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

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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 members that VESA is 'endorsing' these timing standards. Guideline 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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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, CTV 1280x768 timings, 1360x768@60 Hz, CTV 1400x1050 timings, & CTV 1920x1200 timings based on US & Japan workgroup requests.
Version 1.0 Revision 10	July 14, 2004	Added CTV 1.30MA (1440x900) & CTV 1.76MA (1680x1050) formats.
Version 1.0 Revision 11	May 1, 2007	Added several DMT CTV Reduced Blanking Timings, 1280x800@60/75/85 Hz timings, 2560x1600@60/75/85 Hz and DMT IDs.
Version 1.0 Revision 12	Nov. 17, 2008	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.
Version 1.0 Revision 13	Feb. 8, 2013	Added timing definitions for 4096x2160 @ 60Hz (Reduced Blanking v2) and 4096x2160 @ 59.94Hz (Reduced Blanking v2). 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.

**Table 1-1: Summary of Display Monitor Timings – Standards and Guidelines**

Pixel Format	Refresh Rate	Horizontal Frequency	Pixel Frequency	Standard Type	Original Document	Date
640 x 350	85 Hz	37.9 kHz	31.500 MHz	VESA Standard	VDMTPROP	3/1/96
640 x 400	85 Hz	37.9 kHz	31.500 MHz	VESA Standard	VDMTPROP	3/1/96
720 x 400	85 Hz	37.9 kHz	35.500 MHz	VESA Standard	VDMTPROP	3/1/96
640 x 480	60 Hz	31.5 kHz	25.175 MHz	Industry Standard	n/a	n/a
	72 Hz	37.9 kHz	31.500 MHz	VESA Standard	VS901101	12/2/92
	75 Hz	37.5 kHz	31.500 MHz	VESA Standard	VDMT75HZ	10/4/93
	85 Hz	43.3 kHz	36.000 MHz	VESA Standard	VDMTPROP	3/1/96
800 x 600	56 Hz	35.2 kHz	36.000 MHz	VESA Guidelines	VG900601	8/6/90
	60 Hz	37.9 kHz	40.000 MHz	VESA Guidelines	VG900602	8/6/90
	72 Hz	48.1 kHz	50.000 MHz	VESA Standard	VS900603A	8/6/90
	75 Hz	46.9 kHz	49.500 MHz	VESA Standard	VDMT75HZ	10/4/93
	85 Hz	53.7 kHz	56.250 MHz	VESA Standard	VDMTPROP	3/1/96
	120 Hz (RB)	76.3 kHz	73.250 MHz	CVT Red. Blanking	n/a	5/1/07
848 x 480	60 Hz	31.0 kHz	33.750 MHz	VESA Standard	AddDMT	3/4/03
1024 x 768	43 Hz (Int.)	35.5 kHz	44.900 MHz	Industry Standard	n/a	n/a
	60 Hz	48.4 kHz	65.000 MHz	VESA Guidelines	VG901101A	9/10/91
	70 Hz	56.5 kHz	75.000 MHz	VESA Standard	VS910801-2	8/9/91
	75 Hz	60.0 kHz	78.750 MHz	VESA Standard	VDMT75HZ	10/4/93
	85 Hz	68.7 kHz	94.500 MHz	VESA Standard	VDMTPROP	3/1/96
	120 Hz (RB)	97.6 kHz	115.500 MHz	CVT Red. Blanking	n/a	5/1/07
1152 x 864	75 Hz	67.5 kHz	108.000 MHz	VESA Standard	VDMTPROP	3/1/96
1280 x 720	60 Hz	45.0 kHz	74.250 MHz	CEA Standard	CEA-861	TBD
1280 x 768	60 Hz(RB)	47.4 kHz	68.250 MHz	CVT Red. Blanking	AddDMT	3/4/03
	60 Hz	47.8 kHz	79.500 MHz	CVT	AddDMT	3/4/03
	75 Hz	60.3 kHz	102.250 MHz	CVT	AddDMT	3/4/03
	85 Hz	68.6 kHz	117.500 MHz	CVT	AddDMT	3/4/03
	120 Hz (RB)	97.4 kHz	140.250 MHz	CVT Red. Blanking	n/a	5/1/07
1280 x 800	60 Hz(RB)	49.3 kHz	71.000 MHz	CVT Red. Blanking	CVT1.02MA-R	5/1/07
	60 Hz	49.7 kHz	83.500 MHz	CVT	CVT 1.02MA	5/1/07
	75 Hz	62.8 kHz	106.500 MHz	CVT	CVT 1.02MA	5/1/07
	85 Hz	71.6 kHz	122.500 MHz	CVT	CVT 1.02MA	5/1/07
	120 Hz (RB)	101.6 kHz	146.250 MHz	CVT Red. Blanking	n/a	5/1/07
1280 x 960	60 Hz	60.0 kHz	108.000 MHz	VESA Standard	VDMTPROP	3/1/96
	85 Hz	85.9 kHz	148.500 MHz	VESA Standard	VDMTPROP	3/1/96
	120 Hz (RB)	121.9 kHz	175.500 MHz	CVT Red. Blanking	n/a	5/1/07

<b>Pixel Format</b>	<b>Refresh Rate</b>	<b>Horizontal Frequency</b>	<b>Pixel Frequency</b>	<b>Standard Type</b>	<b>Original Document</b>	<b>Date</b>
1280 x 1024	60 Hz	64.0 kHz	108.000 MHz	VESA Standard	VDMTREV	12/18/96
	75 Hz	80.0 kHz	135.000 MHz	VESA Standard	VDMT75HZ	10/4/93
	85 Hz	91.1 kHz	157.500 MHz	VESA Standard	VDMTPROP	3/1/96
	120 Hz (RB)	130.0 kHz	187.250 MHz	CVT Red. Blanking	n/a	5/1/07
1360 x 768	60 Hz	47.7 kHz	85.500 MHz	VESA Standard	AddDMT	3/4/03
	120 Hz (RB)	97.5 kHz	148.250 MHz	CVT Red. Blanking	n/a	5/1/07
1366 x 768	60 Hz	47.7 kHz	85.500 MHz	VESA Standard	DMT Update	11/30/07
1366 x 768	60 Hz (RB)	48.0 kHz	72.000 MHz	VESA Standard	VDMTREV	11/17/08
1400 x 1050	60 Hz(RB)	64.7 kHz	101.000 MHz	CVT Red. Blanking	AddDMT	5/13/03
	60 Hz	65.3 kHz	121.750 MHz	CVT	AddDMT	3/4/03
	75 Hz	82.3 kHz	156.000 MHz	CVT	AddDMT	3/4/03
	85 Hz	93.9 kHz	179.500 MHz	CVT	AddDMT	3/4/03
	120 Hz (RB)	133.3 kHz	208.000 MHz	CVT Red. Blanking	n/a	5/1/07
1440 x 900	60 Hz(RB)	55.5 kHz	88.750 MHz	CVT Red. Blanking	CVT1.30MA-R	7/14/04
	60 Hz	55.9 kHz	106.500 MHz	CVT	CVT 1.30MA	7/14/04
	75 Hz	70.6 kHz	136.750 MHz	CVT	CVT 1.30MA	7/14/04
	85 Hz	80.4 kHz	157.000 MHz	CVT	CVT 1.30MA	7/14/04
	120 Hz (RB)	114.2 kHz	182.750 MHz	CVT Red. Blanking	n/a	5/1/07
1600 x 900	60 Hz (RB)	60.0 kHz	108.000 MHz	VESA Standard	VDMTREV	11/17/08
1600 x 1200	60 Hz	75.0 kHz	162.000 MHz	VESA Standard	VDMTREV	12/18/96
	65 Hz	81.3 kHz	175.500 MHz	VESA Standard	VDMTREV	12/18/96
	70 Hz	87.5 kHz	189.000 MHz	VESA Standard	VDMTREV	12/18/96
	75 Hz	93.8 kHz	202.500 MHz	VESA Standard	VDMTREV	12/18/96
	85 Hz	106.3 kHz	229.500 MHz	VESA Standard	VDMTREV	12/18/96
	120 Hz (RB)	152.4 kHz	268.250 MHz	CVT Red. Blanking	n/a	5/1/07
1680 x 1050	60 Hz(RB)	64.7 kHz	119.000 MHz	CVT Red. Blanking	CVT1.76MA-R	7/14/04
	60 Hz	65.3 kHz	146.250 MHz	CVT	CVT 1.76MA	7/14/04
	75 Hz	82.3 kHz	187.000 MHz	CVT	CVT 1.76MA	7/14/04
	85 Hz	93.9 kHz	214.750 MHz	CVT	CVT 1.76MA	7/14/04
	120 Hz (RB)	133.4 kHz	245.500 MHz	CVT Red. Blanking	n/a	5/1/07
1792 x 1344	60 Hz	83.6 kHz	204.750 MHz	VESA Standard	VDMTREV	9/17/98
	75 Hz	106.3 kHz	261.000 MHz	VESA Standard	VDMTREV	9/17/98
	120 Hz (RB)	170.7 kHz	333.250 MHz	CVT Red. Blanking	n/a	5/1/07
1856 x 1392	60 Hz	86.3 kHz	218.250 MHz	VESA Standard	VDMTREV	9/17/98
	75 Hz	112.5 kHz	288.000 MHz	VESA Standard	VDMTREV	9/17/98
	120 Hz (RB)	176.8 kHz	356.500 MHz	CVT Red. Blanking	n/a	5/1/07
1920 x 1080	60 Hz	67.5 kHz	148.500 MHz	CEA Standard	CEA-861	TBD
1920 x 1200	60 Hz(RB)	74.0 kHz	154.000 MHz	CVT Red. Blanking	AddDMT	3/4/03
	60 Hz	74.6 kHz	193.250 MHz	CVT	AddDMT	3/4/03
	75 Hz	94.0 kHz	245.250 MHz	CVT	AddDMT	3/4/03
	85 Hz	107.2 kHz	281.250 MHz	CVT	AddDMT	3/4/03
	120 Hz (RB)	152.4 kHz	317.000 MHz	CVT Red. Blanking	n/a	5/1/07

<b>Pixel Format</b>	<b>Refresh Rate</b>	<b>Horizontal Frequency</b>	<b>Pixel Frequency</b>	<b>Standard Type</b>	<b>Original Document</b>	<b>Date</b>
1920 x 1440	60 Hz	90.0 kHz	234.000 MHz	VESA Standard	VDMTREV	9/17/98
	75 Hz	112.5 kHz	297.000 MHz	VESA Standard	VDMTREV	9/17/98
	120 Hz (RB)	182.9 kHz	380.500 MHz	CVT Red. Blanking	n/a	5/1/07
2048 x 1152	60 Hz (RB)	70.992 kHz	156.750 MHz	CVT Red. Blanking	VDMTREV	11/17/08
2560 x 1600	60 Hz (RB)	98.7 kHz	268.500 MHz	CVT Red. Blanking	CVT4.10MA-R	5/1/07
	60 Hz	99.5 kHz	348.500 MHz	CVT	CVT 4.10MA	5/1/07
	75 Hz	125.4 kHz	443.250 MHz	CVT	CVT 4.10MA	5/1/07
	85 Hz	142.9 kHz	505.250 MHz	CVT	CVT 4.10MA	5/1/07
	120 Hz (RB)	203.2 kHz	552.750 MHz	CVT Red. Blanking	n/a	5/1/07
4096x2160	60 Hz (RB)	133.320 kHz	556.744 MHz	CVT Red. Blanking V2	n/a	2/8/13
	59.94 Hz (RB)	133.187 kHz	556.188 MHz	CVT Red. Blanking V2	n/a	2/8/13

## 2. DMT Standard Codes & ID Summary

Table 2-1 includes a list of DMT ID codes, Standard (Std.) Timing 2 byte codes and Coordinated Video Timing (CVT) 3 byte codes. A display may use these codes to indicate 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 2-1: Summary of DMT ID, Std. 2 Byte & CVT 3 Byte Codes**

Pixel Format	Refresh Rate	DMT ID Codes	Std. 2 Byte Codes	CVT 3 Byte Codes
640 x 350	85 Hz	01h	n/a	n/a
640 x 400	85 Hz	02h	(31, 19)h	n/a
720 x 400	85 Hz	03h	n/a	n/a
640 x 480	60 Hz	04h	(31, 40)h	n/a
	72 Hz	05h	(31, 4C)h	n/a
	75 Hz	06h	(31, 4F)h	n/a
	85 Hz	07h	(31, 59)h	n/a
800 x 600	56 Hz	08h	n/a	n/a
	60 Hz	09h	(45, 40)h	n/a
	72 Hz	0Ah	(45, 4C)h	n/a
	75 Hz	0Bh	(45, 4F)h	n/a
	85 Hz	0Ch	(45, 59)h	n/a
	120 Hz (RB)	0Dh	n/a	n/a
848 x 480	60 Hz	0Eh	n/a	n/a
1024 x 768	43 Hz (Int.)	0Fh	n/a	n/a
	60 Hz	10h	(61, 40)h	n/a
	70 Hz	11h	(61, 4A)h	n/a
	75 Hz	12h	(61, 4F)h	n/a
	85 Hz	13h	(61, 59)h	n/a
	120 Hz (RB)	14h	n/a	n/a
1152 x 864	75 Hz	15h	(71, 4F)h	n/a
1280 x 720	60 Hz	55h	(81, C0)h	n/a
1280 x 768	60 Hz(RB)	16h	n/a	(7F, 1C, 21)h
	60 Hz	17h	n/a	(7F, 1C, 28)h
	75 Hz	18h	n/a	(7F, 1C, 44)h
	85 Hz	19h	n/a	(7F, 1C, 62)h
	120 Hz (RB)	1Ah	n/a	n/a

<b>Pixel Format</b>	<b>Refresh Rate</b>	<b>DMT ID Codes</b>	<b>Std. 2 Byte Codes</b>	<b>CVT 3 Byte Codes</b>
1280 x 800	60 Hz (RB)	1Bh	n/a	(8F, 18, 21)h
	60 Hz	1Ch	(81, 00)h	(8F, 18, 28)h
	75 Hz	1Dh	(81, 0F)h	(8F, 18, 44)h
	85 Hz	1Eh	(81, 19)h	(8F, 18, 62)h
	120 Hz (RB)	1Fh	n/a	n/a
1280 x 960	60 Hz	20h	(81, 40)h	n/a
	85 Hz	21h	(81, 59)h	n/a
	120 Hz (RB)	22h	n/a	n/a
1280 x 1024	60 Hz	23h	(81, 80)h	n/a
	75 Hz	24h	(81, 8F)h	n/a
	85 Hz	25h	(81, 99)h	n/a
	120 Hz (RB)	26h	n/a	n/a
1360 x 768	60 Hz	27h	n/a	n/a
	120 Hz (RB)	28h	n/a	n/a
1366 x 768	60 Hz	51h	n/a	n/a
1366 x 768	60 Hz(RB)	56h	n/a	n/a
1400 x 1050	60 Hz(RB)	29h	n/a	(0C, 20, 21)h
	60 Hz	2Ah	(90, 40)h	(0C, 20, 28)h
	75 Hz	2Bh	(90, 4F)h	(0C, 20, 44)h
	85 Hz	2Ch	(90, 59)h	(0C, 20, 62)h
	120 Hz (RB)	2Dh	n/a	n/a
1440 x 900	60 Hz(RB)	2Eh	n/a	(C1, 18, 21)h
	60 Hz	2Fh	(95, 00)h	(C1, 18, 28)h
	75 Hz	30h	(95, 0F)h	(C1, 18, 44)h
	85 Hz	31h	(95, 19)h	(C1, 18, 68)h
	120 Hz (RB)	32h	n/a	n/a
1600 x 900	60 Hz (RB)	53h	(A9, C0)h	n/a
1600 x 1200	60 Hz	33h	(A9, 40)h	n/a
	65 Hz	34h	(A9, 45)h	n/a
	70 Hz	35h	(A9, 4A)h	n/a
	75 Hz	36h	(A9, 4F)h	n/a
	85 Hz	37h	(A9, 59)h	n/a
	120 Hz (RB)	38h	n/a	n/a
1680 x 1050	60 Hz(RB)	39h	n/a	(0C, 28, 21)h
	60 Hz	3Ah	(B3, 00)h	(0C, 28, 28)h
	75 Hz	3Bh	(B3, 0F)h	(0C, 28, 44)h
	85 Hz	3Ch	(B3, 19)h	(0C, 28, 68)h
	120 Hz (RB)	3Dh	n/a	n/a

<b>Pixel Format</b>	<b>Refresh Rate</b>	<b>DMT ID Codes</b>	<b>Std. 2 Byte Codes</b>	<b>CVT 3 Byte Codes</b>
1792 x 1344	60 Hz	3Eh	(C1, 40)h	n/a
	75 Hz	3Fh	(C1, 4F)h	n/a
	120 Hz (RB)	40h	n/a	n/a
1856 x 1392	60 Hz	41h	(C9, 40)h	n/a
	75 Hz	42h	(C9, 4F)h	n/a
	120 Hz (RB)	43h	n/a	n/a
1920 x 1080	60 Hz	52h	(D1, C0)h	n/a
1920 x 1200	60 Hz(RB)	44h	n/a	(57, 28, 21)h
	60 Hz	45h	(D1, 00)h	(57, 28, 28)h
	75 Hz	46h	(D1, 0F)h	(57, 28, 44)h
	85 Hz	47h	(D1, 19)h	(57, 28, 62)h
	120 Hz (RB)	48h	n/a	n/a
1920 x 1440	60 Hz	49h	(D1, 40)h	n/a
	75 Hz	4Ah	(D1, 4F)h	n/a
	120 Hz (RB)	4Bh	n/a	n/a
2048 x 1152	60 Hz (RB)	54h	(E1, C0)h	n/a
2560 x 1600	60 Hz (RB)	4Ch	n/a	(1F, 38, 21)h
	60 Hz	4Dh	n/a	(1F, 38, 28)h
	75 Hz	4Eh	n/a	(1F, 38, 44)h
	85 Hz	4Fh	n/a	(1F, 38, 62)h
	120 Hz (RB)	50h	n/a	n/a
4096x2160	60 Hz (RB)	57h	n/a	n/a
	59.94 Hz (RB)	58h	n/a	n/a

**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 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 E-EDID Standard, Rel. A, Rev. 2 for an explanation on how to derive a CVT 3 Byte Code from 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.
3. 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

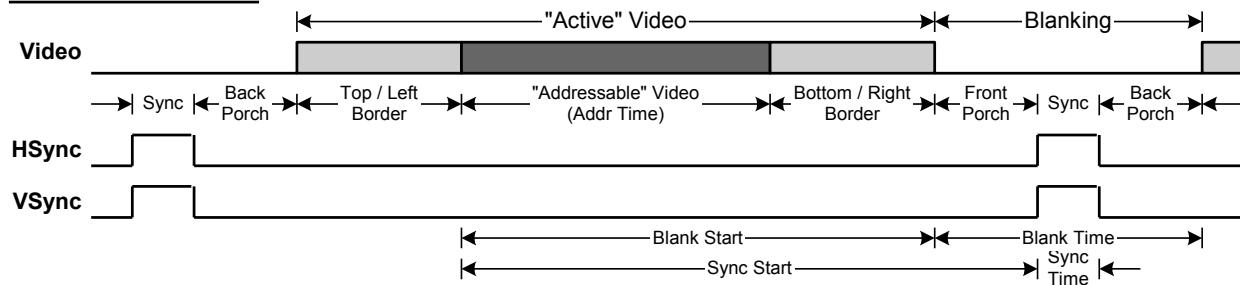
refresh rate. In this case the CVT 3 Byte code would be (7F, 1C, 3E)h. When the source decodes the CVT 3 Byte code, (7F, 1C, 3E)h, it knows that the display supports 1280 x 768, along with 50 Hz, 60 Hz, 75 Hz & 85 Hz vertical refresh rates with 60 Hz being the preferred vertical refresh rate. The source 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 E-EDID Standard Rel. A, Rev. 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.

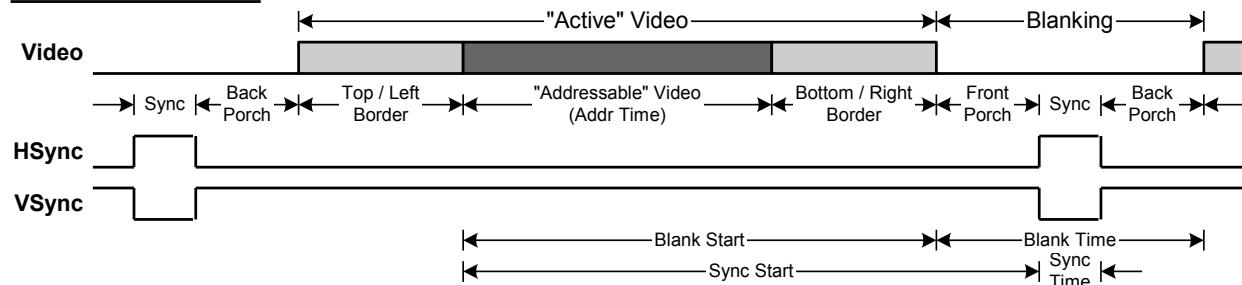
#### 3.1 DMT Video Timing Parameter Definitions - Positive H & Positive V Syncs

##### Definition of Terms



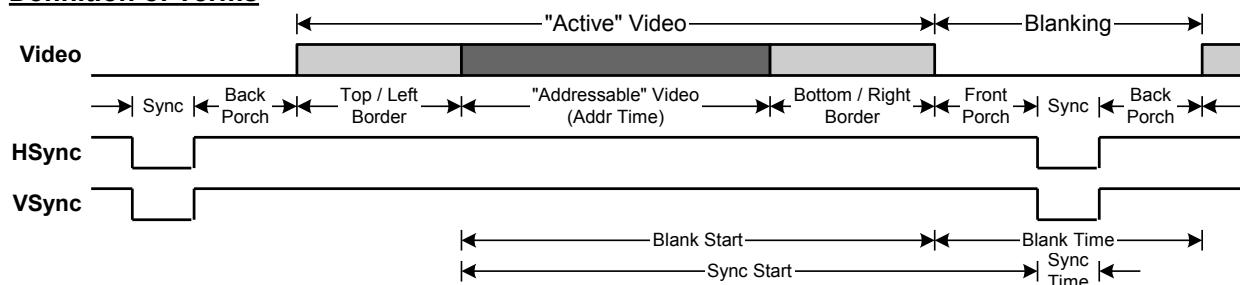
#### 3.2 DMT Video Timing Parameter Definitions - Positive H & Negative V Syncs

##### Definition of Terms



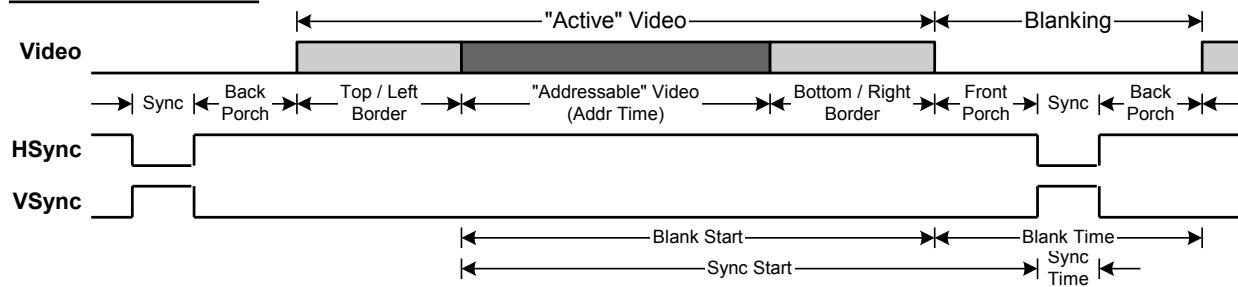
#### 3.3 DMT Video Timing Parameter Definitions - Negative H & Negative V Syncs

