)</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>21.333; (usec)</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>1.016; (usec)</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>2.032; (usec)</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>3.048; (usec)</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>11.754; (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>9.244; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>9.244; (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>2.509; (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>10.090; (msec)</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec)</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.845; (msec)</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.079; (msec)</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>1.585; (msec)</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec)</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.2.
Resolved: 3/1/96
Resolution: 640 x 400 at 85 Hz (non-interlaced)
EDID ID: DMT ID: 02h; STD 2 Byte Code: (31, 19)h; CVT 3 Byte Code: n/a
Method: *** NOT CVT COMPLIANT ***

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>640 x 400 @ 85Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>640;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>400;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>37.861; kHz = 26.4 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>85.080; Hz = 11.8 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>31.500; MHz = 31.7 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; Pixels = 254.0 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>26.413; (usec) = 104 chars = 832 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>20.317; (usec) = 80 chars = 640 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>6.095; (usec) = 24 chars = 192 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>21.333; (usec) = 84 chars = 672 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>1.016; (usec) = 4 chars = 32 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>2.032; (usec) = 8 chars = 64 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>3.048; (usec) = 12 chars = 96 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>11.754; (msec) = 445 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>10.565; (msec) = 400 lines = 4.88</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>10.565; (msec) = 400 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>1.189; (msec) = 45 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>10.591; (msec) = 401 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.026; (msec) = 1 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.079; (msec) = 3 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>1.083; (msec) = 41 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.4.
**VESAT Monitor Timing Standard**

**Adopted:** 3/1/96  
**Resolution:** 720 x 400 at 85 Hz (non-interlaced)  
**EDID ID:** DMT ID: 03h; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a  
**Method:** ***NOT CVT COMPLIANT***

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>720 x 400 @ 85Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>720;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>400;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>37.927;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>85.039;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>35.500;</td>
</tr>
<tr>
<td>Character Width</td>
<td>9;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>26.366;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>20.282;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>20.282;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>6.085;</td>
</tr>
<tr>
<td>Hor Synch Start</td>
<td>21.296;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>1.014;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>2.028;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>3.042;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>11.759;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>10.546;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>10.546;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>1.213;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>10.573;</td>
</tr>
<tr>
<td>Ver Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.026;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.079;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>1.107;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.4.
### VESA MONITOR TIMING STANDARD

**For Reference Only - Not a VESA Standard**

**Adopted:** n/a

**Resolution:** 640 x 480 at 60 Hz (non-interlaced)

**EDID ID:** DMT ID: 04h; STD 2 Byte Code: (31, 40)h; CVT 3 Byte Code: n/a

**BIOS Modes:** 11h, 12h, 101h, 110h, 111h, & 112h (1, 4, 8, 15, 16, & 24 bpp)

**Method:** ***NOT CVT COMPLIANT***

#### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>640;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>480;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>31.469;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.940;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>25.175;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>31.778;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>25.422;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>25.740;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>5.720;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>26.058;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.318;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.318;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>3.813;</td>
</tr>
<tr>
<td>H Back Porch</td>
<td>1.589;</td>
</tr>
<tr>
<td>H Left Border</td>
<td>0.318;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.683;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>15.253;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>15.507;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.922;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>15.571;</td>
</tr>
<tr>
<td>V Bottom Border</td>
<td>0.254;</td>
</tr>
<tr>
<td>V Front Porch</td>
<td>0.064;</td>
</tr>
<tr>
<td>V Sync Time</td>
<td>0.064;</td>
</tr>
<tr>
<td>V Back Porch</td>
<td>0.794;</td>
</tr>
<tr>
<td>V Top Border</td>
<td>0.254;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.3.
Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>640 x 480 @ 72Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>640;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>480;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>37.861;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>72.809;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>31.500;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>26.413;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>20.317;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>20.571;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>5.587;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>21.079;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>13.735;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>12.678;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>12.889;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.634;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>12.916;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>0.528;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>0.211;</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.3.
**VESAT MONTOR TIMING STANDARD**

Adopted: 10/4/93  
Resolution: 640 x 480 at 75 Hz (non-interlaced)  
EDID ID: DMT ID: 06h; STD 2 Byte Code: (31, 4F)h; CVT 3 Byte Code: n/a  
BIOS Modes: 11h, 12h, 101h, 110h, 111h, & 112h (1, 4, 8, 15, 16, & 24 bpp)  
Method: *** NOT CVT COMPLIANT ***

**Detailed Timing Parameters**

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>640 x 480 @ 75Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>640; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>480; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>37.500; kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>75.000; Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>31.500; MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; H Phase = 6.2 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE; HBlank = 23.8% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE; VBlank = 4.0% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>26.667; (usec) 105 chars = 840 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>20.317; (usec) 80 chars = 640 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>20.317; (usec) 80 chars = 640 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>6.349; (usec) 25 chars = 200 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>20.825; (usec) 82 chars = 656 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; (usec) 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.508; (usec) 2 chars = 16 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>2.032; (usec) 8 chars = 64 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>3.810; (usec) 15 chars = 120 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; (usec) 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>13.333; (msec) 500 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>12.800; (msec) 480 lines = 5.13</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>12.800; (msec) 480 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.533; (msec) 20 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>12.827; (msec) 481 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec) 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.027; (msec) 1 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.080; (msec) 3 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.427; (msec) 16 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec) 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.3.
### VESA MONITOR TIMING STANDARD

**Adopted:** 3/1/96  
**Resolution:** 640 x 480 at 85 Hz (non-interlaced)  
**EDID ID:** DMT ID: 07h; STD 2 Byte Code: (31, 59)h; CVT 3 Byte Code: n/a  
**Method:** *** NOT CVT COMPLIANT ***

---

#### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>640 x 480 @ 85Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>640; // Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>480; // Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>43.269; // kHz = 23.1 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>85.008; // Hz = 11.8 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>36.000; // MHz = 27.8 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; // Pixels = 222.2 nsec</td>
</tr>
</tbody>
</table>

#### Definition of Terms: Refer to section 3.3.
**VESAT M O NITOR T IMING S TANDARD**

Adopted: 8/7/90 (VESA #900601)
Resolution: 800 x 600 at 56 Hz (non-interlaced)
EDID ID: DMT ID: 08h; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a
BIOS Modes: 102h, 103h, 113h, 114h, & 115h (4, 8, 15, 16, & 24 bpp)
Method: *** NOT CVT COMPLIANT ***

**Detailed Timing Parameters**

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>800 x 600 @ 56Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>800;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>600;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>35.156;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>56.250;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>36.000;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>28.444;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>22.222;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>22.222;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>6.222;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>22.889;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>17.778;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>17.067;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>17.067;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.711;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>17.095;</td>
</tr>
<tr>
<td>Ver Blank Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.667;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>2.000;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>3.556;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Blank Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.028;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.057;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>0.626;</td>
</tr>
<tr>
<td>Hor Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.1.
**VESA MONITOR TIMING STANDARD**

Adopted: 8/7/90 (VESA #900602)
Resolution: 800 x 600 at 60 Hz (non-interlaced)
EDID ID: DMT ID: 09h; STD 2 Byte Code: (45, 40)h; CVT 3 Byte Code: n/a
BIOS Modes: 102h, 103h, 113h, 114h, & 115h (4, 8, 15, 16, & 24 bpp)
Method: *** NOT CVT COMPLIANT ***

**Detailed Timing Parameters**

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>800 x 600 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>800; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>600; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>37.879; kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.317; Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>40.000; MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; H Phase = 2.3 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; HBlank = 24.2% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; VBlank = 4.5% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>26.400; (usec)</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>20.000; (usec)</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>20.000; (usec)</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>6.400; (usec)</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>21.000; (usec)</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>1.000; (usec)</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>3.200; (usec)</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>2.200; (usec)</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.579; (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>15.840; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>15.840; (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.739; (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>15.866; (msec)</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec)</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.026; (msec)</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.106; (msec)</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.607; (msec)</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec)</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.1.
Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>= 800 x 600 @ 72Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>= 800;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>= 600;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>= 48.077;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>= 72.188;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>= 50,000;</td>
</tr>
<tr>
<td>Character Width</td>
<td>= 8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>= NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>= POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>= POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>= 20.800;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>= 16.000;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>= 16.000;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>= 4.800;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>= 17.120;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>= 13.853;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>= 12.480;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>= 12.480;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>= 1.373;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>= 13.250;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>= 0.770;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>= 0.125;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>= 0.478;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>= 0.000;</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.1.
**VES A MONITOR TIMING STANDARD**

Adopted: 10/4/93  
Resolution: 800 x 600 at 75 Hz (non-interlaced)  
EDID ID: DMT ID: 0Bh; STD 2 Byte Code: (45, 4F)h; CVT 3 Byte Code: n/a  
BIOS Modes: 102h, 103h, 113h, 114h, & 115h (4, 8, 15, 16, & 24 bpp)  
Method: **NOT CVT COMPLIANT**

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>800 x 600 @ 75Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>800; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>600; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>46.875; kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>75.000; Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>49.500; MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; H Phase = 6.8 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; HBlank = 24.2% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; VBlank = 4.0% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>21.333; (usec) 132 chars = 1056 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>16.162; (usec) 100 chars = 800 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>16.162; (usec) 100 chars = 800 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>5.172; (usec) 32 chars = 256 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>16.485; (usec) 102 chars = 816 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; (usec) 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.323; (usec) 2 chars = 16 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.616; (usec) 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>3.232; (usec) 20 chars = 160 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; (usec) 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>13.333; (msec) 625 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>12.800; (msec) 600 lines = 4.2</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>12.800; (msec) 600 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.533; (msec) 25 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>12.821; (msec) 601 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec) 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.021; (msec) 1 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.064; (msec) 3 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.448; (msec) 21 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec) 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.1.
Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>800 x 600 @ 85Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>800;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>600;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>53.674;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>85.061;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>56.250;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>18.631;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>14.222;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>14.222;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>4.409;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>14.791;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>11.179;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>11.179;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>11.179;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.578;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>11.197;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>0.000;</td>
</tr>
<tr>
<td>V Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>V Front Porch</td>
<td>0.503;</td>
</tr>
<tr>
<td>V Sync Time</td>
<td>0.056;</td>
</tr>
<tr>
<td>V Back Porch</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.1.
### VESA MONITOR TIMING STANDARD

**Adopted:** 5/1/07  
**Resolution:** 800 x 600 at 120 Hz (non-interlaced)  
**REDUCED BLANKING**  
**EDID ID:** DMT ID: 0Dh; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a  
**Method:** Generated using CVT (Reduced Blanking) Formula

#### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>800</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>600</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>76.302 kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>119.972 Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>73.250 MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8 Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>13.106 usec</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>10.922 usec</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>10.922 usec</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>2.184 usec</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>11.577 usec</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000 usec</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.655 usec</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.437 usec</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>1.092 usec</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000 usec</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>8.335 msec</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>7.863 msec</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>7.863 msec</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.472 msec</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>7.903 msec</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000 msec</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.039 msec</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.052 msec</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.380 msec</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000 msec</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.2.
Adopted: 8/21/03
Resolution: 848 x 480 at 60 Hz (non-interlaced)
EDID ID: DMT ID: 0Eh; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a
Method: *** NOT CVT COMPLIANT ***

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>848 x 480 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>848;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>480;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>31.020; kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.000; Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>33.750; MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>32.237; (usec)</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>25.126; (usec)</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>25.126; (usec)</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>7.111; (usec)</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>25.600; (usec)</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.474; (usec)</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>3.319; (usec)</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>3.319; (usec)</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.667; (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>15.474; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>15.474; (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>1.193; (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>15.667; (msec)</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec)</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.193; (msec)</td>
</tr>
<tr>
<td>// Ver Sync Time</td>
<td>0.258; (msec)</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.741; (msec)</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec)</td>
</tr>
</tbody>
</table>

Hor Blank = 22.1% of HTotal
Ver Blank = 7.2% of VTotal

Definition of Terms: Refer to section 3.1.
**VESA MONITOR TIMING STANDARD**

Adopted: n/a  **For Reference Only - Not a VESA Standard**
Resolution: 1024 x 768 at 43 Hz (interlaced)
EDID ID: DMT ID: 0Fh; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a
BIOS Modes: 104h, 105h, 116h, 117h, & 118h (4, 8, 15, 16, & 24 bpp)
Method: *** NOT CVT COMPLIANT ***

**Detailed Timing Parameters**

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1024 x 768 @ 43Hz (Interlaced);</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1024;  // Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768;   // Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>35.522;  // kHz = 28.2 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>86.957;  // Hz = 11.5 msec / field</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>44.900;  // MHz = 22.3 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;  // Pixels = 178.2 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>INTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;  // HBlank = 19.0% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;  // VBlank = 5.9% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>28.151;  // (usec) = 158 chars = 1264 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>22.806;  // (usec) = 128 chars = 1024 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>22.806;  // (usec) = 128 chars = 1024 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>5.345;   // (usec) = 30 chars = 240 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>22.984;  // (usec) = 129 chars = 1032 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000;  // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.178;   // (usec) = 1 chars = 8 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>3.920;   // (usec) = 22 chars = 176 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>1.247;   // (usec) = 7 chars = 56 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000;  // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>23.000;  // (msec) = 817 lines (Per Frame)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>21.620;  // (msec) = 768 lines (Per Frame)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>21.620;  // (msec) = 768 lines (Per Frame)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.676;   // (msec) = 24 lines (Per Field)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>21.620;  // (msec) = 768 lines (Per Frame)</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;  // (msec) = 0 lines (Odd Field)</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.000;   // (msec) = 0 lines (Odd Field)</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.113;   // (msec) = 4 lines (Both Fields)</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.563;   // (msec) = 20 lines (Odd Field)</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;   // (msec) = 0 lines (Odd Field)</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.1.
**Detailed Timing Parameters**

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1024 x 768 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1024;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>48.363;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.004;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>65.000;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>20.677;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>15.754;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>15.754;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>4.923;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>16.123;</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.369;</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>2.092;</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>2.462;</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.666;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>15.880;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>15.880;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.786;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>15.942;</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.062;</td>
</tr>
<tr>
<td>// Ver Sync Time</td>
<td>0.124;</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.600;</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.3.
**VESA MONITOR TIMING STANDARD**

Adopted: 8/9/91 (VESA #910801-2)
Resolution: 1024 x 768 at 70 Hz (non-interlaced)
EDID ID: DMT ID: 11h; STD 2 Byte Code: (61, 4A)h; CVT 3 Byte Code: n/a
BIOS Modes: 104h, 105h, 116h, 117h, & 118h (4, 8, 15, 16, & 24 bpp)
Method: *** NOT CVT COMPLIANT ***

