

2 Product Specifications

2-1 Specifications

Item	Description	
LCD Panel	TFT-LCD panel, RGB vertical stripe, normally white, 17-Inch viewable, 0.2895 mm pixel pitch	
Scanning Frequency	Horizontal : 30 kHz ~ 60 kHz (Automatic) Vertical : 56 Hz ~ 75 Hz (Automatic)	
Display Colors	16.7 Million colors	
Maximum Resolution	Horizontal : 1280 Pixels Vertical : 768 Pixels	
Input Video Signal	Analog 0.7 Vp-p \pm 5% positive at 75 Ω , internally terminated	
Input Sync Signal	Type : Separate H/V Sync-on-Green, automatic synchronization without external switch of sync type Level : TTL level	
Maximum Pixel Clock rate	80 MHz	
Active Display Horizontal/Vertical	372.7 mm / 224.5 mm	
AC power voltage & Frequency	AC 90 ~ 264 Volts, 60/ 50 Hz \pm 3 Hz	
Power Consumption	40 W (Max), (2W Power)	
Dimensions (W x D x H) Set (W x D x H) Package (W x D x H)	20.7 x 6.2 x 13.4 Inches (526 x 157.2 x 341 mm) 20.7 x 2.4 x 11.5 Inches (526 x 60.3 x 292 mm) State of stand disassembled 24.3 x 8.3 x 16.3 Inches (617 x 212 x 414 mm)	
Weight	5.1 Kg (11.9 lbs)State of stand installed / 7.2 Kg (15.9 lbs)	
Environmental Considerations	Operating Temperature : 50 °F ~ 104 °F (10 °C ~ 40 °C) Operating Humidity : 10 % ~ 80 % Storage Temperature : -13 °F ~ 113 °F (-25 °C ~ 45 °C) Storage Humidity : 5 % ~ 95 %	
TV System	Tuning	Frequency Synthesize
	Color	NTSC
	Sound	KOREA
Antenna Input	75 Ω , Coaxial Cable	
Sound Characteristic	– MAX Internal speaker Out : Right => 5 W Left => 5 W	
	– BASS Control Range : -12 dB ~ + 12 dB – TREBLE Control Range : -12 dB ~ + 12 dB – Headphone Out: RF => 5 mW max (400 m Vrms) A/V => 10 mW max (580 Vrms), Max Input sound : -9 dBm – Output Frequency (TBD) : RF => 80 Hz ~ 15 kHz A/V => 80 Hz ~ 20 kHz	

2-2 Pin Assignments

2-2-1 15 Pin signal cable connector

Pin No.	Sync Type	15 Pin signal cable connector	
		Separate H/V	Composite H/V
1		Red	Red
2		Green	Green
3		Blue	Blue
4		GND	GND
5		GND (DDC Return)	GND (DDC Return)
6		GND-Red	GND-Red
7		GND-Green	GND-Green
8		GND-Blue	GND-Blue
9		No Connection	No Connection
10		GND-Sync/Self Test	GND-Sync/Self Test
11		GND	GND
12		DDC Data	DDC Data
13		Horizontal Sync	H/V Sync
14		Vertical Sync	Not Used
15		DDC Clock	DDC Clock

2-2-2 DVI / PC

Pin No.	30 Pin Signal Cable (DVI Analog)	Pin No.	30 Pin Signal Cable (DVI Analog)
1	RX2+	16	GND
2	RX2-	17	Check · D-Sub
3	GND	18	GND
4	RX1+	19	DDC_5V
5	RX1-	20	DDC_5V
6	GND	21	GND
7	RX0+	22	V/Sync
8	RX0-	23	GND
9	GND	24	H/Sync
10	RXC+	25	GND
11	RXC-	26	Blue
12	GND	27	GND
13	DDC (Clock)	28	Green
14	DDC (Data)	29	GND
15	GND	30	Red

2-3 Timing Chart

This section of the service manual describes the timing that the computer industry recognizes as standard for computer-generated video signals.