##### Definition of Terms

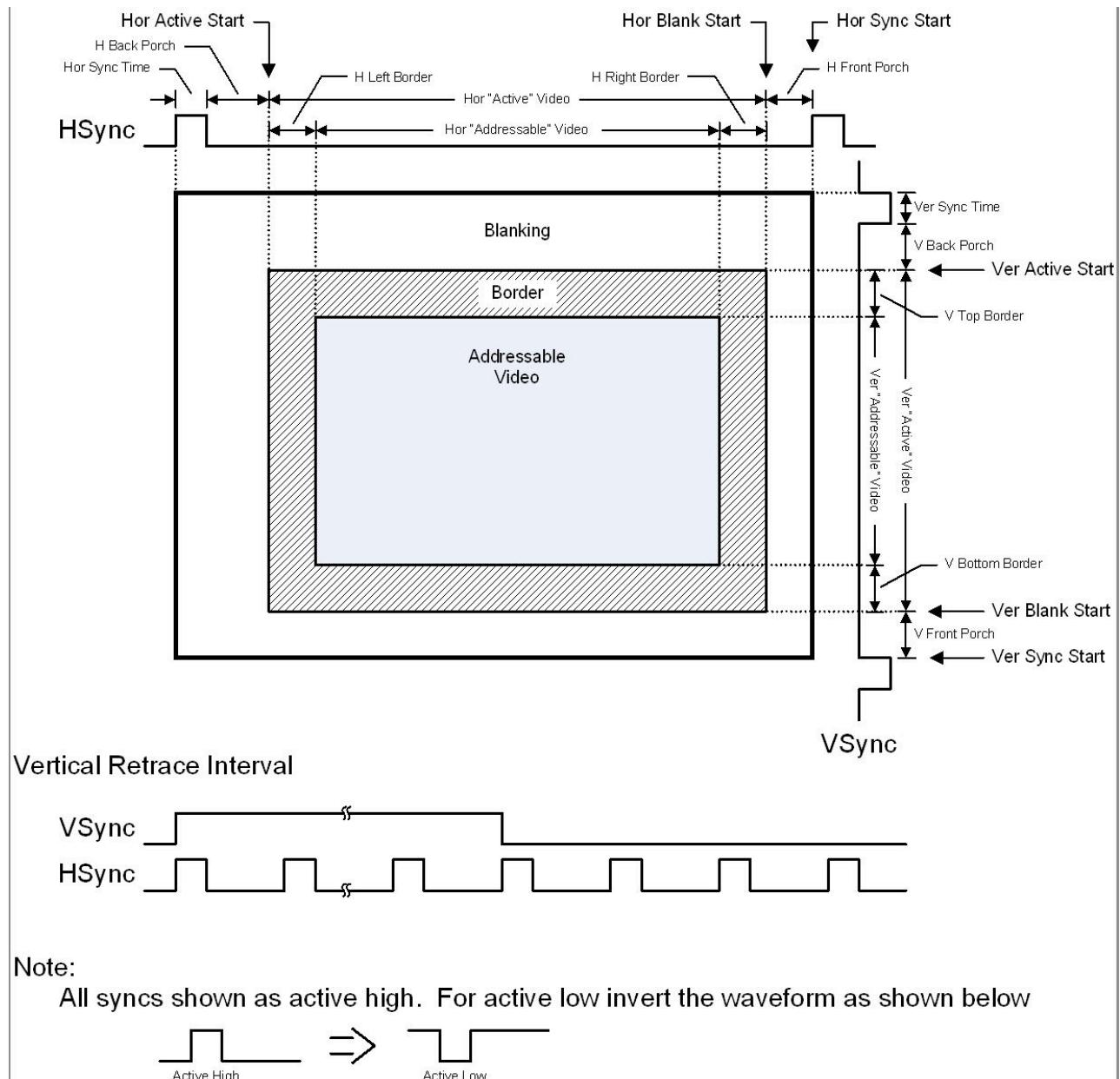


### 3.4 DMT Video Timing Parameter Definitions - Negative H & Positive V Syncs

#### Definition of Terms



### 3.5 DMT Video Timing Parameter Definitions - Total Frame Timing:



## **4. DMT Timing Specifications**

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

## VESA MONITOR TIMING STANDARD

Adopted: 3/1/96  
 Resolution: 640 x 350 at 85 Hz (non-interlaced)  
 EDID ID: DMT ID: 01h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CTV COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>640 x 350 @ 85Hz;</b>			
Hor Pixels	= <b>640;</b>	// Pixels		
Ver Pixels	= <b>350;</b>	// Lines		
Hor Frequency	= 37.861;	// kHz	= 26.4 usec	/ line
Ver Frequency	= 85.080;	// Hz	= 11.8 msec	/ frame
Pixel Clock	= <b>31.500;</b>	// MHz	= 31.7 nsec	± 0.5%
Character Width	= <b>8;</b>	// Pixels	= 254.0 nsec	
Scan Type	= <b>NONINTERLACED;</b>		// H Phase =	3.8 %
Hor Sync Polarity	= <b>POSITIVE;</b>	// HBlank	= 23.1% of HTotal	
Ver Sync Polarity	= <b>NEGATIVE;</b>	// VBlank	= 21.3% of VTotal	
Hor Total Time	= 26.413;	// (usec)	= 104 chars	= 832 Pixels
Hor Addr Time	= 20.317;	// (usec)	= 80 chars	= 640 Pixels
Hor Blank Start	= 20.317;	// (usec)	= 80 chars	= 640 Pixels
Hor Blank Time	= 6.095;	// (usec)	= 24 chars	= 192 Pixels
Hor Sync Start	= 21.333;	// (usec)	= 84 chars	= 672 Pixels
// H Right Border	= 0.000;	// (usec)	= <b>0</b> chars	= 0 Pixels
// H Front Porch	= 1.016;	// (usec)	= <b>4</b> chars	= 32 Pixels
Hor Sync Time	= 2.032;	// (usec)	= <b>8</b> chars	= 64 Pixels
// H Back Porch	= 3.048;	// (usec)	= <b>12</b> chars	= 96 Pixels
// H Left Border	= 0.000;	// (usec)	= <b>0</b> chars	= 0 Pixels
Ver Total Time	= 11.754;	// (msec)	= 445 lines	HT – (1.06xHA)
Ver Addr Time	= 9.244;	// (msec)	= 350 lines	= 4.88
Ver Blank Start	= 9.244;	// (msec)	= 350 lines	
Ver Blank Time	= 2.509;	// (msec)	= 95 lines	
Ver Sync Start	= 10.090;	// (msec)	= 382 lines	
// V Bottom Border	= 0.000;	// (msec)	= <b>0</b> lines	
// V Front Porch	= 0.845;	// (msec)	= <b>32</b> lines	
Ver Sync Time	= 0.079;	// (msec)	= <b>3</b> lines	
// V Back Porch	= 1.585;	// (msec)	= <b>60</b> lines	
// V Top Border	= 0.000;	// (msec)	= <b>0</b> lines	

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

## VESA MONITOR TIMING STANDARD

Adopted: 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

Timing Name	= <b>640 x 400 @ 85Hz;</b>
Hor Pixels	= <b>640;</b> // Pixels
Ver Pixels	= <b>400;</b> // Lines
Hor Frequency	= 37.861; // kHz = 26.4 usec / line
Ver Frequency	= 85.080; // Hz = 11.8 msec / frame
Pixel Clock	= <b>31.500;</b> // MHz = 31.7 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 254.0 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 3.8 %
Hor Sync Polarity	= <b>NEGATIVE;</b> // HBlank = 23.1% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 10.1% of VTotal
Hor Total Time	= 26.413; // (usec) = 104 chars = 832 Pixels
Hor Addr Time	= 20.317; // (usec) = 80 chars = 640 Pixels
Hor Blank Start	= 20.317; // (usec) = 80 chars = 640 Pixels
Hor Blank Time	= 6.095; // (usec) = 24 chars = 192 Pixels
Hor Sync Start	= 21.333; // (usec) = 84 chars = 672 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 1.016; // (usec) = 4 chars = 32 Pixels
Hor Sync Time	= 2.032; // (usec) = 8 chars = 64 Pixels
// H Back Porch	= 3.048; // (usec) = 12 chars = 96 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 11.754; // (msec) = 445 lines HT - (1.06xHA)
Ver Addr Time	= 10.565; // (msec) = 400 lines = 4.88
Ver Blank Start	= 10.565; // (msec) = 400 lines
Ver Blank Time	= 1.189; // (msec) = 45 lines
Ver Sync Start	= 10.591; // (msec) = 401 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.026; // (msec) = 1 lines
Ver Sync Time	= 0.079; // (msec) = 3 lines
// V Back Porch	= 1.083; // (msec) = 41 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**Definition of Terms:** Refer to section 3.4.

## VESA 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; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CTV COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>720 x 400 @ 85Hz;</b>
Hor Pixels	= <b>720;</b> // Pixels
Ver Pixels	= <b>400;</b> // Lines
Hor Frequency	= <b>37.927;</b> // kHz
Ver Frequency	= <b>85.039;</b> // Hz
Pixel Clock	= <b>35.500;</b> // MHz
Character Width	= <b>9;</b> // Pixels
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 3.8 %
Hor Sync Polarity	= <b>NEGATIVE;</b> // HBlank = 23.1% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 10.3% of VTotal
Hor Total Time	= 26.366; // (usec) = 104 chars = 936 Pixels
Hor Addr Time	= 20.282; // (usec) = 80 chars = 720 Pixels
Hor Blank Start	= 20.282; // (usec) = 80 chars = 720 Pixels
Hor Blank Time	= 6.085; // (usec) = 24 chars = 216 Pixels
Hor Sync Start	= 21.296; // (usec) = 84 chars = 756 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 1.014; // (usec) = 4 chars = 36 Pixels
Hor Sync Time	= 2.028; // (usec) = 8 chars = 72 Pixels
// H Back Porch	= 3.042; // (usec) = 12 chars = 108 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 11.759; // (msec) = 446 lines HT - (1.06xHA)
Ver Addr Time	= 10.546; // (msec) = 400 lines = 4.87
Ver Blank Start	= 10.546; // (msec) = 400 lines
Ver Blank Time	= 1.213; // (msec) = 46 lines
Ver Sync Start	= 10.573; // (msec) = 401 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.026; // (msec) = 1 lines
Ver Sync Time	= 0.079; // (msec) = 3 lines
// V Back Porch	= 1.107; // (msec) = 42 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**Definition of Terms:** Refer to section 3.4.

## VESA MONITOR TIMING STANDARD

Adopted: n/a    \*\* For Reference Only - Not a VESA Standard \*\*  
 Resolution: 640 x 480 at 60 Hz (non-interlaced)  
 EDID ID: DMT ID: 04h; Std. 2 Byte Code: (31, 40)h; CTV 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

Timing Name	= <b>640 x 480 @ 60Hz;</b>		
Hor Pixels	= <b>640;</b> // Pixels		
Ver Pixels	= <b>480;</b> // Lines		
Hor Frequency	= 31.469; // kHz	= 31.8 usec	/ line
Ver Frequency	= 59.940; // Hz	= 16.7 msec	/ frame
Pixel Clock	= <b>25.175;</b> // MHz	= 39.7 nsec	± 0.5%
Character Width	= <b>8;</b> // Pixels	= 317.8 nsec	
Scan Type	= <b>NONINTERLACED;</b>	// H Phase	= 2.0 %
Hor Sync Polarity	= <b>NEGATIVE;</b> // HBlank	= 18.0% of HTotal	
Ver Sync Polarity	= <b>NEGATIVE;</b> // VBlank	= 5.5% of VTotal	
Hor Total Time	= 31.778; // (usec)	= 100 chars	= 800 Pixels
Hor Addr Time	= 25.422; // (usec)	= 80 chars	= 640 Pixels
Hor Blank Start	= 25.740; // (usec)	= 81 chars	= 648 Pixels
Hor Blank Time	= 5.720; // (usec)	= 18 chars	= 144 Pixels
Hor Sync Start	= 26.058; // (usec)	= 82 chars	= 656 Pixels
// H Right Border	= 0.318; // (usec)	= 1 chars	= 8 Pixels
// H Front Porch	= 0.318; // (usec)	= 1 chars	= 8 Pixels
Hor Sync Time	= 3.813; // (usec)	= 12 chars	= 96 Pixels
// H Back Porch	= 1.589; // (usec)	= 5 chars	= 40 Pixels
// H Left Border	= 0.318; // (usec)	= 1 chars	= 8 Pixels
Ver Total Time	= 16.683; // (msec)	= 525 lines	HT – (1.06xHA)
Ver Addr Time	= 15.253; // (msec)	= 480 lines	= 4.83
Ver Blank Start	= 15.507; // (msec)	= 488 lines	
Ver Blank Time	= 0.922; // (msec)	= 29 lines	
Ver Sync Start	= 15.571; // (msec)	= 490 lines	
// V Bottom Border	= 0.254; // (msec)	= 8 lines	
// V Front Porch	= 0.064; // (msec)	= 2 lines	
Ver Sync Time	= 0.064; // (msec)	= 2 lines	
// V Back Porch	= 0.794; // (msec)	= 25 lines	
// V Top Border	= 0.254; // (msec)	= 8 lines	

**Definition of Terms:** Refer to section 3.3.

## VESA MONITOR TIMING STANDARD

Adopted: 11/11/90 (VESA #901101)  
 Resolution: 640 x 480 at 72 Hz (non-interlaced)  
 EDID ID: DMT ID: 05h; Std. 2 Byte Code: (31, 4C)h; CTV 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

Timing Name	= <b>640 x 480 @ 72Hz;</b>		
Hor Pixels	= <b>640;</b> // Pixels		
Ver Pixels	= <b>480;</b> // Lines		
Hor Frequency	= 37.861; // kHz	= 26.4 usec	/ line
Ver Frequency	= 72.809; // Hz	= 13.7 msec	/ frame
Pixel Clock	= <b>31.500;</b> // MHz	= 31.7 nsec	± 0.5%
Character Width	= <b>8;</b> // Pixels	= 254.0 nsec	
Scan Type	= <b>NONINTERLACED;</b>	// H Phase	= 6.3 %
Hor Sync Polarity	= <b>NEGATIVE;</b> // HBlank	= 21.2% of HTotal	
Ver Sync Polarity	= <b>NEGATIVE;</b> // VBlank	= 4.6% of VTotal	
Hor Total Time	= 26.413; // (usec)	= 104 chars	= 832 Pixels
Hor Addr Time	= 20.317; // (usec)	= 80 chars	= 640 Pixels
Hor Blank Start	= 20.571; // (usec)	= 81 chars	= 648 Pixels
Hor Blank Time	= 5.587; // (usec)	= 22 chars	= 176 Pixels
Hor Sync Start	= 21.079; // (usec)	= 83 chars	= 664 Pixels
// H Right Border	= 0.254; // (usec)	= 1 chars	= 8 Pixels
// H Front Porch	= 0.508; // (usec)	= 2 chars	= 16 Pixels
Hor Sync Time	= 1.270; // (usec)	= 5 chars	= 40 Pixels
// H Back Porch	= 3.810; // (usec)	= 15 chars	= 120 Pixels
// H Left Border	= 0.254; // (usec)	= 1 chars	= 8 Pixels
Ver Total Time	= 13.735; // (msec)	= 520 lines	HT – (1.06xHA)
Ver Addr Time	= 12.678; // (msec)	= 480 lines	= 4.88
Ver Blank Start	= 12.889; // (msec)	= 488 lines	
Ver Blank Time	= 0.634; // (msec)	= 24 lines	
Ver Sync Start	= 12.916; // (msec)	= 489 lines	
// V Bottom Border	= 0.211; // (msec)	= 8 lines	
// V Front Porch	= 0.026; // (msec)	= 1 lines	
Ver Sync Time	= 0.079; // (msec)	= 3 lines	
// V Back Porch	= 0.528; // (msec)	= 20 lines	
// V Top Border	= 0.211; // (msec)	= 8 lines	

**Definition of Terms:** Refer to section 3.3.

## VESA MONITOR 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; CTV 3 Byte Code: n/a

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

Method: **\*\*\* NOT CTV COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>640 x 480 @ 75Hz;</b>		
Hor Pixels	= <b>640;</b> // Pixels		
Ver Pixels	= <b>480;</b> // Lines		
Hor Frequency	= <b>37.500;</b> // kHz	= 26.7 usec	/ line
Ver Frequency	= <b>75.000;</b> // Hz	= 13.3 msec	/ frame
Pixel Clock	= <b>31.500;</b> // MHz	= 31.7 nsec	± 0.5%
Character Width	= <b>8;</b> // Pixels	= 254.0 nsec	
Scan Type	= <b>NONINTERLACED;</b>	// H Phase =	6.2 %
Hor Sync Polarity	= <b>NEGATIVE;</b> // HBlank	= 23.8% of HTotal	
Ver Sync Polarity	= <b>NEGATIVE;</b> // VBlank	= 4.0% of VTotal	
Hor Total Time	= <b>26.667;</b> // (usec)	= 105 chars =	840 Pixels
Hor Addr Time	= <b>20.317;</b> // (usec)	= 80 chars =	640 Pixels
Hor Blank Start	= <b>20.317;</b> // (usec)	= 80 chars =	640 Pixels
Hor Blank Time	= <b>6.349;</b> // (usec)	= 25 chars =	200 Pixels
Hor Sync Start	= <b>20.825;</b> // (usec)	= 82 chars =	656 Pixels
// H Right Border	= <b>0.000;</b> // (usec)	= <b>0</b> chars =	0 Pixels
// H Front Porch	= <b>0.508;</b> // (usec)	= <b>2</b> chars =	16 Pixels
Hor Sync Time	= <b>2.032;</b> // (usec)	= <b>8</b> chars =	64 Pixels
// H Back Porch	= <b>3.810;</b> // (usec)	= <b>15</b> chars =	120 Pixels
// H Left Border	= <b>0.000;</b> // (usec)	= <b>0</b> chars =	0 Pixels
Ver Total Time	= <b>13.333;</b> // (msec)	= 500 lines	HT – (1.06xHA)
Ver Addr Time	= <b>12.800;</b> // (msec)	= 480 lines	= 5.13
Ver Blank Start	= <b>12.800;</b> // (msec)	= 480 lines	
Ver Blank Time	= <b>0.533;</b> // (msec)	= 20 lines	
Ver Sync Start	= <b>12.827;</b> // (msec)	= 481 lines	
// V Bottom Border	= <b>0.000;</b> // (msec)	= <b>0</b> lines	
// V Front Porch	= <b>0.027;</b> // (msec)	= <b>1</b> lines	
Ver Sync Time	= <b>0.080;</b> // (msec)	= <b>3</b> lines	
// V Back Porch	= <b>0.427;</b> // (msec)	= <b>16</b> lines	
// V Top Border	= <b>0.000;</b> // (msec)	= <b>0</b> lines	

**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

Timing Name	= <b>640 x 480 @ 85Hz;</b>
Hor Pixels	= <b>640;</b> // Pixels
Ver Pixels	= <b>480;</b> // Lines
Hor Frequency	= 43.269; // kHz
Ver Frequency	= 85.008; // Hz
Pixel Clock	= <b>36.000;</b> // MHz
Character Width	= <b>8;</b> // Pixels
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 1.4 %
Hor Sync Polarity	= <b>NEGATIVE;</b> // HBlank
Ver Sync Polarity	= <b>NEGATIVE;</b> // VBlank
Hor Total Time	= 23.111; // (usec)
Hor Addr Time	= 17.778; // (usec)
Hor Blank Start	= 17.778; // (usec)
Hor Blank Time	= 5.333; // (usec)
Hor Sync Start	= 19.333; // (usec)
// H Right Border	= 0.000; // (usec)
// H Front Porch	= 1.556; // (usec)
Hor Sync Time	= 1.556; // (usec)
// H Back Porch	= 2.222; // (usec)
// H Left Border	= 0.000; // (usec)
Ver Total Time	= 11.764; // (msec)
Ver Addr Time	= 11.093; // (msec)
Ver Blank Start	= 11.093; // (msec)
Ver Blank Time	= 0.670; // (msec)
Ver Sync Start	= 11.116; // (msec)
// V Bottom Border	= 0.000; // (msec)
// V Front Porch	= 0.023; // (msec)
Ver Sync Time	= 0.069; // (msec)
// V Back Porch	= 0.578; // (msec)
// V Top Border	= 0.000; // (msec)

**Definition of Terms:** Refer to section 3.3.

## VESA MONITOR TIMING STANDARD

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; CTV 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

Timing Name	= <b>800 x 600 @ 56Hz;</b>		
Hor Pixels	= <b>800;</b> // Pixels		
Ver Pixels	= <b>600;</b> // Lines		
Hor Frequency	= 35.156; // kHz	= 28.4 usec	/ line
Ver Frequency	= 56.250; // Hz	= 17.8 msec	/ frame
Pixel Clock	= <b>36.000;</b> // MHz	= 27.8 nsec	$\pm 0.5\%$
Character Width	= <b>8;</b> // Pixels	= 222.2 nsec	
Scan Type	= <b>NONINTERLACED;</b>	// H Phase =	5.1 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank	= 21.9% of HTotal	
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank	= 4.0% of VTotal	
Hor Total Time	= 28.444; // (usec)	= 128 chars	= 1024 Pixels
Hor Addr Time	= 22.222; // (usec)	= 100 chars	= 800 Pixels
Hor Blank Start	= 22.222; // (usec)	= 100 chars	= 800 Pixels
Hor Blank Time	= 6.222; // (usec)	= 28 chars	= 224 Pixels
Hor Sync Start	= 22.889; // (usec)	= 103 chars	= 824 Pixels
// H Right Border	= 0.000; // (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.667; // (usec)	= 3 chars	= 24 Pixels
Hor Sync Time	= 2.000; // (usec)	= 9 chars	= 72 Pixels
// H Back Porch	= 3.556; // (usec)	= 16 chars	= 128 Pixels
// H Left Border	= 0.000; // (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 17.778; // (msec)	= 625 lines	HT - (1.06xHA)
Ver Addr Time	= 17.067; // (msec)	= 600 lines	= 4.89
Ver Blank Start	= 17.067; // (msec)	= 600 lines	
Ver Blank Time	= 0.711; // (msec)	= 25 lines	
Ver Sync Start	= 17.095; // (msec)	= 601 lines	
// V Bottom Border	= 0.000; // (msec)	= 0 lines	
// V Front Porch	= 0.028; // (msec)	= 1 lines	
Ver Sync Time	= 0.057; // (msec)	= 2 lines	
// V Back Porch	= 0.626; // (msec)	= 22 lines	
// V Top Border	= 0.000; // (msec)	= 0 lines	

**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; CTV 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

Timing Name	= <b>800 x 600 @ 60Hz;</b>
Hor Pixels	= <b>800;</b> // Pixels
Ver Pixels	= <b>600;</b> // Lines
Hor Frequency	= <b>37.879;</b> // kHz = 26.4 usec / line
Ver Frequency	= <b>60.317;</b> // Hz = 16.6 msec / frame
Pixel Clock	= <b>40.000;</b> // MHz = 25.0 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 200.0 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 2.3 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank = 24.2% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 4.5% of VTotal
Hor Total Time	= <b>26.400;</b> // (usec) = 132 chars = 1056 Pixels
Hor Addr Time	= <b>20.000;</b> // (usec) = 100 chars = 800 Pixels
Hor Blank Start	= <b>20.000;</b> // (usec) = 100 chars = 800 Pixels
Hor Blank Time	= <b>6.400;</b> // (usec) = 32 chars = 256 Pixels
Hor Sync Start	= <b>21.000;</b> // (usec) = 105 chars = 840 Pixels
// H Right Border	= <b>0.000;</b> // (usec) = <b>0</b> chars = 0 Pixels
// H Front Porch	= <b>1.000;</b> // (usec) = <b>5</b> chars = 40 Pixels
Hor Sync Time	= <b>3.200;</b> // (usec) = <b>16</b> chars = 128 Pixels
// H Back Porch	= <b>2.200;</b> // (usec) = <b>11</b> chars = 88 Pixels
// H Left Border	= <b>0.000;</b> // (usec) = <b>0</b> chars = 0 Pixels
Ver Total Time	= <b>16.579;</b> // (msec) = 628 lines HT – (1.06xHA)
Ver Addr Time	= <b>15.840;</b> // (msec) = 600 lines = 5.2
Ver Blank Start	= <b>15.840;</b> // (msec) = 600 lines
Ver Blank Time	= <b>0.739;</b> // (msec) = 28 lines
Ver Sync Start	= <b>15.866;</b> // (msec) = 601 lines
// V Bottom Border	= <b>0.000;</b> // (msec) = <b>0</b> lines
// V Front Porch	= <b>0.026;</b> // (msec) = <b>1</b> lines
Ver Sync Time	= <b>0.106;</b> // (msec) = <b>4</b> lines
// V Back Porch	= <b>0.607;</b> // (msec) = <b>23</b> lines
// V Top Border	= <b>0.000;</b> // (msec) = <b>0</b> lines

**Definition of Terms:** Refer to section 3.1.

## VESA MONITOR TIMING STANDARD

Adopted: 9/10/91 (VESA #900603A)  
 Resolution: 800 x 600 at 72 Hz (non-interlaced)  
 EDID ID: DMT ID: 0Ah; Std. 2 Byte Code: (45, 4C)h; CTV 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

Timing Name	= <b>800 x 600 @ 72Hz;</b>
Hor Pixels	= <b>800;</b> // Pixels
Ver Pixels	= <b>600;</b> // Lines
Hor Frequency	= 48.077; // kHz = 20.8 usec / line
Ver Frequency	= 72.188; // Hz = 13.9 msec / frame
Pixel Clock	= <b>50.000;</b> // MHz = 20.0 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 160.0 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 0.4 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank = 23.1% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 9.9% of VTotal
Hor Total Time	= 20.800; // (usec) = 130 chars = 1040 Pixels
Hor Addr Time	= 16.000; // (usec) = 100 chars = 800 Pixels
Hor Blank Start	= 16.000; // (usec) = 100 chars = 800 Pixels
Hor Blank Time	= 4.800; // (usec) = 30 chars = 240 Pixels
Hor Sync Start	= 17.120; // (usec) = 107 chars = 856 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 1.120; // (usec) = 7 chars = 56 Pixels
Hor Sync Time	= 2.400; // (usec) = 15 chars = 120 Pixels
// H Back Porch	= 1.280; // (usec) = 8 chars = 64 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 13.853; // (msec) = 666 lines HT - (1.06xHA)
Ver Addr Time	= 12.480; // (msec) = 600 lines = 3.84
Ver Blank Start	= 12.480; // (msec) = 600 lines
Ver Blank Time	= 1.373; // (msec) = 66 lines
Ver Sync Start	= 13.250; // (msec) = 637 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.770; // (msec) = 37 lines
Ver Sync Time	= 0.125; // (msec) = 6 lines
// V Back Porch	= 0.478; // (msec) = 23 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**Definition of Terms:** Refer to section 3.1.

