



# DLP™ Panel Display

## 60"\*Model - VS-60XT20U

*Mitsubishi Quality with Proven Reliability*

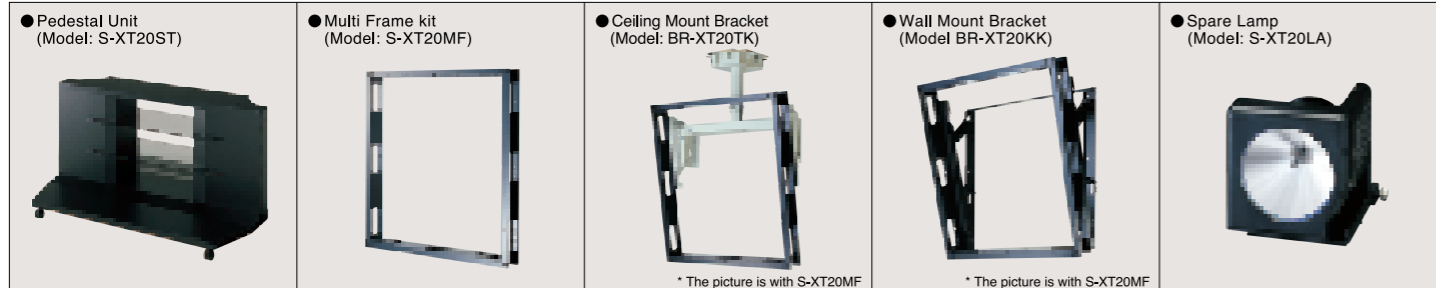


### SPECIFICATIONS

Model	VS-60XT20U	
Technology	1-Chip DLP™ (0.7" DMD™ 1-Chip)	
DMD™ Chip Resolution	1,024 × 768 Pixels	
Display Resolution	1,008 × 756 Pixels	
Screen Size	60" (59" Viewable, 1,200 × 900 mm)	
Brightness	400 cd/m <sup>2</sup> (typ.)	
Contrast Ratio	2,000:1 (typ.)	
Color	Reproduction	16.7 Million
	Gradation	4,096 (12 Bit)
Lamp System	Lamp	Ultra High Pressure Mercury Lamp 120W
	Lamp Life	4,000 Hours (Average) *(1)
Input Scanning Frequency	Horizontal: 15.75kHz, 31.5-85kHz Vertical: 50-85Hz	
Signal Input Terminals	Analog RGB: 5BNC(RGBHV) × 1, D-Sub Mini 15 Pins × 1	
	Digital RGB: MDR 20 Pins × 1	
	Video: Y/C (S Connector) or BNC × 1, Y/C (S Connector) or RCA × 1 Audio: RCA × 2 (L, R) × 3	
Signal Output Terminals	Digital RGB: MDR 20 Pins × 1 (Daisy Chain Use Only)	
	Audio: RCA × 2 (L, R) × 1	
Speaker	5 cm × 9 cm × 2, Amplifier Output 2.0W + 2.0W RGB: 0.7Vp-p / 75Ω Sync. On Green: 1.0Vp-p / 75Ω HD/CS, VD: TTL Level or 1 to 5 V (Positive / Negative) Termination: 1KΩ / 75Ω Switched Superimposition Onto G or Y Signal: 0.3V Negative	
Analog RGB	Video	20-140MHz
	Synchronous	Termination: 1KΩ / 75Ω Switched Superimposition Onto G or Y Signal: 0.3V Negative
Digital RGB	Signal	25-112MHz
	Dot Clock	TMDS
Video Input	Signal	NTSC, PAL, SECAM
Control Signal Input/Output	RS-232C: D-Sub 9 Pins (Male) × 1	
	Multi Control: D-Sub 9 Pins (Female) × 2 (Input / Output)	
	Contact SW : F3.5 Jack × 3 (Input / Output) IR Receiver	
Current Consumption	2.5A	
Power Supply	AC100-240V, 50/60Hz	
Operation Environment	Temperature	10°C-35°C
	Humidity	20-80% RH (Non condensing)
Weight	88 Kg	
Accessories	User's Manual × 1, Power Cord × 1, Digital Cable × 1, Control Cable, Remote control unit, AA-Size Batteries × 2	
Regulatory	Safety	UL60950, CSA22.2No.60950, IEC60950 Approved by UL
	EMC	FCC part15 Class A, Industry Canada Class A, EN55022 Class A, EN55024, EN61000-3-2, EN61000-3-3

\*(1) Average lamp life is average value advised by Lamp Manufacturer.  
The definition of the average lamp life is 50% of lamps can survive or have more than 50% brightness at the average lamp life.