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1024 x 768 @ 70Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1024;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>56.476;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>70.069;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>75.000;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>17.707;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>13.653;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>13.653;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>4.053;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>13.973;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>14.272;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>13.599;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>13.599;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.673;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>13.652;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.106;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.3.
**VESAT MONITOR TIMING STANDARD**

Adopted: 10/4/93
Resolution: 1024 x 768 at 75 Hz (non-interlaced)
EDID ID: DMT ID: 12h; STD 2 Byte Code: (61, 4F)h; CVT 3 Byte Code: n/a
BIOS Modes: 104h, 105h, 116h, 117h, & 118h (4, 8, 15, 16, & 24 bpp)
Method: *** NOT CVT COMPLIANT ***

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1024;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>60.023;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>75.029;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>78.750;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>16.660;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>13.003;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>13.003;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>3.657;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>13.206;</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.203;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.219;</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>2.235;</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>13.328;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>12.795;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>12.795;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.533;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>12.812;</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.017;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.050;</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.466;</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.1.
### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1024</td>
<td>1024 x 768 @ 85Hz</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768</td>
<td></td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>68.677</td>
<td>kHz = 14.6 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>84.997</td>
<td>Hz = 11.8 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>94.500</td>
<td>MHz = 10.6 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8</td>
<td>Pixels = 84.7 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
<td>H Phase = 5.8 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
<td>HBlank = 25.6% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
<td>VBlank = 5.0% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>14.561</td>
<td>(usec) = 172 chars = 1376 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>10.836</td>
<td>(usec) = 128 chars = 1024 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>10.836</td>
<td>(usec) = 128 chars = 1024 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>3.725</td>
<td>(usec) = 44 chars = 352 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>11.344</td>
<td>(usec) = 134 chars = 1072 Pixels</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000</td>
<td>(usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.508</td>
<td>(usec) = 6 chars = 48 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.016</td>
<td>(usec) = 12 chars = 96 Pixels</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>2.201</td>
<td>(usec) = 26 chars = 208 Pixels</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000</td>
<td>(usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>11.765</td>
<td>(msec) = 808 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>11.183</td>
<td>(msec) = 768 lines = 3.07</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>11.183</td>
<td>(msec) = 768 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.582</td>
<td>(msec) = 40 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>11.197</td>
<td>(msec) = 769 lines</td>
</tr>
<tr>
<td>Ver Right Border</td>
<td>0.000</td>
<td>(msec) = 0 lines</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.015</td>
<td>(msec) = 1 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.044</td>
<td>(msec) = 3 lines</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.524</td>
<td>(msec) = 36 lines</td>
</tr>
<tr>
<td>V Top Border</td>
<td>0.000</td>
<td>(msec) = 0 lines</td>
</tr>
</tbody>
</table>

### Definition of Terms: Refer to section 3.1.
VESA MONITOR TIMING STANDARD

Adopted: 5/1/07
Resolution: 1024 x 768 at 120 Hz (non-interlaced) REDUCED BLANKING
EDID ID: DMT ID: 14h; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a
Method: Generated using CVT (Reduced Blanking) Formula

Detailed Timing Parameters

| Timing Name | Hor Pixels | Ver Pixels | Hor Frequency | Ver Frequency | Pixel Clock | Character Width | Scan Type | Hor Sync Polarity | Ver Sync Polarity | Hor Total Time | Hor Addr Time | Hor Blank Start | Hor Blank Time | Hor Sync Start | Hor Right Border | Hor Front Porch | Hor Sync Time | Hor Back Porch | Hor Left Border | Ver Total Time | Ver Addr Time | Ver Blank Start | Ver Blank Time | Ver Sync Start | Ver Bottom Border | Ver Front Porch | Ver Sync Time | Ver Back Porch | Ver Top Border |
|-------------|------------|------------|---------------|---------------|-------------|----------------|-----------|----------------|----------------|----------------|---------------|----------------|---------------|---------------|----------------|----------------|--------------|----------------|----------------|---------------|----------------|----------------|---------------|----------------|----------------|
| 1024 x 768 @ 120Hz CVT (Reduced Blanking); | 1024 | 768 | 97.551; kHz = 10.3 usec / line | 119.989; Hz = 8.3 msec / frame | 115.500; MHZ = 8.7 nsec ± 0.5% | 8 | NONINTERLACED; | POSITIVE; | HBlank = 13.5% of HTotal | NEGATIVE; | VBlank = 5.5% of VTotal | 10.251; (usec) = 148 chars = 1184 Pixels | 8.866; (usec) = 128 chars = 1024 Pixels | 8.866; (usec) = 128 chars = 1024 Pixels | 1.385; (usec) = 20 chars = 160 Pixels | 9.281; (usec) = 134 chars = 1072 Pixels | 0.000; (usec) = 0 chars = 0 Pixels | 0.416; (usec) = 6 chars = 48 Pixels | 0.277; (usec) = 4 chars = 32 Pixels | 0.693; (usec) = 10 chars = 80 Pixels | 0.000; (usec) = 0 chars = 0 Pixels | 8.334; (msec) = 813 lines HT – (1.06xHA) | 7.873; (msec) = 768 lines = 0.85 | 7.873; (msec) = 768 lines | 0.461; (msec) = 45 lines | 7.904; (msec) = 771 lines | 0.000; (msec) = 0 lines | 0.031; (msec) = 3 lines | 0.041; (msec) = 4 lines | 0.390; (msec) = 38 lines | 0.000; (msec) = 0 lines |

Definition of Terms: Refer to section 3.2.
**VESAT MONITOR TIMING STANDARD**

Adopted: 3/1/96  
Resolution: 1152 x 864 at 75 Hz (non-interlaced)  
EDID ID: DMT ID: 15h; STD 2 Byte Code: (71, 4F)h; CVT 3 Byte Code: n/a  
Method: *** NOT CVT COMPLIANT ***

**Detailed Timing Parameters**

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels = 1152;</td>
<td>864;</td>
</tr>
<tr>
<td>Ver Pixels = 864;</td>
<td>1152;</td>
</tr>
<tr>
<td>Hor Frequency = 67.500;</td>
<td>kHz = 14.8 usec / line</td>
</tr>
<tr>
<td>Ver Frequency = 75.000;</td>
<td>Hz = 13.3 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock = 108.000;</td>
<td>MHz = 9.3 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width = 8;</td>
<td>Pixels = 74.1 nsec</td>
</tr>
<tr>
<td>Scan Type = NONINTERLACED;</td>
<td>H Phase = 6.0 %</td>
</tr>
<tr>
<td>Hor Sync Polarity = POSITIVE;</td>
<td>HBlank = 28.0% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity = POSITIVE;</td>
<td>VBlank = 4.0% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time = 14.815;</td>
<td>(usec) = 200 chars = 1600 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time = 10.667;</td>
<td>(usec) = 144 chars = 1152 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start = 10.667;</td>
<td>(usec) = 144 chars = 1152 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time = 4.148;</td>
<td>(usec) = 56 chars = 448 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start = 11.259;</td>
<td>(usec) = 152 chars = 1216 Pixels</td>
</tr>
<tr>
<td>Ver Total Time = 13.333;</td>
<td>(msec) = 900 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time = 12.800;</td>
<td>(msec) = 864 lines = 3.51</td>
</tr>
<tr>
<td>Ver Blank Start = 12.800;</td>
<td>(msec) = 864 lines</td>
</tr>
<tr>
<td>Ver Blank Time = 0.533;</td>
<td>(msec) = 36 lines</td>
</tr>
<tr>
<td>Ver Sync Start = 12.815;</td>
<td>(msec) = 865 lines</td>
</tr>
<tr>
<td>V Bottom Border = 0.000;</td>
<td>(msec) = 0 lines</td>
</tr>
<tr>
<td>V Front Porch = 0.015;</td>
<td>(msec) = 1 lines</td>
</tr>
<tr>
<td>V Sync Time = 0.044;</td>
<td>(msec) = 3 lines</td>
</tr>
<tr>
<td>V Back Porch = 0.474;</td>
<td>(msec) = 32 lines</td>
</tr>
<tr>
<td>V Top Border = 0.000;</td>
<td>(msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.1.
**VESA MONITOR TIMING STANDARD**

**Proposed:** 10/16/08  
**Adopted:** TBD  
**Resolution:** 1280 x 720 at 60 Hz (non-interlaced)  
**EDID ID:** DMT ID: 55h; STD 2 Byte Code: 81h, C0h; CVT 3 Byte Code: n/a  
**Method:** *** NOT CVT COMPLIANT ***  
Per CEA-861 --- 720p (Code 4) Timing Definitions

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1280 x 720 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1280;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>720;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>45.000;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.000;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>74.250;</td>
</tr>
<tr>
<td>Character Width</td>
<td>1;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>22.222;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>17.239;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>17.239;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>4.983;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>18.721;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>1.481;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.539;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>2.963;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.667;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.000;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.000;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.667;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.111;</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.111;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.111;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.444;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to Section 3.1
Resolution: 1280 x 768 at 60 Hz (non-interlaced) REDUCED BLANKING
EDID ID: DMT ID: 16h; STD 2 Byte Code: n/a; CVT 3 Byte Code: (7F, 1C, 21)h
Method: CVT Reduced Blanking

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1280 x 768 CVT (Reduced Blanking)</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>47.396 kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.995 Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>68.250 MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8 Pixels</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>21.099 (usec)</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>18.755 (usec)</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>2.344 (usec)</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>19.458 (usec)</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000 (usec)</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.703 (usec)</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.469 (usec)</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>1.172 (usec)</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000 (usec)</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.668 (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.204 (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.204 (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.464 (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.267 (msec)</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000 (msec)</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.063 (msec)</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.148 (msec)</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.253 (msec)</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000 (msec)</td>
</tr>
</tbody>
</table>

### Definition of Terms: Refer to section 3.2.
**Detailed Timing Parameters**

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1280 x 768 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1280;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>47.776;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.870;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>79.500;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>20.931;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>16.101;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>16.101;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>4.830;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>16.906;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.805;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.610;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>2.415;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.703;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.075;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.075;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.628;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.138;</td>
</tr>
<tr>
<td>Ver Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.063;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.147;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.419;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Blank</td>
<td>20 lines</td>
</tr>
<tr>
<td>Ver Total</td>
<td>798 lines</td>
</tr>
<tr>
<td>Hor Total</td>
<td>1664 Pixels</td>
</tr>
<tr>
<td>Hor Addr</td>
<td>1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank</td>
<td>384 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>1344 Pixels</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0 Pixels</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>64 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>128 Pixels</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>192 Pixels</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0 Pixels</td>
</tr>
<tr>
<td>Ver Total</td>
<td>HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr</td>
<td>768 lines</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>768 lines</td>
</tr>
<tr>
<td>Ver Blank</td>
<td>30 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>771 lines</td>
</tr>
<tr>
<td>Ver Right</td>
<td>0 lines</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>3 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>7 lines</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>20 lines</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.4.
### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>= 1280 x 768 @ 75Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>= 1280; // Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>= 768; // Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>= 60.289; // KHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>= 74.893; // Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>= 102.250; // MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>= 8; // Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>= NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>= NEGATIVE; // HBlank = 24.5% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>= POSITIVE; // VBlank = 4.6% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>= 16.587; // (usec) = 212 chars = 1696 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>= 12.518; // (usec) = 160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>= 12.518; // (usec) = 160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>= 4.068; // (usec) = 52 chars = 416 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>= 13.301; // (usec) = 170 chars = 1360 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>= 0.000; // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>= 0.782; // (usec) = 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>= 1.252; // (usec) = 16 chars = 128 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>= 2.034; // (usec) = 26 chars = 208 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>= 0.000; // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>= 13.352; // (msec) = 805 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>= 12.739; // (msec) = 768 lines = 3.32</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>= 12.739; // (msec) = 768 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>= 0.614; // (msec) = 37 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>= 12.788; // (msec) = 771 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>= 0.000; // (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>= 0.050; // (msec) = 3 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>= 0.116; // (msec) = 7 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>= 0.448; // (msec) = 27 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>= 0.000; // (msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.4.
Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1280;</td>
<td>// Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768;</td>
<td>// Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>68.633;</td>
<td>// kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>84.837;</td>
<td>// Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>117.500;</td>
<td>// MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
<td>// Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
<td>// H Phase 4.0%</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
<td>// HBlank 25.2% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
<td>// VBlank 5.1% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>14.570; // (usec)</td>
<td>= 214 chars = 1712 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>10.894; // (usec)</td>
<td>= 160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>10.894; // (usec)</td>
<td>= 160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>3.677; // (usec)</td>
<td>= 54 chars = 432 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>11.574; // (usec)</td>
<td>= 170 chars = 1360 Pixels</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000; // (usec)</td>
<td>= 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.681; // (usec)</td>
<td>= 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.157; // (usec)</td>
<td>= 17 chars = 136 Pixels</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>1.838; // (usec)</td>
<td>= 27 chars = 216 Pixels</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000; // (usec)</td>
<td>= 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>11.787; // (msec)</td>
<td>= 809 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>11.190; // (msec)</td>
<td>= 768 lines = 3.02</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>11.190; // (msec)</td>
<td>= 768 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.597; // (msec)</td>
<td>= 41 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>11.234; // (msec)</td>
<td>= 771 lines</td>
</tr>
<tr>
<td>V Bottom Border</td>
<td>0.000; // (msec)</td>
<td>= 0 lines</td>
</tr>
<tr>
<td>V Front Porch</td>
<td>0.044; // (msec)</td>
<td>= 3 lines</td>
</tr>
<tr>
<td>V Sync Time</td>
<td>0.102; // (msec)</td>
<td>= 7 lines</td>
</tr>
<tr>
<td>V Back Porch</td>
<td>0.452; // (msec)</td>
<td>= 31 lines</td>
</tr>
<tr>
<td>V Top Border</td>
<td>0.000; // (msec)</td>
<td>= 0 lines</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.4.
### VESA MONITOR TIMING STANDARD

**Adopted:** 5/1/07  
**Resolution:** 1280 x 768 at 120 Hz (non-interlaced) **REDUCED BLANKING**  
**EDID ID:** DMT ID: 1Ah; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a  
**Method:** Generated using CVT (Reduced Blanking) Formula

#### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1280 x 768;</td>
<td>1280;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768;</td>
<td></td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>97.396;</td>
<td>kHz = 10.3 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>119.798;</td>
<td>Hz = 8.3 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>140.250;</td>
<td>MHz = 7.1 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
<td>Pixels = 57.0 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
<td>H Phase = 1.1%</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
<td>HBlank = 11.1% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE</td>
<td>VBlank = 5.5% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>10.267;</td>
<td>(usec) = 180 chars = 1440 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>9.127;</td>
<td>(usec) = 160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>9.127;</td>
<td>(usec) = 160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>1.141;</td>
<td>(usec) = 20 chars = 160 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>9.469;</td>
<td>(usec) = 166 chars = 1328 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000;</td>
<td>(usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.342;</td>
<td>(usec) = 6 chars = 48 Pixels</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>0.228;</td>
<td>(usec) = 4 chars = 32 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>0.570;</td>
<td>(usec) = 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000;</td>
<td>(usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>8.347;</td>
<td>(msec) = 813 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>7.885;</td>
<td>(msec) = 768 lines = 0.59</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>7.885;</td>
<td>(msec) = 768 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.462;</td>
<td>(msec) = 45 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>7.916;</td>
<td>(msec) = 771 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;</td>
<td>(msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.031;</td>
<td>(msec) = 3 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.072;</td>
<td>(msec) = 7 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.359;</td>
<td>(msec) = 35 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;</td>
<td>(msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.2.
### VESA MONITOR TIMING STANDARD

**Adopted:** 5/1/07  
**Resolution:** 1280 x 800 at 60 Hz (non-interlaced) **REDUCED BLANKING**  
**EDID ID:** DMT ID: 1Bh; STD 2 Byte Code: n/a; CVT 3 Byte Code: (8F, 18, 21)h  
**Method:** CVT Reduced Blanking

#### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1280;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>800;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>49.306;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.910;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>71.000;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>20.282;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>18.028;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>18.028;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>2.254;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>18.704;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.676;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.451;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>1.127;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.692;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.225;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.225;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.466;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.286;</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.061;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.122;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.284;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Ft Frame</td>
<td>11.1% of HTotal</td>
</tr>
<tr>
<td>Hor HBlank</td>
<td>2.8% of VTotal</td>
</tr>
<tr>
<td>Ver HBlank</td>
<td>1.1% of HTotal</td>
</tr>
<tr>
<td>Ver VBlank</td>
<td>2.8% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>180 chars = 1440 Pixels</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>20 chars = 160 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>823 lines</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>800 lines</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>800 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>23 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>803 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>0 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>3 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>6 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>14 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>0 lines</td>
</tr>
</tbody>
</table>

#### Definition of Terms:
Refer to section 3.2.
VESA MONITOR TIMING STANDARD

Adopted: 5/1/07
Resolution: 1280 x 800 at 60 Hz (non-interlaced)
EDID ID: DMT ID: 1Ch; STD 2 Byte Code: (81, 00)h; CVT 3 Byte Code: (8F, 18, 28)h
Method: CVT Compliant

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>1280 x 800 @ 60Hz;</td>
</tr>
<tr>
<td>Hor Pixels</td>
<td>1280;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>800;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>49.702 kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.810 Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>83.500 MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>83.500 MHz</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>20.120 usec</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>15.329 usec</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>15.329 usec</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>4.790 usec</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>16.192 usec</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000 usec</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.862 usec</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.533 usec</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>2.395 usec</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000 usec</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.720 msec</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.096 msec</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.096 msec</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.624 msec</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.156 msec</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000 msec</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.060 msec</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.121 msec</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.443 msec</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000 msec</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.4.
VESA MONITOR TIMING STANDARD

Adopted: 5/1/07
Resolution: 1280 x 800 at 75 Hz (non-interlaced)
EDID ID: DMT ID: 1Dh; STD 2 Byte Code: (81, 0F)h; CVT 3 Byte Code: (8F, 18, 44)h
Method: CVT Compliant

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>= 1280 x 800 @ 75Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>= 1280;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>= 800;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>= 62.795;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>= 74.934;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>= 106.500;</td>
</tr>
<tr>
<td>Character Width</td>
<td>= 8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>= NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>= NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>= POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>= 15.925;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>= 12.019;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>= 12.019;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>= 3.906;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>= 12.770;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>= 13.345;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>= 12.740;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>= 12.740;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>= 0.605;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>= 12.788;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>= 0.751;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>= 1.202;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>= 1.953;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Ver Right Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>= 0.048;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>= 0.096;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>= 0.462;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>= 0.000;</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.4.
### VESA MONITOR TIMING STANDARD

**Adopted:** 5/1/07  
**Resolution:** 1280 x 800 at 85 Hz (non-interlaced)  
**EDID ID:** DMT ID: 1Eh; STD 2 Byte Code: (81, 19)h; CVT 3 Byte Code: (8F, 18, 62)h  
**Method:** CVT Compliant

#### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1280 x 800 @ 85Hz;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hor Pixels</td>
<td>1280;</td>
<td>Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>800;</td>
<td>Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>71.554;</td>
<td>kHz = 14.0 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>84.880;</td>
<td>Hz = 11.8 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>122.500;</td>
<td>MHz = 8.2 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
<td>Pixels = 65.3 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
<td>H Phase = 4.0 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
<td>HBlank = 25.2% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
<td>VBlank = 5.1% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>13.976;</td>
<td>(usec) = 214 chars = 1712 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>10.449;</td>
<td>(usec) = 160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>10.449;</td>
<td>(usec) = 160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>3.527;</td>
<td>(usec) = 54 chars = 432 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>11.102;</td>
<td>(usec) = 170 chars = 1360 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000;</td>
<td>(usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.653;</td>
<td>(usec) = 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.110;</td>
<td>(usec) = 17 chars = 136 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>1.763;</td>
<td>(usec) = 27 chars = 216 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000;</td>
<td>(usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>11.781;</td>
<td>(msec) = 843 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>11.180;</td>
<td>(msec) = 800 lines = 2.9</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>11.180;</td>
<td>(msec) = 800 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.601;</td>
<td>(msec) = 43 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>11.222;</td>
<td>(msec) = 803 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;</td>
<td>(msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.042;</td>
<td>(msec) = 3 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.084;</td>
<td>(msec) = 6 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.475;</td>
<td>(msec) = 34 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;</td>
<td>(msec) = 0 lines</td>
</tr>
</tbody>
</table>

#### Definition of Terms: Refer to section 3.4.
Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1280 x 800 @ 120Hz CVT (Reduced Blanking);</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1280;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>800;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>101.563 kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>119.909 Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>146.250 MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>9.846 usec</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>8.752 usec</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>8.752 usec</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>1.094 usec</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>9.080 usec</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000 usec</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.328 usec</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.219 usec</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>0.547 usec</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000 usec</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>8.340 msec</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>7.877 msec</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>7.877 msec</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.463 msec</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>7.906 msec</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000 msec</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.030 msec</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.059 msec</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.374 msec</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000 msec</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.2.
**VESA MONITOR TIMING STANDARD**

Adopted: 3/1/96  
Resolution: 1280 x 960 at 60 Hz (non-interlaced)  
EDID ID: DMT ID: 20h; STD 2 Byte Code: (81, 40)h; CVT 3 Byte Code: n/a  
Method: *** NOT CVT COMPLIANT ***  

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1280 x 960 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1280;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>960;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>60.000;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.000;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>108.000;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>16.667;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>11.852;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>11.852;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>4.815;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>12.741;</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.889;</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>1.037;</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>2.889;</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.667;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.000;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.000;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.667;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.017;</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.017;</td>
</tr>
<tr>
<td>// V Sync Time</td>
<td>0.050;</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.600;</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.1.
**VESAT MONITOR TIMING STANDARD**

Adopted: 3/1/96  
Resolution: 1280 x 960 at 85 Hz (non-interlaced)  
EDID ID: DMT ID: 21h; STD 2 Byte Code: (81, 59)h; CVT 3 Byte Code: n/a  
Method: *** NOT CVT COMPLIANT ***

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>= 1280 x 960 @ 85Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>= 1280;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>= 960;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>= 85.938;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>= 85.002;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>= 148.500;</td>
</tr>
<tr>
<td>Character Width</td>
<td>= 8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>= NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>= POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>= POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>= 11.636;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>= 8.620;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>= 8.620;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>= 3.017;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>= 9.051;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>= 0.431;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>= 1.077;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>= 1.508;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>= 11.764;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>= 11.171;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>= 11.171;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>= 0.593;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>= 11.183;</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>= 0.012;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>= 0.035;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>= 0.547;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>= 0.000;</td>
</tr>
</tbody>
</table>

### Definition of Terms:
Refer to section 3.1.
VESA MONITOR TIMING STANDARD

Adopted: 5/1/07
Resolution: 1280 x 960 at 120 Hz (non-interlaced) REduced BLANKING
EDID ID: DMT ID: 22h; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a
Method: Generated using CVT (Reduced Blanking) Formula

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1280 x 960 @ 120Hz CVT (Reduced Blanking);</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1280; // Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>960; // Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>121.875; // kHz = 8.2 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>119.838; // Hz = 8.3 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>175.500; // MHz = 5.7 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; // Pixels = 45.6 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; // H Phase = 1.1 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; // HBlank = 11.1% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE // VBlank = 5.6% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>8.205; // (usec) = 180 chars = 1440 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>7.293; // (usec) = 160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>7.293; // (usec) = 160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>0.912; // (usec) = 20 chars = 160 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>7.567; // (usec) = 166 chars = 1328 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.274; // (usec) = 6 chars = 48 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.182; // (usec) = 4 chars = 32 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>0.456; // (usec) = 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>8.345; // (msec) = 1017 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>7.877; // (msec) = 960 lines = 0.47</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>7.877; // (msec) = 960 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.468; // (msec) = 57 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>7.902; // (msec) = 963 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; // (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.025; // (msec) = 3 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.033; // (msec) = 4 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.410; // (msec) = 50 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; // (msec) = 0 lines</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.2.
### VESA MONITOR TIMING STANDARD

Adopted: 12/18/96  
Resolution: 1280 x 1024 at 60 Hz (non-interlaced)  
EDID ID: DMT ID: 23h; STD 2 Byte Code: (81, 80)h; CVT 3 Byte Code: n/a  
BIOS Modes: 106h, 107h, 119h, 11Ah, & 11Bh (4, 8, 15, 16, & 24 bpp)  
Method: *** NOT CVT COMPLIANT ***

#### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1280</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1024</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>63.981 (kHz) = 15.6 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.020 (Hz) = 16.7 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>108.000 (MHz) = 9.3 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8 (Pixels) = 74.1 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; H Phase = 5.9%</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; HBlank = 24.2% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; VBlank = 3.9% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>15.630 (usec) = 211 chars = 1688 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>11.852 (usec) = 160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>11.852 (usec) = 160 chars = 1280 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>3.778 (usec) = 51 chars = 408 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>12.296 (usec) = 166 chars = 1328 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.661 (msec) = 1066 lines HT = (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.005 (msec) = 1024 lines = 3.07</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.005 (msec) = 1024 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.656 (msec) = 42 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.020 (msec) = 1025 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000 (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.016 (msec) = 1 lines</td>
</tr>
<tr>
<td>// V Sync Time</td>
<td>0.047 (msec) = 3 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.594 (msec) = 38 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000 (msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.1.
**VESAMONITOR TIMING STANDARD**

Adopted: 10/4/93  
Resolution: 1280 x 1024 at 75 Hz (non-interlaced)  
EDID ID: DMT ID: 24h; STD 2 Byte Code: (81, 8F)h; CVT 3 Byte Code: n/a  
BIOS Modes: 106h, 107h, 119h, 11Ah, & 11Bh (4, 8, 15, 16, & 24 bpp)  
Method: *** NOT CVT COMPLIANT ***

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>= 1280 x 1024 @ 75Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>= 1280; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>= 1024; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>= 79.976; kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>= 75.025; Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>= 135.000; MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>= 8; Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>= NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>= POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>= POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>= 12.504; (usec)</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>= 9.481; (usec)</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>= 9.481; (usec)</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>= 3.022; (usec)</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>= 9.600; (usec)</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>= 0.000; (usec)</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>= 0.119; (usec)</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>= 1.067; (usec)</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>= 1.837; (usec)</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>= 0.000; (usec)</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>= 13.329; (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>= 12.804; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>= 12.804; (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>= 0.525; (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>= 12.816; (msec)</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>= 0.000; (msec)</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>= 0.013; (msec)</td>
</tr>
<tr>
<td>// Ver Sync Time</td>
<td>= 0.038; (msec)</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>= 0.475; (msec)</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>= 0.000; (msec)</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.1.
**VESAMONITOR TIMING STANDARD**

Adopted: 3/1/96  
Resolution: 1280 x 1024 at 85 Hz (non-interlaced)  
EDID ID: DMT ID: 25h; STD 2 Byte Code: (81, 99)h; CVT 3 Byte Code: n/a  
Method: ***NOT CVT COMPLIANT***

**Detailed Timing Parameters**

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1280 x 1024 @ 85Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1280; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1024; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>91.146; kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>85.024; Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>157,500; MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; H Phase = 4.6 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; HBlank = 25.9% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; VBlank = 4.5% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>10.971; (usec)</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>8.127; (usec)</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>8.127; (usec)</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>2.844; (usec)</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>8.533; (usec)</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.406; (usec)</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.016; (usec)</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>1.422; (usec)</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>11.761; (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>11.235; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>11.235; (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.527; (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>11.246; (msec)</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec)</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.011; (msec)</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.033; (msec)</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.483; (msec)</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec)</td>
</tr>
</tbody>
</table>

Hor Total Time = 10.971; (usec) = 216 chars = 1728 Pixels  
Hor Addr Time = 8.127; (usec) = 160 chars = 1280 Pixels  
Hor Blank Start = 8.127; (usec) = 160 chars = 1280 Pixels  
Hor Blank Time = 2.844; (usec) = 56 chars = 448 Pixels  
Hor Sync Start = 8.533; (usec) = 168 chars = 1344 Pixels  
// H Right Border = 0.000; (usec) = 0 chars = 0 Pixels  
// H Front Porch = 0.406; (usec) = 8 chars = 64 Pixels  
Hor Sync Time = 1.016; (usec) = 20 chars = 160 Pixels  
// H Back Porch = 1.422; (usec) = 28 chars = 224 Pixels  
// H Left Border = 0.000; (usec) = 0 chars = 0 Pixels  
Ver Total Time = 11.761; (msec) = 1072 lines \[ \text{HT} - (1.06xHA) \]  
Ver Addr Time = 11.235; (msec) = 1024 lines = 2.36  
Ver Blank Start = 11.235; (msec) = 1024 lines  
Ver Blank Time = 0.527; (msec) = 48 lines  
Ver Sync Start = 11.246; (msec) = 1025 lines  
// V Bottom Border = 0.000; (msec) = 0 lines  
// V Front Porch = 0.011; (msec) = 1 lines  
Ver Sync Time = 0.033; (msec) = 3 lines  
// V Back Porch = 0.483; (msec) = 44 lines  
// V Top Border = 0.000; (msec) = 0 lines

