

PRODUCT SPECIFICATION

Date:04.01.2017

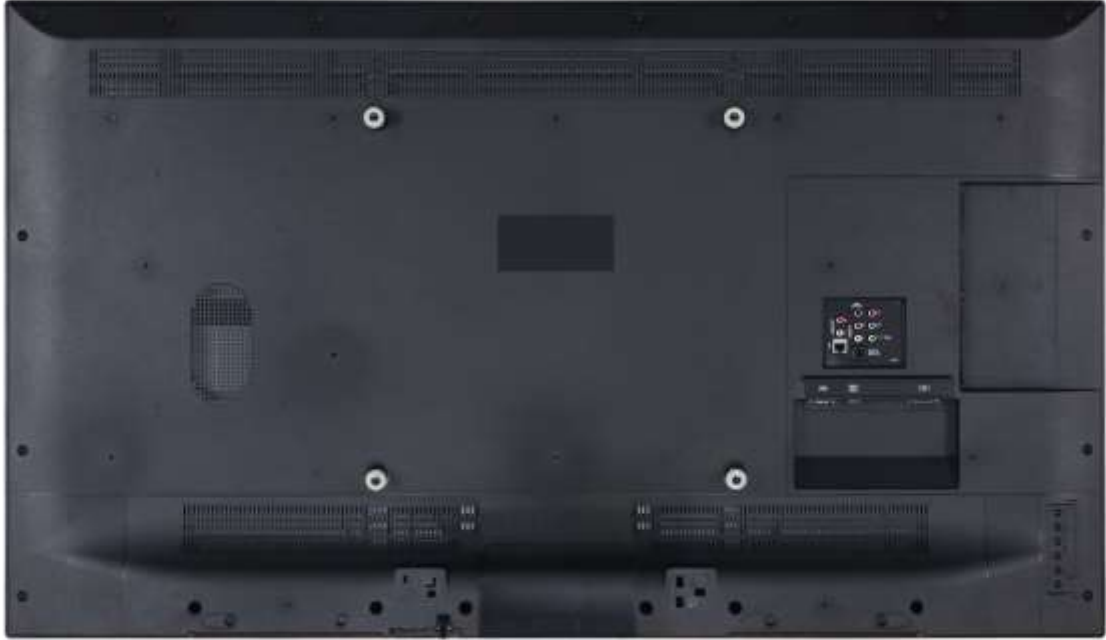
VESTEL**ST55U01****55" SOC BASED****16/7 – Full HD****DIGITAL SIGNAGE DISPLAY**

SPECIFICATIONS

	ST55U01
Panel	
Mainboard Model	System-On-Chip Model: 17MB120DS
H-Freq	67.5 KHz
Max. Pixel Freq.	74.25 MHz
V-Freq	60 Hz
Size	55"
Backlight Type	EDGE TYPE LED
Panel Technology	IPS
Panel Type	16/7 Panel
Front Type	Ultra Narrow Bezel
Orientation	Horizontal
Resolution	1920 x 1080 (16:9) - FHD
Active Area	1210 mm (H) X 681 mm (V)
Brightness (Typ.)	400 cd/m2
Contrast Ratio (Typ.)	1200
Panel life time (Min. / Typ.)	30000 / 50000 Hr
Viewing Angle	178°
Response Time	6 ms
Color Value	8 Bit, 16.7 M Colors
Areas of Usage	Indoor
Monitor Connectivity	
RGB Input	Dsub 15 PIN VGA CON., YPbPr
RGB Output	N/A
VIDEO Input	2xHDMI2.0, DP1.2a, DVI, 1xUSB3.0, 1xUSB2.0
VIDEO Output	DP1.2a
AUDIO Input	LINE IN JACK
AUDIO Output	LINE OUT JACK
External Control	RS232(DSUB 9P), RJ12, Ethernet
External Sensor	N/A
Mechanical Features	
Size	1239 mm(L) x 716 mm(H) x 67 mm(D)
Shipping Size	1369 mm(L) x 145 mm(W) x 874 mm(H)
Weight	19.3 KG
Shipping Weight	22.3 KG
Vesa Mounting Size	400 mm(H)x 400 mm(V)
Bezel Width(Bottom-Side-Top)	18mm / 11 mm
Working Conditions	
Temperature Conditions	+40°C / 0°C
Humidity	90%
Features	