### PRODUCT OPTIONS



### Explaining the DMD™ (Digital Micromirror Device), the heart of the DLP™ (Digital Light Processing)

The display device at the center of this system is the Digital Micromirror Device (DMD™) (Figure 1). Minute 14μm × 14μm metal mirrors have been arranged at multiple points on a silicon base using the most advanced semiconductor fabrication technology (Figure 2). Maneuvering (switching) these mirrors electronically, controls the direction of incoming light reflection for each picture element and produces a display by reflection onto the screen using lenses (Figure 3). Each mirror produces a single picture element (pixel) and can produce sharp quality in intricate detail. Switching takes a rapid 10 microseconds and the high-speed response produces moving picture resolution which is second to none. Unlike an LCD panel, the polarizing plate eliminates light loss and produces bright, high-definition displays. The characteristics of the reflective device are unique in that they produce natural graphics with good continuity between pixels.

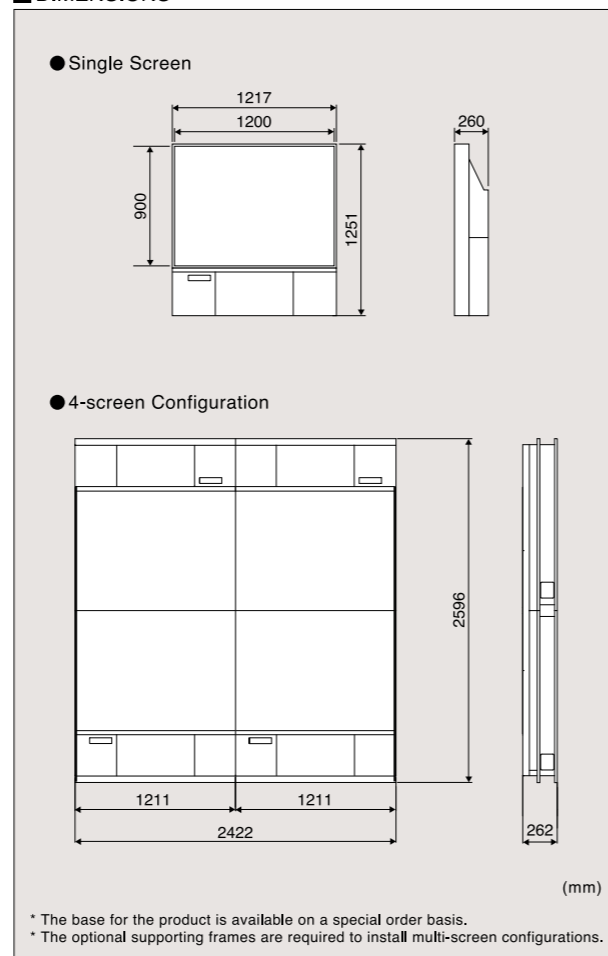
- Digital Light Processing™ (DLP™) and Digital Micromirror Device™ (DMD™) are registered trademarks of Texas Instruments Corporation.
- When using this product with digital compressed projection, there may be cases when the information becomes partially difficult to see.
- Together with the slimming of this product, there may be cases of partial impact on image visibility depending upon the particular contents.
- This product uses high-pressure mercury lamps with high internal pressure. If struck or in use for extended periods of time, these lamps may break with a loud noise, or fail to light at all. The amount of time elapsing before such breakage or faulty lighting is likely to occur will vary by the individual lamps.
- Please be aware that separate charges are required for the transport, installation work, adjustments, contents supply programming software, system design and other aspects in support of this product.
- As certain types of input signals will not be automatically input, please contact Mitsubishi regional sales company or dealer about the details.
- Although the DLP™ is manufactured with high-precision technology, please be aware that there may be instances when an extremely small number of pixels either fail to light or remain constantly lit.
- Adequate care and precautions are necessary for effective use of this product in locations where external light shines in.
- The product color tones in this catalogue may differ from the actual model due to the printing process.
- The display panel images in this catalogue have been inserted as composite photographs.
- Product specifications are subject to change without notice.