**Definition of Terms:** Refer to section 3.1.
Adopted: 5/1/07
Resolution: 1280 x 1024 at 120 Hz (non-interlaced) REDUCED BLANKING
EDID ID: DMT ID: 26h; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a
Method: Generated using CVT (Reduced Blanking) Formula

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Hor Pixels</th>
<th>1280</th>
<th>Ver Pixels</th>
<th>1024</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Frequency</td>
<td>130.035</td>
<td>kHz</td>
<td>Ver Frequency</td>
<td>119.958</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>187.250</td>
<td>MHz</td>
<td>Character Width</td>
<td>8</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED</td>
<td></td>
<td>H Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>7.690</td>
<td>(usec)</td>
<td>Ver Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>6.836</td>
<td>(usec)</td>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>6.836</td>
<td>(usec)</td>
<td>Hor Front Porch</td>
<td>0.256;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>0.854</td>
<td>(usec)</td>
<td>Hor Sync Time</td>
<td>0.171;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>7.092</td>
<td>(usec)</td>
<td>Hor Back Porch</td>
<td>0.427;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>8.336</td>
<td>(msec)</td>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>7.875</td>
<td>(msec)</td>
<td>Ver Total Time</td>
<td>8.336;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>7.875</td>
<td>(msec)</td>
<td>Ver Blank Time</td>
<td>0.461;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>7.898</td>
<td>(msec)</td>
<td>Ver Sync Start</td>
<td>7.898;</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000</td>
<td>(msec)</td>
<td>// V Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.023</td>
<td>(msec)</td>
<td>// V Front Porch</td>
<td>0.023;</td>
</tr>
<tr>
<td>// V Sync Time</td>
<td>0.054</td>
<td>(msec)</td>
<td>// V Sync Time</td>
<td>0.054;</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.385</td>
<td>(msec)</td>
<td>// V Back Porch</td>
<td>0.385;</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000</td>
<td>(msec)</td>
<td>// V Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.2.
### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1360 x 768 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1360;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>47.712;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.015;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>85.500;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>20.959;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>15.906;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>15.906;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>5.053;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>16.655;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.662;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.097;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.097;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.566;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.159;</td>
</tr>
<tr>
<td>Ver Blank Star</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.063;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.126;</td>
</tr>
<tr>
<td>Ver Sync Star</td>
<td>0.377;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.749;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.310;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>2.994;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.662;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.097;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.097;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.566;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.159;</td>
</tr>
<tr>
<td>Ver Blank Star</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.063;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.126;</td>
</tr>
<tr>
<td>Ver Sync Star</td>
<td>0.377;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.749;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.310;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>2.994;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.662;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.097;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.097;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.566;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.159;</td>
</tr>
<tr>
<td>Ver Blank Star</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.063;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.126;</td>
</tr>
<tr>
<td>Ver Sync Star</td>
<td>0.377;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.749;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.310;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>2.994;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.662;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.097;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.097;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.566;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.159;</td>
</tr>
<tr>
<td>Ver Blank Star</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.063;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.126;</td>
</tr>
<tr>
<td>Ver Sync Star</td>
<td>0.377;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.749;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.310;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>2.994;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.662;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.097;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.097;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.566;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.159;</td>
</tr>
<tr>
<td>Ver Blank Star</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.063;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.126;</td>
</tr>
<tr>
<td>Ver Sync Star</td>
<td>0.377;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.1.
**VESAMonitor Timing Standard**

**Adopted:** 5/1/07  
**Resolution:** 1360 x 768 at 120 Hz (non-interlaced)  
**EDID ID:** DMT ID: 28h; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a  
**Method:** Generated using CVT (Reduced Blanking) Formula

---

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Hor Pixels = 1360 x 768 @ 120Hz CVT (Reduced Blanking);</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1360; // Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768; // Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>97.533; // kHz = 10.3 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>119.967; // Hz = 8.3 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>148.250; // MHz = 6.7 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; // Pixels = 54.0 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; // H Phase = 1.1%</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; // HBlank = 10.5% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE // VBlank = 5.5% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>10.253; // (usec) = 190 chars = 1520 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>9.174; // (usec) = 170 chars = 1360 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>9.174; // (usec) = 170 chars = 1360 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>1.079; // (usec) = 20 chars = 160 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>9.497; // (usec) = 176 chars = 1408 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.324; // (usec) = 6 chars = 48 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.216; // (usec) = 4 chars = 32 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>0.540; // (usec) = 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>8.336; // (msec) = 813 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>7.874; // (msec) = 768 lines = 0.53</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>7.874; // (msec) = 768 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.461; // (msec) = 45 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>7.905; // (msec) = 771 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; // (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.031; // (msec) = 3 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.051; // (msec) = 5 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.379; // (msec) = 37 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; // (msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.2.
VESA MONITOR TIMING STANDARD

Proposed: 11/30/07
Adopted: 11/30/07
Resolution: 1366 x 768 at 60 Hz (non-interlaced) NORMAL BLANKING
EDID ID: DMT ID: 51h; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a
Method: *** NOT CVT COMPLIANT ***

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1366 x 768 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1366; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>47.712; KH = 21.0 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.790; Hz = 16.7 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>85.500; MHz = 11.7 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>1; Pixels = 11.7 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; H Phase = 4.0%</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; HBlank = 23.8% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; VBlank = 3.8% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>20.959; (usec) = 1792 chars = 1792 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>15.977; (usec) = 1366 chars = 1366 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>4.982; (usec) = 426 chars = 426 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>16.795; (usec) = 1436 chars = 1436 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.097; (msec) = 798 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.097; (msec) = 768 lines = 4.02</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.097; (msec) = 768 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.629; (msec) = 30 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.159; (msec) = 771 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.063; (msec) = 3 lines</td>
</tr>
<tr>
<td>// V Sync Time</td>
<td>0.063; (msec) = 3 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.503; (msec) = 24 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to Section 3.1
VESA MONITOR TIMING STANDARD

Proposed: 10/16/08
Adopted: TBD
Resolution: 1366 x 768 at 60 Hz (non-interlaced) [REduced BLanking]
EDID ID: DMT ID: 56h; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a
Method: *** NOT CVT COMPLIANT ***

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1366 x 768 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1366; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>768; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>48.000; KHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.000; Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>72.000; MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>1; Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; H Phase = 1.7 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; HBlank = 8.9% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; VBlank = 4.0% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>20.833; (usec) 1500 chars = 1500 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>18.972; (usec) 1366 chars = 1366 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>18.972; (usec) 1366 chars = 1366 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>1.861; (usec) 134 chars = 134 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>19.167; (usec) 1380 chars = 1380 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; (usec) 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.194; (usec) 14 chars = 14 Pixels</td>
</tr>
<tr>
<td>// H Sync Time</td>
<td>0.778; (usec) 56 chars = 56 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>0.889; (usec) 64 chars = 64 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; (usec) 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.667; (msec) 800 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.000; (msec) 768 lines = 0.72</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.000; (msec) 768 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.667; (msec) 32 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.021; (msec) 769 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec) 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.021; (msec) 1 lines</td>
</tr>
<tr>
<td>// V Sync Time</td>
<td>0.063; (msec) 3 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.583; (msec) 28 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec) 0 lines</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to Section 3.1
### VESA MONITOR TIMING STANDARD

**Adopted:** 8/21/03  
**Resolution:** 1400 x 1050 at 60 Hz (non-interlaced) REDUCED BLANKING  
**EDID ID:** DMT ID: 29h; STD 2 Byte Code: n/a; CVT 3 Byte Code: (0C, 20, 21)h  
**Method:** CVT Reduced Blanking

#### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>Pixels</td>
<td>1400</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>Lines</td>
<td>1050</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>kHz</td>
<td>64.744</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>Hz</td>
<td>59.948</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>MHz</td>
<td>101.000</td>
</tr>
<tr>
<td>Character Width</td>
<td>Pixels</td>
<td>8</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED</td>
<td></td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>HBlank</td>
<td>10.3% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>VBlank</td>
<td>2.8% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>(usec)</td>
<td>15.446</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>(usec)</td>
<td>13.861</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>(usec)</td>
<td>1.584</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>(usec)</td>
<td>14.337</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>(usec)</td>
<td>0.000</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>(usec)</td>
<td>0.475</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>(usec)</td>
<td>0.317</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>(usec)</td>
<td>0.792</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>(usec)</td>
<td>0.000</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>(msec)</td>
<td>16.681</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>(msec)</td>
<td>16.218</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>(msec)</td>
<td>16.218</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>(msec)</td>
<td>0.463</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>(msec)</td>
<td>0.062</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>(msec)</td>
<td>0.000</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>(msec)</td>
<td>0.046</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>(msec)</td>
<td>0.355</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>(msec)</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.2.
**VESDA MONITOR TIMING STANDARD**

Adopted: 8/21/03  
Resolution: 1400 x 1050 at 60 Hz (non-interlaced)  
EDID ID: DMT ID: 2Ah; STD 2 Byte Code: (90, 40)h; CVT 3 Byte Code: (0C, 20, 28)h  
Method: CVT Compliant

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1400;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1050;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>65.317; kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.978; Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>121.750; MHZ</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>15.310; (usec)</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>11.499; (usec)</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>11.499; (usec)</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>3.811; (usec)</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>12.222; (usec)</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.673; (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.076; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.076; (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.597; (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.121; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>0.000; (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.046; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>0.061; (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.490; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>0.000; (msec)</td>
</tr>
</tbody>
</table>

| Ver Total Time    | 1089 lines                |
| Ver Addr Time     | 1050 lines                |
| Ver Blank Start   | 1050 lines                |
| Ver Blank Time    | 39 lines                  |
| Ver Sync Start    | 1053 lines                |
| // V Bottom Border| 0 lines                   |
| // V Front Porch  | 3 lines                   |
| // V Sync Time    | 4 lines                   |
| // V Back Porch   | 32 lines                  |
| // V Top Border   | 0 lines                   |

**Definition of Terms:** Refer to section 3.4.
VESA MONITOR TIMING STANDARD

Adopted: 8/21/03
Resolution: 1400 x 1050 at 75 Hz (non-interlaced)
EDID ID: DMT ID: 2Bh; STD 2 Byte Code: (90, 4F)h; CVT 3 Byte Code: (0C, 20, 44)h
Method: CVT Compliant

Detailed Timing Parameters

| Timing Name | Hor Pixels | Ver Pixels | Hor Frequency | Ver Frequency | Pixel Clock | Character Width | Scan Type       | Hor Sync Polarity | Ver Sync Polarity | Hor Total Time | Hor Addr Time | Hor Blank Start | Hor Blank Time | Hor Sync Start | Hor Right Border | Hor Front Porch | Hor Sync Time | Hor Back Porch | Hor Left Border | Ver Total Time | Ver Addr Time | Ver Blank Start | Ver Blank Time | Ver Sync Start | Ver Bottom Border | Ver Front Porch | Ver Sync Time | Ver Back Porch | Ver Top Border | Ver Blank Start |
|-------------|------------|------------|---------------|---------------|-------------|----------------|-----------------|------------------|------------------|---------------|---------------|----------------|---------------|----------------|----------------|----------------|--------------|----------------|----------------|---------------|----------------|----------------|---------------|----------------|----------------|
| 1400 x 1050 | 1400       | 1050       | 82.278        | 74.867        | 156.000     | 8              | NONINTERLACED   | NEGATIVE         | POSITIVE         | 12.154         | 8.974         | 8.974          | 3.179         | 9.641          | 0.000           | 0.667          | 0.923        | 1.590          | 0.000          | 13.357        | 12.762         | 12.762         | 0.596         | 12.798         | 0.000          | 0.036         | 0.049          | 0.051          | 0.000          |

Definition of Terms: Refer to section 3.4.
**VESDA MONITOR TIMING STANDARD**

Adopted: 8/21/03  
Resolution: 1400 x 1050 at 85 Hz (non-interlaced)  
EDID ID: DMT ID: 2Ch; STD 2 Byte Code: (90, 59)h; CVT 3 Byte Code: (0C, 20, 62)h  
Method: CVT Compliant

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>= 1400 x 1050 @ 85Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>= 1400; // Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>= 1050; // Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>= 93.881; // kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>= 84.960; // Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>= 179.500; // MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>= 8; // Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>= NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>= NEGATIVE; // HBlank</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>= POSITIVE; // VBlank</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>= 10.652; // (usec)</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>= 7.799; // (usec)</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>= 7.799; // (usec)</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>= 2.852; // (usec)</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>= 8.379; // (usec)</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>= 0.000; // (usec)</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>= 0.579; // (usec)</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>= 0.847; // (usec)</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>= 1.426; // (usec)</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>= 0.000; // (usec)</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>= 11.770; // (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>= 11.184; // (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>= 11.184; // (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>= 0.586; // (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>= 11.216; // (msec)</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>= 0.000; // (msec)</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>= 0.032; // (msec)</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>= 0.043; // (msec)</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>= 0.511; // (msec)</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>= 0.000; // (msec)</td>
</tr>
</tbody>
</table>

### Definition of Terms:
Refer to section 3.4.
**VESAT MONITOR TIMING STANDARD**

Adopted: 5/1/07
Resolution: 1400 x 1050 at 120 Hz (non-interlaced) **REDUCED BLANKING**
EDID ID: DMT ID: 2Dh; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a
Method: Generated using CVT (Reduced Blanking) Formula