<i>Main Features</i>	Open Content Management Support, Scheduler, USB-Autoplay, Auto-Launch, HDMI-CEC, HDMI-Hotplug, Auto-switch on Failover, Panel Lock
<i>Mechanical Features</i>	Mechanical Buttons, IR Extender Support
<i>Speaker</i>	2 x 10 W
Power	
<i>Power Supply</i>	110 VAC - 240 VAC
<i>Power Consumption(Deep StandBy)</i>	≤0.5W
<i>Power Consumption(On Full Load)</i>	107W
Accessory	
<i>Standard</i>	QSG, Warranty Card, IB, Power Cord, Remote Control, RC Battery, Mounting Kit
Certification	
Safety Approval	<input checked="" type="checkbox"/>
CB	<input checked="" type="checkbox"/>
S-MARK	<input checked="" type="checkbox"/>
EMC Approval	<input checked="" type="checkbox"/>
CE	<input checked="" type="checkbox"/>
Reliability Approval	<input checked="" type="checkbox"/>

VIEW

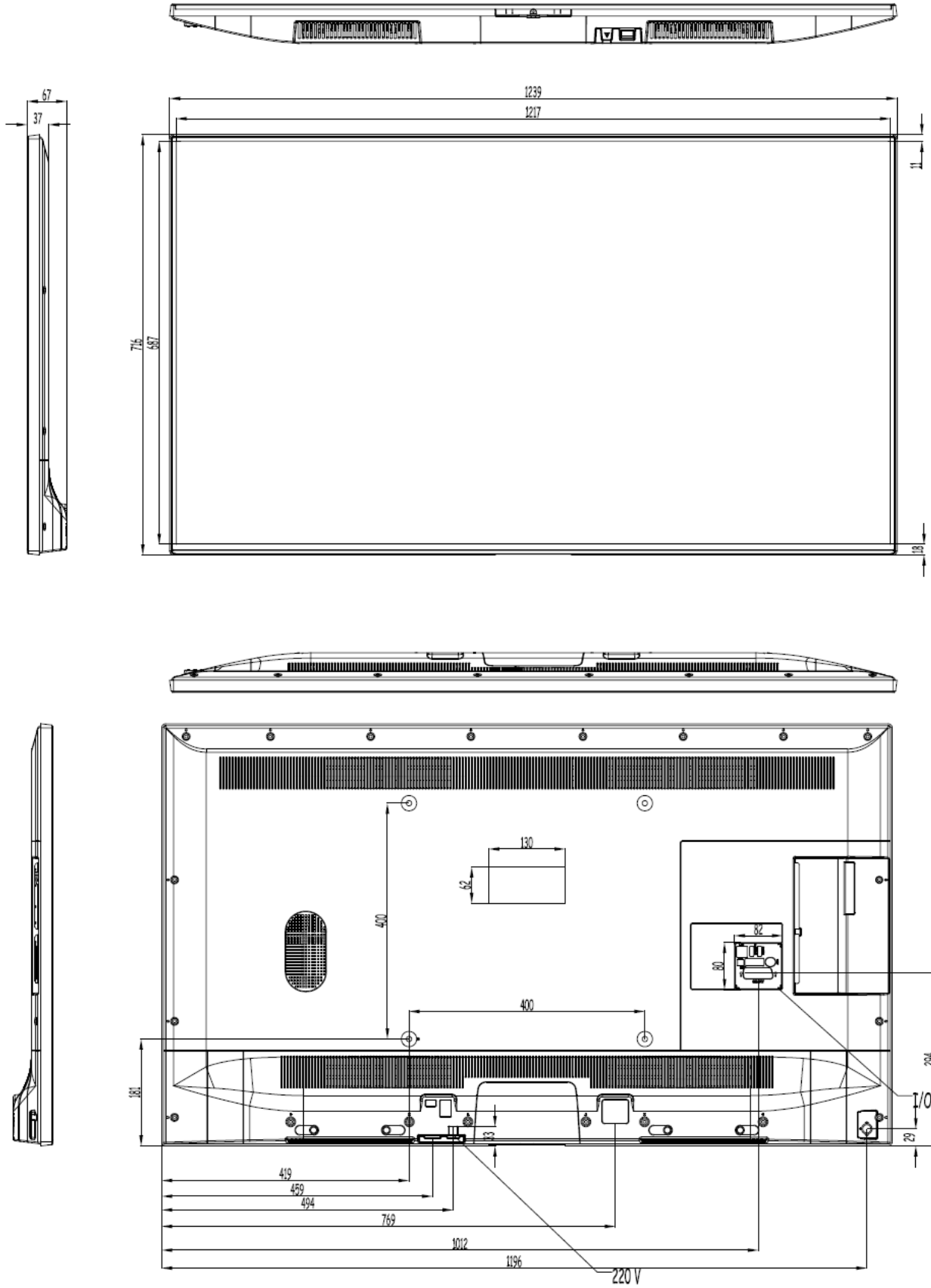


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DESIGN



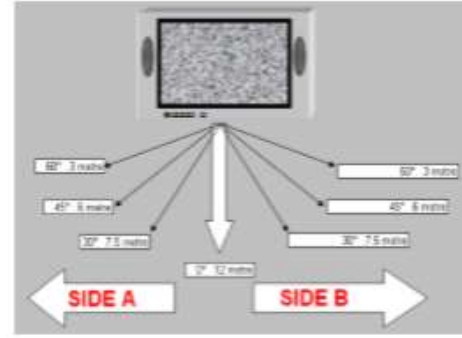
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REMOTE CONTROLLER



Symbol	TV Function	DVB Function	MM Function	SYS CODE: 01 Code (RC5)
	Stand By	Stand By	Stand By	0C
RED			ZOOM	37
GREEN			REPEAT	36
YELLOW			ROOT	32
BLUE			TITLE	34
T.TEXT	TTEXT Mode On / Off / Mix			3C
INTERNET	internet	Internet	internet	2E
PR. GUIDE		Guide (Electronic Programming Guide)		2F
1/..@	Direct Programme	DTV spelling	1	01
2/ABC	Direct Programme	DTV spelling	2	02
3/DEF	Direct Programme	DTV spelling	3	03
4/GHI	Direct Programme	DTV spelling	4	04