#### Cautions when using this projector

- The cooling fan and plug on this projector are consumables, and will wear out after extended use.
- Regular inspections are recommended to maintain clear and bright images over the long term.
- To ensure correct and safe use of this product, take time to read the "User's Manual" prior to use.
- This panel display requires special installation to prevent falling or toppling. Please ask installation specialists for installation. Don't attempt to install the panel display by yourself.

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### DIMENSIONS



\* The base for the product is available on a special order basis.  
\* The optional supporting frames are required to install multi-screen configurations.



Fig. 1 Digital Micromirror device

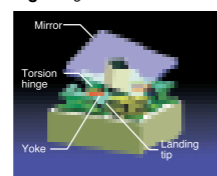


Fig. 2 Pixel configuration

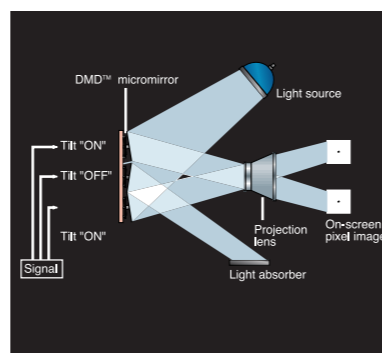


Fig. 3 DMD principle and configuration

NOTICE

New publication, effective March.2003.  
Specifications subject to change without notice.



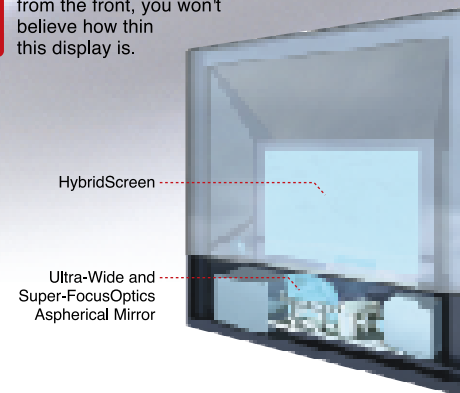
# The World's First\* 26cm deep DLP™ Panel Display based on Three New Mitsubishi Technologies

Amazing Crystal Clear Picture with No Burn-In and Minimal Screen Gap When Tiled. A Great Alternative to Plasma Display Technology for Digital Signage.

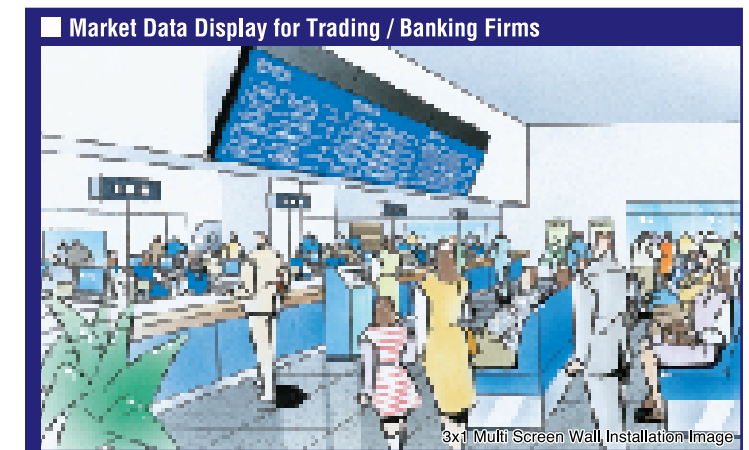
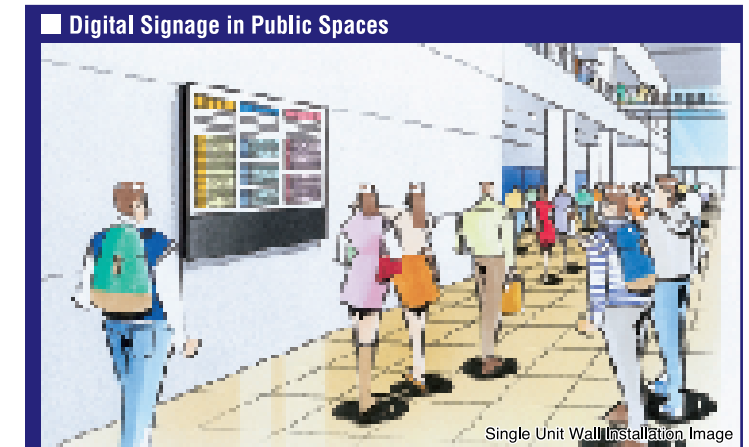
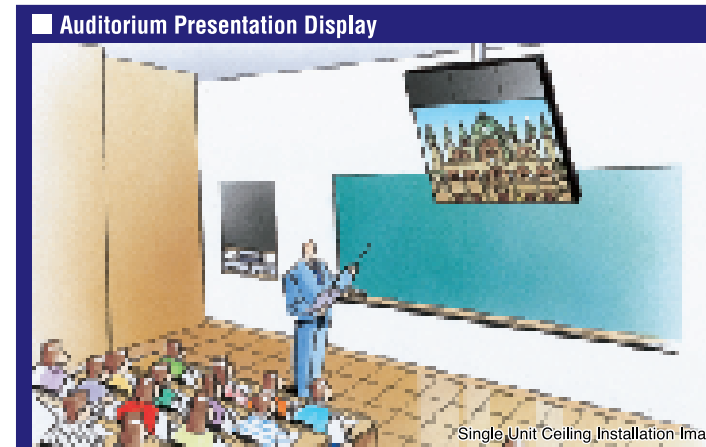