---

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1400 x 1050 @ 120Hz CVT (Reduced Blanking);</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1400; // Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1050; // Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>133.333; // kHz 7.5 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>119.904; // Hz 8.3 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>208.000; // MHz 4.8 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; // Pixels 38.5 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; H Phase = 1.0 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; HBlank = 10.3% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE VBlank = 5.6% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>7.500; // (usec) 195 chars = 1560 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>6.731; // (usec) 175 chars = 1400 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>6.731; // (usec) 175 chars = 1400 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>0.769; // (usec) 20 chars = 160 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>6.962; // (usec) 181 chars = 1448 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; // (usec) 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.231; // (usec) 6 chars = 48 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.154; // (usec) 4 chars = 32 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>0.385; // (usec) 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; // (usec) 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>8.340; // (msec) 1112 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>7.875; // (msec) 1050 lines 0.37</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>7.875; // (msec) 1050 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.465; // (msec) 62 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>7.898; // (msec) 1053 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; // (msec) 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.023; // (msec) 3 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.030; // (msec) 4 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.413; // (msec) 55 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; // (msec) 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.2.
VESA MONITOR TIMING STANDARD

Adopted: 10/24/04
Resolution: 1440 x 900 at 60 Hz (non-interlaced) **REDUCED BLANKING**
EDID ID: DMT ID: 2Eh; STD 2 Byte Code: n/a; CVT 3 Byte Code: (C1, 18, 21)h
Method: CVT Reduced Blanking

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1440;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>900;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>55.469;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.901;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>88.750;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>18.028;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>16.225;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>16.225;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>1.803;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>16.766;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.694;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.225;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.225;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.469;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.279;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.225;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.054;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.108;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>0.306;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

### Definition of Terms:
Refer to section 3.2.
**VESAT Monitor Timing Standard**

Adopted: 10/24/04
Resolution: 1440 x 900 at 60 Hz (non-interlaced)
EDID ID: DMT ID: 2Fh; STD 2 Byte Code: (95, 00)h; CVT 3 Byte Code: (C1, 18, 28)h
Method: CVT Compliant

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1440 x 900 @ 60Hz</strong></td>
<td>1440 x 900; 900;</td>
<td>Hor Pixels: 1440; Ver Pixels: 900;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>55.935; 17.9 usec / line</td>
<td>55.935 kHz Hor Frequency: 17.9 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.887; 16.7 msec / frame</td>
<td>59.887 Hz Ver Frequency: 16.7 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>106.500; 9.4 nsec ± 0.5%</td>
<td>106.500 MHz Pixel Clock: 9.4 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; 75.1 nsec</td>
<td>8 Pixels Character Width: 75.1 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; 24.4% of HTotal</td>
<td>Scan Type: NONINTERLACED; 24.4% of HTotal</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE; 24.4% of HTotal</td>
<td>Hor Sync Polarity: NEGATIVE; 24.4% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; 3.6% of VTotal</td>
<td>Ver Sync Polarity: POSITIVE; 3.6% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>17.878; 238 chars = 1904 Pixels</td>
<td>Hor Total Time: 17.878; (usec) = 238 chars = 1904 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>13.521; 180 chars = 1440 Pixels</td>
<td>Hor Addr Time: 13.521; (usec) = 180 chars = 1440 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>13.521; 180 chars = 1440 Pixels</td>
<td>Hor Blank Start: 13.521; (usec) = 180 chars = 1440 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>4.357; 58 chars = 464 Pixels</td>
<td>Hor Blank Time: 4.357; (usec) = 58 chars = 464 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>14.272; 190 chars = 1520 Pixels</td>
<td>Hor Sync Start: 14.272; (usec) = 190 chars = 1520 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; 0 chars = 0 Pixels</td>
<td>// H Right Border: 0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.751; 10 chars = 80 Pixels</td>
<td>// H Front Porch: 0.751; (usec) = 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.427; 19 chars = 152 Pixels</td>
<td>Hor Sync Time: 1.427; (usec) = 19 chars = 152 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>2.178; 29 chars = 232 Pixels</td>
<td>// H Back Porch: 2.178; (usec) = 29 chars = 232 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; 0 chars = 0 Pixels</td>
<td>// H Left Border: 0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.698; 934 lines HT – (1.06xHA)</td>
<td>Ver Total Time: 16.698; (msec) = 934 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.090; 900 lines = 3.55</td>
<td>Ver Addr Time: 16.090; (msec) = 900 lines = 3.55</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.090; 900 lines</td>
<td>Ver Blank Start: 16.090; (msec) = 900 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.608; 34 lines</td>
<td>Ver Blank Time: 0.608; (msec) = 34 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.144; 903 lines</td>
<td>Ver Sync Start: 16.144; (msec) = 903 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; 0 lines</td>
<td>// V Bottom Border: 0.000; (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.054; 3 lines</td>
<td>// V Front Porch: 0.054; (msec) = 3 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.107; 6 lines</td>
<td>Ver Sync Time: 0.107; (msec) = 6 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.447; 25 lines</td>
<td>// V Back Porch: 0.447; (msec) = 25 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; 0 lines</td>
<td>// V Top Border: 0.000; (msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.4.
### VESA Monitor Timing Standard

**Adopted:** 10/24/04  
**Resolution:** 1440 x 900 at 75 Hz (non-interlaced)  
**EDID ID:** DMT ID: 30h; STD 2 Byte Code: (95, 0F)h; CVT 3 Byte Code: (C1, 18, 44)h  
**Method:** CVT Compliant

#### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Resolution = 1440 x 900 @ 75Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1440;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>900;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>70.635 kHz;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>74.984 Hz;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>136.750 MHz;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>14.157 (usec);</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>10.530 (usec);</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>3.627 (usec);</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>11.232 (usec);</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>0.000 (usec);</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000 (usec);</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.702 (usec);</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>1.112 (usec);</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>1.814 (usec);</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000 (usec);</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>13.336 (msec);</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>12.741 (msec);</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>12.741 (msec);</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.595 (msec);</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>12.784 (msec);</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000 (msec);</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.042 (msec);</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.085 (msec);</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.467 (msec);</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000 (msec);</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.4.
VESA MONITOR TIMING STANDARD

Adopted: 10/24/04
Resolution: 1440 x 900 at 85 Hz (non-interlaced)
EDID ID: DMT ID: 31h; STD 2 Byte Code: (95, 19)h; CVT 3 Byte Code: (C1, 18, 68)h
Method: CVT Compliant

**Detailed Timing Parameters**

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>= 1440 x 900 @ 85Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>= 1440;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>= 900;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>= 80.430;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>= 84.842;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>= 157.000;</td>
</tr>
<tr>
<td>Character Width</td>
<td>= 8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>= NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>= NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>= POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>= 12.433;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>= 9.172;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>= 9.172;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>= 3.261;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>= 9.834;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>= 0.662;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>= 0.968;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>= 1.631;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>= 11.787;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>= 11.190;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>= 11.190;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>= 0.597;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>= 11.227;</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>= 0.037;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>= 0.075;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>= 0.485;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Verblank</td>
<td>= 26.2% of HTotal</td>
</tr>
<tr>
<td>HBlank</td>
<td>= 5.1% of VTotal</td>
</tr>
<tr>
<td>244 chars</td>
<td>= 1952 Pixels</td>
</tr>
<tr>
<td>180 chars</td>
<td>= 1440 Pixels</td>
</tr>
<tr>
<td>180 chars</td>
<td>= 1440 Pixels</td>
</tr>
<tr>
<td>64 chars</td>
<td>= 512 Pixels</td>
</tr>
<tr>
<td>193 chars</td>
<td>= 1544 Pixels</td>
</tr>
<tr>
<td>0 chars</td>
<td>= 0 Pixels</td>
</tr>
<tr>
<td>13 chars</td>
<td>= 104 Pixels</td>
</tr>
<tr>
<td>19 chars</td>
<td>= 152 Pixels</td>
</tr>
<tr>
<td>32 chars</td>
<td>= 256 Pixels</td>
</tr>
<tr>
<td>0 chars</td>
<td>= 0 Pixels</td>
</tr>
<tr>
<td>948 lines HT – (1.06xHA)</td>
<td>900 lines</td>
</tr>
<tr>
<td>900 lines</td>
<td>= 2.71</td>
</tr>
<tr>
<td>48 lines</td>
<td>= 39 lines</td>
</tr>
<tr>
<td>39 lines</td>
<td>= 0 lines</td>
</tr>
<tr>
<td>6 lines</td>
<td>= 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.4.
VESA MONITOR TIMING STANDARD

Adopted: 5/1/07
Resolution: 1440 x 900 at 120 Hz (non-interlaced) REDUCED BLANKING
EDID ID: DMT ID: 32h; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a
Method: Generated using CVT (Reduced Blanking) Formula

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Hor Pixels = 1440</th>
<th>Ver Pixels = 900</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Frequency</td>
<td>114.219 kHz</td>
<td>8.8 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>119.852 Hz</td>
<td>8.3 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>182.750 MHz</td>
<td>5.5 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8</td>
<td>43.8 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED</td>
<td>H Phase = 1.0%</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE</td>
<td>HBlank = 10.0% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE</td>
<td>VBlank = 5.6% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>8.755 usec</td>
<td>200 chars = 1600 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>7.880 usec</td>
<td>180 chars = 1440 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>7.880 usec</td>
<td>180 chars = 1440 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>0.876 usec</td>
<td>20 chars = 160 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>8.142 usec</td>
<td>186 chars = 1488 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000 usec</td>
<td>0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.263 usec</td>
<td>6 chars = 48 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.175 usec</td>
<td>4 chars = 32 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>0.438 usec</td>
<td>10 chars = 80 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000 usec</td>
<td>0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>8.344 msec</td>
<td>953 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>7.880 msec</td>
<td>900 lines = 0.4</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>7.880 msec</td>
<td>900 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.464 msec</td>
<td>53 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>7.906 msec</td>
<td>903 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000 msec</td>
<td>0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.026 msec</td>
<td>3 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.053 msec</td>
<td>6 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.385 msec</td>
<td>44 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000 msec</td>
<td>0 lines</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.2.
Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1600 x 900 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1600; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>900; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>60.000; KHZ = 16.7 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.000; Hz = 16.7 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>108.000; MHZ = 9.3 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; Pixels = 74.1 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; H Phase = 2.0 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; HBlank = 11.1% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; VBlank = 10.0% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>16.667; (usec) = 225 chars = 1800 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>14.815; (usec) = 200 chars = 1600 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>14.815; (usec) = 20 chars = 200 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>1.852; (usec) = 25 chars = 200 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>15.037; (usec) = 203 chars = 1624 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front porch</td>
<td>0.222; (usec) = 3 chars = 24 Pixels</td>
</tr>
<tr>
<td>// H Sync Time</td>
<td>0.741; (usec) = 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>// H Back porch</td>
<td>0.889; (usec) = 12 chars = 96 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.667; (msec) = 1000 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>15.000; (msec) = 900 lines = 0.96</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>15.000; (msec) = 900 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>1.667; (msec) = 100 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>15.017; (msec) = 901 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front porch</td>
<td>0.017; (msec) = 1 lines</td>
</tr>
<tr>
<td>// V Sync Time</td>
<td>0.050; (msec) = 3 lines</td>
</tr>
<tr>
<td>// V Back porch</td>
<td>1.600; (msec) = 96 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to Section 3.1
VESA MONITOR TIMING STANDARD

Adopted: 12/18/96
Resolution: 1600 x 1200 at 60 Hz (non-interlaced)
EDID ID: DMT ID: 33h; STD 2 Byte Code: (A9, 40)h; CVT 3 Byte Code: n/a
Method: *** NOT CVT COMPLIANT ***

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1600 x 1200 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1600;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1200;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>75.000;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.000;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>162.000;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>13.333;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>9.877;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>9.877;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>3.457;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>10.272;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.395;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.185;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>1.877;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.667;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.000;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.000;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.667;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.013;</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.013;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.040;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.613;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// H Right Border</td>
<td></td>
</tr>
<tr>
<td>// H Front Porch</td>
<td></td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td></td>
</tr>
<tr>
<td>// Hor Back Porch</td>
<td></td>
</tr>
<tr>
<td>// Hor Left Border</td>
<td></td>
</tr>
<tr>
<td>// Ver Total Time</td>
<td></td>
</tr>
<tr>
<td>// Ver Addr Time</td>
<td></td>
</tr>
<tr>
<td>// Ver Blank Start</td>
<td></td>
</tr>
<tr>
<td>// Ver Blank Time</td>
<td></td>
</tr>
<tr>
<td>// Ver Sync Start</td>
<td></td>
</tr>
<tr>
<td>// Ver Bottom Border</td>
<td></td>
</tr>
<tr>
<td>// Ver Front Porch</td>
<td></td>
</tr>
<tr>
<td>// Ver Sync Time</td>
<td></td>
</tr>
<tr>
<td>// Ver Back Porch</td>
<td></td>
</tr>
<tr>
<td>// Ver Top Border</td>
<td></td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.1.
**VESA MONITOR TIMING STANDARD**

Adopted: 12/18/96  
Resolution: 1600 x 1200 at 65 Hz (non-interlaced)  
EDID ID: DMT ID: 34h; STD 2 Byte Code: (A9, 45)h; CVT 3 Byte Code: n/a  
Method: *** NOT CVT COMPLIANT ***

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1600 x 1200 @ 65Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1600;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1200;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>81.250;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>65.000;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>175,500;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>12.308;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>9.117;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>9.117;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>3.191;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>9.481;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.365;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.094;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>1.732;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>15.385;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>14.769;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>14.769;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.615;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>14.782;</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.012;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.037;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.566;</td>
</tr>
<tr>
<td>V Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

### Definition of Terms:
Refer to section 3.1.
Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1600 x 1200 @ 70Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1600;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1200;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>87.500;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>70.000;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>189.000;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>11.429;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>8.466;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>2.963;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>8.804;</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.339;</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>1.016;</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>1.608;</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>14.286;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>13.714;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>13.714;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.571;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>13.726;</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.011;</td>
</tr>
<tr>
<td>// Ver Sync Time</td>
<td>0.034;</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.526;</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>11.429;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>8.466;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>2.963;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>8.804;</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.339;</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>1.016;</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>1.608;</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>14.286;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>13.714;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>13.714;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.571;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>13.726;</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.011;</td>
</tr>
<tr>
<td>// Ver Sync Time</td>
<td>0.034;</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.526;</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.1.
### VESA MONITOR TIMING STANDARD