5/JKL	Direct Programme	DTV spelling	5	05
6/MNO	Direct Programme	DTV spelling	6	06
7/PQRS	Direct Programme	DTV spelling	7	07
8/TUV	Direct Programme	DTV spelling	8	08
9/WXYZ	Direct Programme	DTV spelling	9	09
SWAP	Previous Programme/Swap	Previous Programme/Swap		22
0	0	0	0	00
BACK	Back (Return) / TXT Index	Back (Return)		0A
V-	Volume Decrease	Volume Decrease	Volume Decrease	11
V+	Volume Increase	Volume Increase	Volume Increase	10
	Mute	Mute	Mute	0D
P-	Programme/Channel -	Programme/Channel -		21
P+	Programme/Channel +	Programme/Channel +		20
I	Info / TXT Reveal	IDTV Info	TIME	12
SOURCE	Source	Source	Source	38
	Cursor Up			14
	Cursor Left			15
OK	OK (Select)/ TXT HOLD	OK (Select)		35
	Cursor Right / TXT subpage			16
MENU	Menu	Menu		30
	Cursor Down / TXT page down			13
Q MENU	Quick Menu	Quick Menu	Quick Menu	2B
EXIT	EXIT	EXIT	EXIT	25
LANG.	Language	Language	Language	0F
SUBTT.		Subtitle	Subtitle	1F
SCREEN	Screen Mod (4:3 / 16:9)	Screen Mod (4:3 / 16:9)	Screen Mod (4:3 / 16:9)	0B
MY BUTTON 1 / DISPLAY	My Button	My Button	Display	3B
MY BUTTON 2 / SEARCH MODE	My Button 2	My Button 2	Search Mode	1A
CHANNELS	TV - AV / TV Channel List / DVB-T-C	TV - AV / TV Channel List / DVB-T-C		26
RECORD		Record On/Off	Record On/Off	33
PLAY		PLAY	PLAY	19
STOP		STOP	STOP	18
PAUSE		PAUSE	PAUSE	31
search back		Search Back	Search Back	1B
search forward		Search Forward	Search Forward	1C
MULTIMEDIA (Angel)	Media Browser	Media Browser	Angle	39

