# DATA SHEET

**HATTELAND® DISPLAY**

| | |
|---|---|
| Manufacturer: | **Hatteland Display AS** |
| Product: | **26 inch Maritime Multi Computer (MMC)** |
| Type: | **HD 26T21 MxC-xxx-xxxx (LED)** |

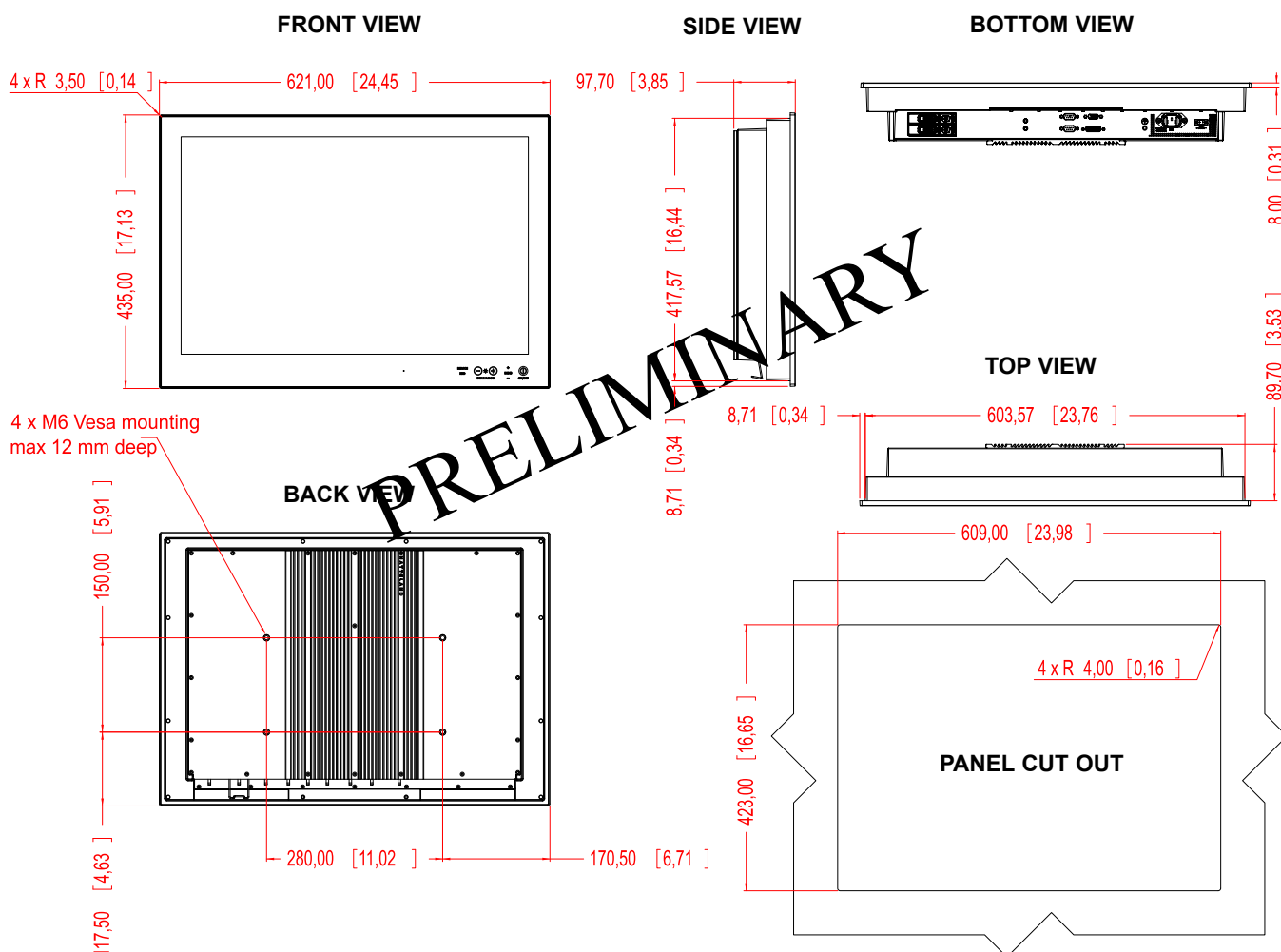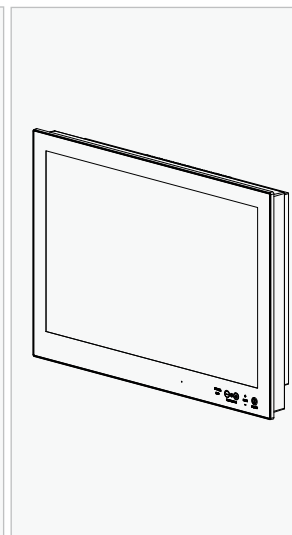| | |
|---|---|
| Last Revised: | **18 Feb 2013** |
| Revision#: | **01** |