*Adopted: 12/18/96*

*Resolution: 1600 x 1200 at 75 Hz (non-interlaced)*

*EDID ID: DMT ID: 36h; STD 2 Byte Code: (A9, 4F)h; CVT 3 Byte Code: n/a*

*Method: *** NOT CVT COMPLIANT ****

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1600 x 1200 @ 75Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1600;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1200;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>93.750;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>75.000;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>202.500;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>10.667;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>7.901;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>2.765;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>8.217;</td>
</tr>
<tr>
<td>Hor Start</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.316;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.948;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>1.501;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>13.333;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>12.800;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>12.800;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.533;</td>
</tr>
<tr>
<td>Ver Start</td>
<td>12.811;</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.011;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.032;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.491;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

### Definition of Terms: Refer to section 3.1.
**VESA MONITOR TIMING STANDARD**

Adopted: 12/18/96  
Resolution: 1600 x 1200 at 85 Hz (non-interlaced)  
EDID ID: DMT ID: 37h; STD 2 Byte Code: (A9, 59)h; CVT 3 Byte Code: n/a  
Method: *** NOT CVT COMPLIANT ***

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>= 1600 x 1200 @ 85Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>= 1600; // Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>= 1200; // Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>= 106.250; // kHz = 9.4 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>= 85.000; // Hz = 11.8 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>= 229.500; // MHz = 4.4 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>= 8; // Pixels = 34.9 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>= NONINTERLACED; // H Phase = 5.6 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>= POSITIVE; // HBlank = 25.9% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>= POSITIVE; // VBlank = 4.0% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>= 9.412; // (usec) = 270 chars = 2160 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>= 6.972; // (usec) = 200 chars = 1600 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>= 2.440; // (usec) = 70 chars = 560 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>= 7.251; // (usec) = 208 chars = 1664 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>= 0.000; // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>= 0.279; // (usec) = 8 chars = 64 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>= 0.837; // (usec) = 24 chars = 192 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>= 1.325; // (usec) = 38 chars = 304 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>= 0.000; // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>= 11.765; // (msec) = 1250 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>= 11.294; // (msec) = 1200 lines = 2.02</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>= 11.294; // (msec) = 1200 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>= 0.471; // (msec) = 50 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>= 11.304; // (msec) = 1201 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>= 0.000; // (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>= 0.009; // (msec) = 1 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>= 0.028; // (msec) = 3 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>= 0.433; // (msec) = 46 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>= 0.000; // (msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.1.
Detailed Timing Parameters

| Timing Name | Hor Pixels | Ver Pixels | Hor Frequency | Ver Frequency | Pixel Clock | Character Width | Scan Type | Hor Sync Polarity | Ver Sync Polarity | Hor Total Time | Hor Addr Time | Hor Blank Start | Hor Blank Time | Hor Sync Start | Hor Right Border | Hor Front Porch | Hor Sync Time | Hor Back Porch | Hor Left Border | Ver Total Time | Ver Addr Time | Ver Blank Start | Ver Blank Time | Ver Sync Start | Ver Bottom Border | Ver Front Porch | Ver Sync Time | Ver Back Porch | Ver Top Border |
|-------------|------------|------------|---------------|---------------|-------------|----------------|-----------|------------------|------------------|---------------|---------------|----------------|---------------|---------------|----------------|----------------|---------------|----------------|----------------|---------------|----------------|---------------|---------------|----------------|---------------|
| Hor Pixels  | 1600;      | 1200;      | 152.415;      | 119.917;      | 268.250;    | 8;             | 1600 x 1200 | POSITIVE;       | NEGATIVE;        | 6.561;        | 5.965;        | 5.965;         | 0.596;         | 6.144;         | 0.000;         | 0.179;         | 0.119;         | 0.298;         | 0.000;         | 0.000;         | 0.000;         | 0.000;         | 0.000;         | 0.000;         | 0.000;         | 0.000;         | 0.000;         | 0.000;         |
| Ver Pixels  |            |            |               |               |             |                | 1200;      |                |                 |              |              |                |               |               |                |                |               |                |               |                |                |                |                |                |                |                |

**Definition of Terms:** Refer to section 3.2.
VESA MONITOR TIMING STANDARD

Adopted: 10/24/04
Resolution: 1680 x 1050 at 60 Hz (non-interlaced) REDUCED BLANKING
EDID ID: DMT ID: 39h; STD 2 Byte Code: n/a; CVT 3 Byte Code: (0C, 28, 21)h
Method: CVT Reduced Blanking

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1680 x 1050 @ 60Hz CVT (Reduced Blanking):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1680; // Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1050; // Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>64.674; // kHz = 15.5 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.883; // Hz = 16.7 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>119.000; // MHz = 8.4 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; // Pixels = 67.2 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; // H Phase = 0.9 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; // HBlank = 8.7% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE // VBlank = 2.8% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>15.462; // (usec) = 230 chars = 1840 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>14.118; // (usec) = 210 chars = 1680 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>14.118; // (usec) = 210 chars = 1680 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>1.345; // (usec) = 20 chars = 160 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>14.521; // (usec) = 216 chars = 1728 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.403; // (usec) = 6 chars = 48 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.269; // (usec) = 4 chars = 32 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>0.672; // (usec) = 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.699; // (msec) = 1080 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.235; // (msec) = 1050 lines = 0.5</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.235; // (msec) = 1050 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.464; // (msec) = 30 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.282; // (msec) = 1053 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; // (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.046; // (msec) = 3 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.093; // (msec) = 6 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.325; // (msec) = 21 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; // (msec) = 0 lines</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.2.
**VESAMONITOR TIMING STANDARD**

Adopted: 10/24/04
Resolution: 1680 x 1050 at 60 Hz (non-interlaced)
EDID ID: DMT ID: 3Ah; STD 2 Byte Code: (B3, 00)h; CVT 3 Byte Code: (0C, 28, 28)h
Method: CVT Compliant

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>= 1680 x 1050 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>= 1680;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>= 1050;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>= 65.290;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>= 59.954;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>= 146.250;</td>
</tr>
<tr>
<td>Character Width</td>
<td>= 8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>= NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>= NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>= POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>= 15.316;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>= 11.487;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>= 11.487;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>= 3.829;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>= 12.198;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>= 0.711;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>= 1.203;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>= 1.915;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>= 16.679;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>= 16.082;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>= 16.082;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>= 0.597;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>= 16.128;</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>= 0.046;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>= 0.092;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>= 0.459;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>= 0.000;</td>
</tr>
<tr>
<td>Ver Blank</td>
<td>= 25.0% of HTotal</td>
</tr>
<tr>
<td>Ver Blank</td>
<td>= 3.6% of VTotal</td>
</tr>
<tr>
<td>HBlank</td>
<td>= 280 chars = 2240 Pixels</td>
</tr>
<tr>
<td>VBlank</td>
<td>= 210 chars = 1680 Pixels</td>
</tr>
<tr>
<td>VBlank</td>
<td>= 210 chars = 1680 Pixels</td>
</tr>
<tr>
<td>VBlank</td>
<td>= 70 chars = 560 Pixels</td>
</tr>
<tr>
<td>VBlank</td>
<td>= 223 chars = 1784 Pixels</td>
</tr>
<tr>
<td>HPhase</td>
<td>= 3.9 %</td>
</tr>
<tr>
<td>HTotal</td>
<td>= 1089 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>VTotal</td>
<td>= 1050 lines = 3.14</td>
</tr>
<tr>
<td>VBlank</td>
<td>= 39 lines</td>
</tr>
<tr>
<td>VBlank</td>
<td>= 1053 lines</td>
</tr>
<tr>
<td>VBlank</td>
<td>= 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>VBlank</td>
<td>= 22 chars = 176 Pixels</td>
</tr>
<tr>
<td>VBlank</td>
<td>= 35 chars = 280 Pixels</td>
</tr>
<tr>
<td>VBlank</td>
<td>= 0 chars = 0 Pixels</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.4.
VESA MONITOR TIMING STANDARD

Adopted: 10/24/04
Resolution: 1680 x 1050 at 75 Hz (non-interlaced)
EDID ID: DMT ID: 3Bh; STD 2 Byte Code: (B3, 0F)h; CVT 3 Byte Code: (0C, 28, 44)h
Method: CVT Compliant

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1680 x 1050 @ 75Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1680; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1050; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>82.306; kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>74.892; Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>187.000; MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE; HBlank = 26.1% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; VBlank = 4.5% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>12.150; (usec)</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>8.984; (usec)</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>9.626; (usec)</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>3.166; (usec)</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>0.941; (usec)</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.642; (usec)</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.583; (usec)</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>13.353; (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>12.757; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>12.757; (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.595; (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>12.794; (msec)</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>13.353; (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>12.757; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>12.757; (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.595; (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>12.794; (msec)</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec)</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.036; (msec)</td>
</tr>
<tr>
<td>// V Sync Time</td>
<td>0.073; (msec)</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.486; (msec)</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec)</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.4.
**VESAMONITOR TIMING STANDARD**

Adopted: 10/24/04  
Resolution: 1680 x 1050 at 85 Hz (non-interlaced)  
EDID ID: DMT ID: 3Ch; STD 2 Byte Code: (B3, 19)h; CVT 3 Byte Code: (0C, 28, 68)h  
Method: CVT Compliant

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>1680 x 1050 @ 85Hz;</td>
</tr>
<tr>
<td>Hor Pixels</td>
<td>1680;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1050;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>93.859 kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>84.941 Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>214.750 MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>10.654;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>7.823;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>7.823;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>2.831;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>8.419;</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.596;</td>
</tr>
<tr>
<td>// H Sync Time</td>
<td>0.820;</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>1.416;</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>11.773;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>11.187;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>11.187;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.586;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>11.219;</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.032;</td>
</tr>
<tr>
<td>// V Sync Time</td>
<td>0.064;</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.490;</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

| Hor Sync Polarity    | NEGATIVE // HBlank = 26.6% of HTotal |
| Ver Sync Polarity    | POSITIVE // VBlank = 5.0% of VTotal |
| Hor Total Time       | 286 chars = 2288 Pixels |
| Hor Addr Time        | 210 chars = 1680 Pixels |
| Hor Blank Start      | 210 chars = 1680 Pixels |
| Hor Blank Time       | 76 chars = 608 Pixels |
| Hor Sync Start       | 226 chars = 1808 Pixels |
| // H Right Border    | 0 chars = 0 Pixels |
| // H Front Porch     | 16 chars = 128 Pixels |
| // H Sync Time       | 22 chars = 176 Pixels |
| // H Back Porch      | 38 chars = 304 Pixels |
| // H Left Border     | 0 chars = 0 Pixels |
| Ver Total Time       | 1105 lines HT – (1.06xHA) |
| Ver Addr Time        | 1050 lines = 2.36 |
| Ver Blank Start      | 1050 lines |
| Ver Blank Time       | 55 lines |
| Ver Sync Start       | 1053 lines |
| // V Bottom Border   | 0 lines |
| // V Front Porch     | 3 lines |
| // V Sync Time       | 6 lines |
| // V Back Porch      | 46 lines |
| // V Top Border      | 0 lines |

**Definition of Terms:** Refer to section 3.4.
Adopted: 5/1/07  
Resolution: 1680 x 1050 at 120 Hz (non-interlaced) **REduced Blanking**  
EDID ID: DMT ID: 3Dh; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a  
Method: Generated using CVT (Reduced Blanking) Formula

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1680; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1050; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>133.424; kHz = 7.5 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>119.986; Hz = 8.3 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>245.500; MHZ = 4.1 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; Pixels = 32.6 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; H Phase = 0.9 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; HBlank = 8.7% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE; VBlank = 5.6% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>7.495; (usec) = 230 chars = 1840 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>6.843; (usec) = 210 chars = 1680 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>6.843; (usec) = 210 chars = 1680 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>0.652; (usec) = 20 chars = 160 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>7.039; (usec) = 216 chars = 1728 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.196; (usec) = 6 chars = 48 Pixels</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>0.130; (usec) = 4 chars = 32 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>0.326; (usec) = 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>8.334; (msec) = 1112 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>7.870; (msec) = 1050 lines = 0.24</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>7.870; (msec) = 1050 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.465; (msec) = 62 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>7.892; (msec) = 1053 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.022; (msec) = 3 lines</td>
</tr>
<tr>
<td>// Ver Sync Time</td>
<td>0.045; (msec) = 6 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.397; (msec) = 53 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.2.
**VESA MONITOR TIMING STANDARD**

Adopted: 9/17/98
Resolution: 1792 x 1344 at 60 Hz (non-interlaced)
EDID ID: DMT ID: 3Eh; STD 2 Byte Code: (C1, 40)h; CVT 3 Byte Code: n/a
Method: *** NOT CVT COMPLIANT ***

**Detailed Timing Parameters**

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1792 x 1344 @ 60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1792;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1344;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>83.640;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.000;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>204.750;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>11.956;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>8.752;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>8.752;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>3.204;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>9.377;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.667;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.069;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.069;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.598;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.081;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.625;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.977;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>1.602;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.667;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.069;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.069;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.598;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.081;</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.012;</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>0.036;</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.012;</td>
</tr>
<tr>
<td>// Ver Sync Time</td>
<td>0.036;</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.550;</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.4.
## VESA MONITOR TIMING STANDARD

**Adopted:** 9/17/98  
**Resolution:** 1792 x 1344 at 75 Hz (non-interlaced)  
**EDID ID:** DMT ID: 3Fh; STD 2 Byte Code: (C1, 4F)h; CVT 3 Byte Code: n/a  
**Method:** *** NOT CVT COMPLIANT ***

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1792 x 1344 @ 75Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1792; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1344; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>106.270 kHz; 9.4 usec/line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>74.997 Hz; 13.3 msec/frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>261.000 MHz; 3.8 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; 30.7 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; H Phase = 5.2%</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE; 27.0% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; 5.2% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>9.410; 307 chars = 2456 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>6.866; 224 chars = 1792 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>6.866; 224 chars = 1792 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>2.544; 83 chars = 664 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>7.234; 236 chars = 1888 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.368; 12 chars = 96 Pixels</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>0.828; 27 chars = 216 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>1.349; 44 chars = 352 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>13.334; 1417 lines = (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>12.647; 1344 lines = 2.13</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>12.647; 1344 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.687; 73 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>12.656; 1345 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.009; 1 lines</td>
</tr>
<tr>
<td>// Ver Sync Time</td>
<td>0.028; 3 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.649; 69 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; 0 lines</td>
</tr>
</tbody>
</table>