## VESA 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; CTV 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

Timing Name	= <b>800 x 600 @ 75Hz;</b>		
Hor Pixels	= <b>800;</b> // Pixels		
Ver Pixels	= <b>600;</b> // Lines		
Hor Frequency	= 46.875; // kHz	= 21.3 usec	/ line
Ver Frequency	= 75.000; // Hz	= 13.3 msec	/ frame
Pixel Clock	= <b>49.500;</b> // MHz	= 20.2 nsec	± 0.5%
Character Width	= <b>8;</b> // Pixels	= 161.6 nsec	
Scan Type	= <b>NONINTERLACED;</b>	// H Phase =	6.8 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank	= 24.2% of HTotal	
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank	= 4.0% of VTotal	
Hor Total Time	= 21.333; // (usec)	= 132 chars	= 1056 Pixels
Hor Addr Time	= 16.162; // (usec)	= 100 chars	= 800 Pixels
Hor Blank Start	= 16.162; // (usec)	= 100 chars	= 800 Pixels
Hor Blank Time	= 5.172; // (usec)	= 32 chars	= 256 Pixels
Hor Sync Start	= 16.485; // (usec)	= 102 chars	= 816 Pixels
// H Right Border	= 0.000; // (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.323; // (usec)	= 2 chars	= 16 Pixels
Hor Sync Time	= 1.616; // (usec)	= 10 chars	= 80 Pixels
// H Back Porch	= 3.232; // (usec)	= 20 chars	= 160 Pixels
// H Left Border	= 0.000; // (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 13.333; // (msec)	= 625 lines	HT – (1.06xHA)
Ver Addr Time	= 12.800; // (msec)	= 600 lines	= 4.2
Ver Blank Start	= 12.800; // (msec)	= 600 lines	
Ver Blank Time	= 0.533; // (msec)	= 25 lines	
Ver Sync Start	= 12.821; // (msec)	= 601 lines	
// V Bottom Border	= 0.000; // (msec)	= 0 lines	
// V Front Porch	= 0.021; // (msec)	= 1 lines	
Ver Sync Time	= 0.064; // (msec)	= 3 lines	
// V Back Porch	= 0.448; // (msec)	= 21 lines	
// V Top Border	= 0.000; // (msec)	= 0 lines	

**Definition of Terms:** Refer to section 3.1.

## VESA MONITOR TIMING STANDARD

Adopted: 3/1/96

Resolution: 800 x 600 at 85 Hz (non-interlaced)

EDID ID: DMT ID: 0Ch; Std. 2 Byte Code: (45, 59)h; CTV 3 Byte Code: n/a

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

### Detailed Timing Parameters

Timing Name	= <b>800 x 600 @ 85Hz;</b>		
Hor Pixels	= <b>800;</b> // Pixels		
Ver Pixels	= <b>600;</b> // Lines		
Hor Frequency	= 53.674; // kHz	= 18.6 usec	/ line
Ver Frequency	= 85.061; // Hz	= 11.8 msec	/ frame
Pixel Clock	= <b>56.250;</b> // MHz	= 17.8 nsec	± 0.5%
Character Width	= <b>8;</b> // Pixels	= 142.2 nsec	
Scan Type	= <b>NONINTERLACED;</b>	// H Phase =	5.7 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank	= 23.7% of HTotal	
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank	= 4.9% of VTotal	
Hor Total Time	= 18.631; // (usec)	= 131 chars	= 1048 Pixels
Hor Addr Time	= 14.222; // (usec)	= 100 chars	= 800 Pixels
Hor Blank Start	= 14.222; // (usec)	= 100 chars	= 800 Pixels
Hor Blank Time	= 4.409; // (usec)	= 31 chars	= 248 Pixels
Hor Sync Start	= 14.791; // (usec)	= 104 chars	= 832 Pixels
// H Right Border	= 0.000; // (usec)	= <b>0</b> chars	= 0 Pixels
// H Front Porch	= 0.569; // (usec)	= <b>4</b> chars	= 32 Pixels
Hor Sync Time	= 1.138; // (usec)	= <b>8</b> chars	= 64 Pixels
// H Back Porch	= 2.702; // (usec)	= <b>19</b> chars	= 152 Pixels
// H Left Border	= 0.000; // (usec)	= <b>0</b> chars	= 0 Pixels
Ver Total Time	= 11.756; // (msec)	= 631 lines	HT – (1.06xHA)
Ver Addr Time	= 11.179; // (msec)	= 600 lines	= 3.56
Ver Blank Start	= 11.179; // (msec)	= 600 lines	
Ver Blank Time	= 0.578; // (msec)	= 31 lines	
Ver Sync Start	= 11.197; // (msec)	= 601 lines	
// V Bottom Border	= 0.000; // (msec)	= <b>0</b> lines	
// V Front Porch	= 0.019; // (msec)	= <b>1</b> lines	
Ver Sync Time	= 0.056; // (msec)	= <b>3</b> lines	
// V Back Porch	= 0.503; // (msec)	= <b>27</b> lines	
// V Top Border	= 0.000; // (msec)	= <b>0</b> lines	

**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; CTV 3 Byte Code: n/a  
 Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	<b>= 800 x 600 @ 120Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= 800;	// Pixels		
Ver Pixels	= 600;	// Lines		
Hor Frequency	= 76.302;	// kHz	= 13.1 usec	/ line
Ver Frequency	= 119.972;	// Hz	= 8.3 msec	/ frame
Pixel Clock	= 73.250;	// MHz	= 13.7 nsec	± 0.5%
Character Width	= 8;	// Pixels	= 109.2 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 1.7 %			
Hor Sync Polarity	= POSITIVE;	// HBlank	= 16.7% of HTotal	
Ver Sync Polarity	= NEGATIVE	// VBlank	= 5.7% of VTotal	
Hor Total Time	= 13.106;	// (usec)	= 120 chars	= 960 Pixels
Hor Addr Time	= 10.922;	// (usec)	= 100 chars	= 800 Pixels
Hor Blank Start	= 10.922;	// (usec)	= 100 chars	= 800 Pixels
Hor Blank Time	= 2.184;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 11.577;	// (usec)	= 106 chars	= 848 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.655;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.437;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 1.092;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 8.335;	// (msec)	= 636 lines	HT – (1.06xHA)
Ver Addr Time	= 7.863;	// (msec)	= 600 lines	= 1.53
Ver Blank Start	= 7.863;	// (msec)	= 600 lines	
Ver Blank Time	= 0.472;	// (msec)	= 36 lines	
Ver Sync Start	= 7.903;	// (msec)	= 603 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.039;	// (msec)	= 3 lines	
Ver Sync Time	= 0.052;	// (msec)	= 4 lines	
// V Back Porch	= 0.380;	// (msec)	= 29 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

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

## VESA MONITOR TIMING STANDARD

Adopted: 8/21/03  
 Resolution: 848 x 480 at 60 Hz (non-interlaced)  
 EDID ID: DMT ID: 0Eh; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CTV COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>848 x 480 @ 60Hz;</b>		
Hor Pixels	= <b>848;</b> // Pixels		
Ver Pixels	= <b>480;</b> // Lines		
Hor Frequency	= 31.020; // kHz	= 32.2 usec	/ line
Ver Frequency	= 60.000; // Hz	= 16.7 msec	/ frame
Pixel Clock	= <b>33.750;</b> // MHz	= 29.6 nsec	± 0.5%
Character Width	= <b>8;</b> // Pixels	= 237.0 nsec	
Scan Type	= <b>NONINTERLACED;</b>	// H Phase	= 4.4 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank	= 22.1% of HTotal	
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank	= 7.2% of VTotal	
Hor Total Time	= 32.237; // (usec)	= 136 chars	= 1088 Pixels
Hor Addr Time	= 25.126; // (usec)	= 106 chars	= 848 Pixels
Hor Blank Start	= 25.126; // (usec)	= 106 chars	= 848 Pixels
Hor Blank Time	= 7.111; // (usec)	= 30 chars	= 240 Pixels
Hor Sync Start	= 25.600; // (usec)	= 108 chars	= 864 Pixels
// H Right Border	= 0.000; // (usec)	= <b>0</b> chars	= 0 Pixels
// H Front Porch	= 0.474; // (usec)	= <b>2</b> chars	= 16 Pixels
Hor Sync Time	= 3.319; // (usec)	= <b>14</b> chars	= 112 Pixels
// H Back Porch	= 3.319; // (usec)	= <b>14</b> chars	= 112 Pixels
// H Left Border	= 0.000; // (usec)	= <b>0</b> chars	= 0 Pixels
Ver Total Time	= 16.667; // (msec)	= 517 lines	HT – (1.06xHA)
Ver Addr Time	= 15.474; // (msec)	= 480 lines	= 5.6
Ver Blank Start	= 15.474; // (msec)	= 480 lines	
Ver Blank Time	= 1.193; // (msec)	= 37 lines	
Ver Sync Start	= 15.667; // (msec)	= 486 lines	
// V Bottom Border	= 0.000; // (msec)	= <b>0</b> lines	
// V Front Porch	= 0.193; // (msec)	= <b>6</b> lines	
Ver Sync Time	= 0.258; // (msec)	= <b>8</b> lines	
// V Back Porch	= 0.741; // (msec)	= <b>23</b> lines	
// V Top Border	= 0.000; // (msec)	= <b>0</b> lines	

**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; CTV 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

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

**Definition of Terms:** Refer to section 3.1.

## VESA MONITOR TIMING STANDARD

Adopted: 9/10/91 (VESA #901101A)  
 Resolution: 1024 x 768 at 60 Hz (non-interlaced)  
 EDID ID: DMT ID: 10h; Std. 2 Byte Code: (61, 40)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

Timing Name	= <b>1024 x 768 @ 60Hz;</b>
Hor Pixels	= <b>1024;</b> // Pixels
Ver Pixels	= <b>768;</b> // Lines
Hor Frequency	= 48.363; // kHz = 20.7 usec / line
Ver Frequency	= 60.004; // Hz = 16.7 msec / frame
Pixel Clock	= <b>65.000;</b> // MHz = 15.4 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 123.1 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 5.1 %
Hor Sync Polarity	= <b>NEGATIVE;</b> // HBlank = 23.8% of HTotal
Ver Sync Polarity	= <b>NEGATIVE;</b> // VBlank = 4.7% of VTotal
Hor Total Time	= 20.677; // (usec) = 168 chars = 1344 Pixels
Hor Addr Time	= 15.754; // (usec) = 128 chars = 1024 Pixels
Hor Blank Start	= 15.754; // (usec) = 128 chars = 1024 Pixels
Hor Blank Time	= 4.923; // (usec) = 40 chars = 320 Pixels
Hor Sync Start	= 16.123; // (usec) = 131 chars = 1048 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.369; // (usec) = 3 chars = 24 Pixels
Hor Sync Time	= 2.092; // (usec) = 17 chars = 136 Pixels
// H Back Porch	= 2.462; // (usec) = 20 chars = 160 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 16.666; // (msec) = 806 lines HT – (1.06xHA)
Ver Addr Time	= 15.880; // (msec) = 768 lines = 3.98
Ver Blank Start	= 15.880; // (msec) = 768 lines
Ver Blank Time	= 0.786; // (msec) = 38 lines
Ver Sync Start	= 15.942; // (msec) = 771 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.062; // (msec) = 3 lines
Ver Sync Time	= 0.124; // (msec) = 6 lines
// V Back Porch	= 0.600; // (msec) = 29 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**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; CTV 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

Timing Name	= <b>1024 x 768 @ 70Hz;</b>
Hor Pixels	= <b>1024;</b> // Pixels
Ver Pixels	= <b>768;</b> // Lines
Hor Frequency	= 56.476; // kHz = 17.7 usec / line
Ver Frequency	= 70.069; // Hz = 14.3 msec / frame
Pixel Clock	= <b>75.000;</b> // MHz = 13.3 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 106.7 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 4.5 %
Hor Sync Polarity	= <b>NEGATIVE;</b> // HBlank = 22.9% of HTotal
Ver Sync Polarity	= <b>NEGATIVE;</b> // VBlank = 4.7% of VTotal
Hor Total Time	= 17.707; // (usec) = 166 chars = 1328 Pixels
Hor Addr Time	= 13.653; // (usec) = 128 chars = 1024 Pixels
Hor Blank Start	= 13.653; // (usec) = 128 chars = 1024 Pixels
Hor Blank Time	= 4.053; // (usec) = 38 chars = 304 Pixels
Hor Sync Start	= 13.973; // (usec) = 131 chars = 1048 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.320; // (usec) = 3 chars = 24 Pixels
Hor Sync Time	= 1.813; // (usec) = 17 chars = 136 Pixels
// H Back Porch	= 1.920; // (usec) = 18 chars = 144 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 14.272; // (msec) = 806 lines HT – (1.06xHA)
Ver Addr Time	= 13.599; // (msec) = 768 lines = 3.23
Ver Blank Start	= 13.599; // (msec) = 768 lines
Ver Blank Time	= 0.673; // (msec) = 38 lines
Ver Sync Start	= 13.652; // (msec) = 771 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.053; // (msec) = 3 lines
Ver Sync Time	= 0.106; // (msec) = 6 lines
// V Back Porch	= 0.513; // (msec) = 29 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**Definition of Terms:** Refer to section 3.3.

## VESA 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; CTV 3 Byte Code: n/a

BIOS Modes: 104h, 105h, 116h, 117h, & 118h (4, 8, 15, 16, & 24 bpp)

Method: **\*\*\* NOT CTV COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1024 x 768 @ 75Hz;</b>		
Hor Pixels	= <b>1024;</b> // Pixels		
Ver Pixels	= <b>768;</b> // Lines		
Hor Frequency	= 60.023; // kHz	= 16.7 usec	/ line
Ver Frequency	= 75.029; // Hz	= 13.3 msec	/ frame
Pixel Clock	= <b>78.750;</b> // MHz	= 12.7 nsec	$\pm 0.5\%$
Character Width	= <b>8;</b> // Pixels	= 101.6 nsec	
Scan Type	= <b>NONINTERLACED;</b>	// H Phase =	6.1 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank	= 22.0% of HTotal	
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank	= 4.0% of VTotal	
Hor Total Time	= 16.660; // (usec)	= 164 chars	= 1312 Pixels
Hor Addr Time	= 13.003; // (usec)	= 128 chars	= 1024 Pixels
Hor Blank Start	= 13.003; // (usec)	= 128 chars	= 1024 Pixels
Hor Blank Time	= 3.657; // (usec)	= 36 chars	= 288 Pixels
Hor Sync Start	= 13.206; // (usec)	= 130 chars	= 1040 Pixels
// H Right Border	= 0.000; // (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.203; // (usec)	= 2 chars	= 16 Pixels
Hor Sync Time	= 1.219; // (usec)	= 12 chars	= 96 Pixels
// H Back Porch	= 2.235; // (usec)	= 22 chars	= 176 Pixels
// H Left Border	= 0.000; // (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 13.328; // (msec)	= 800 lines	HT - (1.06xHA)
Ver Addr Time	= 12.795; // (msec)	= 768 lines	= 2.88
Ver Blank Start	= 12.795; // (msec)	= 768 lines	
Ver Blank Time	= 0.533; // (msec)	= 32 lines	
Ver Sync Start	= 12.812; // (msec)	= 769 lines	
// V Bottom Border	= 0.000; // (msec)	= 0 lines	
// V Front Porch	= 0.017; // (msec)	= 1 lines	
Ver Sync Time	= 0.050; // (msec)	= 3 lines	
// V Back Porch	= 0.466; // (msec)	= 28 lines	
// V Top Border	= 0.000; // (msec)	= 0 lines	

**Definition of Terms:** Refer to section 3.1.

## VESA MONITOR TIMING STANDARD

Adopted: 3/1/96  
 Resolution: 1024 x 768 at 85 Hz (non-interlaced)  
 EDID ID: DMT ID: 13h; Std. 2 Byte Code: (61, 59)h; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

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

**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; CTV 3 Byte Code: n/a

Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	<b>= 1024 x 768 @ 120Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= <b>1024;</b>	// Pixels		
Ver Pixels	= <b>768;</b>	// Lines		
Hor Frequency	= 97.551;	// kHz	= 10.3 usec	/ line
Ver Frequency	= 119.989;	// Hz	= 8.3 msec	/ frame
Pixel Clock	= <b>115.500;</b>	// MHz	= 8.7 nsec	± 0.5%
Character Width	= <b>8;</b>	// Pixels	= 69.3 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 1.4 %			
Hor Sync Polarity	= <b>POSITIVE;</b>	// HBlank	= 13.5% of HTotal	
Ver Sync Polarity	= <b>NEGATIVE</b>	// VBlank	= 5.5% of VTotal	
Hor Total Time	= 10.251;	// (usec)	= 148 chars	= 1184 Pixels
Hor Addr Time	= 8.866;	// (usec)	= 128 chars	= 1024 Pixels
Hor Blank Start	= 8.866;	// (usec)	= 128 chars	= 1024 Pixels
Hor Blank Time	= 1.385;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 9.281;	// (usec)	= 134 chars	= 1072 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.416;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.277;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.693;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 8.334;	// (msec)	= 813 lines	HT - (1.06xHA)
Ver Addr Time	= 7.873;	// (msec)	= 768 lines	= 0.85
Ver Blank Start	= 7.873;	// (msec)	= 768 lines	
Ver Blank Time	= 0.461;	// (msec)	= 45 lines	
Ver Sync Start	= 7.904;	// (msec)	= 771 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.031;	// (msec)	= 3 lines	
Ver Sync Time	= 0.041;	// (msec)	= 4 lines	
// V Back Porch	= 0.390;	// (msec)	= 38 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

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

## VESA 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; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1152 x 864 @ 75Hz;</b>				
Hor Pixels	= <b>1152;</b>	// Pixels			
Ver Pixels	= <b>864;</b>	// Lines			
Hor Frequency	= 67.500;	// kHz	= 14.8 usec	/ line	
Ver Frequency	= 75.000;	// Hz	= 13.3 msec	/ frame	
Pixel Clock	= <b>108.000;</b>	// MHz	= 9.3 nsec	± 0.5%	
Character Width	= <b>8;</b>	// Pixels	= 74.1 nsec		
Scan Type	= <b>NONINTERLACED;</b>		// H Phase =	6.0 %	
Hor Sync Polarity	= <b>POSITIVE;</b>	// HBlank	= 28.0% of HTotal		
Ver Sync Polarity	= <b>POSITIVE;</b>	// VBlank	= 4.0% of VTotal		
Hor Total Time	= 14.815;	// (usec)	= 200 chars	= 1600 Pixels	
Hor Addr Time	= 10.667;	// (usec)	= 144 chars	= 1152 Pixels	
Hor Blank Start	= 10.667;	// (usec)	= 144 chars	= 1152 Pixels	
Hor Blank Time	= 4.148;	// (usec)	= 56 chars	= 448 Pixels	
Hor Sync Start	= 11.259;	// (usec)	= 152 chars	= 1216 Pixels	
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
// H Front Porch	= 0.593;	// (usec)	= 8 chars	= 64 Pixels	
Hor Sync Time	= 1.185;	// (usec)	= 16 chars	= 128 Pixels	
// H Back Porch	= 2.370;	// (usec)	= 32 chars	= 256 Pixels	
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
Ver Total Time	= 13.333;	// (msec)	= 900 lines	HT - (1.06xHA)	
Ver Addr Time	= 12.800;	// (msec)	= 864 lines	= 3.51	
Ver Blank Start	= 12.800;	// (msec)	= 864 lines		
Ver Blank Time	= 0.533;	// (msec)	= 36 lines		
Ver Sync Start	= 12.815;	// (msec)	= 865 lines		
// V Bottom Border	= 0.000;	// (msec)	= 0 lines		
// V Front Porch	= 0.015;	// (msec)	= 1 lines		
Ver Sync Time	= 0.044;	// (msec)	= 3 lines		
// V Back Porch	= 0.474;	// (msec)	= 32 lines		
// V Top Border	= 0.000;	// (msec)	= 0 lines		

**Definition of Terms:** Refer to section 3.1.

## VESA MONITOR TIMING STANDARD

Adopted: 11/17/08

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

Timing Name	= <b>1280 x 720 @ 60Hz;</b>
Hor Pixels	= <b>1280;</b> // Pixels
Ver Pixels	= <b>720;</b> // Lines
Hor Frequency	= 45.000; // KHz = 22.2 usec / line
Ver Frequency	= 60.000; // Hz = 16.7 msec / frame
Pixel Clock	= <b>74.250;</b> // MHz = 13.5 nsec ± 0.5%
Character Width	= <b>1;</b> // Pixels = 13.5 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 3.3 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank = 22.4% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 4.0% of VTotal
Hor Total Time	= 22.222; // (usec) = 1650 chars = 1650 Pixels
Hor Addr Time	= 17.239; // (usec) = 1280 chars = 1280 Pixels
Hor Blank Start	= 17.239; // (usec) = 1280 chars = 1280 Pixels
Hor Blank Time	= 4.983; // (usec) = 370 chars = 370 Pixels
Hor Sync Start	= 18.721; // (usec) = 1390 chars = 1390 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 1.481; // (usec) = 110 chars = 110 Pixels
Hor Sync Time	= 0.539; // (usec) = 40 chars = 40 Pixels
// H Back Porch	= 2.963; // (usec) = 220 chars = 220 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 16.667; // (msec) = 750 lines HT - (1.06xHA)
Ver Addr Time	= 16.000; // (msec) = 720 lines = 3.95
Ver Blank Start	= 16.000; // (msec) = 720 lines
Ver Blank Time	= 0.667; // (msec) = 30 lines
Ver Sync Start	= 16.111; // (msec) = 725 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.111; // (msec) = 5 lines
Ver Sync Time	= 0.111; // (msec) = 5 lines
// V Back Porch	= 0.444; // (msec) = 20 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**Definition of Terms:** Refer to Section 3.1