DESCRIPTION	SPECIFICATION
Carrier Frequency	System clock : 429KHz Carrier : 36 KHz
Operating Voltage	Loaded Voltage 2,6V – 3,4V
Initial Current, whenpressed.	Max. : 30 mA
Stable Current, while pressing.	Max. :15 mA
In idle mode, leakage current.	Max. : 10 uA



DIMMENSIONS	
Width	
Length	
Depth	
Weight	

	CONDITION	SPECIFICATION
DROP TEST	Drop the sample with batteries from a height of 80 cm to the ground which is covered with a flat wooden board of 30 mm thickness, the test is performed at 6 faces.	1) No functional failure is allowed 2) No mechanical crack on the product is allowed

	CONDITION	SPECIFICATION
KEYS OPERATING LIFE	Activate the key at the centre with a load of 200 gr at 2 or 3 cycles/sec. Test is done for 50.000 cycles	It must satisfy the specification. Check all products.

	CONDITION	SPECIFICATION
BATTERY LID LIFE	Open and close the battery lid 100 times in or 3 cycles/sec	Don't close by the weight of the door.

	Weee logo should be added.
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	Recycling logo should be added on Remote Control package
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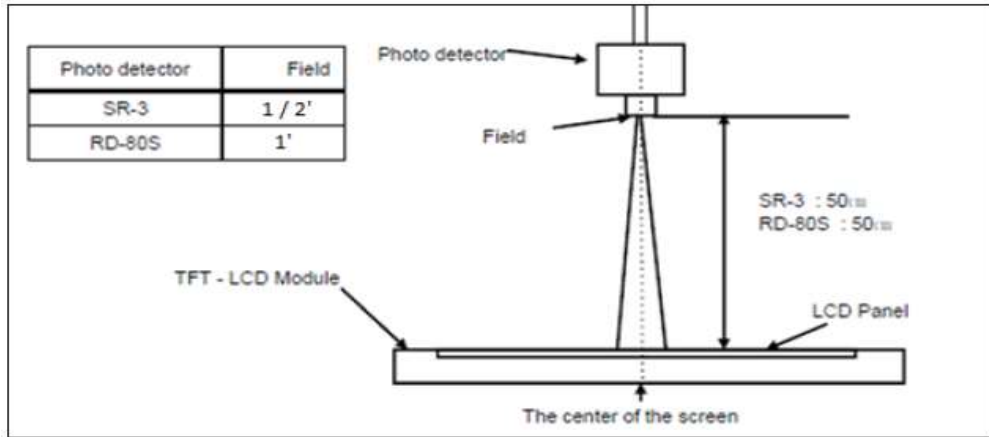
CE	CE logo should be added.
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There should be rib on 5 key button for blind people.