## 26 inch Maritime Multi Computer - Series X

### Features:

Series X Displays and Panel Computers 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 Panel Computer range is a flexible all in one monitor & PC solution, designed and type approved for the professional marine segment, where reliability and long life time are key-pre requisites for the industry. The product range combines state of the art display and computer technology with innovative features and options, making it all that the integrator needs for top class type-approved marine systems.

The high performance MMC Panel Computer models provide a wide choice of display size and format, along with various processor and storage options. The compact, all-in-one MMC solution is the ideal one for all ship navigation or automation installations. This range with all it's versitility and capability provides a robust and cost effective platform from which to run multiple applications and display and manage data.

Series X Panel Computer feature Glass Display Control™, LED Backlight Technology, full dimming and multipower all as standard. In addition there are options such as HDD or SSD storage mediums, Multiple interface configurations and several OS options. The product range can also accomodate and combine touch screen, optical bonding, sunlight readability and ECDIS calibration.

**FRONT VIEW**

4 x R 3,50 [0,14]  621,00 [24,45]

435,00 [17,13]

4 x M6 Vesa mounting max 12 mm deep

**BACK VIEW**

150,00 [5,91]

4,63

117,50

280,00 [11,02]  170,50 [6,71]

**SIDE VIEW**

97,70 [3,85]

417,57 [16,44]

8,71 [0,34]

8,71 [0,34]

**BOTTOM VIEW**

8,00 [0,31]

89,70 [3,53]

**TOP VIEW**

603,57 [23,76]

609,00 [23,98]

4 x R 4,00 [0,16]

16,65

423,00

**PANEL CUT OUT**

PRELIMINARY

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.

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# SPECIFICATIONS

Note: All specifications are subject to change without prior notice!
Please visit www.hatteland-display.com for the latest electronic version.

**HATTELAND® DISPLAY**

## 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 Standard : 350 cd/m$^2$ (typical)
- Light Intensity High Bright : TBD
- 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

## Computer Specifications:

| | |
|---|---|
| • Installed OS | : None or see table below |
| • Installed Storage | : 1 x 250GB 2.5" HDD. Option for 2 x 2.5" removable HDD(SATA),Raid 0,1 or see table below |
| • CPU/Processor | : See table below |
| • Installed Memory | : 1 x 2GB DDR3 1066/800MHz or see table below |
| • System Chipset | : Intel® BD82QM57 |
| • Graphics Chipset | : Intel® Arrandale IGD supports DVMT 5.0 |
| • Ethernet LAN #1 | : Intel® 82577LM Gigabit LAN 10/100/1000Mbps |
| • Ethernet LAN #2 | : Realtek RTL8111C Gigabit LAN 10/100/1000Mbps |
| • Audio Chipset | : Realtek ALC888-GR (+2W Amplifier) |
| • BIOS | : UEFI AMIBIOS |
| • Speaker / Buzzer | : No Speaker / 3500Hz Buzzer |
| • Watchdog Timer | : 256 Segments, 0, 1, 2...255 sec/min |
| • Power Manager | : ACPI S3/S4 |
| • Monitoring | : Temperature and voltages status |
| • Other Features | : GPIO, LAN Wakeup, USB Boot and Wakeup |
| • DVI-I OUT Resolution | : From 640 x 480 to 1920 x 1200 @ 60 Hz |
| • RGB OUT Resolution | : From 640 x 480 to 2048 x 1536 @ 75 Hz |
| • Sync. Range | : Hor: 31.5 kHz to 91.1 kHz, Ver: 60 Hz* to 85 Hz |

