

Manufacturer: **Hatteland Display AS**  
 Product: **26 inch Maritime Multi Display (MMD)**  
 Type: **HD 26T21 MMD-xxx-Fxxx**

Last Revised: **11 Oct 2018**  
 Revision#: **33**

## 26 inch Maritime Multi Display - Series X

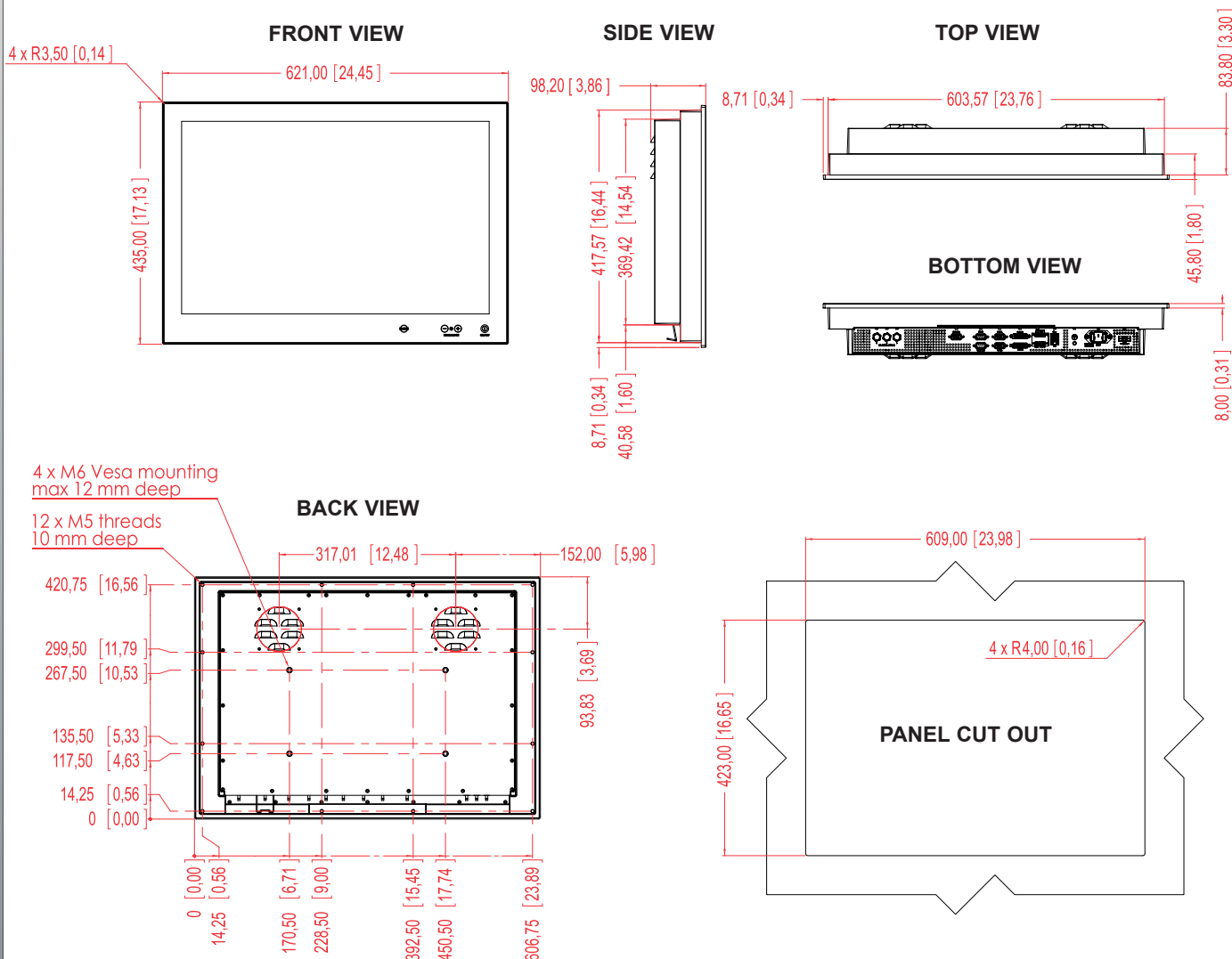
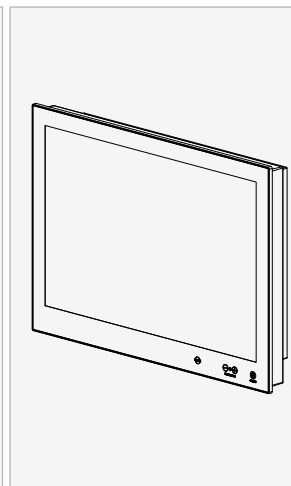
### Features:

Series X Displays offer the ultimate in performance, convenience, state of the art design and enduring quality for system integrators and boat builders. Series X products offer a range of feature sets optimized for varying requirements and applications.

The Series X display range is a flexible monitor solution designed and type approved for the professional maritime segment, where reliability and long life time are key prerequisites for the industry. The product range combines stunning design and technology with innovative features and options, making it all that the integrator needs for top class type-approved marine systems.

The multi-input MMD models provide a wide choice of display size and format for a multitude of shipboard applications, where combining data and video inputs to a single unit provides maximum flexibility. Be it for ship navigation, automation or security, this range with all it's possible options provides a robust and multipurpose platform from which to display and manage data and multiple camera or sensor videos.

Series X displays feature Glass Display Control™, LED Backlight Technology, full dimming and multipower as standard, and can also accommodate a number of options such as multi-touch screen, optical bonding and ECDIS calibration. By factory standards the 26 inch unit is ECDIS Compliant.



Dimensions might be shown with or without decimals and indicated as mm [inches]. Tolerance on drawings is +/- 1mm. For accurate measurements, check relevant DWG file.

## TFT Technology:

- High Quality TFT with LED Backlight Technology
- 25.54 inch viewable image size, Widescreen, Aspect Ratio 16:10
- S-MVA, Active Matrix, Thin Film Transistor (TFT)
- RGB Vertical Stripe

## TFT Characteristics:

- Native Resolution : 1920 x 1200
- Pixel Pitch (RGB) : 0.2865 (H) x 0.2865 (V) mm
- Response Time : 20ms (Tr+Tf)
- Contrast Ratio : 1500:1 (typical)
- Light Intensity : 350 cd/m<sup>2</sup> (typical)
- Viewable Angle : +/- 88 deg. (typical) (Up/Down/Left/Right)
- Active Display Area : 550.08 (H) x 343.8 (V) mm
- Max Colors : 16.7 million

## Synchronization:

- Digital separate synchronization
- Composite synchronization
- Synchronization on green
- Auto detects VGA -> WUXGA, interlaced and non interlaced
- Video Signal : Analog RGB 0,7Vp-p
- Input Impedance : 75 Ohm

## Synchronization Range:

- Horizontal : 31.5 kHz to 91.1 kHz
- Vertical : 60 Hz\* to 85 Hz

\* Recommended for optimal picture quality

## Supported Signals:

### Resolutions:

- VGA : 640 x 480 (including 640 x 350)
- SVGA : 800 x 600 (including 720 x 400)
- XGA : 1024 x 768
- SXGA : 1280 x 1024
- UXGA : 1600 x 1200
- FHD : 1920 x 1080
- WUXGA : 1920 x 1200\*

\* Recommended for optimal picture quality

### Video Signals:

- Interlaced HDTV, NTSC, PAL and SECAM video
- Composite video

## Power Specifications:

### Multi-power Supply:

- 115&230VAC - 50/60Hz + 24 VDC - HD 26T21 MMD-Mxx-Fxxx

Note: You may connect either AC power or DC power or both. In case both sources are connected, power will be sourced from the AC input. If AC input is lost, there will be a uninterrupted switch-over to DC input.