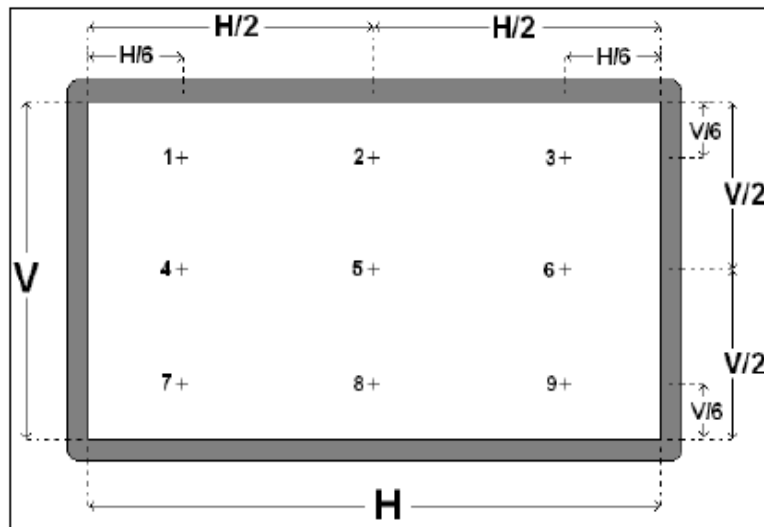
There should be a label that describes Company Name, system code and batch number.

TESTING STANDARDS

The measurement should be executed in a stable, windless and dark room 60min after lighting the back light at the given temperature for stabilization of the back light. This should be measured in the center of screen. Environment condition: $T_a = 25 \pm 2 \text{ }^\circ\text{C}$.



Definition of Test Points:



Note (1) Definition of Contrast Ratio (C/R):

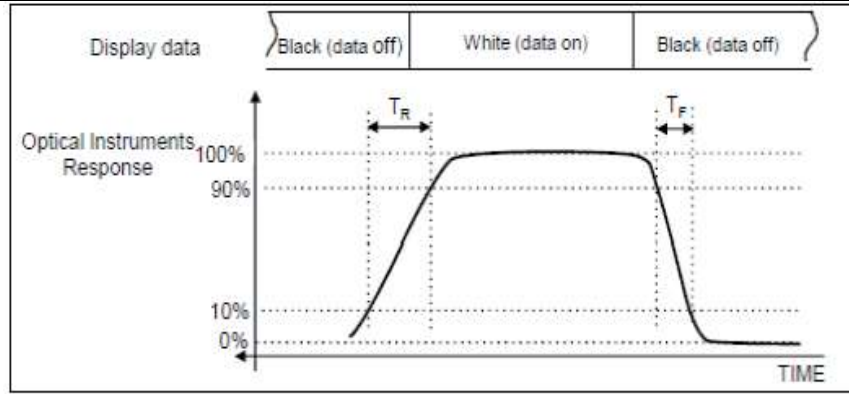
Ratio of gray max (G_{max}) & gray min (G_{min}) at the center point (5) the panel

$$\frac{C}{R} = \frac{G_{max}}{G_{min}}$$

G_{max} : Luminance with all pixels white

G_{min} : Luminance with all pixels black

Note (2) Definition of Response Time: $T_R + T_F$



Note (3) Definition of 9 points brightness uniformity:

$$B_{uni} = 100 * \frac{(B_{max} - B_{min})}{B_{max}}$$

(Test pattern: Full White)

Bmax: Maximum brightness

Bmin: Minimum brightness

Note (4) Definition of Luminance of White:

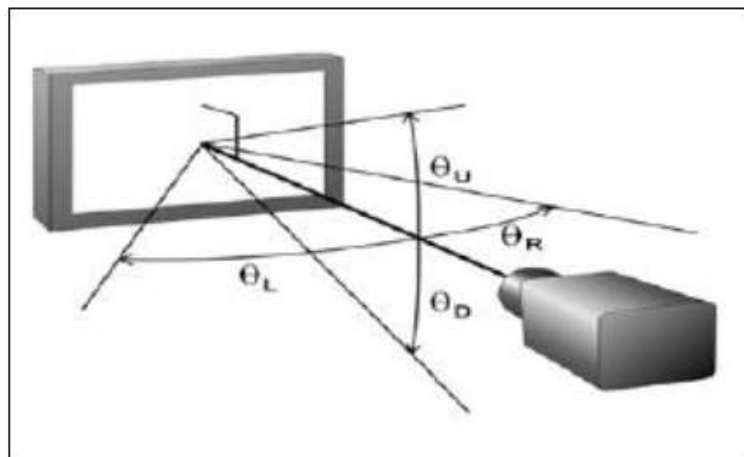
Luminance of white at center point 5

Note (5) Definition of White Color Chromaticity:

Color coordinates of White at center point 5

Note (6) Definition of Viewing Angle

Viewing angle range ($C/R > 10$)



**Safety IEC 60950-1: 2005+A1:2009
EN 60950-1: 2006+A11: 2009+A12:2011**

EMC

Immunity Tests	
Specification	Description
EN 55024:2010	Immunity
EN 61000-4-2:2009	Electrostatic Discharge (ESD)
EN 61000-4-3:2006+A2:2010	Radiated, radio-frequency, electromagnetic field immunity
EN 61000-4-4:2004+A1:2010	Electrical Fast Transient/Burst Immunity
EN 61000-4-5:2006	Surge
EN 61000-4-6:2009	Conducted Disturbances Induced by Radio-Frequency Fields
EN 61000-4-11:2004	Voltage Dips and Short Interruptions

Emission Test	
Specification	Description
EN 55022:2010/AC:2011 – Class B	Disturbance Voltage at the Mains Terminals (Conducted Emission)
EN 55022:2010/AC:2011 – Class B	Disturbance Voltage at the Telecommunication Terminals (Conducted Emission)
EN 55022:2010/AC:2011 – Class B	Field Strength (Radiated Emission) (1GHz-6GHz)
EN 55022:2010/AC:2011 – Class B	Field Strength (Radiated Emission) (30MHz-1GHz)
EN 61000-3-2:2006+A1:2009+A2:2009	Harmonics
EN 61000-3-3:2008	Flicker

Note EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN61000-4-8 and EN 61000-4-11 are basic standards referred from EN 55024.

According to EN 55024, EN 61000-4-8 Power Frequency Magnetic Field test is not performed since the EUT is not sensitive power frequency magnetic field.

EN 301489 – 1 V1.9.2	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
EN 301489 – 17 V2.2.1	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment; Part 17: Specific conditions for Broadband Data Transmission Systems

Reliability Test Standards

Low Temperature Test

Products must be boot up without any delay more than one minute. No abnormality on operation. There mustn't come out any electrical and functional problems.

Test Condition :

Temperature: -15 °C , Humidity: 50% , Duration: 24 hours , Mode of Operation: Power Off

High Temperature Test

After the test, product should work properly as electrical and mechanically.
No software crash, No hang up, No lock up.

Test Condition :

Temperature: 50 °C , Humidity: 90% , Duration: 72 hours , Mode of Operation: 3D Mark 2011

Life Test

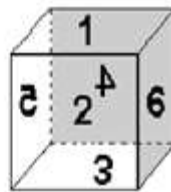
After the test Product should work properly as electrically and mechanically.
No software crash, No hang up, No lock up.

Test Condition :

Temperature: 35 °C , Humidity: 50% , Duration: 150 hours , Mode of Operation: 3D Mark 2011

Drop Test

Product should work properly and there mustn't be any crack at the cabin or any cosmetic problem. In addition, there mustn't be any major problem at the product packaging and snow boxes.



The test is performed on the packed digital products sample under following conditions;

Drop Order :

- 1- Face 3of the package
- 2- 2-3-5 corner of package
- 3- 2-5 edge of package
- 4- 3-5 edge of package
- 5- 2-3 edge of package
- 6- Face 1 of the package
- 7- Face 5 of the package
- 8- Face 6 of the package
- 9- Face 2 of the package
- 10- Face 4 of the package

Total: 10 drops

Test Condition :

Dropping height: Face 3 (Bottom surface): 55cm, Other surfaces: 40cm
Temperature: 25 ± 2 °C , Humidity: 45% ± 10

Vibration Test

Product should work properly and there mustn't be any crack at the cabin, at the solder points of chassis, at the pins of components. In addition, there mustn't be any major problem at the product packaging and snow boxes.

Direction of Vibration	Frequency of Vibration	Power Spectral Density	Sweep Time	Total Duration	Acceleration
Z	10Hz – 500Hz	0.002G ² /Hz	10min	60min	1Grms(9.81m/s ²)