## VESA MONITOR TIMING STANDARD

Adopted: 8/21/03

Resolution: 1280 x 768 at 60 Hz (non-interlaced) **REDUCED BLANKING**

EDID ID: DMT ID: 16h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: (7F, 1C, 21)h

Method: CTV Reduced Blanking

### Detailed Timing Parameters

Timing Name	<b>= 1280 x 768 @ 60Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= <b>1280;</b>	// Pixels		
Ver Pixels	= <b>768;</b>	// Lines		
Hor Frequency	= 47.396;	// kHz	= 21.1 usec	/ line
Ver Frequency	= 59.995;	// Hz	= 16.7 msec	/ frame
Pixel Clock	= <b>68.250;</b>	// MHz	= 14.7 nsec	± 0.5%
Character Width	= <b>8;</b>	// Pixels	= 117.2 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 1.1 %			
Hor Sync Polarity	= <b>POSITIVE;</b>	// HBlank	= 11.1% of HTotal	
Ver Sync Polarity	= <b>NEGATIVE</b>	// VBlank	= 2.8% of VTotal	
Hor Total Time	= 21.099;	// (usec)	= 180 chars	= 1440 Pixels
Hor Addr Time	= 18.755;	// (usec)	= 160 chars	= 1280 Pixels
Hor Blank Start	= 18.755;	// (usec)	= 160 chars	= 1280 Pixels
Hor Blank Time	= 2.344;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 19.458;	// (usec)	= 166 chars	= 1328 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.703;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.469;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 1.172;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 16.668;	// (msec)	= 790 lines	HT - (1.06xHA)
Ver Addr Time	= 16.204;	// (msec)	= 768 lines	= 1.22
Ver Blank Start	= 16.204;	// (msec)	= 768 lines	
Ver Blank Time	= 0.464;	// (msec)	= 22 lines	
Ver Sync Start	= 16.267;	// (msec)	= 771 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.063;	// (msec)	= 3 lines	
Ver Sync Time	= 0.148;	// (msec)	= 7 lines	
// V Back Porch	= 0.253;	// (msec)	= 12 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

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

## VESA MONITOR TIMING STANDARD

Adopted: 8/21/03  
 Resolution: 1280 x 768 at 60 Hz (non-interlaced)  
 EDID ID: DMT ID: 17h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: (7F, 1C, 28)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1280 x 768 @ 60Hz;</b>				
Hor Pixels	= <b>1280;</b>	// Pixels			
Ver Pixels	= <b>768;</b>	// Lines			
Hor Frequency	= 47.776;	// kHz	= 20.9 usec	/ line	
Ver Frequency	= 59.870;	// Hz	= 16.7 msec	/ frame	
Pixel Clock	= <b>79.500;</b>	// MHz	= 12.6 nsec	± 0.5%	
Character Width	= <b>8;</b>	// Pixels	= 100.6 nsec		
Scan Type	= <b>NONINTERLACED;</b>		// H Phase =	3.8 %	
Hor Sync Polarity	= <b>NEGATIVE</b>	// HBlank	= 23.1% of HTotal		
Ver Sync Polarity	= <b>POSITIVE;</b>	// VBlank	= 3.8% of VTotal		
Hor Total Time	= 20.931;	// (usec)	= 208 chars	= 1664 Pixels	
Hor Addr Time	= 16.101;	// (usec)	= 160 chars	= 1280 Pixels	
Hor Blank Start	= 16.101;	// (usec)	= 160 chars	= 1280 Pixels	
Hor Blank Time	= 4.830;	// (usec)	= 48 chars	= 384 Pixels	
Hor Sync Start	= 16.906;	// (usec)	= 168 chars	= 1344 Pixels	
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
// H Front Porch	= 0.805;	// (usec)	= 8 chars	= 64 Pixels	
Hor Sync Time	= 1.610;	// (usec)	= 16 chars	= 128 Pixels	
// H Back Porch	= 2.415;	// (usec)	= 24 chars	= 192 Pixels	
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
Ver Total Time	= 16.703;	// (msec)	= 798 lines	HT – (1.06xHA)	
Ver Addr Time	= 16.075;	// (msec)	= 768 lines	= 3.86	
Ver Blank Start	= 16.075;	// (msec)	= 768 lines		
Ver Blank Time	= 0.628;	// (msec)	= 30 lines		
Ver Sync Start	= 16.138;	// (msec)	= 771 lines		
// V Bottom Border	= 0.000;	// (msec)	= 0 lines		
// V Front Porch	= 0.063;	// (msec)	= 3 lines		
Ver Sync Time	= 0.147;	// (msec)	= 7 lines		
// V Back Porch	= 0.419;	// (msec)	= 20 lines		
// V Top Border	= 0.000;	// (msec)	= 0 lines		

**Definition of Terms:** Refer to section 3.4.

## VESA MONITOR TIMING STANDARD

Adopted: 8/21/03  
 Resolution: 1280 x 768 at 75 Hz (non-interlaced)  
 EDID ID: DMT ID: 18h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: (7F, 1C, 44)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1280 x 768 @ 75Hz;</b>				
Hor Pixels	= <b>1280;</b>	// Pixels			
Ver Pixels	= <b>768;</b>	// Lines			
Hor Frequency	= 60.289;	// KHz	= 16.6 usec	/ line	
Ver Frequency	= 74.893;	// Hz	= 13.4 msec	/ frame	
Pixel Clock	= <b>102.250;</b>	// MHz	= 9.8 nsec	± 0.5%	
Character Width	= <b>8;</b>	// Pixels	= 78.2 nsec		
Scan Type	= <b>NONINTERLACED;</b>		// H Phase =	3.8 %	
Hor Sync Polarity	= <b>NEGATIVE</b>	// HBlank	= 24.5% of HTotal		
Ver Sync Polarity	= <b>POSITIVE;</b>	// VBlank	= 4.6% of VTotal		
Hor Total Time	= 16.587;	// (usec)	= 212 chars	= 1696 Pixels	
Hor Addr Time	= 12.518;	// (usec)	= 160 chars	= 1280 Pixels	
Hor Blank Start	= 12.518;	// (usec)	= 160 chars	= 1280 Pixels	
Hor Blank Time	= 4.068;	// (usec)	= 52 chars	= 416 Pixels	
Hor Sync Start	= 13.301;	// (usec)	= 170 chars	= 1360 Pixels	
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
// H Front Porch	= 0.782;	// (usec)	= 10 chars	= 80 Pixels	
Hor Sync Time	= 1.252;	// (usec)	= 16 chars	= 128 Pixels	
// H Back Porch	= 2.034;	// (usec)	= 26 chars	= 208 Pixels	
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
Ver Total Time	= 13.352;	// (msec)	= 805 lines	HT – (1.06xHA)	
Ver Addr Time	= 12.739;	// (msec)	= 768 lines	= 3.32	
Ver Blank Start	= 12.739;	// (msec)	= 768 lines		
Ver Blank Time	= 0.614;	// (msec)	= 37 lines		
Ver Sync Start	= 12.788;	// (msec)	= 771 lines		
// V Bottom Border	= 0.000;	// (msec)	= 0 lines		
// V Front Porch	= 0.050;	// (msec)	= 3 lines		
Ver Sync Time	= 0.116;	// (msec)	= 7 lines		
// V Back Porch	= 0.448;	// (msec)	= 27 lines		
// V Top Border	= 0.000;	// (msec)	= 0 lines		

**Definition of Terms:** Refer to section 3.4.

## VESA MONITOR TIMING STANDARD

Adopted: 8/21/03  
 Resolution: 1280 x 768 at 85 Hz (non-interlaced)  
 EDID ID: DMT ID: 19h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: (7F, 1C, 62)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1280 x 768 @ 85Hz;</b>				
Hor Pixels	= <b>1280;</b>	// Pixels			
Ver Pixels	= <b>768;</b>	// Lines			
Hor Frequency	= 68.633;	// kHz	= 14.6 usec	/ line	
Ver Frequency	= 84.837;	// Hz	= 11.8 msec	/ frame	
Pixel Clock	= <b>117.500;</b>	// MHz	= 8.5 nsec	± 0.5%	
Character Width	= <b>8;</b>	// Pixels	= 68.1 nsec		
Scan Type	= <b>NONINTERLACED;</b>		// H Phase = 4.0 %		
Hor Sync Polarity	= <b>NEGATIVE</b>	// HBlank	= 25.2% of HTotal		
Ver Sync Polarity	= <b>POSITIVE;</b>	// VBlank	= 5.1% of VTotal		
Hor Total Time	= 14.570;	// (usec)	= 214 chars	= 1712 Pixels	
Hor Addr Time	= 10.894;	// (usec)	= 160 chars	= 1280 Pixels	
Hor Blank Start	= 10.894;	// (usec)	= 160 chars	= 1280 Pixels	
Hor Blank Time	= 3.677;	// (usec)	= 54 chars	= 432 Pixels	
Hor Sync Start	= 11.574;	// (usec)	= 170 chars	= 1360 Pixels	
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
// H Front Porch	= 0.681;	// (usec)	= 10 chars	= 80 Pixels	
Hor Sync Time	= 1.157;	// (usec)	= 17 chars	= 136 Pixels	
// H Back Porch	= 1.838;	// (usec)	= 27 chars	= 216 Pixels	
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
Ver Total Time	= 11.787;	// (msec)	= 809 lines	HT – (1.06xHA)	
Ver Addr Time	= 11.190;	// (msec)	= 768 lines	= 3.02	
Ver Blank Start	= 11.190;	// (msec)	= 768 lines		
Ver Blank Time	= 0.597;	// (msec)	= 41 lines		
Ver Sync Start	= 11.234;	// (msec)	= 771 lines		
// V Bottom Border	= 0.000;	// (msec)	= 0 lines		
// V Front Porch	= 0.044;	// (msec)	= 3 lines		
Ver Sync Time	= 0.102;	// (msec)	= 7 lines		
// V Back Porch	= 0.452;	// (msec)	= 31 lines		
// V Top Border	= 0.000;	// (msec)	= 0 lines		

**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: 1Ah; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a

Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	<b>= 1280 x 768 @ 120Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= <b>1280;</b>	// Pixels		
Ver Pixels	= <b>768;</b>	// Lines		
Hor Frequency	= 97.396;	// kHz	= 10.3 usec	/ line
Ver Frequency	= 119.798;	// Hz	= 8.3 msec	/ frame
Pixel Clock	= <b>140.250;</b>	// MHz	= 7.1 nsec	± 0.5%
Character Width	= <b>8;</b>	// Pixels	= 57.0 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 1.1 %			
Hor Sync Polarity	= <b>POSITIVE;</b>	// HBlank	= 11.1% of HTotal	
Ver Sync Polarity	= <b>NEGATIVE</b>	// VBlank	= 5.5% of VTotal	
Hor Total Time	= 10.267;	// (usec)	= 180 chars	= 1440 Pixels
Hor Addr Time	= 9.127;	// (usec)	= 160 chars	= 1280 Pixels
Hor Blank Start	= 9.127;	// (usec)	= 160 chars	= 1280 Pixels
Hor Blank Time	= 1.141;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 9.469;	// (usec)	= 166 chars	= 1328 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.342;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.228;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.570;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 8.347;	// (msec)	= 813 lines	HT - (1.06xHA)
Ver Addr Time	= 7.885;	// (msec)	= 768 lines	= 0.59
Ver Blank Start	= 7.885;	// (msec)	= 768 lines	
Ver Blank Time	= 0.462;	// (msec)	= 45 lines	
Ver Sync Start	= 7.916;	// (msec)	= 771 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.031;	// (msec)	= 3 lines	
Ver Sync Time	= 0.072;	// (msec)	= 7 lines	
// V Back Porch	= 0.359;	// (msec)	= 35 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

**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; CTV 3 Byte Code: (8F, 18, 21)h

Method: CTV Reduced Blanking

### Detailed Timing Parameters

Timing Name	= <b>1280 x 800 @ 60Hz CTV (Reduced Blanking);</b>
Hor Pixels	= <b>1280;</b> // Pixels
Ver Pixels	= <b>800;</b> // Lines
Hor Frequency	= 49.306; // kHz = 20.3 usec / line
Ver Frequency	= 59.910; // Hz = 16.7 msec / frame
Pixel Clock	= <b>71.000;</b> // MHz = 14.1 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 112.7 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 1.1 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank = 11.1% of HTotal
Ver Sync Polarity	= <b>NEGATIVE;</b> // VBlank = 2.8% of VTotal
Hor Total Time	= 20.282; // (usec) = 180 chars = 1440 Pixels
Hor Addr Time	= 18.028; // (usec) = 160 chars = 1280 Pixels
Hor Blank Start	= 18.028; // (usec) = 160 chars = 1280 Pixels
Hor Blank Time	= 2.254; // (usec) = 20 chars = 160 Pixels
Hor Sync Start	= 18.704; // (usec) = 166 chars = 1328 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.676; // (usec) = 6 chars = 48 Pixels
Hor Sync Time	= 0.451; // (usec) = 4 chars = 32 Pixels
// H Back Porch	= 1.127; // (usec) = 10 chars = 80 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 16.692; // (msec) = 823 lines HT – (1.06xHA)
Ver Addr Time	= 16.225; // (msec) = 800 lines = 1.17
Ver Blank Start	= 16.225; // (msec) = 800 lines
Ver Blank Time	= 0.466; // (msec) = 23 lines
Ver Sync Start	= 16.286; // (msec) = 803 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.061; // (msec) = 3 lines
Ver Sync Time	= 0.122; // (msec) = 6 lines
// V Back Porch	= 0.284; // (msec) = 14 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**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; CTV 3 Byte Code: (8F, 18, 28)h

Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1280 x 800 @ 60Hz;</b>			
Hor Pixels	= <b>1280;</b>	// Pixels		
Ver Pixels	= <b>800;</b>	// Lines		
Hor Frequency	= 49.702;	// kHz	= 20.1 usec	/ line
Ver Frequency	= 59.810;	// Hz	= 16.7 msec	/ frame
Pixel Clock	= <b>83.500;</b>	// MHz	= 12.0 nsec	± 0.5%
Character Width	= <b>8;</b>	// Pixels	= 95.8 nsec	
Scan Type	= <b>NONINTERLACED;</b>		// H Phase =	3.8 %
Hor Sync Polarity	= <b>NEGATIVE;</b>	// HBlank	= 23.8% of HTotal	
Ver Sync Polarity	= <b>POSITIVE;</b>	// VBlank	= 3.7% of VTotal	
Hor Total Time	= 20.120;	// (usec)	= 210 chars	= 1680 Pixels
Hor Addr Time	= 15.329;	// (usec)	= 160 chars	= 1280 Pixels
Hor Blank Start	= 15.329;	// (usec)	= 160 chars	= 1280 Pixels
Hor Blank Time	= 4.790;	// (usec)	= 50 chars	= 400 Pixels
Hor Sync Start	= 16.192;	// (usec)	= 169 chars	= 1352 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.862;	// (usec)	= 9 chars	= 72 Pixels
Hor Sync Time	= 1.533;	// (usec)	= 16 chars	= 128 Pixels
// H Back Porch	= 2.395;	// (usec)	= 25 chars	= 200 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 16.720;	// (msec)	= 831 lines	HT – (1.06xHA)
Ver Addr Time	= 16.096;	// (msec)	= 800 lines	= 3.87
Ver Blank Start	= 16.096;	// (msec)	= 800 lines	
Ver Blank Time	= 0.624;	// (msec)	= 31 lines	
Ver Sync Start	= 16.156;	// (msec)	= 803 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.060;	// (msec)	= 3 lines	
Ver Sync Time	= 0.121;	// (msec)	= 6 lines	
// V Back Porch	= 0.443;	// (msec)	= 22 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

**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; CTV 3 Byte Code: (8F, 18, 44)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1280 x 800 @ 75Hz;</b>
Hor Pixels	= <b>1280;</b> // Pixels
Ver Pixels	= <b>800;</b> // Lines
Hor Frequency	= 62.795; // kHz = 15.9 usec / line
Ver Frequency	= 74.934; // Hz = 13.3 msec / frame
Pixel Clock	= <b>106.500;</b> // MHz = 9.4 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 75.1 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 3.8 %
Hor Sync Polarity	= <b>NEGATIVE;</b> // HBlank = 24.5% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 4.5% of VTotal
Hor Total Time	= 15.925; // (usec) = 212 chars = 1696 Pixels
Hor Addr Time	= 12.019; // (usec) = 160 chars = 1280 Pixels
Hor Blank Start	= 12.019; // (usec) = 160 chars = 1280 Pixels
Hor Blank Time	= 3.906; // (usec) = 52 chars = 416 Pixels
Hor Sync Start	= 12.770; // (usec) = 170 chars = 1360 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.751; // (usec) = 10 chars = 80 Pixels
Hor Sync Time	= 1.202; // (usec) = 16 chars = 128 Pixels
// H Back Porch	= 1.953; // (usec) = 26 chars = 208 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 13.345; // (msec) = 838 lines HT - (1.06xHA)
Ver Addr Time	= 12.740; // (msec) = 800 lines = 3.18
Ver Blank Start	= 12.740; // (msec) = 800 lines
Ver Blank Time	= 0.605; // (msec) = 38 lines
Ver Sync Start	= 12.788; // (msec) = 803 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.048; // (msec) = 3 lines
Ver Sync Time	= 0.096; // (msec) = 6 lines
// V Back Porch	= 0.462; // (msec) = 29 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**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; CTV 3 Byte Code: (8F, 18, 62)h  
 Method: CTV Compliant

### Detailed Timing Parameters

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

**Definition of Terms:** Refer to section 3.4.

## VESA MONITOR TIMING STANDARD

Adopted: 5/1/07

Resolution: 1280 x 800 at 120 Hz (non-interlaced) **REDUCED BLANKING**

EDID ID: 1Fh; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a

Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	<b>= 1280 x 800 @ 120Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= <b>1280;</b>	// Pixels		
Ver Pixels	= <b>800;</b>	// Lines		
Hor Frequency	= 101.563;	// kHz	= 9.8 usec	/ line
Ver Frequency	= 119.909;	// Hz	= 8.3 msec	/ frame
Pixel Clock	= <b>146.250;</b>	// MHz	= 6.8 nsec	± 0.5%
Character Width	= <b>8;</b>	// Pixels	= 54.7 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 1.1 %			
Hor Sync Polarity	= <b>POSITIVE;</b>	// HBlank	= 11.1% of HTotal	
Ver Sync Polarity	= <b>NEGATIVE</b>	// VBlank	= 5.5% of VTotal	
Hor Total Time	= 9.846;	// (usec)	= 180 chars	= 1440 Pixels
Hor Addr Time	= 8.752;	// (usec)	= 160 chars	= 1280 Pixels
Hor Blank Start	= 8.752;	// (usec)	= 160 chars	= 1280 Pixels
Hor Blank Time	= 1.094;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 9.080;	// (usec)	= 166 chars	= 1328 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.328;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.219;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.547;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 8.340;	// (msec)	= 847 lines	HT - (1.06xHA)
Ver Addr Time	= 7.877;	// (msec)	= 800 lines	= 0.57
Ver Blank Start	= 7.877;	// (msec)	= 800 lines	
Ver Blank Time	= 0.463;	// (msec)	= 47 lines	
Ver Sync Start	= 7.906;	// (msec)	= 803 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.030;	// (msec)	= 3 lines	
Ver Sync Time	= 0.059;	// (msec)	= 6 lines	
// V Back Porch	= 0.374;	// (msec)	= 38 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

**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; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1280 x 960 @ 60Hz;</b>			
Hor Pixels	= <b>1280;</b>	// Pixels		
Ver Pixels	= <b>960;</b>	// Lines		
Hor Frequency	= 60.000;	// kHz	= 16.7 usec	/ line
Ver Frequency	= 60.000;	// Hz	= 16.7 msec	/ frame
Pixel Clock	= <b>108.000;</b>	// MHz	= 9.3 nsec	± 0.5%
Character Width	= <b>8;</b>	// Pixels	= 74.1 nsec	
Scan Type	= <b>NONINTERLACED;</b>		// H Phase =	6.0 %
Hor Sync Polarity	= <b>POSITIVE;</b>	// HBlank	= 28.9% of HTotal	
Ver Sync Polarity	= <b>POSITIVE;</b>	// VBlank	= 4.0% of VTotal	
Hor Total Time	= 16.667;	// (usec)	= 225 chars	= 1800 Pixels
Hor Addr Time	= 11.852;	// (usec)	= 160 chars	= 1280 Pixels
Hor Blank Start	= 11.852;	// (usec)	= 160 chars	= 1280 Pixels
Hor Blank Time	= 4.815;	// (usec)	= 65 chars	= 520 Pixels
Hor Sync Start	= 12.741;	// (usec)	= 172 chars	= 1376 Pixels
// H Right Border	= 0.000;	// (usec)	= <b>0</b> chars	= 0 Pixels
// H Front Porch	= 0.889;	// (usec)	= <b>12</b> chars	= 96 Pixels
Hor Sync Time	= 1.037;	// (usec)	= <b>14</b> chars	= 112 Pixels
// H Back Porch	= 2.889;	// (usec)	= <b>39</b> chars	= 312 Pixels
// H Left Border	= 0.000;	// (usec)	= <b>0</b> chars	= 0 Pixels
Ver Total Time	= 16.667;	// (msec)	= 1000 lines	HT – (1.06xHA)
Ver Addr Time	= 16.000;	// (msec)	= 960 lines	= 4.1
Ver Blank Start	= 16.000;	// (msec)	= 960 lines	
Ver Blank Time	= 0.667;	// (msec)	= 40 lines	
Ver Sync Start	= 16.017;	// (msec)	= 961 lines	
// V Bottom Border	= 0.000;	// (msec)	= <b>0</b> lines	
// V Front Porch	= 0.017;	// (msec)	= <b>1</b> lines	
Ver Sync Time	= 0.050;	// (msec)	= <b>3</b> lines	
// V Back Porch	= 0.600;	// (msec)	= <b>36</b> lines	
// V Top Border	= 0.000;	// (msec)	= <b>0</b> lines	

**Definition of Terms:** Refer to section 3.1.

## VESA 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

Timing Name	= <b>1280 x 960 @ 85Hz;</b>
Hor Pixels	= <b>1280;</b> // Pixels
Ver Pixels	= <b>960;</b> // Lines
Hor Frequency	= 85.938; // kHz
Ver Frequency	= 85.002; // Hz
Pixel Clock	= <b>148.500;</b> // MHz
Character Width	= <b>8;</b> // Pixels
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 4.6 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank
Hor Total Time	= 11.636; // (usec)
Hor Addr Time	= 8.620; // (usec)
Hor Blank Start	= 8.620; // (usec)
Hor Blank Time	= 3.017; // (usec)
Hor Sync Start	= 9.051; // (usec)
// H Right Border	= 0.000; // (usec)
// H Front Porch	= 0.431; // (usec)
Hor Sync Time	= 1.077; // (usec)
// H Back Porch	= 1.508; // (usec)
// H Left Border	= 0.000; // (usec)
Ver Total Time	= 11.764; // (msec)
Ver Addr Time	= 11.171; // (msec)
Ver Blank Start	= 11.171; // (msec)
Ver Blank Time	= 0.593; // (msec)
Ver Sync Start	= 11.183; // (msec)
// V Bottom Border	= 0.000; // (msec)
// V Front Porch	= 0.012; // (msec)
Ver Sync Time	= 0.035; // (msec)
// V Back Porch	= 0.547; // (msec)
// V Top Border	= 0.000; // (msec)

**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; CTV 3 Byte Code: n/a

Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

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

**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; CTV 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

Timing Name	= <b>1280 x 1024 @ 60Hz;</b>
Hor Pixels	= <b>1280;</b> // Pixels
Ver Pixels	= <b>1024;</b> // Lines
Hor Frequency	= 63.981; // kHz = 15.6 usec / line
Ver Frequency	= 60.020; // Hz = 16.7 msec / frame
Pixel Clock	= <b>108.000;</b> // MHz = 9.3 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 74.1 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 5.9 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank = 24.2% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 3.9% of VTotal
Hor Total Time	= 15.630; // (usec) = 211 chars = 1688 Pixels
Hor Addr Time	= 11.852; // (usec) = 160 chars = 1280 Pixels
Hor Blank Start	= 11.852; // (usec) = 160 chars = 1280 Pixels
Hor Blank Time	= 3.778; // (usec) = 51 chars = 408 Pixels
Hor Sync Start	= 12.296; // (usec) = 166 chars = 1328 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.444; // (usec) = 6 chars = 48 Pixels
Hor Sync Time	= 1.037; // (usec) = 14 chars = 112 Pixels
// H Back Porch	= 2.296; // (usec) = 31 chars = 248 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 16.661; // (msec) = 1066 lines HT - (1.06xHA)
Ver Addr Time	= 16.005; // (msec) = 1024 lines = 3.07
Ver Blank Start	= 16.005; // (msec) = 1024 lines
Ver Blank Time	= 0.656; // (msec) = 42 lines
Ver Sync Start	= 16.020; // (msec) = 1025 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.016; // (msec) = 1 lines
Ver Sync Time	= 0.047; // (msec) = 3 lines
// V Back Porch	= 0.594; // (msec) = 38 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**Definition of Terms:** Refer to section 3.1.

