

DATA SHEET

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HATTELAND®
DISPLAY

Manufacturer: **Hatteland Display AS**

Product: **26.0 inch Maritime Multi Display (MMD)**

Type: **JH 26T11 MMD-xxx-Axxx**

Last Revised: **18 Oct 2012**
Revision#: **22**

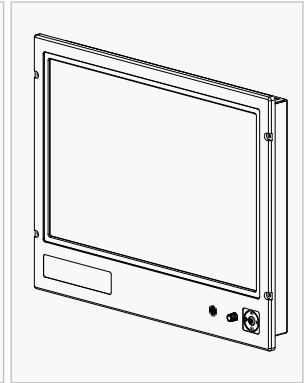
26.0 inch Widescreen (MMD) - Series 1

Features:

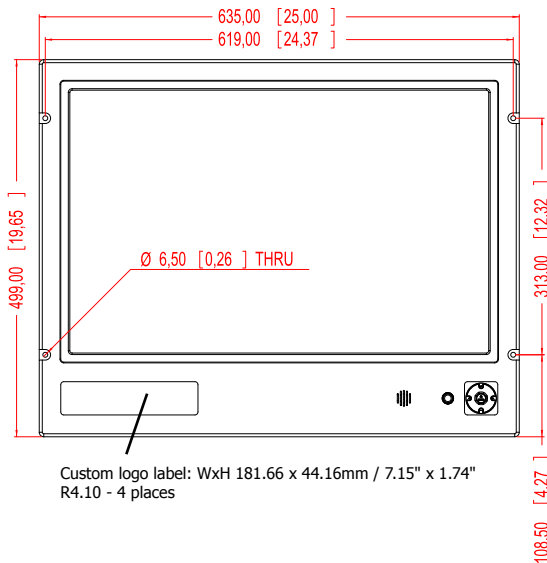
This Series 1 widescreen is by factory default optically bonded which ensures that the unit offers excellent viewing clarity and will not suffer from condensation or misting. Further, Optical Bonding Technology strengthens the display against impact, making it extremely durable in all conditions.

Connections include DVI-I in, RGB out, RGB in, IEC inlet, IEC outlet and USB I/O. The Series 1 provide Picture-By-Picture (PBP) and Picture-In-Picture (PIP) functionality. The choice of power input can be AC only or Multi-power (AC and DC power input built in). Multi-power ensures that they are compatible with all power systems on all vessels. It will automatically switch to whatever power is connected, making it highly flexible for shipbuilders and system integrators alike.

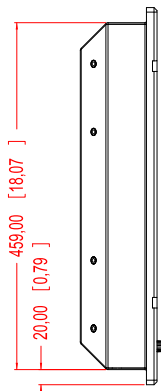
Signal input/output options can be increased upon request by using the Multifunction Connector, which allows the connection of many common signal types through a single cable connection, for common signals such as; Composite Video Input, Touch Screen and Serial Communication. By factory standards the unit is ECDIS Compliant.



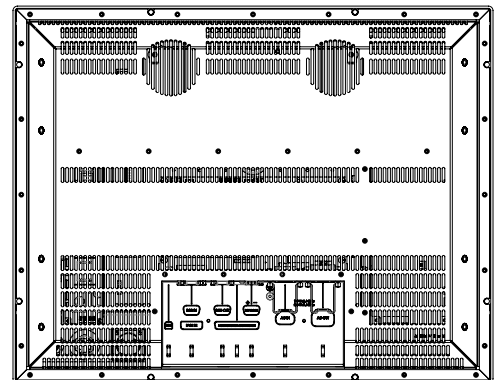
FRONT VIEW



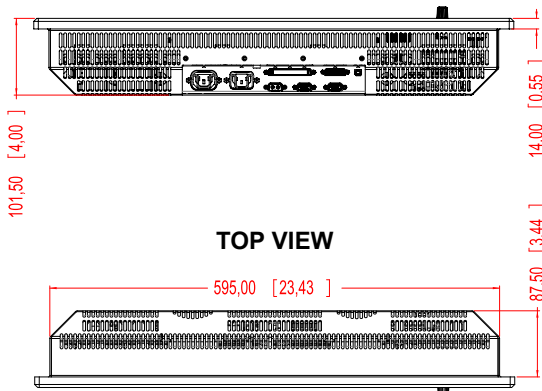
SIDE VIEW



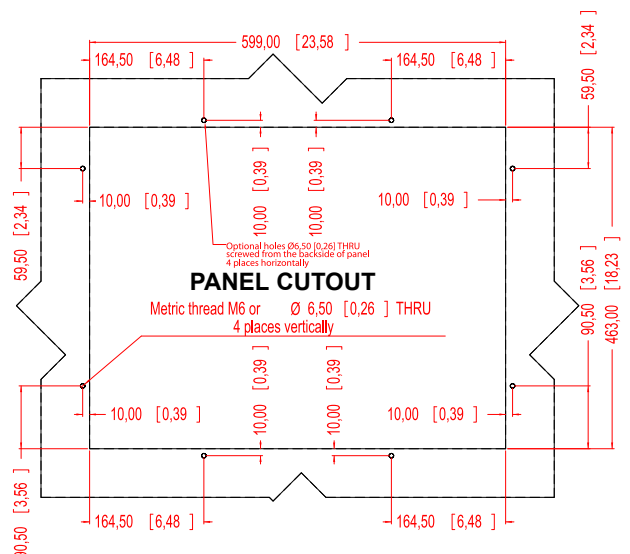
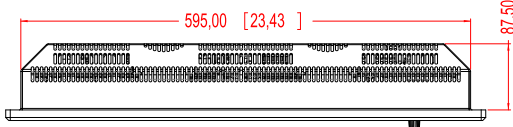
BACK VIEW