## Available Computer Configurations:

| Type | Description | Size/Specification |
|---|---|---|
| CPU | 1 x Intel® Celeron® P4505, 1.86GHz, 2MB Cache, FSB 800MHz or 1 x Intel® Core™ i7-620LE, 2.0GHz, 4MB Cache, FSB 1066MHz | |
| Memory | 1 x Single Channel, 200-pin DDR3 | - 1GB, 2GB, 4GB |
| Storage | 2 x 2.5" SSD SATA, Single or Multi Level | - 40GB, 80GB, 120GB, 300GB |
| Storage | 2 x 2.5" HDD SATA | - 40GB, 80GB, 120GB, 300GB - 500GB/1TB (Coming Q3 2012) |
| OS | Microsoft® Windows® Embedded Enterprise or customized image | - Win XP Pro Eng w/SP3 or SP2c - Win Server 2K3/2K8 Eng, 64bit - Win 7 Pro Eng, 32bit/64bit |
| Notes | For OS Win7, >1GB RAM and >40GB SSD/HDD is recommended. | |

## Power Specifications:

**Multi-power Supply:**
- 115&230VAC - 50/60Hz + 24 VDC     - HD 26T21 MxC-Mxx-xXxx

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 : 125 W (max) TBC
  : TBD (typ) at max backlight+high CPU load

## Physical Considerations:
- 621.00 (W) x 435.00 (H) x 97.70 (D) mm
- 24.45" (W) x 17.13" (H) x 3.85" (D) inch
- 4 x M6 VESA mounting 280x150mm, Max 12mm deep
- Weight: TBD kg (approx)

## User Controls:
**Behind front bezel - Glass Display Control™ (GDC) IP66:**
- Power On/Off, Brightness Control (-/+), Hotkeys (left/right)
- Power LED, HDD/SSD LED, 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) |

**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.*

## Input/Output Connectors:

| Connector | Rear | Internal |
|---|---|---|
| • Ethernet GBLan | 2 x RJ-45 | |
| • Keyboard | 1 x PS/2 (purple) | |
| • Mouse | 1 x PS/2 (green) | |
| • COM RS-232 | 1 x DB9M non-isolated | |
| • COM RS-422/485 | 1 x DB9M non-isolated | |
| • LPT / Parallel | | 1 x Pin Header |
| • USB1.1 (>10m) | 1 x USB Type A | |
| • USB2.0 (<10m) | 3 x USB Type A | 2 x Pin Header (=4 USB) |
| • DVI or RGB OUT | 1 x 29P DVI-I or as RGB with adapter | |
| • RGB OUT | 1 x 15p HD D-SUB | |
| • AC Power | 1 x Std IEC inlet | |
| • DC Power | 1 x Phoenix 2pin 1927564 MSTB 2,5/2-GF-5,08 THT | |
| • Line Out | 1 x 3.5mm mini jack (Lime) | |
| • Mic In | 1 x 3.5mm mini jack (Pink) | |

## Available Accessories:
- HD CMB SX1-C1 = 1 x Console Mount Kit
- HD TMB SX1-C1 = 1 x Table Mount Bracket. EN60945 Tested
- JH C01MF A-A = 1 x USB Cable 1m,TypeA to Chassis mount receptacle

Please see user manual/datasheet for more information

## Factory Options:
- Capacitive Touch Screen (USB interface)*
- Optical Bonding Technology
- Sunlight Readable / High Bright (includes Optical Bonding) model*
- Color Calibrated models (ECDIS)
- Variations of SSD/HDD Storage, RAM Memory, Operating System

## Capabilities / Prepared for:
- 4 x COM RS-422/485 isolated ECDIS/NMEA (Phoenix T. Block 3.81)
- 2 x CAN isolated 2 channel module (Phoenix Terminal Block 3.81)
- 4 x COM RS-232 non-isolated module (9P D-SUB connectors)
- 1 x mini-DIN 5pin Speaker L/F (Realtek ALC888-GR, +2W Amplifier)

*Release date to be confirmed. Please contact us for more information.*

For a full overview of typenumbers, please review the following link:
www.hatteland-display.com/pdflink/ind100780-4.php

Compass Safe Distance: HD 26T21 MxC-xxx-xxxx - Standard: 125cm - Steering: 80cm

# APPROVALS & CERTIFICATES

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

**IEC 60945 4th** (EN 60945:2002)
**GL** - Germanischer Lloyd
**CCS** - China Classification Society (Pending)

**IACS E10**
**DNV** - Det Norske Veritas
**BV** - Bureau Veritas

**IP66**  **ClassNK** - Nippon Kaiji Kyokai (Pending)
**ABS** - American Bureau of Shipping
**LRS** - Lloyd's Register of Shipping (Pending)