## VESA MONITOR 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; CTV 3 Byte Code: n/a

BIOS Modes: 106h, 107h, 119h, 11Ah, & 11Bh (4, 8, 15, 16, & 24 bpp)

Method: **\*\*\* NOT CTV COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1280 x 1024 @ 75Hz;</b>
Hor Pixels	= <b>1280;</b> // Pixels
Ver Pixels	= <b>1024;</b> // Lines
Hor Frequency	= <b>79.976;</b> // kHz
Ver Frequency	= <b>75.025;</b> // Hz
Pixel Clock	= <b>135.000;</b> // MHz
Character Width	= <b>8;</b> // Pixels
Scan Type	= <b>NONINTERLACED;</b> // H Phase = <b>6.9 %</b>
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank = <b>24.2%</b> of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = <b>3.9%</b> of VTotal
Hor Total Time	= <b>12.504;</b> // (usec) = <b>211</b> chars = <b>1688</b> Pixels
Hor Addr Time	= <b>9.481;</b> // (usec) = <b>160</b> chars = <b>1280</b> Pixels
Hor Blank Start	= <b>9.481;</b> // (usec) = <b>160</b> chars = <b>1280</b> Pixels
Hor Blank Time	= <b>3.022;</b> // (usec) = <b>51</b> chars = <b>408</b> Pixels
Hor Sync Start	= <b>9.600;</b> // (usec) = <b>162</b> chars = <b>1296</b> Pixels
// H Right Border	= <b>0.000;</b> // (usec) = <b>0</b> chars = <b>0</b> Pixels
// H Front Porch	= <b>0.119;</b> // (usec) = <b>2</b> chars = <b>16</b> Pixels
Hor Sync Time	= <b>1.067;</b> // (usec) = <b>18</b> chars = <b>144</b> Pixels
// H Back Porch	= <b>1.837;</b> // (usec) = <b>31</b> chars = <b>248</b> Pixels
// H Left Border	= <b>0.000;</b> // (usec) = <b>0</b> chars = <b>0</b> Pixels
Ver Total Time	= <b>13.329;</b> // (msec) = <b>1066</b> lines HT - (1.06xHA)
Ver Addr Time	= <b>12.804;</b> // (msec) = <b>1024</b> lines = <b>2.45</b>
Ver Blank Start	= <b>12.804;</b> // (msec) = <b>1024</b> lines
Ver Blank Time	= <b>0.525;</b> // (msec) = <b>42</b> lines
Ver Sync Start	= <b>12.816;</b> // (msec) = <b>1025</b> lines
// V Bottom Border	= <b>0.000;</b> // (msec) = <b>0</b> lines
// V Front Porch	= <b>0.013;</b> // (msec) = <b>1</b> lines
Ver Sync Time	= <b>0.038;</b> // (msec) = <b>3</b> lines
// V Back Porch	= <b>0.475;</b> // (msec) = <b>38</b> lines
// V Top Border	= <b>0.000;</b> // (msec) = <b>0</b> lines

**Definition of Terms:** Refer to section 3.1.

## VESA MONITOR 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; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1280 x 1024 @ 85Hz;</b>
Hor Pixels	= <b>1280;</b> // Pixels
Ver Pixels	= <b>1024;</b> // Lines
Hor Frequency	= 91.146; // kHz = 11.0 usec / line
Ver Frequency	= 85.024; // Hz = 11.8 msec / frame
Pixel Clock	= <b>157.500;</b> // MHz = 6.3 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 50.8 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 4.6 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank = 25.9% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 4.5% of VTotal
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 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.

## VESA MONITOR TIMING STANDARD

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; CTV 3 Byte Code: n/a  
 Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	<b>= 1280 x 1024 @ 120Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= 1280;	// Pixels		
Ver Pixels	= 1024;	// Lines		
Hor Frequency	= 130.035;	// kHz	= 7.7 usec	/ line
Ver Frequency	= 119.958;	// Hz	= 8.3 msec	/ frame
Pixel Clock	= 187.250;	// MHz	= 5.3 nsec	± 0.5%
Character Width	= 8;	// Pixels	= 42.7 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 1.1 %			
Hor Sync Polarity	= POSITIVE;	// HBlank	= 11.1% of HTotal	
Ver Sync Polarity	= NEGATIVE	// VBlank	= 5.5% of VTotal	
Hor Total Time	= 7.690;	// (usec)	= 180 chars	= 1440 Pixels
Hor Addr Time	= 6.836;	// (usec)	= 160 chars	= 1280 Pixels
Hor Blank Start	= 6.836;	// (usec)	= 160 chars	= 1280 Pixels
Hor Blank Time	= 0.854;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 7.092;	// (usec)	= 166 chars	= 1328 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.256;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.171;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.427;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 8.336;	// (msec)	= 1084 lines	HT - (1.06xHA)
Ver Addr Time	= 7.875;	// (msec)	= 1024 lines	= 0.44
Ver Blank Start	= 7.875;	// (msec)	= 1024 lines	
Ver Blank Time	= 0.461;	// (msec)	= 60 lines	
Ver Sync Start	= 7.898;	// (msec)	= 1027 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.023;	// (msec)	= 3 lines	
Ver Sync Time	= 0.054;	// (msec)	= 7 lines	
// V Back Porch	= 0.385;	// (msec)	= 50 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

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

## VESA MONITOR TIMING STANDARD

Adopted: 8/21/03  
 Resolution: 1360 x 768 at 60 Hz (non-interlaced)  
 EDID ID: DMT ID: 27h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CTV COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1360 x 768 @ 60Hz;</b>				
Hor Pixels	= <b>1360;</b>	// Pixels			
Ver Pixels	= <b>768;</b>	// Lines			
Hor Frequency	= 47.712;	// kHz	= 21.0 usec	/ line	
Ver Frequency	= 60.015;	// Hz	= 16.7 msec	/ frame	
Pixel Clock	= <b>85.500;</b>	// MHz	= 11.7 nsec	± 0.5%	
Character Width	= <b>8;</b>	// Pixels	= 93.6 nsec		
Scan Type	= <b>NONINTERLACED;</b>		// H Phase =	5.4 %	
Hor Sync Polarity	= <b>POSITIVE;</b>	// HBlank	= 24.1% of HTotal		
Ver Sync Polarity	= <b>POSITIVE;</b>	// VBlank	= 3.4% of VTotal		
Hor Total Time	= 20.959;	// (usec)	= 224 chars	= 1792 Pixels	
Hor Addr Time	= 15.906;	// (usec)	= 170 chars	= 1360 Pixels	
Hor Blank Start	= 15.906;	// (usec)	= 170 chars	= 1360 Pixels	
Hor Blank Time	= 5.053;	// (usec)	= 54 chars	= 432 Pixels	
Hor Sync Start	= 16.655;	// (usec)	= 178 chars	= 1424 Pixels	
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
// H Front Porch	= 0.749;	// (usec)	= 8 chars	= 64 Pixels	
Hor Sync Time	= 1.310;	// (usec)	= 14 chars	= 112 Pixels	
// H Back Porch	= 2.994;	// (usec)	= 32 chars	= 256 Pixels	
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
Ver Total Time	= 16.662;	// (msec)	= 795 lines	HT – (1.06xHA)	
Ver Addr Time	= 16.097;	// (msec)	= 768 lines	= 4.1	
Ver Blank Start	= 16.097;	// (msec)	= 768 lines		
Ver Blank Time	= 0.566;	// (msec)	= 27 lines		
Ver Sync Start	= 16.159;	// (msec)	= 771 lines		
// V Bottom Border	= 0.000;	// (msec)	= 0 lines		
// V Front Porch	= 0.063;	// (msec)	= 3 lines		
Ver Sync Time	= 0.126;	// (msec)	= 6 lines		
// V Back Porch	= 0.377;	// (msec)	= 18 lines		
// V Top Border	= 0.000;	// (msec)	= 0 lines		

**Definition of Terms:** Refer to section 3.1.

## VESA MONITOR TIMING STANDARD

Adopted: 5/1/07

Resolution: 1360 x 768 at 120 Hz (non-interlaced) **REDUCED BLANKING**

EDID ID: DMT ID: 28h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a

Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

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

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

## VESA MONITOR TIMING STANDARD

Adopted: 11/17/08  
 Resolution: 1366 x 768 at 60 Hz (non-interlaced) **NORMAL BLANKING**  
 EDID ID: DMT ID: 51h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1366 x 768 @ 60Hz;</b>
Hor Pixels	= <b>1366;</b> // Pixels
Ver Pixels	= <b>768;</b> // Lines
Hor Frequency	= <b>47.712;</b> // KHz = 21.0 usec / line
Ver Frequency	= <b>59.790;</b> // Hz = 16.7 msec / frame
Pixel Clock	= <b>85.500;</b> // MHz = 11.7 nsec ± 0.5%
Character Width	= <b>1;</b> // Pixels = 11.7 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 4.0 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank = 23.8% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 3.8% of VTotal
Hor Total Time	= <b>20.959;</b> // (usec) = 1792 chars = 1792 Pixels
Hor Addr Time	= <b>15.977;</b> // (usec) = 1366 chars = 1366 Pixels
Hor Blank Start	= <b>15.977;</b> // (usec) = 1366 chars = 1366 Pixels
Hor Blank Time	= <b>4.982;</b> // (usec) = 426 chars = 426 Pixels
Hor Sync Start	= <b>16.795;</b> // (usec) = 1436 chars = 1436 Pixels
// H Right Border	= <b>0.000;</b> // (usec) = <b>0</b> chars = 0 Pixels
// H Front Porch	= <b>0.819;</b> // (usec) = <b>70</b> chars = 70 Pixels
Hor Sync Time	= <b>1.673;</b> // (usec) = <b>143</b> chars = 143 Pixels
// H Back Porch	= <b>2.491;</b> // (usec) = <b>213</b> chars = 213 Pixels
// H Left Border	= <b>0.000;</b> // (usec) = <b>0</b> chars = 0 Pixels
Ver Total Time	= <b>16.725;</b> // (msec) = 798 lines HT – (1.06xHA)
Ver Addr Time	= <b>16.097;</b> // (msec) = 768 lines = 4.02
Ver Blank Start	= <b>16.097;</b> // (msec) = 768 lines
Ver Blank Time	= <b>0.629;</b> // (msec) = 30 lines
Ver Sync Start	= <b>16.159;</b> // (msec) = 771 lines
// V Bottom Border	= <b>0.000;</b> // (msec) = <b>0</b> lines
// V Front Porch	= <b>0.063;</b> // (msec) = <b>3</b> lines
Ver Sync Time	= <b>0.063;</b> // (msec) = <b>3</b> lines
// V Back Porch	= <b>0.503;</b> // (msec) = <b>24</b> lines
// V Top Border	= <b>0.000;</b> // (msec) = <b>0</b> lines

**Definition of Terms:** Refer to Section 3.1

## VESA MONITOR TIMING STANDARD

Adopted: 11/17/08  
 Resolution: 1366 x 768 at 60 Hz (non-interlaced) **REDUCED BLANKING**  
 EDID ID: DMT ID: 56h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1366 x 768 @ 60Hz;</b>
Hor Pixels	= <b>1366;</b> // Pixels
Ver Pixels	= <b>768;</b> // Lines
Hor Frequency	= <b>48.000;</b> // KHz = 20.8 usec / line
Ver Frequency	= <b>60.000;</b> // Hz = 16.7 msec / frame
Pixel Clock	= <b>72.000;</b> // MHz = 13.9 nsec ± 0.5%
Character Width	= <b>1;</b> // Pixels = 13.9 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 1.7 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank = 8.9% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 4.0% of VTotal
Hor Total Time	= <b>20.833;</b> // (usec) = 1500 chars = 1500 Pixels
Hor Addr Time	= <b>18.972;</b> // (usec) = 1366 chars = 1366 Pixels
Hor Blank Start	= <b>18.972;</b> // (usec) = 1366 chars = 1366 Pixels
Hor Blank Time	= <b>1.861;</b> // (usec) = 134 chars = 134 Pixels
Hor Sync Start	= <b>19.167;</b> // (usec) = 1380 chars = 1380 Pixels
// H Right Border	= <b>0.000;</b> // (usec) = <b>0</b> chars = 0 Pixels
// H Front Porch	= <b>0.194;</b> // (usec) = <b>14</b> chars = 14 Pixels
Hor Sync Time	= <b>0.778;</b> // (usec) = <b>56</b> chars = 56 Pixels
// H Back Porch	= <b>0.889;</b> // (usec) = <b>64</b> chars = 64 Pixels
// H Left Border	= <b>0.000;</b> // (usec) = <b>0</b> chars = 0 Pixels
Ver Total Time	= <b>16.667;</b> // (msec) = 800 lines HT – (1.06xHA)
Ver Addr Time	= <b>16.000;</b> // (msec) = 768 lines = 0.72
Ver Blank Start	= <b>16.000;</b> // (msec) = 768 lines
Ver Blank Time	= <b>0.667;</b> // (msec) = 32 lines
Ver Sync Start	= <b>16.021;</b> // (msec) = 769 lines
// V Bottom Border	= <b>0.000;</b> // (msec) = <b>0</b> lines
// V Front Porch	= <b>0.021;</b> // (msec) = <b>1</b> lines
Ver Sync Time	= <b>0.063;</b> // (msec) = <b>3</b> lines
// V Back Porch	= <b>0.583;</b> // (msec) = <b>28</b> lines
// V Top Border	= <b>0.000;</b> // (msec) = <b>0</b> lines

**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; CTV 3 Byte Code: (0C, 20, 21)h  
 Method: CTV Reduced Blanking

### Detailed Timing Parameters

Timing Name	<b>= 1400 x 1050 @ 60Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= 1400;	// Pixels		
Ver Pixels	= 1050;	// Lines		
Hor Frequency	= 64.744;	// kHz	= 15.4 usec	/ line
Ver Frequency	= 59.948;	// Hz	= 16.7 msec	/ frame
Pixel Clock	= 101.000;	// MHz	= 9.9 nsec	± 0.5%
Character Width	= 8;	// Pixels	= 79.2 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 1.0 %			
Hor Sync Polarity	= POSITIVE;	// HBlank	= 10.3% of HTotal	
Ver Sync Polarity	= NEGATIVE	// VBlank	= 2.8% of VTotal	
Hor Total Time	= 15.446;	// (usec)	= 195 chars	= 1560 Pixels
Hor Addr Time	= 13.861;	// (usec)	= 175 chars	= 1400 Pixels
Hor Blank Start	= 13.861;	// (usec)	= 175 chars	= 1400 Pixels
Hor Blank Time	= 1.584;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 14.337;	// (usec)	= 181 chars	= 1448 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.475;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.317;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.792;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 16.681;	// (msec)	= 1080 lines	HT - (1.06xHA)
Ver Addr Time	= 16.218;	// (msec)	= 1050 lines	= 0.75
Ver Blank Start	= 16.218;	// (msec)	= 1050 lines	
Ver Blank Time	= 0.463;	// (msec)	= 30 lines	
Ver Sync Start	= 16.264;	// (msec)	= 1053 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.046;	// (msec)	= 3 lines	
Ver Sync Time	= 0.062;	// (msec)	= 4 lines	
// V Back Porch	= 0.355;	// (msec)	= 23 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

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

## VESA 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; CTV 3 Byte Code: (0C, 20, 28)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1400 x 1050 @ 60Hz;;</b>				
Hor Pixels	= <b>1400;</b>	// Pixels			
Ver Pixels	= <b>1050;</b>	// Lines			
Hor Frequency	= 65.317;	// kHz	= 15.3 usec	/ line	
Ver Frequency	= 59.978;	// Hz	= 16.7 msec	/ frame	
Pixel Clock	= <b>121.750;</b>	// MHz	= 8.2 nsec	± 0.5%	
Character Width	= <b>8;</b>	// Pixels	= 65.7 nsec		
Scan Type	= <b>NONINTERLACED;</b>		// H Phase =	3.9 %	
Hor Sync Polarity	= <b>NEGATIVE</b>	// HBlank	= 24.9% of HTotal		
Ver Sync Polarity	= <b>POSITIVE;</b>	// VBlank	= 3.6% of VTotal		
Hor Total Time	= 15.310;	// (usec)	= 233 chars	= 1864 Pixels	
Hor Addr Time	= 11.499;	// (usec)	= 175 chars	= 1400 Pixels	
Hor Blank Start	= 11.499;	// (usec)	= 175 chars	= 1400 Pixels	
Hor Blank Time	= 3.811;	// (usec)	= 58 chars	= 464 Pixels	
Hor Sync Start	= 12.222;	// (usec)	= 186 chars	= 1488 Pixels	
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
// H Front Porch	= 0.723;	// (usec)	= 11 chars	= 88 Pixels	
Hor Sync Time	= 1.183;	// (usec)	= 18 chars	= 144 Pixels	
// H Back Porch	= 1.906;	// (usec)	= 29 chars	= 232 Pixels	
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
Ver Total Time	= 16.673;	// (msec)	= 1089 lines	HT – (1.06xHA)	
Ver Addr Time	= 16.076;	// (msec)	= 1050 lines	= 3.12	
Ver Blank Start	= 16.076;	// (msec)	= 1050 lines		
Ver Blank Time	= 0.597;	// (msec)	= 39 lines		
Ver Sync Start	= 16.121;	// (msec)	= 1053 lines		
// V Bottom Border	= 0.000;	// (msec)	= 0 lines		
// V Front Porch	= 0.046;	// (msec)	= 3 lines		
Ver Sync Time	= 0.061;	// (msec)	= 4 lines		
// V Back Porch	= 0.490;	// (msec)	= 32 lines		
// V Top Border	= 0.000;	// (msec)	= 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; CTV 3 Byte Code: (0C, 20, 44)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1400 x 1050 @ 75Hz;</b>				
Hor Pixels	= <b>1400;</b>	// Pixels			
Ver Pixels	= <b>1050;</b>	// Lines			
Hor Frequency	= 82.278;	// kHz	= 12.2 usec	/ line	
Ver Frequency	= 74.867;	// Hz	= 13.4 msec	/ frame	
Pixel Clock	= <b>156.000;</b>	// MHz	= 6.4 nsec	± 0.5%	
Character Width	= <b>8;</b>	// Pixels	= 51.3 nsec		
Scan Type	= <b>NONINTERLACED;</b>		// H Phase =	3.8 %	
Hor Sync Polarity	= <b>NEGATIVE</b>	// HBlank	= 26.2% of HTotal		
Ver Sync Polarity	= <b>POSITIVE;</b>	// VBlank	= 4.5% of VTotal		
Hor Total Time	= 12.154;	// (usec)	= 237 chars	= 1896 Pixels	
Hor Addr Time	= 8.974;	// (usec)	= 175 chars	= 1400 Pixels	
Hor Blank Start	= 8.974;	// (usec)	= 175 chars	= 1400 Pixels	
Hor Blank Time	= 3.179;	// (usec)	= 62 chars	= 496 Pixels	
Hor Sync Start	= 9.641;	// (usec)	= 188 chars	= 1504 Pixels	
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
// H Front Porch	= 0.667;	// (usec)	= 13 chars	= 104 Pixels	
Hor Sync Time	= 0.923;	// (usec)	= 18 chars	= 144 Pixels	
// H Back Porch	= 1.590;	// (usec)	= 31 chars	= 248 Pixels	
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
Ver Total Time	= 13.357;	// (msec)	= 1099 lines	HT – (1.06xHA)	
Ver Addr Time	= 12.762;	// (msec)	= 1050 lines	= 2.64	
Ver Blank Start	= 12.762;	// (msec)	= 1050 lines		
Ver Blank Time	= 0.596;	// (msec)	= 49 lines		
Ver Sync Start	= 12.798;	// (msec)	= 1053 lines		
// V Bottom Border	= 0.000;	// (msec)	= 0 lines		
// V Front Porch	= 0.036;	// (msec)	= 3 lines		
Ver Sync Time	= 0.049;	// (msec)	= 4 lines		
// V Back Porch	= 0.510;	// (msec)	= 42 lines		
// V Top Border	= 0.000;	// (msec)	= 0 lines		

**Definition of Terms:** Refer to section 3.4.

## VESA 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; CTV 3 Byte Code: (0C, 20, 62)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1400 x 1050 @ 85Hz;</b>				
Hor Pixels	= <b>1400;</b> // Pixels				
Ver Pixels	= <b>1050;</b> // Lines				
Hor Frequency	= 93.881; // kHz	= 10.7 usec	/ line		
Ver Frequency	= 84.960; // Hz	= 11.8 msec	/ frame		
Pixel Clock	= <b>179.500;</b> // MHz	= 5.6 nsec	± 0.5%		
Character Width	= <b>8;</b> // Pixels	= 44.6 nsec			
Scan Type	= <b>NONINTERLACED;</b>	// H Phase	= 4.0 %		
Hor Sync Polarity	= <b>NEGATIVE</b> // HBlank	= 26.8% of HTotal			
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank	= 5.0% of VTotal			
Hor Total Time	= 10.652; // (usec)	= 239 chars	= 1912 Pixels		
Hor Addr Time	= 7.799; // (usec)	= 175 chars	= 1400 Pixels		
Hor Blank Start	= 7.799; // (usec)	= 175 chars	= 1400 Pixels		
Hor Blank Time	= 2.852; // (usec)	= 64 chars	= 512 Pixels		
Hor Sync Start	= 8.379; // (usec)	= 188 chars	= 1504 Pixels		
// H Right Border	= 0.000; // (usec)	= 0 chars	= 0 Pixels		
// H Front Porch	= 0.579; // (usec)	= 13 chars	= 104 Pixels		
Hor Sync Time	= 0.847; // (usec)	= 19 chars	= 152 Pixels		
// H Back Porch	= 1.426; // (usec)	= 32 chars	= 256 Pixels		
// H Left Border	= 0.000; // (usec)	= 0 chars	= 0 Pixels		
Ver Total Time	= 11.770; // (msec)	= 1105 lines	HT – (1.06xHA)		
Ver Addr Time	= 11.184; // (msec)	= 1050 lines	= 2.38		
Ver Blank Start	= 11.184; // (msec)	= 1050 lines			
Ver Blank Time	= 0.586; // (msec)	= 55 lines			
Ver Sync Start	= 11.216; // (msec)	= 1053 lines			
// V Bottom Border	= 0.000; // (msec)	= 0 lines			
// V Front Porch	= 0.032; // (msec)	= 3 lines			
Ver Sync Time	= 0.043; // (msec)	= 4 lines			
// V Back Porch	= 0.511; // (msec)	= 48 lines			
// V Top Border	= 0.000; // (msec)	= 0 lines			