### Power Consumption:

- Operating AC/DC: 60W (typ) - 185W (max)

## Physical Considerations:

- W:621.00 [24.45"] x H:435.00 [17.13"] x D:98.20 [3.86"] mm [inch]
- 4 x M6 VESA mounting 280x150mm, Max 12mm deep
- Weight: 15.6kg / 34.3lbs

## Signal Terminals:

- DVI-D Signal IN : 2 x 24p DVI (female)
- RGB Signal IN : 2 x 15p HD D-SUB (female)
- Comp. Video IN : 3 x BNC Connector (female)
- SCOM RS-422/485 : 1 x 5-pin Terminal Block 3.81, non-isolated+Buzzer
- RGB Signal OUT : 1 x 15p HD D-SUB (female) - Clone of RGB IN\*
- If Touchscreen : 1 x USB TYPE A Connector (female)
- Ethernet : 1 x RJ45 Connector for Remote Control
- SCOM RS-232 : 1 x 9p D-SUB (female) non-isolated+Buzzer
- Potmeter : 1 x 9p D-SUB (male)
- (Potentiometer IN, +5VDC OUT, BRT +/- IN)
- AC Power IN : 1 x Std IEC Inlet
- DC Power IN : 1 x 2-pin Terminal Block 5.08

\*Tested at recommended resolutions. The RGB output signal is at same resolution and sync as the RGB input. The output is working even if the display unit is turned off, but power cable/supply must be connected/provided.

## User Controls:

### Behind front bezel - Glass Display Control™ (GDC) IP66:

- Power On/Off, On Screen Display Menu, Brightness Control (-/+)
- Hotkeys (left/right), Mode Status Indicators (ECDIS, Service)
- Buzzer (not visible), Light Sensor (not visible)

## Environmental Considerations:

- Operating : Temperature -15 deg. C to +55 deg. C  
- Humidity up to 95%
- Storage : Temperature -20 deg. C to +60 deg. C  
- Humidity up to 95%
- IP Rating : Protection: IP66 front – IP22 rear (EN60529)
- Compass Safe Dist. : HD26T21MMD-xxx-Fxxx - Std: 130cm Steering: 70cm

### Lifetime Considerations:

Even though the test conditions for bridge units provide for a maximum operating temperature of 55°C, continuous operation of all electronic components should, if possible, take place at ambient temperatures of only 25°C. This is a necessary prerequisite for long life and low service costs.

## Available Accessories:

- HD CMB SX1-C1 : 1 x Console Mount Kit. EN60945 Tested
- HD TMB SX1-C1 : 1 x Table Mount Bracket. EN60945 Tested
- HD VED SX1-A1 : 1 x VESA Bracket, not EN60945 Tested
- HD REM SX1-A1 : 1 x External Remote Control, EN60945 Tested
- JH 26TAP STD-A1 : 1 x Frame Adapter for Series 1 Cutout (retrofit)
- HD 26TAP SX1-A1 : 1 x Frame Adapter for JH 27T11 MMD Cutout(Retrofit)

Please see user manual/datasheet for more information

## Factory Options:

- Projected Capacitive Touch Screen (Multitouch, USB interface)
- Optical Bonding Technology
- Color Calibrated models (ECDIS)
- Single AC Power 115&230VAC - 50/60Hz Input

# APPROVALS & CERTIFICATES

This product have been tested / type approved by the following classification societies:

**IEC 60945 4th** (EN 60945:2002)  
**DNV** - Det Norske Veritas  
**LRS** - Lloyd's Register of Shipping

**IACS E10**  
**ABS** - American Bureau of Shipping  
**EU RO MR** - Mutual Recognition

**ClassNK** - Nippon Kaiji Kyokai  
**CCS** - China Classification Society

**GL** - Germanischer Lloyd  
**BV** - Bureau Veritas