BOTTOM VIEW



TOP VIEW



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
- Optical Bonding 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 : 8 ms (typical), "gray" to "gray"
- Contrast Ratio : 1500:1 (typical)
- Light Intensity : 350 cd/m² (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 millions

Synchronisation:

Sync Signal:

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

Synchronisation Range:

- Horizontal : 15,0 kHz to 91,1 kHz
- Vertical : 60 Hz* to 85 Hz

* Recommended for optimum 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
- WUXGA : 1920 x 1200*

* Recommended for optimum picture quality. (60 Hz)

Video Signals (with Multifunction Cable):

- Interlaced NTSC and PAL/SECAM video
- Composite video

Power Specifications:

Power Supply Options:

- 115&230VAC - 50/60Hz - JH 26T11 MMD-Axx-xxxx
- 115&230VAC - 50/60Hz + 24 VDC - JH 26T11 MMD-Mxx-xxxx*

*Multi-power 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.

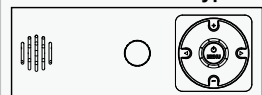
Power Consumption:

- Operating : 122W (TYP) - 185W (MAX)

Typical Type Numbers:

- JH 26T11 MMD-MA1-AOBA = AC/DC, Bonded, Potmeter Controls+Buzzer
- JH 26T11 MMD-AA1-AOAC = AC, Bonded, Capacitive Touch Screen

Buzzer-Potmeter-Keypad



MMD-xxx-xxBx

Keypad



MMD-xxx-xxAx

For a full overview, please review our typenumber sheet found on our website:
<http://www.hatteland-display.com/pdflink/ind100780-1.php>

Physical Considerations:

- 635.00 (W) x 499.00 (H) x 101.50 (D) mm
- 25.00" (W) x 19.65" (H) x 4.00" (D)
- Weight: 15 kg (approx)

Signal Terminals:

- DVI-I Signal IN : 1 x 29p DVI Female (or as RGB IN with adapter)
- RGB Signal IN : 1 x 15p HD D-SUB (female)
- RGB Signal OUT : 1 x 15p HD D-SUB (female) - Clone of RGB IN**
- Multifunction : 1 x 160p D-SUB (female) - Also see table below
- USB I/O : 1 x TYPE B Conn. (female) Reserved for future use
- AC Power IN : 1 x Std IEC Inlet
- DC Power IN : 1 x 2p D-SUB Connector (male) - Amphenol FCC17
- AC Power OUT : 1 x Std IEC Outlet (5A Max)

**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.

Multifunction Cable:

Available factory standard cables, 30cm [11.81"] in length.

- | | |
|---------------|---|
| • VSD100692-1 | : 1 x 9P D-SUB (female) - RS-232 (COM1) |
| • VSD100692-3 | : 1 x 9P D-SUB (female) - RS-232 (COM1)
: 1 x 9P D-SUB (female) - RS-232 (COM Touch Screen)
: 3 x BNC (female) (Composite Video in) |
| • VSD100692-4 | : 1 x 9P D-SUB (female) - RS-232 (COM1)
: 3 x BNC (female) (Composite Video in) |

Customized cables are possible to support more built-in signals, like: RS-485, RS-422/RS-485, Buzzer, ON/OFF, Touch (PS/2), 1 x S-Video IN, Remote External User Controls, Alternative Keypad interface (i2c) and reserved for other signals. Custom cable lengths can be manufactured.

User Controls:

On front bezel - Keypad control (IP66) xxx-xxAx models:

- Power On/Off and On Screen Display Menu (push button)
- Brightness Control (up/down - push buttons),
- Hotkeys (left/right - push buttons)
- Mode Status Red/Green Illuminated LED-Ring Indicator

On front bezel - Potmeter control (IP66) xxx-xxBx models:

- Power On/Off and On Screen Display Menu (push button)
- Brightness Control (rotary control) and Hotkeys (left/right - push buttons)
- Mode Status Red/Green Illuminated LED-Ring Indicator and
- Speaker / Buzzer

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 (EN60529): IP66 front - IP20 rear
- Compass Safe Dist. : JH26T11MMD-xxx-xxxx - Std: 125cm Steering: 80cm

Safety Considerations:

Even although 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:

- Cables = Custom Multifunction Cable to support more signals
- JH 26BRD STD-A1 = Mounting Bracket EN6095 Tested
- JH 26TBR STD-A1 = Mounting Bracket
- JH MMDRO STD-A1 = Rotary Bracket
- JH 26TSV STD-A1 = Sun Visor
- JH 26VED STD-A1 = Vesa Bracket
- JH 26TWC STD-A1 = Water Cover
- *Please see user manual for drawings/measurements.

Factory Options:

- Color Calibrated models (ECDIS)
- Capacitive Touch Screen / Optical Bonding Technology

TESTING / APPROVALS & CERTIFICATES

This product have been tested / type approved by the following classification societies: (*=pending)

IEC 60945 4th (EN 60945:2002)

ABS - American Bureau of Shipping

ClassNK - Nippon Kaiji Kyokai*

BV - Bureau Veritas

GL - Germanischer Lloyd

LRS - Lloyd's Register of Shipping*

DNV - Det Norske Veritas