**Definition of Terms:** Refer to section 3.4.

## VESA 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; CTV 3 Byte Code: n/a  
 Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

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

**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; CTV 3 Byte Code: (C1, 18, 21)h  
 Method: CTV Reduced Blanking

### Detailed Timing Parameters

Timing Name	= <b>1440 x 900 @ 60Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= <b>1440;</b>	// Pixels		
Ver Pixels	= <b>900;</b>	// Lines		
Hor Frequency	= 55.469;	// kHz	= 18.0 usec	/ line
Ver Frequency	= 59.901;	// Hz	= 16.7 msec	/ frame
Pixel Clock	= <b>88.750;</b>	// MHz	= 11.3 nsec	± 0.5%
Character Width	= <b>8;</b>	// Pixels	= 90.1 nsec	
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 1.0 %			
Hor Sync Polarity	= <b>POSITIVE;</b>	// HBlank	= 10.0% of HTotal	
Ver Sync Polarity	= <b>NEGATIVE</b>	// VBlank	= 2.8% of VTotal	
Hor Total Time	= 18.028;	// (usec)	= 200 chars	= 1600 Pixels
Hor Addr Time	= 16.225;	// (usec)	= 180 chars	= 1440 Pixels
Hor Blank Start	= 16.225;	// (usec)	= 180 chars	= 1440 Pixels
Hor Blank Time	= 1.803;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 16.766;	// (usec)	= 186 chars	= 1488 Pixels
// H Right Border	= 0.000;	// (usec)	= <b>0</b> chars	= 0 Pixels
// H Front Porch	= 0.541;	// (usec)	= <b>6</b> chars	= 48 Pixels
Hor Sync Time	= 0.361;	// (usec)	= <b>4</b> chars	= 32 Pixels
// H Back Porch	= 0.901;	// (usec)	= <b>10</b> chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= <b>0</b> chars	= 0 Pixels
Ver Total Time	= 16.694;	// (msec)	= 926 lines	HT - (1.06xHA)
Ver Addr Time	= 16.225;	// (msec)	= 900 lines	= 0.83
Ver Blank Start	= 16.225;	// (msec)	= 900 lines	
Ver Blank Time	= 0.469;	// (msec)	= 26 lines	
Ver Sync Start	= 16.279;	// (msec)	= 903 lines	
// V Bottom Border	= 0.000;	// (msec)	= <b>0</b> lines	
// V Front Porch	= 0.054;	// (msec)	= <b>3</b> lines	
Ver Sync Time	= 0.108;	// (msec)	= <b>6</b> lines	
// V Back Porch	= 0.306;	// (msec)	= <b>17</b> lines	
// V Top Border	= 0.000;	// (msec)	= <b>0</b> lines	

**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)  
 EDID ID: DMT ID: 2Fh; Std. 2 Byte Code: (95, 00)h; CTV 3 Byte Code: (C1, 18, 28)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1440 x 900 @ 60Hz;</b>				
Hor Pixels	= <b>1440;</b> // Pixels				
Ver Pixels	= <b>900;</b> // Lines				
Hor Frequency	= 55.935; // kHz	= 17.9 usec	/ line		
Ver Frequency	= 59.887; // Hz	= 16.7 msec	/ frame		
Pixel Clock	= <b>106.500;</b> // MHz	= 9.4 nsec	± 0.5%		
Character Width	= <b>8;</b> // Pixels	= 75.1 nsec			
Scan Type	= <b>NONINTERLACED;</b>	// H Phase =	4.0 %		
Hor Sync Polarity	= <b>NEGATIVE</b> // HBlank	= 24.4% of HTotal			
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank	= 3.6% of VTotal			
Hor Total Time	= 17.878; // (usec)	= 238 chars	= 1904 Pixels		
Hor Addr Time	= 13.521; // (usec)	= 180 chars	= 1440 Pixels		
Hor Blank Start	= 13.521; // (usec)	= 180 chars	= 1440 Pixels		
Hor Blank Time	= 4.357; // (usec)	= 58 chars	= 464 Pixels		
Hor Sync Start	= 14.272; // (usec)	= 190 chars	= 1520 Pixels		
// H Right Border	= 0.000; // (usec)	= <b>0</b> chars	= 0 Pixels		
// H Front Porch	= 0.751; // (usec)	= <b>10</b> chars	= 80 Pixels		
Hor Sync Time	= 1.427; // (usec)	= <b>19</b> chars	= 152 Pixels		
// H Back Porch	= 2.178; // (usec)	= <b>29</b> chars	= 232 Pixels		
// H Left Border	= 0.000; // (usec)	= <b>0</b> chars	= 0 Pixels		
Ver Total Time	= 16.698; // (msec)	= 934 lines	HT – (1.06xHA)		
Ver Addr Time	= 16.090; // (msec)	= 900 lines	= 3.55		
Ver Blank Start	= 16.090; // (msec)	= 900 lines			
Ver Blank Time	= 0.608; // (msec)	= 34 lines			
Ver Sync Start	= 16.144; // (msec)	= 903 lines			
// V Bottom Border	= 0.000; // (msec)	= <b>0</b> lines			
// V Front Porch	= 0.054; // (msec)	= <b>3</b> lines			
Ver Sync Time	= 0.107; // (msec)	= <b>6</b> lines			
// V Back Porch	= 0.447; // (msec)	= <b>25</b> lines			
// V Top Border	= 0.000; // (msec)	= <b>0</b> lines			

**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; CTV 3 Byte Code: (C1, 18, 44)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1440 x 900 @ 75Hz;</b>				
Hor Pixels	= <b>1440;</b> // Pixels				
Ver Pixels	= <b>900;</b> // Lines				
Hor Frequency	= 70.635; // kHz	= 14.2 usec	/ line		
Ver Frequency	= 74.984; // Hz	= 13.3 msec	/ frame		
Pixel Clock	= <b>136.750;</b> // MHz	= 7.3 nsec	± 0.5%		
Character Width	= <b>8;</b> // Pixels	= 58.5 nsec			
Scan Type	= <b>NONINTERLACED;</b>	// H Phase =	3.9 %		
Hor Sync Polarity	= <b>NEGATIVE</b> // HBlank	= 25.6% of HTotal			
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank	= 4.5% of VTotal			
Hor Total Time	= 14.157; // (usec)	= 242 chars	= 1936 Pixels		
Hor Addr Time	= 10.530; // (usec)	= 180 chars	= 1440 Pixels		
Hor Blank Start	= 10.530; // (usec)	= 180 chars	= 1440 Pixels		
Hor Blank Time	= 3.627; // (usec)	= 62 chars	= 496 Pixels		
Hor Sync Start	= 11.232; // (usec)	= 192 chars	= 1536 Pixels		
// H Right Border	= 0.000; // (usec)	= <b>0</b> chars	= 0 Pixels		
// H Front Porch	= 0.702; // (usec)	= <b>12</b> chars	= 96 Pixels		
Hor Sync Time	= 1.112; // (usec)	= <b>19</b> chars	= 152 Pixels		
// H Back Porch	= 1.814; // (usec)	= <b>31</b> chars	= 248 Pixels		
// H Left Border	= 0.000; // (usec)	= <b>0</b> chars	= 0 Pixels		
Ver Total Time	= 13.336; // (msec)	= 942 lines	HT – (1.06xHA)		
Ver Addr Time	= 12.741; // (msec)	= 900 lines	= 3		
Ver Blank Start	= 12.741; // (msec)	= 900 lines			
Ver Blank Time	= 0.595; // (msec)	= 42 lines			
Ver Sync Start	= 12.784; // (msec)	= 903 lines			
// V Bottom Border	= 0.000; // (msec)	= <b>0</b> lines			
// V Front Porch	= 0.042; // (msec)	= <b>3</b> lines			
Ver Sync Time	= 0.085; // (msec)	= <b>6</b> lines			
// V Back Porch	= 0.467; // (msec)	= <b>33</b> lines			
// V Top Border	= 0.000; // (msec)	= <b>0</b> lines			

**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; CTV 3 Byte Code: (C1, 18, 68)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1440 x 900 @ 85Hz;</b>				
Hor Pixels	= <b>1440;</b> // Pixels				
Ver Pixels	= <b>900;</b> // Lines				
Hor Frequency	= 80.430; // kHz	=	12.4 usec	/ line	
Ver Frequency	= 84.842; // Hz	=	11.8 msec	/ frame	
Pixel Clock	= <b>157.000;</b> // MHz	=	6.4 nsec	± 0.5%	
Character Width	= <b>8;</b> // Pixels	=	51.0 nsec		
Scan Type	= <b>NONINTERLACED;</b>	// H Phase =	3.9 %		
Hor Sync Polarity	= <b>NEGATIVE</b> // HBlank	=	26.2% of HTotal		
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank	=	5.1% of VTotal		
Hor Total Time	= 12.433; // (usec)	=	244 chars	=	1952 Pixels
Hor Addr Time	= 9.172; // (usec)	=	180 chars	=	1440 Pixels
Hor Blank Start	= 9.172; // (usec)	=	180 chars	=	1440 Pixels
Hor Blank Time	= 3.261; // (usec)	=	64 chars	=	512 Pixels
Hor Sync Start	= 9.834; // (usec)	=	193 chars	=	1544 Pixels
// H Right Border	= 0.000; // (usec)	=	<b>0</b> chars	=	0 Pixels
// H Front Porch	= 0.662; // (usec)	=	<b>13</b> chars	=	104 Pixels
Hor Sync Time	= 0.968; // (usec)	=	<b>19</b> chars	=	152 Pixels
// H Back Porch	= 1.631; // (usec)	=	<b>32</b> chars	=	256 Pixels
// H Left Border	= 0.000; // (usec)	=	<b>0</b> chars	=	0 Pixels
Ver Total Time	= 11.787; // (msec)	=	948 lines	HT - (1.06xHA)	
Ver Addr Time	= 11.190; // (msec)	=	900 lines	= 2.71	
Ver Blank Start	= 11.190; // (msec)	=	900 lines		
Ver Blank Time	= 0.597; // (msec)	=	48 lines		
Ver Sync Start	= 11.227; // (msec)	=	903 lines		
// V Bottom Border	= 0.000; // (msec)	=	<b>0</b> lines		
// V Front Porch	= 0.037; // (msec)	=	<b>3</b> lines		
Ver Sync Time	= 0.075; // (msec)	=	<b>6</b> lines		
// V Back Porch	= 0.485; // (msec)	=	<b>39</b> lines		
// V Top Border	= 0.000; // (msec)	=	<b>0</b> lines		

**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; CTV 3 Byte Code: n/a

Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	<b>= 1440 x 900 @ 120Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= <b>1440;</b>	// Pixels		
Ver Pixels	= <b>900;</b>	// Lines		
Hor Frequency	= 114.219;	// kHz	= 8.8 usec	/ line
Ver Frequency	= 119.852;	// Hz	= 8.3 msec	/ frame
Pixel Clock	= <b>182.750;</b>	// MHz	= 5.5 nsec	± 0.5%
Character Width	= <b>8;</b>	// Pixels	= 43.8 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 1.0 %			
Hor Sync Polarity	= <b>POSITIVE;</b>	// HBlank	= 10.0% of HTotal	
Ver Sync Polarity	= <b>NEGATIVE</b>	// VBlank	= 5.6% of VTotal	
Hor Total Time	= 8.755;	// (usec)	= 200 chars	= 1600 Pixels
Hor Addr Time	= 7.880;	// (usec)	= 180 chars	= 1440 Pixels
Hor Blank Start	= 7.880;	// (usec)	= 180 chars	= 1440 Pixels
Hor Blank Time	= 0.876;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 8.142;	// (usec)	= 186 chars	= 1488 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.263;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.175;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.438;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 8.344;	// (msec)	= 953 lines	HT - (1.06xHA)
Ver Addr Time	= 7.880;	// (msec)	= 900 lines	= 0.4
Ver Blank Start	= 7.880;	// (msec)	= 900 lines	
Ver Blank Time	= 0.464;	// (msec)	= 53 lines	
Ver Sync Start	= 7.906;	// (msec)	= 903 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.026;	// (msec)	= 3 lines	
Ver Sync Time	= 0.053;	// (msec)	= 6 lines	
// V Back Porch	= 0.385;	// (msec)	= 44 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

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

## VESA MONITOR TIMING STANDARD

Adopted: 11/17/08

Resolution: 1600 x 900 at 60 Hz (non-interlaced) **REDUCED BLANKING**

EDID ID: 53h; Std. 2 Byte Code: A9h, C0h; CVT 3 Byte Code: n/a

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

### Detailed Timing Parameters

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

**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

Timing Name	= <b>1600 x 1200 @ 60Hz;</b>
Hor Pixels	= <b>1600;</b> // Pixels
Ver Pixels	= <b>1200;</b> // Lines
Hor Frequency	= 75.000; // kHz
Ver Frequency	= 60.000; // Hz
Pixel Clock	= <b>162.000;</b> // MHz
Character Width	= <b>8;</b> // Pixels
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 5.6 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank = 25.9% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 4.0% of VTotal
Hor Total Time	= 13.333; // (usec) = 270 chars = 2160 Pixels
Hor Addr Time	= 9.877; // (usec) = 200 chars = 1600 Pixels
Hor Blank Start	= 9.877; // (usec) = 200 chars = 1600 Pixels
Hor Blank Time	= 3.457; // (usec) = 70 chars = 560 Pixels
Hor Sync Start	= 10.272; // (usec) = 208 chars = 1664 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.395; // (usec) = 8 chars = 64 Pixels
Hor Sync Time	= 1.185; // (usec) = 24 chars = 192 Pixels
// H Back Porch	= 1.877; // (usec) = 38 chars = 304 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 16.667; // (msec) = 1250 lines HT - (1.06xHA)
Ver Addr Time	= 16.000; // (msec) = 1200 lines = 2.86
Ver Blank Start	= 16.000; // (msec) = 1200 lines
Ver Blank Time	= 0.667; // (msec) = 50 lines
Ver Sync Start	= 16.013; // (msec) = 1201 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.013; // (msec) = 1 lines
Ver Sync Time	= 0.040; // (msec) = 3 lines
// V Back Porch	= 0.613; // (msec) = 46 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**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; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1600 x 1200 @ 65Hz;</b>
Hor Pixels	= <b>1600;</b> // Pixels
Ver Pixels	= <b>1200;</b> // Lines
Hor Frequency	= 81.250; // kHz
Ver Frequency	= 65.000; // Hz
Pixel Clock	= <b>175.500;</b> // MHz
Character Width	= <b>8;</b> // Pixels
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 5.6 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank
Hor Total Time	= 12.308; // (usec)
Hor Addr Time	= 9.117; // (usec)
Hor Blank Start	= 9.117; // (usec)
Hor Blank Time	= 3.191; // (usec)
Hor Sync Start	= 9.481; // (usec)
// H Right Border	= 0.000; // (usec)
// H Front Porch	= 0.365; // (usec)
Hor Sync Time	= 1.094; // (usec)
// H Back Porch	= 1.732; // (usec)
// H Left Border	= 0.000; // (usec)
Ver Total Time	= 15.385; // (msec)
Ver Addr Time	= 14.769; // (msec)
Ver Blank Start	= 14.769; // (msec)
Ver Blank Time	= 0.615; // (msec)
Ver Sync Start	= 14.782; // (msec)
// V Bottom Border	= 0.000; // (msec)
// V Front Porch	= 0.012; // (msec)
Ver Sync Time	= 0.037; // (msec)
// V Back Porch	= 0.566; // (msec)
// V Top Border	= 0.000; // (msec)

**Definition of Terms:** Refer to section 3.1.

## VESA MONITOR TIMING STANDARD

Adopted: 12/18/96  
 Resolution: 1600 x 1200 at 70 Hz (non-interlaced)  
 EDID ID: DMT ID: 35h; Std. 2 Byte Code: (A9, 4A)h; CVT 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1600 x 1200 @ 70Hz;</b>
Hor Pixels	= <b>1600;</b> // Pixels
Ver Pixels	= <b>1200;</b> // Lines
Hor Frequency	= 87.500; // kHz = 11.4 usec / line
Ver Frequency	= 70.000; // Hz = 14.3 msec / frame
Pixel Clock	= <b>189.000;</b> // MHz = 5.3 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 42.3 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 5.6 %
Hor Sync Polarity	= <b>POSITIVE;</b> // HBlank = 25.9% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 4.0% of VTotal
Hor Total Time	= 11.429; // (usec) = 270 chars = 2160 Pixels
Hor Addr Time	= 8.466; // (usec) = 200 chars = 1600 Pixels
Hor Blank Start	= 8.466; // (usec) = 200 chars = 1600 Pixels
Hor Blank Time	= 2.963; // (usec) = 70 chars = 560 Pixels
Hor Sync Start	= 8.804; // (usec) = 208 chars = 1664 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.339; // (usec) = 8 chars = 64 Pixels
Hor Sync Time	= 1.016; // (usec) = 24 chars = 192 Pixels
// H Back Porch	= 1.608; // (usec) = 38 chars = 304 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 14.286; // (msec) = 1250 lines HT – (1.06xHA)
Ver Addr Time	= 13.714; // (msec) = 1200 lines = 2.46
Ver Blank Start	= 13.714; // (msec) = 1200 lines
Ver Blank Time	= 0.571; // (msec) = 50 lines
Ver Sync Start	= 13.726; // (msec) = 1201 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.011; // (msec) = 1 lines
Ver Sync Time	= 0.034; // (msec) = 3 lines
// V Back Porch	= 0.526; // (msec) = 46 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**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; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1600 x 1200 @ 75Hz;</b>				
Hor Pixels	= <b>1600;</b>	// Pixels			
Ver Pixels	= <b>1200;</b>	// Lines			
Hor Frequency	= 93.750;	// kHz	= 10.7 usec	/ line	
Ver Frequency	= 75.000;	// Hz	= 13.3 msec	/ frame	
Pixel Clock	= <b>202.500;</b>	// MHz	= 4.9 nsec	± 0.5%	
Character Width	= <b>8;</b>	// Pixels	= 39.5 nsec		
Scan Type	= <b>NONINTERLACED;</b>		// H Phase =	5.6 %	
Hor Sync Polarity	= <b>POSITIVE;</b>	// HBlank	= 25.9% of HTotal		
Ver Sync Polarity	= <b>POSITIVE;</b>	// VBlank	= 4.0% of VTotal		
Hor Total Time	= 10.667;	// (usec)	= 270 chars	= 2160 Pixels	
Hor Addr Time	= 7.901;	// (usec)	= 200 chars	= 1600 Pixels	
Hor Blank Start	= 7.901;	// (usec)	= 200 chars	= 1600 Pixels	
Hor Blank Time	= 2.765;	// (usec)	= 70 chars	= 560 Pixels	
Hor Sync Start	= 8.217;	// (usec)	= 208 chars	= 1664 Pixels	
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
// H Front Porch	= 0.316;	// (usec)	= 8 chars	= 64 Pixels	
Hor Sync Time	= 0.948;	// (usec)	= 24 chars	= 192 Pixels	
// H Back Porch	= 1.501;	// (usec)	= 38 chars	= 304 Pixels	
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels	
Ver Total Time	= 13.333;	// (msec)	= 1250 lines	HT – (1.06xHA)	
Ver Addr Time	= 12.800;	// (msec)	= 1200 lines	= 2.29	
Ver Blank Start	= 12.800;	// (msec)	= 1200 lines		
Ver Blank Time	= 0.533;	// (msec)	= 50 lines		
Ver Sync Start	= 12.811;	// (msec)	= 1201 lines		
// V Bottom Border	= 0.000;	// (msec)	= 0 lines		
// V Front Porch	= 0.011;	// (msec)	= 1 lines		
Ver Sync Time	= 0.032;	// (msec)	= 3 lines		
// V Back Porch	= 0.491;	// (msec)	= 46 lines		
// V Top Border	= 0.000;	// (msec)	= 0 lines		

**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; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

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

**Definition of Terms:** Refer to section 3.1.

## VESA MONITOR TIMING STANDARD

Adopted: 5/1/07  
 Resolution: 1600 x 1200 at 120 Hz (non-interlaced) **REDUCED BLANKING**  
 EDID ID: DMT ID: 38h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a  
 Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	<b>= 1600 x 1200 @ 120Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= 1600;	// Pixels		
Ver Pixels	= 1200;	// Lines		
Hor Frequency	= 152.415;	// kHz	= 6.6 usec	/ line
Ver Frequency	= 119.917;	// Hz	= 8.3 msec	/ frame
Pixel Clock	= 268.250;	// MHz	= 3.7 nsec	± 0.5%
Character Width	= 8;	// Pixels	= 29.8 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 0.9 %			
Hor Sync Polarity	= POSITIVE;	// HBlank	= 9.1% of HTotal	
Ver Sync Polarity	= NEGATIVE	// VBlank	= 5.6% of VTotal	
Hor Total Time	= 6.561;	// (usec)	= 220 chars	= 1760 Pixels
Hor Addr Time	= 5.965;	// (usec)	= 200 chars	= 1600 Pixels
Hor Blank Start	= 5.965;	// (usec)	= 200 chars	= 1600 Pixels
Hor Blank Time	= 0.596;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 6.144;	// (usec)	= 206 chars	= 1648 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.179;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.119;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.298;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 8.339;	// (msec)	= 1271 lines	HT - (1.06xHA)
Ver Addr Time	= 7.873;	// (msec)	= 1200 lines	= 0.24
Ver Blank Start	= 7.873;	// (msec)	= 1200 lines	
Ver Blank Time	= 0.466;	// (msec)	= 71 lines	
Ver Sync Start	= 7.893;	// (msec)	= 1203 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.020;	// (msec)	= 3 lines	
Ver Sync Time	= 0.026;	// (msec)	= 4 lines	
// V Back Porch	= 0.420;	// (msec)	= 64 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