Table 2-1 Timing Chart

Timing No.				
Originator	VESA			
Mode Name	1280/60Hz			
Resolution (HxV)	1280x768			
HORIZONTAL				
Frequency	47.776kHz			
Total time	19.321 μ S			
Active time	16.101 μ S			
Blank time	4.830 μ S			
Border (L / R)	0.000 μ S	blank	blank	blank
Data time	16.101 μ S			
Front porch	0.805 μ S			
Sync. width	1.610 μ S			
Back porch	2.415 μ S			
Sync. polarity	Negative			
VERTICAL				
Frequency	59.870Hz			
Total time	16.557ms			
Active time	16.075ms			
Blank time	0.629ms			
Border (T / B)	0.000ms	blank	blank	blank
Data time	16.075ms			
Front porch	0.063ms			
Sync. width	0.147ms			
Back porch	0.419ms			
Sync. polarity	Positive			
Dot Clock	79.5MHz			
Sync. Type	Separate			
Scan Type	N/I			

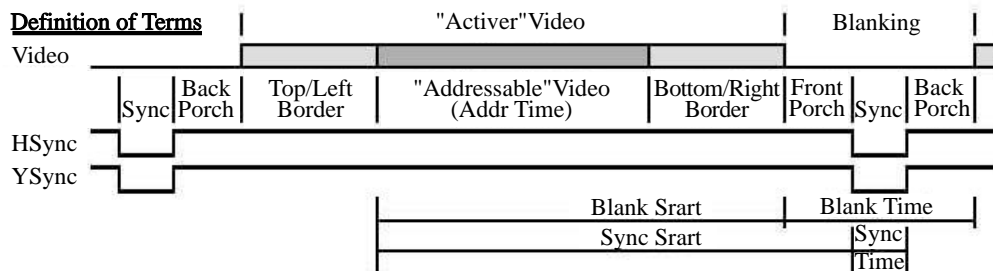


Table 2-2 Timing Chart

Timing No. Originator Mode Name Resolution (HxV)	1 IBM VGA1 640x350	2 IBM VGA2 720x400	3 IBM VGA3 640x480	11 VESA 640/72Hz 640x480	17 VESA 640/75Hz 640x480
HORIZONTAL					
Frequency	31.469kHz	31.469kHz	31.469kHz	37.861kHz	37.500kHz
Total time	31.778 μ s	31.777 μ s	31.778 μ s	26.413 μ s	26.667 μ s
Active time	26.058 μ s	26.058 μ s	26.058 μ s	20.825 μ s	20.317 μ s
Blank time	5.720 μ s	5.720 μ s	5.720 μ s	5.588 μ s	6.350 μ s
Border (L / R)	0.318 μ s	0.318 μ s	0.318 μ s	0.254 μ s	0.000 μ s
Data time	25.422 μ s	25.422 μ s	25.422 μ s	20.317 μ s	20.317 μ s
Front porch	0.318 μ s	0.318 μ s	0.318 μ s	0.508 μ s	0.508 μ s
Sync. width	3.813 μ s	3.813 μ s	3.813 μ s	1.270 μ s	2.032 μ s
Back porch	1.589 μ s	1.589 μ s	1.589 μ s	3.810 μ s	3.810 μ s
Sync. polarity	Positive	Negative	Negative	Negative	Negative
VERTICAL					
Frequency	70.086Hz	70.087Hz	59.940Hz	72.809Hz	75.000Hz
Total time	14.268ms	14.268ms	16.683ms	13.735ms	13.333ms
Active time	11.504ms	13.155ms	15.761ms	13.100ms	12.800ms
Blank time	2.764ms	1.113ms	0.922ms	0.635ms	0.533ms
Border (T / B)	0.191ms	0.222ms	0.254ms	0.211ms	0.000ms
Data time	11.122ms	12.711ms	15.253ms	12.678ms	12.800ms
Front porch	0.985ms	0.191ms	0.064ms	0.026ms	0.027ms
Sync. width	0.064ms	0.064ms	0.064ms	0.079ms	0.080ms
Back porch	1.716ms	0.858ms	0.794ms	0.528ms	0.427ms
Sync. polarity	Negative	Positive	Negative	Negative	Negative
Dot Clock	25.175MHz	28.322MHz	25.175MHz	31.500MHz	31.500MHz
Sync. Type	Separate	Separate	Separate	Separate	Separate
Scan Type*	N/I	N/I	N/I	N/I	N/I