## MITSUBISHI'S ORIGINAL NEW TECHNOLOGIES

- 1 Ultra-Wide and Super-Focus Optical Engine**  
Mitsubishi's original innovative new optical engine, which is absolutely unachievable with conventional technologies, realizes ultra-wide angle, low distortion, and high resolution. The impressive 26-cm deep VS-60XT20U defines conventional wisdom in the field of DLP™ rear projection.
- 2 Fitted with Special Aspherical Mirror**  
Mitsubishi's newly developed lenses and special aspherical mirror dramatically reduce picture distortion, paving the way to DLP™ rear projection systems that are thinner, with higher resolution and produce more beautiful pictures.
- 3 Hybrid Screen**  
The special hybrid screen was developed by Mitsubishi for this ultra-wide angle system. Viewed from the front, you won't believe how thin this display is.



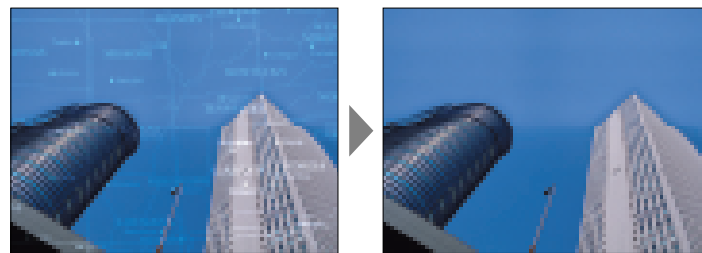
## [ DLP™ PANEL DISPLAY APPLICATIONS ]



## MAIN FEATURES

### No Image Retention for Long Time Usage

The DMD™ semiconductor is a reflective device and is not affected by heat absorption, even when projecting a fixed pattern over a long period of time. Consequently no image retention or burn-in effects occur. VS-60XT20U provides average 4,000 hours lamp life with a 120W lamp, and is specifically designed for reliability even under severe on-site conditions.



● Image Retention

● No Image Retention (DMD™)

### Low Power Consumption (210W) for Low Cost of Ownership

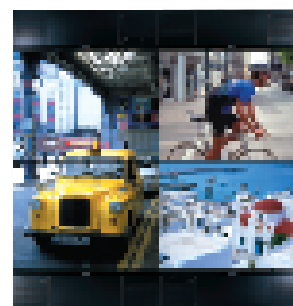
Compared to other display technologies, the lower power consumption (210W) of VS-60XT20U provides lower cost of ownership over time, and a much reduced load on the air conditioning.

### No Back Space Needed for Service and Maintenance

Complete front serviceability and maintenance capability of VS-60XT20U needs no space behind the product. All product configurations ranging from a stand-alone to multi-screen can be designed and installed without any space behind the product.