### Definition of Terms:
Refer to section 3.4.
**Detailed Timing Parameters**

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1792 x 1344 @ 120Hz CVT (Reduced Blanking);</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1792;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1344;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>170.722;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>119.974;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>333.250;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>5.857;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>5.377;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>5.377;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>0.480;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>5.521;</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.144;</td>
</tr>
<tr>
<td>// H Sync Time</td>
<td>0.096;</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>0.240;</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>8.335;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>7.872;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>7.872;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.463;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>7.890;</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.018;</td>
</tr>
<tr>
<td>// V Sync Time</td>
<td>0.023;</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.422;</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.2.
**VESAT MNNON TIRING FNADTANDARD**

Adopted: 9/17/98  
Resolution: 1856 x 1392 at 60 Hz (non-interlaced)  
EDID ID: DMT ID: 41h; STD 2 Byte Code: (C9, 40)h; CVT 3 Byte Code: n/a  
Method: *** NOT CVT COMPLIANT ***

**Detailed Timing Parameters**

| Timing Name          | Hor Pixels = 1856;  
|                      | Ver Pixels = 1392;  
| Hor Frequency = 86.333; kHz = 11.6 usec / line  
| Ver Frequency = 59.995; Hz = 16.7 msec / frame  
| Pixel Clock = 218.250; MHz = 4.6 nsec ± 0.5%  
| Character Width = 8; Pixels = 36.7 nsec  
| Scan Type = NONINTERLaced;  
| Hor Sync Polarity = NEGATIVE; HBlank = 26.6% of HTotal  
| Ver Sync Polarity = POSITIVE; VBlank = 3.3% of VTotal  
| Hor Total Time = 11.583; (usec) = 316 chars = 2528 Pixels  
| Hor Addr Time = 8.504; (usec) = 232 chars = 1856 Pixels  
| Hor Blank Start = 8.504; (usec) = 232 chars = 1856 Pixels  
| Hor Blank Time = 3.079; (usec) = 84 chars = 672 Pixels  
| Hor Sync Start = 8.944; (usec) = 244 chars = 1952 Pixels  
| // H Right Border = 0.000; (usec) = 0 chars = 0 Pixels  
| // H Front Porch = 0.440; (usec) = 12 chars = 96 Pixels  
| // Hor Sync Time = 1.026; (usec) = 28 chars = 224 Pixels  
| // H Back Porch = 1.613; (usec) = 44 chars = 352 Pixels  
| // H Left Border = 0.000; (usec) = 0 chars = 0 Pixels  
| Ver Total Time = 16.668; (msec) = 1439 lines HT – (1.06xHA)  
| Ver Addr Time = 16.124; (msec) = 1392 lines = 2.57  
| Ver Blank Start = 16.124; (msec) = 1392 lines  
| Ver Blank Time = 0.544; (msec) = 47 lines  
| Ver Sync Start = 16.135; (msec) = 1393 lines  
| // V Bottom Border = 0.000; (msec) = 0 lines  
| // V Front Porch = 0.012; (msec) = 1 lines  
| Ver Sync Time = 0.035; (msec) = 3 lines  
| // V Back Porch = 0.498; (msec) = 43 lines  
| // V Top Border = 0.000; (msec) = 0 lines  

**Definition of Terms:** Refer to section 3.4.
VESA MONITOR TIMING STANDARD

Adopted: 9/17/98
Resolution: 1856 x 1392 at 75 Hz (non-interlaced)
EDID ID: DMT ID: 42h; STD 2 Byte Code: (C9, 4F)h; CVT 3 Byte Code: n/a
Method: *** NOT CVT COMPLIANT ***

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1856 x 1392 @ 75Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1856;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1392;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>112.500;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>75.000;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>288.000;</td>
</tr>
<tr>
<td>Character Width</td>
<td>n/a</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>8.889;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>6.444;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>6.444;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>2.444;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>6.889;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>13.333;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>12.373;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>12.373;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.960;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>12.382;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.009;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.027;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.924;</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>27.5% of HTotal</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>7.2% of VTotal</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>108 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>1393 lines</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.444;</td>
</tr>
<tr>
<td>// H Sync Time</td>
<td>0.778;</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>1.222;</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.009;</td>
</tr>
<tr>
<td>// V Sync Time</td>
<td>0.027;</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.924;</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.4.
### VESA MONITOR TIMING STANDARD

**Adopted:** 5/1/07  
**Resolution:** 1856 x 1392 at 120 Hz (non-interlaced)  
**EDID ID:** DMT ID: 43h; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a  
**Method:** Generated using CVT (Reduced Blanking) Formula

#### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1856 x 1392 @ 120Hz CVT (Reduced Blanking);</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1856;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1392;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>176.835;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>119.970;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>356.500;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>5.655; (usec) = 252 chars = 2016 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>5.206; (usec) = 232 chars = 1856 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>0.449; (usec) = 20 chars = 160 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>0.341; (usec) = 238 chars = 1904 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>8.335; (msec) = 1474 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>7.872; (msec) = 1392 lines = 0.14</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>7.872; (msec) = 1392 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.464; (msec) = 82 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>7.889; (msec) = 1395 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.017; (msec) = 3 lines</td>
</tr>
<tr>
<td>// V Sync Time</td>
<td>0.023; (msec) = 4 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.424; (msec) = 75 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.2.
## VESA MONITOR TIMING STANDARD

Adopted: Nov. 30, 2007
Resolution: 1920 x 1080 at 60 Hz (non-interlaced)
EDID ID: DMT ID: 52h; STD 2 Byte Code: (D1, C0)h; CVT 3 Byte Code: n/a
Method: **NOT CVT COMPLIANT**
Per CEA-861 --- 1080p (Code 16) Timing Definition

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1920 x 1080 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1920; // Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1080; // Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>67.500; // kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.000; // Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>148.500; // MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>4; // Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; // H Phase = 1.4 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE // HBlank = 12.7% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE // VBlank = 4.0% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>14.815; // (usec)</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>12.929; // (usec)</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>12.929; // (usec)</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>1.886; // (usec)</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>13.522; // (usec)</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; // (usec)</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.593; // (usec)</td>
</tr>
<tr>
<td>// H Sync Time</td>
<td>0.296; // (usec)</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>0.997; // (usec)</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; // (usec)</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.667; // (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.000; // (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.000; // (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.667; // (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.059; // (msec)</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; // (msec)</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.059; // (msec)</td>
</tr>
<tr>
<td>// V Sync Time</td>
<td>0.074; // (msec)</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.533; // (msec)</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; // (msec)</td>
</tr>
</tbody>
</table>

### Definition of Terms:
Refer to section 3.1
Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1920;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1200;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>74.038;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.950;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>154.000;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>13.506;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>12.468;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>12.468;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>1.039;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>12.779;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.312;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.208;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>0.519;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.681;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.208;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.208;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.473;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.248;</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.041;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.081;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.351;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.2.
VESA MONITOR TIMING STANDARD

Adopted: 8/21/03
Resolution: 1920 x 1200 at 60 Hz (non-interlaced)
EDID ID: DMT ID: 45h; STD 2 Byte Code: (D1, 00)h; CVT 3 Byte Code: (57, 28, 28)h
Method: CVT Compliant

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1920 x 1200 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1920;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1200;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>74.556;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.885;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>193.250;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>13.413;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>9.935;</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>9.935;</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>3.477;</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>10.639;</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.704;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>1.035;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>1.739;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.699;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.095;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.095;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.604;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.135;</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.040;</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.080;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.483;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

| Hor Blank          | 25.9% of HTotal     |
| Ver Blank          | 3.6% of VTotal      |
| H Phase            | 3.9%                |
| HBlank             | 2592 Pixels         |
| VBlank             | 2056 Pixels         |
| 1200 lines         |
| 2.88               |
| 3 lines            |
| 6 lines            |
| 36 lines           |
| 0 lines            |
| 0 pixels           |
| 0 pixels           |
| 0 pixels           |
| 0 pixels           |

Definition of Terms: Refer to section 3.4.
**Resolution:** 1920 x 1200 at 75 Hz (non-interlaced)

**EDID ID:** DMT ID: 46h; STD 2 Byte Code: (D1, 0F)h; CVT 3 Byte Code: (57, 28, 44)h

**Method:** CVT Compliant

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>1920 x 1200 @ 75Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1920;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1200;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>94.038;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>74.930;</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>245.250;</td>
</tr>
<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>10.634;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>7.829;</td>
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<tr>
<td>Hor Blank Start</td>
<td>7.829;</td>
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<td>Hor Blank Time</td>
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<td>0.000;</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.555;</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.848;</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>1.403;</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>13.346;</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>12.761;</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>12.761;</td>
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<tr>
<td>Ver Blank Time</td>
<td>0.585;</td>
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<tr>
<td>Ver Sync Start</td>
<td>12.793;</td>
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<tr>
<td>Ver Right Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.032;</td>
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<tr>
<td>Ver Sync Time</td>
<td>0.064;</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.489;</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.4.
**VESAT Monitor Timing Standard**

Adopted: 8/21/03
Resolution: 1920 x 1200 at 85 Hz (non-interlaced)
EDID ID: DMT ID: 47h; STD 2 Byte Code: (D1, 19)h; CVT 3 Byte Code: (57, 28, 62)h
Method: CVT Compliant

### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>1920;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1200;</td>
</tr>
<tr>
<td>Hor Frequency</td>
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</tr>
<tr>
<td>Ver Frequency</td>
<td>84.932;</td>
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<td>Pixel Clock</td>
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<tr>
<td>Character Width</td>
<td>8;</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>9.330;</td>
</tr>
<tr>
<td>Hor Addr Time</td>
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<td>Hor Blank Start</td>
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<td>7.339;</td>
</tr>
<tr>
<td>Ver Total Time</td>
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<tr>
<td>Ver Addr Time</td>
<td>11.196;</td>
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<tr>
<td>Ver Blank Start</td>
<td>11.196;</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.578;</td>
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</tr>
<tr>
<td>Ver Blank Start</td>
<td>11.196;</td>
</tr>
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<tr>
<td>Hor Sync Polarity</td>
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</table>
### VESA MONITOR TIMING STANDARD

Adopted: 5/1/07  
Resolution: 1920 x 1200 at 120 Hz (non-interlaced) **REDUCED BLANKING**  
EDID ID: DMT ID: 48h; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a  
Method: Generated using CVT (Reduced Blanking) Formula

#### Detailed Timing Parameters

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<thead>
<tr>
<th>Timing Name</th>
<th>Value</th>
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</thead>
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<td>Hor Pixels</td>
<td>1920;</td>
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<tr>
<td>Ver Pixels</td>
<td>1200;</td>
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<tr>
<td>Hor Frequency</td>
<td>152.404;</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>119.909;</td>
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<tr>
<td>Pixel Clock</td>
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</tr>
<tr>
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</tr>
<tr>
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</tr>
<tr>
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<td>POSITIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>6.562;</td>
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<tr>
<td>Hor Addr Time</td>
<td>6.057;</td>
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<tr>
<td>Hor Blank Start</td>
<td>0.505;</td>
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<td>6.208;</td>
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<tr>
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<tr>
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<td>Ver Blank Time</td>
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<td>0.039;</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Horisonal**  
- H Phase = 0.8%  
- H Blank = 7.7% of HTotal  
- H Blank = 20 chars = 160 Pixels  
- H Sync Start = 246 chars = 1968 Pixels  
- H Right Border = 0 chars = 0 Pixels  
- H Front Porch = 6 chars = 48 Pixels  
- H Back Porch = 10 chars = 80 Pixels  
- H Left Border = 0 chars = 0 Pixels  

**Vertical**  
- V Blank = 5.6% of VTotal  
- V Blank = 71 lines  
- V Back Porch = 6 lines  
- V Top Border = 0 lines

**Definition of Terms:** Refer to section 3.2.
**VESAL MONITOR TIMING STANDARD**

Adopted: 9/17/98  
Resolution: 1920 x 1440 at 60 Hz (non-interlaced)  
EDID ID: DMT ID: 49h; STD 2 Byte Code: (D1, 40)h; CVT 3 Byte Code: n/a  
Method: *** NOT CVT COMPLIANT ***

**Detailed Timing Parameters**

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</tr>
</thead>
<tbody>
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<td>Hor Pixels</td>
<td>1920; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1440; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>90.000; kHz = 11.1 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.000; Hz = 16.7 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>234.000; MHz = 4.3 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>234.000; Pixels = 34.2 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
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</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE; HBlank = 26.2% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; VBlank = 4.0% of VTotall</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>11.111; (usec) = 325 chars = 2600 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>8.205; (usec) = 240 chars = 1920 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>8.205; (usec) = 240 chars = 1920 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>2.906; (usec) = 85 chars = 680 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>8.752; (usec) = 256 chars = 2048 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.547; (usec) = 16 chars = 128 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.889; (usec) = 26 chars = 208 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>1.470; (usec) = 43 chars = 344 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.667; (msec) = 1500 lines HT – (1.06xHA)</td>
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<td>16.000; (msec) = 1440 lines = 2.41</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.000; (msec) = 1440 lines</td>
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<tr>
<td>Ver Blank Time</td>
<td>0.667; (msec) = 60 lines</td>
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<tr>
<td>Ver Sync Start</td>
<td>16.011; (msec) = 1441 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.011; (msec) = 1 lines</td>
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<td>Ver Sync Time</td>
<td>0.033; (msec) = 3 lines</td>
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<tr>
<td>// V Back Porch</td>
<td>0.622; (msec) = 56 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; (msec) = 0 lines</td>
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**Definition of Terms:** Refer to section 3.4.
**VESA MONITOR TIMING STANDARD**

Adopted: 9/17/98
Resolution: 1920 x 1440 at 75 Hz (non-interlaced)
EDID ID: DMT ID: 4Ah; STD 2 Byte Code: (D1, 4F)h; CVT 3 Byte Code: n/a
Method: *** NOT CVT COMPLIANT ***