Table 2-3 Timing Chart

Timing No. Originator Mode Name Resolution (HxV)	32 MAC 640/67Hz 640x480	33 MAC 832/75Hz 832x624	12 VESA 800/56Hz 800x600	13 VESA 800/60Hz 800x600	14 VESA 800/72Hz 800x600
HORIZONTAL Frequency Total time Active time Blank time Border (L / R) Data time Front porch Sync. width Back porch Sync. polarity	35.000kHz 28.571 μ S 21.164 μ S 7.407 μ S 0.000 μ S 21.164 μ S 2.116 μ S 2.116 μ S 3.175 μ S Negative	49.726kHz 20.110 μ S 14.524 μ S 5.586 μ S 0.000 μ S 14.524 μ S 0.559 μ S 1.117 μ S 3.910 μ S Negative	35.156kHz 28.444 μ S 22.222 μ S 6.222 μ S 0.000 μ S 22.222 μ S 0.667 μ S 2.000 μ S 3.556 μ S Positive or Negative	37.879kHz 26.400 μ S 20.000 μ S 6.400 μ S 0.000 μ S 20.000 μ S 1.000 μ S 3.200 μ S 2.200 μ S Positive	48.077kHz 20.800 μ S 16.000 μ S 4.800 μ S 0.000 μ S 16.000 μ S 1.120 μ S 2.400 μ S 1.280 μ S Positive
VERTICAL Frequency Total time Active time Blank time Border (T / B) Data time Front porch Sync. width Back porch Sync. polarity	66.667Hz 15.000ms 13.714ms 1.286ms 0.000ms 13.714ms 0.086ms 0.086ms 1.114ms Negative	74.551Hz 13.414ms 12.549ms 0.865ms 0.000ms 12.549ms 0.020ms 0.060ms 0.784ms Negative	56.250Hz 17.778ms 17.067ms 0.711ms 0.000ms 17.067ms 0.028ms 0.057ms 0.626ms Positive or Negative	60.317Hz 16.579ms 15.840ms 0.739ms 0.000ms 15.840ms 0.026ms 0.106ms 0.607ms Positive	72.188Hz 13.853ms 12.480ms 1.373ms 0.000ms 12.480ms 0.770ms 0.125ms 0.478ms Positive
Dot Clock	30.240MHz	57.284MHz	36.000MHz	40.000MHz	50.000MHz
Sync. Type	Separate Composite	Separate Composite	Separate	Separate	Separate
Scan Type	N/I	N/I	N/I	N/I	N/I

Table 2-2 Timing Chart

Timing No. Originator Mode Name Resolution (HxV)	18 VESA 800/75Hz 800x600	15 VESA 1024/60Hz 1024x768	16 VESA 1024/70Hz 1024x768	19 VESA 1024/75Hz 1024x768
HORIZONTAL				
Frequency	46.875kHz	48.363kHz	56.476kHz	60.023kHz
Total time	21.333 μ S	20.677 μ S	17.707 μ S	16.660 μ S
Active time	16.162 μ S	15.754 μ S	13.653 μ S	13.003 μ S
Blank time	5.171 μ S	4.923 μ S	4.054 μ S	3.657 μ S
Border (L / R)	0.000 μ S	0.000 μ S	0.000 μ S	0.000 μ S
Data time	16.162 μ S	15.754 μ S	13.653 μ S	13.003 μ S
Front porch	0.323 μ S	0.369 μ S	0.320 μ S	0.203 μ S
Sync. width	1.616 μ S	2.092 μ S	1.813 μ S	1.219 μ S
Back porch	3.232 μ S	2.462 μ S	1.920 μ S	2.235 μ S
Sync. polarity	Positive	Negative	Negative	Positive
VERTICAL				
Frequency	75.000Hz	60.004Hz	70.069Hz	75.029Hz
Total time	13.333ms	16.666ms	14.272ms	13.328ms
Active time	12.800ms	15.880ms	13.599ms	12.795ms
Blank time	0.533ms	0.786ms	0.673ms	0.533ms
Border (T / B)	0.000ms	0.000ms	0.000ms	0.000ms
Data time	12.800ms	15.880ms	13.599ms	12.795ms
Front porch	0.021ms	0.062ms	0.053ms	0.017ms
Sync. width	0.064ms	0.124ms	0.106ms	0.050ms
Back porch	0.448ms	0.600ms	0.513ms	0.466ms
Sync. polarity	Positive	Negative	Negative	Positive
Dot Clock	49.500MHz	65.000MHz	75.000MHz	78.750MHz
Sync. Type	Separate	Separate	Separate	Separate
Scan Type*	N/I	N/I	N/I	N/I