**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; CTV 3 Byte Code: (0C, 28, 21)h  
 Method: CTV Reduced Blanking

### Detailed Timing Parameters

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

**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)  
 EDID ID: DMT ID: 3Ah; Std. 2 Byte Code: (B3, 00)h; CTV 3 Byte Code: (0C, 28, 28)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1680 x 1050 @ 60Hz;</b>
Hor Pixels	= <b>1680;</b> // Pixels
Ver Pixels	= <b>1050;</b> // Lines
Hor Frequency	= 65.290; // kHz = 15.3 usec / line
Ver Frequency	= 59.954; // Hz = 16.7 msec / frame
Pixel Clock	= <b>146.250;</b> // MHz = 6.8 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 54.7 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 3.9 %
Hor Sync Polarity	= <b>NEGATIVE</b> // HBlank = 25.0% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 3.6% of VTotal
Hor Total Time	= 15.316; // (usec) = 280 chars = 2240 Pixels
Hor Addr Time	= 11.487; // (usec) = 210 chars = 1680 Pixels
Hor Blank Start	= 11.487; // (usec) = 210 chars = 1680 Pixels
Hor Blank Time	= 3.829; // (usec) = 70 chars = 560 Pixels
Hor Sync Start	= 12.198; // (usec) = 223 chars = 1784 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.711; // (usec) = 13 chars = 104 Pixels
Hor Sync Time	= 1.203; // (usec) = 22 chars = 176 Pixels
// H Back Porch	= 1.915; // (usec) = 35 chars = 280 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 16.679; // (msec) = 1089 lines HT – (1.06xHA)
Ver Addr Time	= 16.082; // (msec) = 1050 lines = 3.14
Ver Blank Start	= 16.082; // (msec) = 1050 lines
Ver Blank Time	= 0.597; // (msec) = 39 lines
Ver Sync Start	= 16.128; // (msec) = 1053 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.046; // (msec) = 3 lines
Ver Sync Time	= 0.092; // (msec) = 6 lines
// V Back Porch	= 0.459; // (msec) = 30 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**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; CTV 3 Byte Code: (0C, 28, 44)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1680 x 1050 @ 75Hz;</b>
Hor Pixels	= <b>1680;</b> // Pixels
Ver Pixels	= <b>1050;</b> // Lines
Hor Frequency	= 82.306; // kHz = 12.1 usec / line
Ver Frequency	= 74.892; // Hz = 13.4 msec / frame
Pixel Clock	= <b>187.000;</b> // MHz = 5.3 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 42.8 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 3.9 %
Hor Sync Polarity	= <b>NEGATIVE</b> // HBlank = 26.1% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 4.5% of VTotal
Hor Total Time	= 12.150; // (usec) = 284 chars = 2272 Pixels
Hor Addr Time	= 8.984; // (usec) = 210 chars = 1680 Pixels
Hor Blank Start	= 8.984; // (usec) = 210 chars = 1680 Pixels
Hor Blank Time	= 3.166; // (usec) = 74 chars = 592 Pixels
Hor Sync Start	= 9.626; // (usec) = 225 chars = 1800 Pixels
// H Right Border	= 0.000; // (usec) = <b>0</b> chars = 0 Pixels
// H Front Porch	= 0.642; // (usec) = <b>15</b> chars = 120 Pixels
Hor Sync Time	= 0.941; // (usec) = <b>22</b> chars = 176 Pixels
// H Back Porch	= 1.583; // (usec) = <b>37</b> chars = 296 Pixels
// H Left Border	= 0.000; // (usec) = <b>0</b> chars = 0 Pixels
Ver Total Time	= 13.353; // (msec) = 1099 lines HT – (1.06xHA)
Ver Addr Time	= 12.757; // (msec) = 1050 lines = 2.63
Ver Blank Start	= 12.757; // (msec) = 1050 lines
Ver Blank Time	= 0.595; // (msec) = 49 lines
Ver Sync Start	= 12.794; // (msec) = 1053 lines
// V Bottom Border	= 0.000; // (msec) = <b>0</b> lines
// V Front Porch	= 0.036; // (msec) = <b>3</b> lines
Ver Sync Time	= 0.073; // (msec) = <b>6</b> lines
// V Back Porch	= 0.486; // (msec) = <b>40</b> lines
// V Top Border	= 0.000; // (msec) = <b>0</b> lines

**Definition of Terms:** Refer to section 3.4.

## VESA MONITOR 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; CTV 3 Byte Code: (0C, 28, 68)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>1680 x 1050 @ 85Hz;</b>				
Hor Pixels	= <b>1680;</b> // Pixels				
Ver Pixels	= <b>1050;</b> // Lines				
Hor Frequency	= 93.859; // kHz	=	10.7 usec	/ line	
Ver Frequency	= 84.941; // Hz	=	11.8 msec	/ frame	
Pixel Clock	= <b>214.750;</b> // MHz	=	4.7 nsec	± 0.5%	
Character Width	= <b>8;</b> // Pixels	=	37.3 nsec		
Scan Type	= <b>NONINTERLACED;</b>	// H Phase =	3.8 %		
Hor Sync Polarity	= <b>NEGATIVE</b> // HBlank	=	26.6% of HTotal		
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank	=	5.0% of VTotal		
Hor Total Time	= 10.654; // (usec)	=	286 chars	=	2288 Pixels
Hor Addr Time	= 7.823; // (usec)	=	210 chars	=	1680 Pixels
Hor Blank Start	= 7.823; // (usec)	=	210 chars	=	1680 Pixels
Hor Blank Time	= 2.831; // (usec)	=	76 chars	=	608 Pixels
Hor Sync Start	= 8.419; // (usec)	=	226 chars	=	1808 Pixels
// H Right Border	= 0.000; // (usec)	=	<b>0</b> chars	=	0 Pixels
// H Front Porch	= 0.596; // (usec)	=	<b>16</b> chars	=	128 Pixels
Hor Sync Time	= 0.820; // (usec)	=	<b>22</b> chars	=	176 Pixels
// H Back Porch	= 1.416; // (usec)	=	<b>38</b> chars	=	304 Pixels
// H Left Border	= 0.000; // (usec)	=	<b>0</b> chars	=	0 Pixels
Ver Total Time	= 11.773; // (msec)	=	1105 lines	HT - (1.06xHA)	
Ver Addr Time	= 11.187; // (msec)	=	1050 lines	= 2.36	
Ver Blank Start	= 11.187; // (msec)	=	1050 lines		
Ver Blank Time	= 0.586; // (msec)	=	55 lines		
Ver Sync Start	= 11.219; // (msec)	=	1053 lines		
// V Bottom Border	= 0.000; // (msec)	=	<b>0</b> lines		
// V Front Porch	= 0.032; // (msec)	=	<b>3</b> lines		
Ver Sync Time	= 0.064; // (msec)	=	<b>6</b> lines		
// V Back Porch	= 0.490; // (msec)	=	<b>46</b> lines		
// V Top Border	= 0.000; // (msec)	=	<b>0</b> lines		

**Definition of Terms:** Refer to section 3.4.

## VESA MONITOR TIMING STANDARD

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; CTV 3 Byte Code: n/a  
 Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	<b>= 1680 x 1050 @ 120Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= 1680;	// Pixels		
Ver Pixels	= 1050;	// Lines		
Hor Frequency	= 133.424;	// kHz	= 7.5 usec	/ line
Ver Frequency	= 119.986;	// Hz	= 8.3 msec	/ frame
Pixel Clock	= 245.500;	// MHz	= 4.1 nsec	± 0.5%
Character Width	= 8;	// Pixels	= 32.6 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 0.9 %			
Hor Sync Polarity	= POSITIVE;	// HBlank	= 8.7% of HTotal	
Ver Sync Polarity	= NEGATIVE	// VBlank	= 5.6% of VTotal	
Hor Total Time	= 7.495;	// (usec)	= 230 chars	= 1840 Pixels
Hor Addr Time	= 6.843;	// (usec)	= 210 chars	= 1680 Pixels
Hor Blank Start	= 6.843;	// (usec)	= 210 chars	= 1680 Pixels
Hor Blank Time	= 0.652;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 7.039;	// (usec)	= 216 chars	= 1728 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.196;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.130;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.326;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 8.334;	// (msec)	= 1112 lines	HT - (1.06xHA)
Ver Addr Time	= 7.870;	// (msec)	= 1050 lines	= 0.24
Ver Blank Start	= 7.870;	// (msec)	= 1050 lines	
Ver Blank Time	= 0.465;	// (msec)	= 62 lines	
Ver Sync Start	= 7.892;	// (msec)	= 1053 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.022;	// (msec)	= 3 lines	
Ver Sync Time	= 0.045;	// (msec)	= 6 lines	
// V Back Porch	= 0.397;	// (msec)	= 53 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

**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; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1792 x 1344 @ 60 Hz</b>
Hor Pixels	= <b>1792;</b> // Pixels
Ver Pixels	= <b>1344;</b> // Lines
Hor Frequency	= 83.640; // kHz = 12.0 usec / line
Ver Frequency	= 60.000; // Hz = 16.7 msec / frame
Pixel Clock	= <b>204.750;</b> // MHz = 4.9 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 39.1 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 4.1 %
Hor Sync Polarity	= <b>NEGATIVE;</b> // HBlank = 26.8% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 3.6% of VTotal
Hor Total Time	= 11.956; // (usec) = 306 chars = 2448 Pixels
Hor Addr Time	= 8.752; // (usec) = 224 chars = 1792 Pixels
Hor Blank Start	= 8.752; // (usec) = 224 chars = 1792 Pixels
Hor Blank Time	= 3.204; // (usec) = 82 chars = 656 Pixels
Hor Sync Start	= 9.377; // (usec) = 240 chars = 1920 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.625; // (usec) = 16 chars = 128 Pixels
Hor Sync Time	= 0.977; // (usec) = 25 chars = 200 Pixels
// H Back Porch	= 1.602; // (usec) = 41 chars = 328 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 16.667; // (msec) = 1394 lines HT – (1.06xHA)
Ver Addr Time	= 16.069; // (msec) = 1344 lines = 2.68
Ver Blank Start	= 16.069; // (msec) = 1344 lines
Ver Blank Time	= 0.598; // (msec) = 50 lines
Ver Sync Start	= 16.081; // (msec) = 1345 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.012; // (msec) = 1 lines
Ver Sync Time	= 0.036; // (msec) = 3 lines
// V Back Porch	= 0.550; // (msec) = 46 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: 1792 x 1344 at 75 Hz (non-interlaced)  
 EDID ID: DMT ID: 3Fh; Std. 2 Byte Code: (C1, 4F)h; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

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

**Definition of Terms:** Refer to section 3.4.

## VESA MONITOR TIMING STANDARD

Adopted: 5/1/07  
 Resolution: 1792 x 1344 at 120 Hz (non-interlaced) **REDUCED BLANKING**  
 EDID ID: DMT ID: 40h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a  
 Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	<b>= 1792 x 1344 @ 120Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= 1792;	// Pixels		
Ver Pixels	= 1344;	// Lines		
Hor Frequency	= 170.722;	// kHz	= 5.9 usec	/ line
Ver Frequency	= 119.974;	// Hz	= 8.3 msec	/ frame
Pixel Clock	= 333.250;	// MHz	= 3.0 nsec	± 0.5%
Character Width	= 8;	// Pixels	= 24.0 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 0.8 %			
Hor Sync Polarity	= POSITIVE;	// HBlank	= 8.2% of HTotal	
Ver Sync Polarity	= NEGATIVE	// VBlank	= 5.6% of VTotal	
Hor Total Time	= 5.857;	// (usec)	= 244 chars	= 1952 Pixels
Hor Addr Time	= 5.377;	// (usec)	= 224 chars	= 1792 Pixels
Hor Blank Start	= 5.377;	// (usec)	= 224 chars	= 1792 Pixels
Hor Blank Time	= 0.480;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 5.521;	// (usec)	= 230 chars	= 1840 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.144;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.096;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.240;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 8.335;	// (msec)	= 1423 lines	HT – (1.06xHA)
Ver Addr Time	= 7.872;	// (msec)	= 1344 lines	= 0.16
Ver Blank Start	= 7.872;	// (msec)	= 1344 lines	
Ver Blank Time	= 0.463;	// (msec)	= 79 lines	
Ver Sync Start	= 7.890;	// (msec)	= 1347 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.018;	// (msec)	= 3 lines	
Ver Sync Time	= 0.023;	// (msec)	= 4 lines	
// V Back Porch	= 0.422;	// (msec)	= 72 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

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

## VESA MONITOR TIMING STANDARD

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	= <b>1856 x 1392 at 60Hz;</b>
Hor Pixels	= <b>1856;</b> // Pixels
Ver Pixels	= <b>1392;</b> // Lines
Hor Frequency	= 86.333; // kHz = 11.6 usec / line
Ver Frequency	= 59.995; // Hz = 16.7 msec / frame
Pixel Clock	= <b>218.250;</b> // MHz = 4.6 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 36.7 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 5.1 %
Hor Sync Polarity	= <b>NEGATIVE;</b> // HBlank = 26.6% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // 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) = <b>0</b> chars = 0 Pixels
// H Front Porch	= 0.440; // (usec) = <b>12</b> chars = 96 Pixels
Hor Sync Time	= 1.026; // (usec) = <b>28</b> chars = 224 Pixels
// H Back Porch	= 1.613; // (usec) = <b>44</b> chars = 352 Pixels
// H Left Border	= 0.000; // (usec) = <b>0</b> 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) = <b>0</b> lines
// V Front Porch	= 0.012; // (msec) = <b>1</b> lines
Ver Sync Time	= 0.035; // (msec) = <b>3</b> lines
// V Back Porch	= 0.498; // (msec) = <b>43</b> lines
// V Top Border	= 0.000; // (msec) = <b>0</b> 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; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

Timing Name	= <b>1856 x 1392 @ 75Hz;</b>			
Hor Pixels	= <b>1856;</b>	// Pixels		
Ver Pixels	= <b>1392;</b>	// Lines		
Hor Frequency	= 112.500;	// kHz	= 8.9 usec	/ line
Ver Frequency	= 75.000;	// Hz	= 13.3 msec	/ frame
Pixel Clock	= <b>288.000;</b>	// MHz	= 3.5 nsec	± 0.5%
Character Width	= <b>8;</b>	// Pixels	= 27.8 nsec	
Scan Type	= <b>NONINTERLACED;</b>		// H Phase =	4.4 %
Hor Sync Polarity	= <b>NEGATIVE;</b>	// HBlank	= 27.5% of HTotal	
Ver Sync Polarity	= <b>POSITIVE;</b>	// VBlank	= 7.2% of VTotal	
Hor Total Time	= 8.889;	// (usec)	= 320 chars	= 2560 Pixels
Hor Addr Time	= 6.444;	// (usec)	= 232 chars	= 1856 Pixels
Hor Blank Start	= 6.444;	// (usec)	= 232 chars	= 1856 Pixels
Hor Blank Time	= 2.444;	// (usec)	= 88 chars	= 704 Pixels
Hor Sync Start	= 6.889;	// (usec)	= 248 chars	= 1984 Pixels
// H Right Border	= 0.000;	// (usec)	= <b>0</b> chars	= 0 Pixels
// H Front Porch	= 0.444;	// (usec)	= <b>16</b> chars	= 128 Pixels
Hor Sync Time	= 0.778;	// (usec)	= <b>28</b> chars	= 224 Pixels
// H Back Porch	= 1.222;	// (usec)	= <b>44</b> chars	= 352 Pixels
// H Left Border	= 0.000;	// (usec)	= <b>0</b> chars	= 0 Pixels
Ver Total Time	= 13.333;	// (msec)	= 1500 lines	HT – (1.06xHA)
Ver Addr Time	= 12.373;	// (msec)	= 1392 lines	= 2.06
Ver Blank Start	= 12.373;	// (msec)	= 1392 lines	
Ver Blank Time	= 0.960;	// (msec)	= 108 lines	
Ver Sync Start	= 12.382;	// (msec)	= 1393 lines	
// V Bottom Border	= 0.000;	// (msec)	= <b>0</b> lines	
// V Front Porch	= 0.009;	// (msec)	= <b>1</b> lines	
Ver Sync Time	= 0.027;	// (msec)	= <b>3</b> lines	
// V Back Porch	= 0.924;	// (msec)	= <b>104</b> lines	
// V Top Border	= 0.000;	// (msec)	= <b>0</b> lines	

**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) **REDUCED BLANKING**  
 EDID ID: DMT ID: 43h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a  
 Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	<b>= 1856 x 1392 @ 120Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= 1856;	// Pixels		
Ver Pixels	= 1392;	// Lines		
Hor Frequency	= 176.835;	// kHz	= 5.7 usec	/ line
Ver Frequency	= 119.970;	// Hz	= 8.3 msec	/ frame
Pixel Clock	= 356.500;	// MHz	= 2.8 nsec	± 0.5%
Character Width	= 8;	// Pixels	= 22.4 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 0.8 %			
Hor Sync Polarity	= POSITIVE;	// HBlank	= 7.9% of HTotal	
Ver Sync Polarity	= NEGATIVE	// VBlank	= 5.6% of VTotal	
Hor Total Time	= 5.655;	// (usec)	= 252 chars	= 2016 Pixels
Hor Addr Time	= 5.206;	// (usec)	= 232 chars	= 1856 Pixels
Hor Blank Start	= 5.206;	// (usec)	= 232 chars	= 1856 Pixels
Hor Blank Time	= 0.449;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 5.341;	// (usec)	= 238 chars	= 1904 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.135;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.090;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.224;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 8.335;	// (msec)	= 1474 lines	HT – (1.06xHA)
Ver Addr Time	= 7.872;	// (msec)	= 1392 lines	= 0.14
Ver Blank Start	= 7.872;	// (msec)	= 1392 lines	
Ver Blank Time	= 0.464;	// (msec)	= 82 lines	
Ver Sync Start	= 7.889;	// (msec)	= 1395 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.017;	// (msec)	= 3 lines	
Ver Sync Time	= 0.023;	// (msec)	= 4 lines	
// V Back Porch	= 0.424;	// (msec)	= 75 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

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

## VESA MONITOR TIMING STANDARD

Adopted: 11/17/08  
 Resolution: 1920 x 1080 at 60 Hz (non-interlaced)  
 EDID ID: DMT ID: 52h; Std. 2 Byte Code: (D1, C0)h; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***  
 Per CEA-861 --- 1080p (Code 16) Timing Definition

### Detailed Timing Parameters

Timing Name	= <b>1920 x 1080 @ 60Hz;</b>
Hor Pixels	= <b>1920;</b> // Pixels
Ver Pixels	= <b>1080;</b> // Lines
Hor Frequency	= 67.500; // kHz = 14.8 usec / line
Ver Frequency	= 60.000; // Hz = 16.7 msec / frame
Pixel Clock	= <b>148.500;</b> // MHz = 6.7 nsec ± 0.5%
Character Width	= <b>4;</b> // Pixels = 26.9 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 1.4 %
Hor Sync Polarity	= <b>POSITIVE</b> // HBlank = 12.7% of HTotal
Ver Sync Polarity	= <b>POSITIVE</b> // VBlank = 4.0% of VTotal
Hor Total Time	= 14.815; // (usec) = 550 chars = 2200 Pixels
Hor Addr Time	= 12.929; // (usec) = 480 chars = 1920 Pixels
Hor Blank Start	= 12.929; // (usec) = 480 chars = 1920 Pixels
Hor Blank Time	= 1.886; // (usec) = 70 chars = 280 Pixels
Hor Sync Start	= 13.522; // (usec) = 502 chars = 2008 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.593; // (usec) = 22 chars = 88 Pixels
Hor Sync Time	= 0.296; // (usec) = 11 chars = 44 Pixels
// H Back Porch	= 0.997; // (usec) = 37 chars = 148 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 16.667; // (msec) = 1125 lines HT - (1.06xHA)
Ver Addr Time	= 16.000; // (msec) = 1080 lines = 1.11
Ver Blank Start	= 16.000; // (msec) = 1080 lines
Ver Blank Time	= 0.667; // (msec) = 45 lines
Ver Sync Start	= 16.059; // (msec) = 1084 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.059; // (msec) = 4 lines
Ver Sync Time	= 0.074; // (msec) = 5 lines
// V Back Porch	= 0.533; // (msec) = 36 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**Definition of Terms:** Refer to section 3.1

## VESA MONITOR TIMING STANDARD

Adopted: 8/21/03  
 Resolution: 1920 x 1200 at 60 Hz (non-interlaced) **REDUCED BLANKING**  
 EDID ID: DMT ID: 44h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: (57, 28, 21)h  
 Method: CTV Reduced Blanking

### Detailed Timing Parameters

Timing Name	<b>= 1920 x 1200 @ 60Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= 1920;	// Pixels		
Ver Pixels	= 1200;	// Lines		
Hor Frequency	= 74.038;	// kHz	= 13.5 usec	/ line
Ver Frequency	= 59.950;	// Hz	= 16.7 msec	/ frame
Pixel Clock	= 154.000;	// MHz	= 6.5 nsec	± 0.5%
Character Width	= 8;	// Pixels	= 51.9 nsec	
Scan Type	<b>= NONINTERLACED;</b>		// H Phase	= 0.8 %
Hor Sync Polarity	= POSITIVE;	// HBlank	= 7.7% of HTotal	
Ver Sync Polarity	= NEGATIVE	// VBlank	= 2.8% of VTotal	
Hor Total Time	= 13.506;	// (usec)	= 260 chars	= 2080 Pixels
Hor Addr Time	= 12.468;	// (usec)	= 240 chars	= 1920 Pixels
Hor Blank Start	= 12.468;	// (usec)	= 240 chars	= 1920 Pixels
Hor Blank Time	= 1.039;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 12.779;	// (usec)	= 246 chars	= 1968 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.312;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.208;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.519;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 16.681;	// (msec)	= 1235 lines	HT – (1.06xHA)
Ver Addr Time	= 16.208;	// (msec)	= 1200 lines	= 0.29
Ver Blank Start	= 16.208;	// (msec)	= 1200 lines	
Ver Blank Time	= 0.473;	// (msec)	= 35 lines	
Ver Sync Start	= 16.248;	// (msec)	= 1203 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.041;	// (msec)	= 3 lines	
Ver Sync Time	= 0.081;	// (msec)	= 6 lines	
// V Back Porch	= 0.351;	// (msec)	= 26 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

**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; CTV 3 Byte Code: (57, 28, 28)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	<b>= 1920 x 1200 @ 60Hz;</b>			
Hor Pixels	= 1920;	// Pixels		
Ver Pixels	= 1200;	// Lines		
Hor Frequency	= 74.556;	// kHz	= 13.4 usec	/ line
Ver Frequency	= 59.885;	// Hz	= 16.7 msec	/ frame
Pixel Clock	= 193.250;	// MHz	= 5.2 nsec	± 0.5%
Character Width	= 8;	// Pixels	= 41.4 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 3.9 %			
Hor Sync Polarity	= NEGATIVE	// HBlank	= 25.9% of HTotal	
Ver Sync Polarity	= POSITIVE;	// VBlank	= 3.6% of VTotal	
Hor Total Time	= 13.413;	// (usec)	= 324 chars	= 2592 Pixels
Hor Addr Time	= 9.935;	// (usec)	= 240 chars	= 1920 Pixels
Hor Blank Start	= 9.935;	// (usec)	= 240 chars	= 1920 Pixels
Hor Blank Time	= 3.477;	// (usec)	= 84 chars	= 672 Pixels
Hor Sync Start	= 10.639;	// (usec)	= 257 chars	= 2056 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.704;	// (usec)	= 17 chars	= 136 Pixels
Hor Sync Time	= 1.035;	// (usec)	= 25 chars	= 200 Pixels
// H Back Porch	= 1.739;	// (usec)	= 42 chars	= 336 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 16.699;	// (msec)	= 1245 lines	HT - (1.06xHA)
Ver Addr Time	= 16.095;	// (msec)	= 1200 lines	= 2.88
Ver Blank Start	= 16.095;	// (msec)	= 1200 lines	
Ver Blank Time	= 0.604;	// (msec)	= 45 lines	
Ver Sync Start	= 16.135;	// (msec)	= 1203 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.040;	// (msec)	= 3 lines	
Ver Sync Time	= 0.080;	// (msec)	= 6 lines	
// V Back Porch	= 0.483;	// (msec)	= 36 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

**Definition of Terms:** Refer to section 3.4.

## VESA MONITOR TIMING STANDARD

Adopted: 8/21/03  
 Resolution: 1920 x 1200 at 75 Hz (non-interlaced)  
 EDID ID: DMT ID: 46h; Std. 2 Byte Code: (D1, 0F)h; CTV 3 Byte Code: (57, 28, 44)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	<b>= 1920 x 1200 @ 75Hz;</b>			
Hor Pixels	= 1920;	// Pixels		
Ver Pixels	= 1200;	// Lines		
Hor Frequency	= 94.038;	// kHz	= 10.6 usec	/ line
Ver Frequency	= 74.930;	// Hz	= 13.3 msec	/ frame
Pixel Clock	= 245.250;	// MHz	= 4.1 nsec	± 0.5%
Character Width	= 8;	// Pixels	= 32.6 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 4.0 %			
Hor Sync Polarity	= NEGATIVE	// HBlank	= 26.4% of HTotal	
Ver Sync Polarity	= POSITIVE;	// VBlank	= 4.4% of VTotal	
Hor Total Time	= 10.634;	// (usec)	= 326 chars	= 2608 Pixels
Hor Addr Time	= 7.829;	// (usec)	= 240 chars	= 1920 Pixels
Hor Blank Start	= 7.829;	// (usec)	= 240 chars	= 1920 Pixels
Hor Blank Time	= 2.805;	// (usec)	= 86 chars	= 688 Pixels
Hor Sync Start	= 8.383;	// (usec)	= 257 chars	= 2056 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.555;	// (usec)	= 17 chars	= 136 Pixels
Hor Sync Time	= 0.848;	// (usec)	= 26 chars	= 208 Pixels
// H Back Porch	= 1.403;	// (usec)	= 43 chars	= 344 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 13.346;	// (msec)	= 1255 lines	HT - (1.06xHA)
Ver Addr Time	= 12.761;	// (msec)	= 1200 lines	= 2.34
Ver Blank Start	= 12.761;	// (msec)	= 1200 lines	
Ver Blank Time	= 0.585;	// (msec)	= 55 lines	
Ver Sync Start	= 12.793;	// (msec)	= 1203 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.032;	// (msec)	= 3 lines	
Ver Sync Time	= 0.064;	// (msec)	= 6 lines	
// V Back Porch	= 0.489;	// (msec)	= 46 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