Detailed Timing Parameters

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<td>Ver Sync Polarity</td>
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<tr>
<td>// H Front Porch</td>
<td>0.485;</td>
</tr>
<tr>
<td>// Hor Sync Time</td>
<td>0.754;</td>
</tr>
<tr>
<td>// Hor Back Porch</td>
<td>1.185;</td>
</tr>
<tr>
<td>// Hor Left Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000;</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.009;</td>
</tr>
<tr>
<td>// Ver Sync Time</td>
<td>0.027;</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.498;</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000;</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.4.
Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution: 1920 x 1440 at 120 Hz (non-interlaced) REDUCED BLANKING</td>
<td>Generated using CVT (Reduced Blanking) Formula</td>
</tr>
<tr>
<td>Hor Pixels = 1920; Ver Pixels = 1440;</td>
<td>Pixels Lines</td>
</tr>
<tr>
<td>Hor Frequency = 182.933; Ver Frequency = 119.956;</td>
<td>kHz Hz 5.5 usec 8.3 msec</td>
</tr>
<tr>
<td>Pixel Clock = 380.500;</td>
<td>MHZ 2.6 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width = 8;</td>
<td>Pixels 21.0 nsec</td>
</tr>
<tr>
<td>Scan Type = NONINTERLACED;</td>
<td>H Phase 0.8%</td>
</tr>
<tr>
<td>Hor Sync Polarity = POSITIVE;</td>
<td>HBlank 7.7% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity = NEGATIVE;</td>
<td>VBlank 5.6% of VTTotal</td>
</tr>
<tr>
<td>Hor Total Time = 5.466;</td>
<td>(usec) 260 chars 2080 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time = 5.046;</td>
<td>(usec) 240 chars 1920 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time = 0.420;</td>
<td>(usec) 20 chars 160 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start = 5.172;</td>
<td>(usec) 246 chars 1968 Pixels</td>
</tr>
<tr>
<td>Hor Right Border = 0.000;</td>
<td>(usec) 0 chars 0 Pixels</td>
</tr>
<tr>
<td>Hor Front Porch = 0.126;</td>
<td>(usec) 6 chars 48 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time = 0.084;</td>
<td>(usec) 4 chars 32 Pixels</td>
</tr>
<tr>
<td>Hor Back Porch = 0.210;</td>
<td>(usec) 10 chars 80 Pixels</td>
</tr>
<tr>
<td>Hor Left Border = 0.000;</td>
<td>(usec) 0 chars 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time = 8.336;</td>
<td>(msec) 1525 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time = 7.872;</td>
<td>(msec) 1440 lines</td>
</tr>
<tr>
<td>Ver Blank Time = 0.465;</td>
<td>(msec) 85 lines</td>
</tr>
<tr>
<td>Ver Sync Start = 7.888;</td>
<td>(msec) 1443 lines</td>
</tr>
<tr>
<td>Ver Bottom Border = 0.000;</td>
<td>(msec) 0 lines</td>
</tr>
<tr>
<td>Ver Front Porch = 0.016;</td>
<td>(msec) 3 lines</td>
</tr>
<tr>
<td>Ver Sync Time = 0.022;</td>
<td>(msec) 4 lines</td>
</tr>
<tr>
<td>Ver Back Porch = 0.426;</td>
<td>(msec) 78 lines</td>
</tr>
<tr>
<td>Ver Top Border = 0.000;</td>
<td>(msec) 0 lines</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.2.
**Detailed Timing Parameters**

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>2048 x 1152 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>2048;</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1152;</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>72.000; KHz = 13.9 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>60.000; Hz = 16.7 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>162.000; MHZ = 6.2 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>1; Pixels = 6.2 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; H Phase = 1.6 %</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; HBlank = 9.0% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; VBlank = 4.0% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>13.889; (usec) = 2250 chars = 2250 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>12.642; (usec) = 2048 chars = 2048 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>1.247; (usec) = 202 chars = 202 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>12.802; (usec) = 2074 chars = 2074 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.667; (msec) = 1200 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.000; (msec) = 1152 lines = 0.49</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.000; (msec) = 1152 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.667; (msec) = 48 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.014; (msec) = 1153 lines</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.160; (usec) = 26 chars = 26 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.494; (usec) = 80 chars = 80 Pixels</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>0.593; (usec) = 96 chars = 96 Pixels</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000; (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.014; (msec) = 1 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.042; (msec) = 3 lines</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>0.611; (msec) = 44 lines</td>
</tr>
<tr>
<td>Hor Top Border</td>
<td>0.000; (msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to Section 3.1
VESA Display Monitor Timing Standard

Adopted: 5/1/07
Resolution: 2560 x 1600 at 60 Hz (non-interlaced) REDUCED BLANKING
EDID ID: DMT ID: 4Ch; STD 2 Byte Code: n/a; CVT 3 Byte Code: (1F, 38, 21)h
Method: CVT Compliant

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>2560 x 1600 @ 60Hz CVT (Reduced Blanking);</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>2560; // Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1600; // Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>98.713; // kHz = 10.1 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.972; // Hz = 16.7 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>268.500; // MHz = 3.7 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; // Pixels = 29.8 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; // H Phase = 0.6%</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>POSITIVE; // HBlank = 5.9% of HTotal</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>NEGATIVE; // VBlank = 2.8% of VTotal</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>10.130; // (usec) = 340 chars = 2720 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>9.534; // (usec) = 320 chars = 2560 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>9.534; // (usec) = 320 chars = 2560 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>0.596; // (usec) = 20 chars = 160 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>9.713; // (usec) = 326 chars = 2608 Pixels</td>
</tr>
<tr>
<td>// H Right Border</td>
<td>0.000; // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>// H Front Porch</td>
<td>0.179; // (usec) = 6 chars = 48 Pixels</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.119; // (usec) = 4 chars = 32 Pixels</td>
</tr>
<tr>
<td>// H Back Porch</td>
<td>0.298; // (usec) = 10 chars = 80 Pixels</td>
</tr>
<tr>
<td>// H Left Border</td>
<td>0.000; // (usec) = 0 chars = 0 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.675; // (msec) = 1646 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.209; // (msec) = 1600 lines = 0.02</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.209; // (msec) = 1600 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.466; // (msec) = 46 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.239; // (msec) = 1603 lines</td>
</tr>
<tr>
<td>// V Bottom Border</td>
<td>0.000; // (msec) = 0 lines</td>
</tr>
<tr>
<td>// V Front Porch</td>
<td>0.030; // (msec) = 3 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.061; // (msec) = 6 lines</td>
</tr>
<tr>
<td>// V Back Porch</td>
<td>0.375; // (msec) = 37 lines</td>
</tr>
<tr>
<td>// V Top Border</td>
<td>0.000; // (msec) = 0 lines</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.2.
VESA MONITOR TIMING STANDARD

Adopted: 5/1/07
Resolution: 2560 x 1600 at 60 Hz (non-interlaced)
EDID ID: DMT ID: 4Dh; STD 2 Byte Code: n/a; CVT 3 Byte Code: (1F, 38, 28)h
Method: CVT Compliant

Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>2560 x 1600 @ 60Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>2560; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1600; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>99.458; kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>59.987; Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>348.500; MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>348.500; MHz</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE;</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>10.055; (usec)</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>7.346; (usec)</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>7.346; (usec)</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>2.709; (usec)</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>7.897; (usec)</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.551; (usec)</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.803; (usec)</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>1.354; (usec)</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>16.670; (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>16.087; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>16.087; (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.583; (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>16.117; (msec)</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000; (msec)</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.030; (msec)</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.060; (msec)</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.493; (msec)</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000; (msec)</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.4.
### VESA MONITOR TIMING STANDARD

**Adopted:** 5/1/07  
**Resolution:** 2560 x 1600 at 75 Hz (non-interlaced)  
**EDID ID:** DMT ID: 4Eh; STD 2 Byte Code: n/a; CVT 3 Byte Code: (1F, 38, 44)h  
**Method:** CVT Compliant

#### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>Values</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2560 x 1600 @ 75Hz;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hor Pixels</td>
<td>2560</td>
<td>// Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1600</td>
<td>// Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>125.354</td>
<td>// kHz = 8.0 usec / line</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>74.972</td>
<td>// Hz = 13.3 msec / frame</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>443.250</td>
<td>// MHz = 2.3 nsec ± 0.5%</td>
</tr>
<tr>
<td>Character Width</td>
<td>8</td>
<td>// Pixels = 18.0 nsec</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED; // H Phase = 4.0 %</td>
<td></td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE // HBlank = 27.6% of HTotal</td>
<td></td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE; // VBlank = 4.3% of VTotal</td>
<td></td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>7.977</td>
<td>// (usec) = 442 chars = 3536 Pixels</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>5.776</td>
<td>// (usec) = 320 chars = 2560 Pixels</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>5.776</td>
<td>// (usec) = 320 chars = 2560 Pixels</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>2.202</td>
<td>// (usec) = 122 chars = 976 Pixels</td>
</tr>
<tr>
<td>Hor Sync Start</td>
<td>6.245</td>
<td>// (usec) = 346 chars = 2768 Pixels</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>13.338</td>
<td>// (msec) = 1672 lines HT – (1.06xHA)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>12.764</td>
<td>// (msec) = 1600 lines = 1.86</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>12.764</td>
<td>// (msec) = 1600 lines</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.574</td>
<td>// (msec) = 72 lines</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>12.788</td>
<td>// (msec) = 1603 lines</td>
</tr>
<tr>
<td>V Bottom Border</td>
<td>0.000</td>
<td>// (msec) = 0 lines</td>
</tr>
<tr>
<td>V Front Porch</td>
<td>0.024</td>
<td>// (msec) = 3 lines</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.048</td>
<td>// (msec) = 6 lines</td>
</tr>
<tr>
<td>V Back Porch</td>
<td>0.503</td>
<td>// (msec) = 63 lines</td>
</tr>
<tr>
<td>V Top Border</td>
<td>0.000</td>
<td>// (msec) = 0 lines</td>
</tr>
</tbody>
</table>

**Definition of Terms:** Refer to section 3.4.
Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Timing Name</th>
<th>2560 x 1600 @ 85Hz;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hor Pixels</td>
<td>2560; Pixels</td>
</tr>
<tr>
<td>Ver Pixels</td>
<td>1600; Lines</td>
</tr>
<tr>
<td>Hor Frequency</td>
<td>142.887; kHz</td>
</tr>
<tr>
<td>Ver Frequency</td>
<td>84.951; Hz</td>
</tr>
<tr>
<td>Pixel Clock</td>
<td>505.250; MHz</td>
</tr>
<tr>
<td>Character Width</td>
<td>8; Pixels</td>
</tr>
<tr>
<td>Scan Type</td>
<td>NONINTERLACED;</td>
</tr>
<tr>
<td>Hor Sync Polarity</td>
<td>NEGATIVE</td>
</tr>
<tr>
<td>Ver Sync Polarity</td>
<td>POSITIVE;</td>
</tr>
<tr>
<td>Hor Total Time</td>
<td>6.999; (usec)</td>
</tr>
<tr>
<td>Hor Addr Time</td>
<td>5.067; (usec)</td>
</tr>
<tr>
<td>Hor Blank Start</td>
<td>1.932; (usec)</td>
</tr>
<tr>
<td>Hor Blank Time</td>
<td>5.478; (usec)</td>
</tr>
<tr>
<td>Hor Right Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>Hor Front Porch</td>
<td>0.412; (usec)</td>
</tr>
<tr>
<td>Hor Sync Time</td>
<td>0.554; (usec)</td>
</tr>
<tr>
<td>Hor Back Porch</td>
<td>0.966; (usec)</td>
</tr>
<tr>
<td>Hor Left Border</td>
<td>0.000; (usec)</td>
</tr>
<tr>
<td>Ver Total Time</td>
<td>11.772; (msec)</td>
</tr>
<tr>
<td>Ver Addr Time</td>
<td>11.198; (msec)</td>
</tr>
<tr>
<td>Ver Blank Start</td>
<td>11.198; (msec)</td>
</tr>
<tr>
<td>Ver Blank Time</td>
<td>0.574; (msec)</td>
</tr>
<tr>
<td>Ver Sync Start</td>
<td>11.219; (msec)</td>
</tr>
<tr>
<td>Ver Bottom Border</td>
<td>0.000; (msec)</td>
</tr>
<tr>
<td>Ver Front Porch</td>
<td>0.021; (msec)</td>
</tr>
<tr>
<td>Ver Sync Time</td>
<td>0.042; (msec)</td>
</tr>
<tr>
<td>Ver Back Porch</td>
<td>0.511; (msec)</td>
</tr>
<tr>
<td>Ver Top Border</td>
<td>0.000; (msec)</td>
</tr>
</tbody>
</table>

Definition of Terms: Refer to section 3.4.
### Detailed Timing Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>2560 x 1600 at 120 Hz (non-interlaced) R<strong>EDUCED BLANKING</strong></td>
</tr>
<tr>
<td>EDID ID</td>
<td>DMT ID: 50h; STD 2 Byte Code: n/a; CVT 3 Byte Code: n/a</td>
</tr>
<tr>
<td>Method</td>
<td>Generated using CVT (Reduced Blanking) Formula</td>
</tr>
</tbody>
</table>

**Timings**: 2560 x 1600 @ 120Hz CVT (Reduced Blanking);

- **Hor Pixels**: 2560; // Pixels
- **Ver Pixels**: 1600; // Lines
- **Hor Frequency**: 203.217; // kHz = 4.9 usec / line
- **Ver Frequency**: 119.963; // Hz = 8.3 msec / frame
- **Pixel Clock**: 552.750; // MHz = 1.8 nsec ± 0.5%
- **Character Width**: 8; // Pixels = 14.5 nsec
- **Scan Type**: NONINTERLACED; // H Phase = 0.6 %
- **Hor Sync Polarity**: POSITIVE; // HBlank = 5.9% of HTotal
- **Ver Sync Polarity**: NEGATIVE // VBlank = 5.5% of VTotal
- **Hor Total Time**: 4.921; // (usec) = 340 chars = 2720 Pixels
- **Hor Addr Time**: 4.631; // (usec) = 320 chars = 2560 Pixels
- **Hor Blank Start**: 4.631; // (usec) = 320 chars = 2560 Pixels
- **Hor Blank Time**: 0.289; // (usec) = 20 chars = 160 Pixels
- **Hor Sync Start**: 4.718; // (usec) = 326 chars = 2608 Pixels
- **Ver Total Time**: 8.336; // (msec) = 1694 lines HT – (1.06xHA)
- **Ver Addr Time**: 7.873; // (msec) = 1600 lines = 0.01
- **Ver Blank Start**: 7.873; // (msec) = 1600 lines
- **Ver Blank Time**: 0.463; // (msec) = 94 lines
- **Ver Sync Start**: 7.888; // (msec) = 1603 lines
- **// V Bottom Border**: 0.000; // (msec) = 0 lines
- **// V Front Porch**: 0.015; // (msec) = 3 lines
- **Ver Sync Time**: 0.030; // (msec) = 6 lines
- **// V Back Porch**: 0.418; // (msec) = 85 lines
- **// V Top Border**: 0.000; // (msec) = 0 lines

**Definition of Terms**: Refer to section 3.2.

End of the DMT Standard