### Multi-Screen Capability with 2.5 mm Jointing (Each Screen)

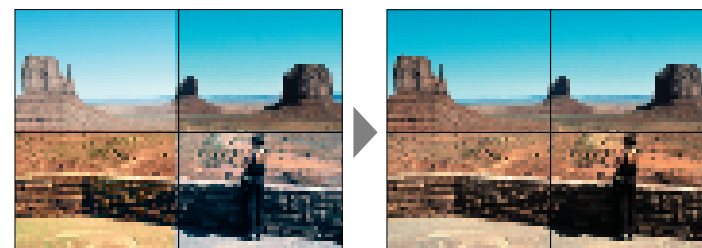
VS-60XT20U can be stacked 2 high and horizontally no limitation with the optional supporting frames. With a 2.5 mm (typical) jointing of each screen, pictures on multi-screen configurations of VS-60XT20U perfectly match, even when the picture span 2 or more adjacent screens.



● 2x2 Multi-Screen Configuration (Example)

### 12 Bit Digital Color Space Control Circuit for Optimum Color Matching on Multi-Screens

Mitsubishi's original Digital Color Space Control (CSC) circuit, or digital color balancing and blending circuit, compensates for color and brightness discrepancies among the screens, and gives consistent color blending and brilliance uniformity over multi-screen configurations of VS-60XT20U.

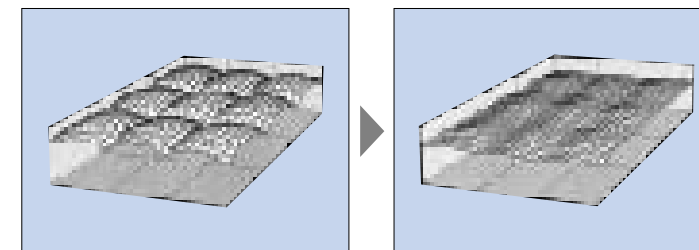


● Without CSC Color Balancing & Blending

● With CSC Color Balancing & Blending

### 12 Bit Digital Gradation Circuit for Superior Brightness Uniformity on Multi-Screens

Mitsubishi's original Digital Gradation Circuit can elevate the brightness level on the edges of a screen, where usually the brightness goes down, in order to ensure the optimum brightness distribution and uniformity over multi-screen configurations of VS-60XT20U.

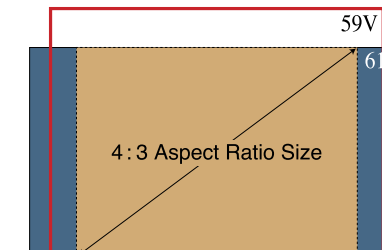


● Before Digital Smoothing Process

● After Digital Smoothing Process

### The Ideal 4:3 Aspect Ratio for Major Picture Sources

VS-60XT20U has the ideal 4:3 aspect ratio, which is the general data and image format of PC. With the 16:9 aspect ratio used by other display technologies as the main format, showing the data and images generated by PC causes the black areas on either side.



## OTHER FEATURES

### 12 Bit Three Dimensional Dither & Digital Gamma Circuits for Smoother Picture Gradations

Mitsubishi's original 12 Bit (4,096) Three Dimensional Dither Circuit enables the expression of truly natural gradation in picture reproduction. This circuit processes frame (time axis) direction and also ensures smoother gradation for all images.

Mitsubishi's original 12 Bit Digital Gamma Circuit assures high resolution and true gradation rendering both bright and dark areas for precise half-tone images.



### 12 Bit Expanded Natural Color Matrix Circuit for Natural Tints and Brilliant Tonal Balances

Mitsubishi's original 12 Bit Expanded Natural Color Matrix Circuit, which exercises independent control over six main colors of Red (R), Green (G), Blue (B), Yellow (Y), Magenta (M), and Cyan (C), corrects chromaticity gaps to fit the traits of the specific display equipment in use. The use of color expanding function within the circuit to smoothly enlarge chromaticity effectively expands the sphere of color reproductions.

### High Contrast (2000:1) for Clear and Modulated Pictures

The combination of Mitsubishi original new optical system and 12 degree DMD™ chip (with black metal) realizes outstanding contrast of 2000:1.