**Definition of Terms:** Refer to section 3.4.

## VESA 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; CTV 3 Byte Code: (57, 28, 62)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	<b>= 1920 x 1200 @ 85Hz;</b>			
Hor Pixels	= 1920;	// Pixels		
Ver Pixels	= 1200;	// Lines		
Hor Frequency	= 107.184;	// kHz	= 9.3 usec	/ line
Ver Frequency	= 84.932;	// Hz	= 11.8 msec	/ frame
Pixel Clock	= 281.250;	// MHz	= 3.6 nsec	± 0.5%
Character Width	= 8;	// Pixels	= 28.4 nsec	
Scan Type	<b>= NONINTERLACED;</b> // H Phase = 4.0 %			
Hor Sync Polarity	= NEGATIVE	// HBlank	= 26.8% of HTotal	
Ver Sync Polarity	= POSITIVE;	// VBlank	= 4.9% of VTotal	
Hor Total Time	= 9.330;	// (usec)	= 328 chars	= 2624 Pixels
Hor Addr Time	= 6.827;	// (usec)	= 240 chars	= 1920 Pixels
Hor Blank Start	= 6.827;	// (usec)	= 240 chars	= 1920 Pixels
Hor Blank Time	= 2.503;	// (usec)	= 88 chars	= 704 Pixels
Hor Sync Start	= 7.339;	// (usec)	= 258 chars	= 2064 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.512;	// (usec)	= 18 chars	= 144 Pixels
Hor Sync Time	= 0.740;	// (usec)	= 26 chars	= 208 Pixels
// H Back Porch	= 1.252;	// (usec)	= 44 chars	= 352 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 11.774;	// (msec)	= 1262 lines	HT - (1.06xHA)
Ver Addr Time	= 11.196;	// (msec)	= 1200 lines	= 2.09
Ver Blank Start	= 11.196;	// (msec)	= 1200 lines	
Ver Blank Time	= 0.578;	// (msec)	= 62 lines	
Ver Sync Start	= 11.224;	// (msec)	= 1203 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.028;	// (msec)	= 3 lines	
Ver Sync Time	= 0.056;	// (msec)	= 6 lines	
// V Back Porch	= 0.494;	// (msec)	= 53 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

**Definition of Terms:** Refer to section 3.4.

## 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; CTV 3 Byte Code: n/a  
 Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	<b>= 1920 x 1200 @ 120Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= 1920;	// Pixels		
Ver Pixels	= 1200;	// Lines		
Hor Frequency	= 152.404;	// kHz	= 6.6 usec	/ line
Ver Frequency	= 119.909;	// Hz	= 8.3 msec	/ frame
Pixel Clock	= 317.000;	// MHz	= 3.2 nsec	± 0.5%
Character Width	= 8;	// Pixels	= 25.2 nsec	
Scan Type	<b>= NONINTERLACED;</b>		// H Phase	= 0.8 %
Hor Sync Polarity	= POSITIVE;	// HBlank	= 7.7% of HTotal	
Ver Sync Polarity	= NEGATIVE	// VBlank	= 5.6% of VTotal	
Hor Total Time	= 6.562;	// (usec)	= 260 chars	= 2080 Pixels
Hor Addr Time	= 6.057;	// (usec)	= 240 chars	= 1920 Pixels
Hor Blank Start	= 6.057;	// (usec)	= 240 chars	= 1920 Pixels
Hor Blank Time	= 0.505;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 6.208;	// (usec)	= 246 chars	= 1968 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.151;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.101;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.252;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 8.340;	// (msec)	= 1271 lines	HT – (1.06xHA)
Ver Addr Time	= 7.874;	// (msec)	= 1200 lines	= 0.14
Ver Blank Start	= 7.874;	// (msec)	= 1200 lines	
Ver Blank Time	= 0.466;	// (msec)	= 71 lines	
Ver Sync Start	= 7.894;	// (msec)	= 1203 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.020;	// (msec)	= 3 lines	
Ver Sync Time	= 0.039;	// (msec)	= 6 lines	
// V Back Porch	= 0.407;	// (msec)	= 62 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

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

## VESA 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, 40h); CTV 3 Byte Code: n/a

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

### Detailed Timing Parameters

Timing Name	= <b>1920 x 1440 @ 60Hz;</b>
Hor Pixels	= <b>1920;</b> // Pixels
Ver Pixels	= <b>1440;</b> // Lines
Hor Frequency	= 90.000; // kHz = 11.1 usec / line
Ver Frequency	= 60.000; // Hz = 16.7 msec / frame
Pixel Clock	= <b>234.000;</b> // MHz = 4.3 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 34.2 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 4.2 %
Hor Sync Polarity	= <b>NEGATIVE;</b> // HBlank = 26.2% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 4.0% of VTotal
Hor Total Time	= 11.111; // (usec) = 325 chars = 2600 Pixels
Hor Addr Time	= 8.205; // (usec) = 240 chars = 1920 Pixels
Hor Blank Start	= 8.205; // (usec) = 240 chars = 1920 Pixels
Hor Blank Time	= 2.906; // (usec) = 85 chars = 680 Pixels
Hor Sync Start	= 8.752; // (usec) = 256 chars = 2048 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.547; // (usec) = 16 chars = 128 Pixels
Hor Sync Time	= 0.889; // (usec) = 26 chars = 208 Pixels
// H Back Porch	= 1.470; // (usec) = 43 chars = 344 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 16.667; // (msec) = 1500 lines HT – (1.06xHA)
Ver Addr Time	= 16.000; // (msec) = 1440 lines = 2.41
Ver Blank Start	= 16.000; // (msec) = 1440 lines
Ver Blank Time	= 0.667; // (msec) = 60 lines
Ver Sync Start	= 16.011; // (msec) = 1441 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	= 0.622; // (msec) = 56 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: 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

Timing Name	= <b>1920 x 1440 @ 75Hz;</b>
Hor Pixels	= <b>1920;</b> // Pixels
Ver Pixels	= <b>1440;</b> // Lines
Hor Frequency	= 112.500; // kHz = 8.9 usec / line
Ver Frequency	= 75.000; // Hz = 13.3 msec / frame
Pixel Clock	= <b>297.000;</b> // MHz = 3.4 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 26.9 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 3.9 %
Hor Sync Polarity	= <b>NEGATIVE</b> // HBlank = 27.3% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 4.0% of VTotal
Hor Total Time	= 8.889; // (usec) = 330 chars = 2640 Pixels
Hor Addr Time	= 6.465; // (usec) = 240 chars = 1920 Pixels
Hor Blank Start	= 6.465; // (usec) = 240 chars = 1920 Pixels
Hor Blank Time	= 2.424; // (usec) = 90 chars = 720 Pixels
Hor Sync Start	= 6.949; // (usec) = 258 chars = 2064 Pixels
// H Right Border	= 0.000; // (usec) = <b>0</b> chars = 0 Pixels
// H Front Porch	= 0.485; // (usec) = <b>18</b> chars = 144 Pixels
Hor Sync Time	= 0.754; // (usec) = <b>28</b> chars = 224 Pixels
// H Back Porch	= 1.185; // (usec) = <b>44</b> chars = 352 Pixels
// H Left Border	= 0.000; // (usec) = <b>0</b> chars = 0 Pixels
Ver Total Time	= 13.333; // (msec) = 1500 lines HT - (1.06xHA)
Ver Addr Time	= 12.800; // (msec) = 1440 lines = 2.04
Ver Blank Start	= 12.800; // (msec) = 1440 lines
Ver Blank Time	= 0.533; // (msec) = 60 lines
Ver Sync Start	= 12.809; // (msec) = 1441 lines
// V Bottom Border	= 0.000; // (msec) = <b>0</b> lines
// V Front Porch	= 0.009; // (msec) = <b>1</b> lines
Ver Sync Time	= 0.027; // (msec) = <b>3</b> lines
// V Back Porch	= 0.498; // (msec) = <b>56</b> lines
// V Top Border	= 0.000; // (msec) = <b>0</b> lines

**Definition of Terms:** Refer to section 3.4.

## VESA MONITOR TIMING STANDARD

Adopted: 5/1/07  
 Resolution: 1920 x 1440 at 120 Hz (non-interlaced) **REDUCED BLANKING**  
 EDID ID: DMT ID: 4Bh; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a  
 Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	= <b>1920 x 1440 @ 120Hz CTV (Reduced Blanking);</b>			
Hor Pixels	= <b>1920;</b>	// Pixels		
Ver Pixels	= <b>1440;</b>	// Lines		
Hor Frequency	= 182.933;	// kHz	= 5.5 usec	/ line
Ver Frequency	= 119.956;	// Hz	= 8.3 msec	/ frame
Pixel Clock	= <b>380.500;</b>	// MHz	= 2.6 nsec	± 0.5%
Character Width	= <b>8;</b>	// Pixels	= 21.0 nsec	
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 0.8 %			
Hor Sync Polarity	= <b>POSITIVE;</b>	// HBlank	= 7.7% of HTotal	
Ver Sync Polarity	= <b>NEGATIVE</b>	// VBlank	= 5.6% of VTotal	
Hor Total Time	= 5.466;	// (usec)	= 260 chars	= 2080 Pixels
Hor Addr Time	= 5.046;	// (usec)	= 240 chars	= 1920 Pixels
Hor Blank Start	= 5.046;	// (usec)	= 240 chars	= 1920 Pixels
Hor Blank Time	= 0.420;	// (usec)	= 20 chars	= 160 Pixels
Hor Sync Start	= 5.172;	// (usec)	= 246 chars	= 1968 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.126;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.084;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.210;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 8.336;	// (msec)	= 1525 lines	HT – (1.06xHA)
Ver Addr Time	= 7.872;	// (msec)	= 1440 lines	= 0.12
Ver Blank Start	= 7.872;	// (msec)	= 1440 lines	
Ver Blank Time	= 0.465;	// (msec)	= 85 lines	
Ver Sync Start	= 7.888;	// (msec)	= 1443 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.016;	// (msec)	= 3 lines	
Ver Sync Time	= 0.022;	// (msec)	= 4 lines	
// V Back Porch	= 0.426;	// (msec)	= 78 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

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

## VESA MONITOR TIMING STANDARD

Adopted: 11/17/08  
 Resolution: 2048 x 1152 at 60 Hz (non-interlaced) **REDUCED BLANKING**  
 EDID ID: DMT ID: 54h; Std. 2 Byte Code: E1h, C0h; CTV 3 Byte Code: n/a  
 Method: **\*\*\* NOT CVT COMPLIANT \*\*\***

### Detailed Timing Parameters

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

**Definition of Terms:** Refer to Section 3.1

## VESA 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; CTV 3 Byte Code: (1F, 38, 21)h  
 Method: CTV Compliant

### Detailed Timing Parameters

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

**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; CTV 3 Byte Code: (1F, 38, 28)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>2560 x 1600 @ 60Hz;</b>
Hor Pixels	= <b>2560;</b> // Pixels
Ver Pixels	= <b>1600;</b> // Lines
Hor Frequency	= 99.458; // kHz = 10.1 usec / line
Ver Frequency	= 59.987; // Hz = 16.7 msec / frame
Pixel Clock	= <b>348.500;</b> // MHz = 2.9 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 23.0 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 4.0 %
Hor Sync Polarity	= <b>NEGATIVE</b> // HBlank = 26.9% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 3.5% of VTotal
Hor Total Time	= 10.055; // (usec) = 438 chars = 3504 Pixels
Hor Addr Time	= 7.346; // (usec) = 320 chars = 2560 Pixels
Hor Blank Start	= 7.346; // (usec) = 320 chars = 2560 Pixels
Hor Blank Time	= 2.709; // (usec) = 118 chars = 944 Pixels
Hor Sync Start	= 7.897; // (usec) = 344 chars = 2752 Pixels
// H Right Border	= 0.000; // (usec) = <b>0</b> chars = 0 Pixels
// H Front Porch	= 0.551; // (usec) = <b>24</b> chars = 192 Pixels
Hor Sync Time	= 0.803; // (usec) = <b>35</b> chars = 280 Pixels
// H Back Porch	= 1.354; // (usec) = <b>59</b> chars = 472 Pixels
// H Left Border	= 0.000; // (usec) = <b>0</b> chars = 0 Pixels
Ver Total Time	= 16.670; // (msec) = 1658 lines HT – (1.06xHA)
Ver Addr Time	= 16.087; // (msec) = 1600 lines = 2.27
Ver Blank Start	= 16.087; // (msec) = 1600 lines
Ver Blank Time	= 0.583; // (msec) = 58 lines
Ver Sync Start	= 16.117; // (msec) = 1603 lines
// V Bottom Border	= 0.000; // (msec) = <b>0</b> lines
// V Front Porch	= 0.030; // (msec) = <b>3</b> lines
Ver Sync Time	= 0.060; // (msec) = <b>6</b> lines
// V Back Porch	= 0.493; // (msec) = <b>49</b> lines
// V Top Border	= 0.000; // (msec) = <b>0</b> lines

**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; CTV 3 Byte Code: (1F, 38, 44)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>2560 x 1600 @ 75Hz;</b>
Hor Pixels	= <b>2560;</b> // Pixels
Ver Pixels	= <b>1600;</b> // Lines
Hor Frequency	= 125.354; // kHz = 8.0 usec / line
Ver Frequency	= 74.972; // Hz = 13.3 msec / frame
Pixel Clock	= <b>443.250;</b> // MHz = 2.3 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 18.0 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 4.0 %
Hor Sync Polarity	= <b>NEGATIVE</b> // HBlank = 27.6% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 4.3% of VTotal
Hor Total Time	= 7.977; // (usec) = 442 chars = 3536 Pixels
Hor Addr Time	= 5.776; // (usec) = 320 chars = 2560 Pixels
Hor Blank Start	= 5.776; // (usec) = 320 chars = 2560 Pixels
Hor Blank Time	= 2.202; // (usec) = 122 chars = 976 Pixels
Hor Sync Start	= 6.245; // (usec) = 346 chars = 2768 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.469; // (usec) = 26 chars = 208 Pixels
Hor Sync Time	= 0.632; // (usec) = 35 chars = 280 Pixels
// H Back Porch	= 1.101; // (usec) = 61 chars = 488 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 13.338; // (msec) = 1672 lines HT – (1.06xHA)
Ver Addr Time	= 12.764; // (msec) = 1600 lines = 1.86
Ver Blank Start	= 12.764; // (msec) = 1600 lines
Ver Blank Time	= 0.574; // (msec) = 72 lines
Ver Sync Start	= 12.788; // (msec) = 1603 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.024; // (msec) = 3 lines
Ver Sync Time	= 0.048; // (msec) = 6 lines
// V Back Porch	= 0.503; // (msec) = 63 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**Definition of Terms:** Refer to section 3.4.

## VESA MONITOR TIMING STANDARD

Adopted: 5/1/07  
 Resolution: 2560 x 1600 at 85 Hz (non-interlaced)  
 EDID ID: DMT ID: 4Fh; Std. 2 Byte Code: n/a; CTV 3 Byte Code: (1F, 38, 62)h  
 Method: CTV Compliant

### Detailed Timing Parameters

Timing Name	= <b>2560 x 1600 @ 85Hz;</b>
Hor Pixels	= <b>2560;</b> // Pixels
Ver Pixels	= <b>1600;</b> // Lines
Hor Frequency	= 142.887; // kHz = 7.0 usec / line
Ver Frequency	= 84.951; // Hz = 11.8 msec / frame
Pixel Clock	= <b>505.250;</b> // MHz = 2.0 nsec ± 0.5%
Character Width	= <b>8;</b> // Pixels = 15.8 nsec
Scan Type	= <b>NONINTERLACED;</b> // H Phase = 4.0 %
Hor Sync Polarity	= <b>NEGATIVE</b> // HBlank = 27.6% of HTotal
Ver Sync Polarity	= <b>POSITIVE;</b> // VBlank = 4.9% of VTotal
Hor Total Time	= 6.999; // (usec) = 442 chars = 3536 Pixels
Hor Addr Time	= 5.067; // (usec) = 320 chars = 2560 Pixels
Hor Blank Start	= 5.067; // (usec) = 320 chars = 2560 Pixels
Hor Blank Time	= 1.932; // (usec) = 122 chars = 976 Pixels
Hor Sync Start	= 5.478; // (usec) = 346 chars = 2768 Pixels
// H Right Border	= 0.000; // (usec) = 0 chars = 0 Pixels
// H Front Porch	= 0.412; // (usec) = 26 chars = 208 Pixels
Hor Sync Time	= 0.554; // (usec) = 35 chars = 280 Pixels
// H Back Porch	= 0.966; // (usec) = 61 chars = 488 Pixels
// H Left Border	= 0.000; // (usec) = 0 chars = 0 Pixels
Ver Total Time	= 11.772; // (msec) = 1682 lines HT – (1.06xHA)
Ver Addr Time	= 11.198; // (msec) = 1600 lines = 1.63
Ver Blank Start	= 11.198; // (msec) = 1600 lines
Ver Blank Time	= 0.574; // (msec) = 82 lines
Ver Sync Start	= 11.219; // (msec) = 1603 lines
// V Bottom Border	= 0.000; // (msec) = 0 lines
// V Front Porch	= 0.021; // (msec) = 3 lines
Ver Sync Time	= 0.042; // (msec) = 6 lines
// V Back Porch	= 0.511; // (msec) = 73 lines
// V Top Border	= 0.000; // (msec) = 0 lines

**Definition of Terms:** Refer to section 3.4.

## VESA MONITOR TIMING STANDARD

Adopted: 5/1/07  
 Resolution: 2560 x 1600 at 120 Hz (non-interlaced) **REDUCED BLANKING**  
 EDID ID: DMT ID: 50h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a  
 Method: Generated using CTV (Reduced Blanking) Formula

### Detailed Timing Parameters

Timing Name	<b>= 2560 x 1600 @ 120Hz CTV (Reduced Blanking);</b>			
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	<b>= NONINTERLACED;</b>		// 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
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.087;	// (usec)	= 6 chars	= 48 Pixels
Hor Sync Time	= 0.058;	// (usec)	= 4 chars	= 32 Pixels
// H Back Porch	= 0.145;	// (usec)	= 10 chars	= 80 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 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.

## VESA MONITOR TIMING STANDARD

Proposed: 2/8/13  
 Resolution: 4096 x 2160 at 60 Hz (non-interlaced) **REDUCED BLANKING v2**  
 EDID ID: DMT ID: 57h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a  
 Method: Generated using CTV (Reduced Blanking v2) Formula

### Detailed Timing Parameters

Timing Name	<b>= 4096 x 2160 @ 60Hz CTV (Reduced Blanking v2);</b>			
Hor Pixels	= 4096;	// Pixels		
Ver Pixels	= 2160;	// Lines		
Hor Frequency	= 133.320;	// kHz	= 7.5 usec	/ line
Ver Frequency	= 60.000;	// Hz	= 16.7 msec	/ frame
Pixel Clock	= 556.744;	// MHz	= 1.8 nsec	± 0.5%
Character Width	= 1;	// Pixels	= 1.8 nsec	
Scan Type	= NONINTERLACED; // H Phase = 0.4 %			
Hor Sync Polarity	= POSITIVE;	// HBlank	= 1.9% of HTotal	
Ver Sync Polarity	= NEGATIVE	// VBlank	= 2.8% of VTotal	
Hor Total Time	= 7.501;	// (usec)	= 4176 chars	= 4176 Pixels
Hor Addr Time	= 7.357;	// (usec)	= 4096 chars	= 4096 Pixels
Hor Blank Start	= 7.357;	// (usec)	= 4096 chars	= 4096 Pixels
Hor Blank Time	= 0.144;	// (usec)	= 80 chars	= 80 Pixels
Hor Sync Start	= 7.371;	// (usec)	= 4104 chars	= 4104 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.014;	// (usec)	= 8 chars	= 8 Pixels
Hor Sync Time	= 0.057;	// (usec)	= 32 chars	= 32 Pixels
// H Back Porch	= 0.072;	// (usec)	= 40 chars	= 40 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 16.667;	// (msec)	= 2222 lines	HT - (1.06xHA)
Ver Addr Time	= 16.202;	// (msec)	= 2160 lines	= -0.3
Ver Blank Start	= 16.202;	// (msec)	= 2160 lines	
Ver Blank Time	= 0.465;	// (msec)	= 62 lines	
Ver Sync Start	= 16.562;	// (msec)	= 2208 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.360;	// (msec)	= 48 lines	
Ver Sync Time	= 0.060;	// (msec)	= 8 lines	
// V Back Porch	= 0.045;	// (msec)	= 6 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

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

## VESA MONITOR TIMING STANDARD

Proposed: 2/8/13

Resolution: 4096 x 2160 at 59.94 Hz (non-interlaced) REDUCED BLANKING v2

EDID ID: DMT ID: 58h; Std. 2 Byte Code: n/a; CTV 3 Byte Code: n/a

Method: Generated using CTV (Reduced Blanking v2) Formula

### Detailed Timing Parameters

Timing Name	<b>= 4096 x 2160 @ 59.94 Hz CTV (Reduced Blanking v2);</b>			
Hor Pixels	= 4096;	// Pixels		
Ver Pixels	= 2160;	// Lines		
Hor Frequency	= 133.187;	// kHz	= 7.5 usec	/ line
Ver Frequency	= 59.940;	// Hz	= 16.7 msec	/ frame
Pixel Clock	= 556.188;	// MHz	= 1.8 nsec	± 0.5%
Character Width	= 1;	// Pixels	= 1.8 nsec	
Scan Type	= NONINTERLACED; // H Phase = 0.4 %			
Hor Sync Polarity	= POSITIVE;	// HBlank	= 1.9% of HTotal	
Ver Sync Polarity	= NEGATIVE	// VBlank	= 2.8% of VTotal	
Hor Total Time	= 7.508;	// (usec)	= 4176 chars	= 4176 Pixels
Hor Addr Time	= 7.364;	// (usec)	= 4096 chars	= 4096 Pixels
Hor Blank Start	= 7.364;	// (usec)	= 4096 chars	= 4096 Pixels
Hor Blank Time	= 0.144;	// (usec)	= 80 chars	= 80 Pixels
Hor Sync Start	= 7.379;	// (usec)	= 4104 chars	= 4104 Pixels
// H Right Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
// H Front Porch	= 0.014;	// (usec)	= 8 chars	= 8 Pixels
Hor Sync Time	= 0.058;	// (usec)	= 32 chars	= 32 Pixels
// H Back Porch	= 0.072;	// (usec)	= 40 chars	= 40 Pixels
// H Left Border	= 0.000;	// (usec)	= 0 chars	= 0 Pixels
Ver Total Time	= 16.683;	// (msec)	= 2222 lines	HT - (1.06xHA)
Ver Addr Time	= 16.218;	// (msec)	= 2160 lines	= -0.3
Ver Blank Start	= 16.218;	// (msec)	= 2160 lines	
Ver Blank Time	= 0.466;	// (msec)	= 62 lines	
Ver Sync Start	= 16.578;	// (msec)	= 2208 lines	
// V Bottom Border	= 0.000;	// (msec)	= 0 lines	
// V Front Porch	= 0.360;	// (msec)	= 48 lines	
Ver Sync Time	= 0.060;	// (msec)	= 8 lines	
// V Back Porch	= 0.045;	// (msec)	= 6 lines	
// V Top Border	= 0.000;	// (msec)	= 0 lines	

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