DATASHEET

HATTELAND TECHNOLOGY
an EMBRON Company

Manufacturer:	**Hatteland Technology AS**
Product:	**55 inch Multi Vision Monitor (MVD)**
Type:	**HD 55T40 MVD-MAx-KOJG + HD DCF STD-A1**
	Where x=ECDIS Calibration (4 or 1)
Note:	Unit is part of Chart Table Kit (See page 2)

55 inch Multi Vision Monitor - Series X

Features:

The Series X Multi Vision Monitor (MVD) range of products provides large 4K resolution display solutions to maritime IBS, Automation and Command Control system integrators. The cutting edge high definition LED display technology used, with its high quality brightness and contrast, enables the presentation of large amounts of data onto one screen instead of multiple displays.

The 55 inch Series X MVD features 4K screen resolution and high-end panel technology, it provides unmatched viewing clarity in all light conditions. Its ultramodern approach represents the pinnacle of maritime display technology, making it the most advanced platform for the development of a new generation of sophisticated, function rich and user-friendly bridge technologies that demand only the best monitor solutions to ensure increased navigational safety and efficiency on the bridge.
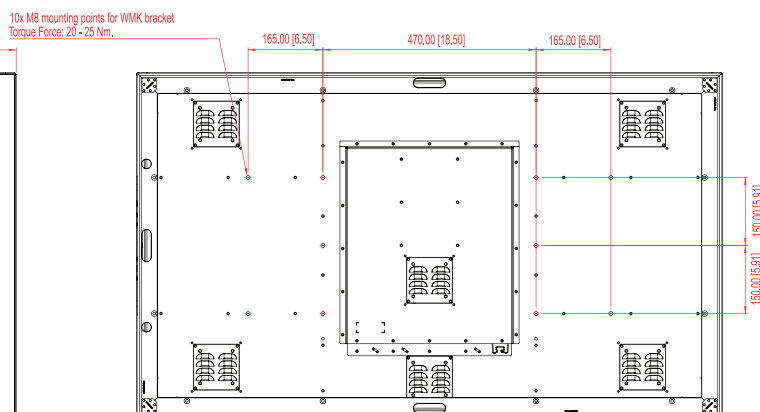
Approved for harsh maritime environments where reliability and long life time are key factors, the new 55 inch Series X MVD display is a robust, flexible and ergonomic solution, suitable for a wide range of bridge applications including ECDIS, radar, voyage planning, safety systems and tactical command & control platforms. Standard features include console, multi-data input, full dimming, built in On-Screen Monitor (OSD) and uniquely for a console mounted solution, an external Tactile button-control panel which can be mounted for operation of the OSD and other parameters. Factory options include Optical Bonding Technology, Multi-touch touch interface and ECDIS Calibrated models.
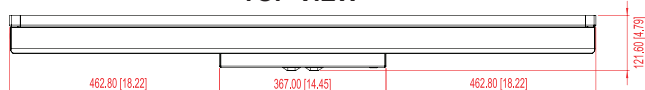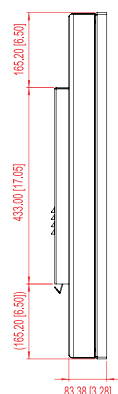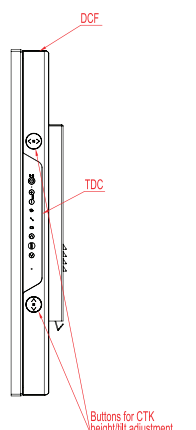

FRONT VIEW

10x M8 mounting points for WMK bracket
Torque Force: 20 - 25 Nm.

1292.60 [50.89]
763.40 [30.06]

BACK VIEW

165.00 [6.50]   470,00 [18,50]   165.00 [6.50]
150.00 [5.91]
150.00 [5.91]

TOP VIEW

462.80 [18.22]   367.00 [14.45]   462.80 [18.22]
121.60 [4.79]

LEFT VIEW   **RIGHT VIEW**

DCF
TDC
165.20 [6.50]
433.00 [17.05]
(165.20 [6.50])
83.38 [3.28]
Buttons for CTK height/tilt adjustment
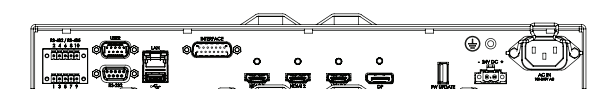
CONNECTOR DETAILS

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.

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

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TFT Technology:
- High Quality TFT with LED Backlight Technology
- 55.0 inch viewable image size, Widescreen, Aspect Ratio 16:9
- TFT active-matrix liquid crystal panel, RGB vertical stripe
- MVA (Multi-domain Vertical Alignment) LCD Technology

TFT Characteristics:
- Native Resolution   : 3840 x 2160 (UHD, 4K)
- Pixel Pitch (RGB)   : 0.315 (H) x 0.315 (V) mm
- Response Time   : 6.5 ms (typical) (G to G)
- Contrast Ratio   : 4000:1 (typical)
- Light Intensity   : 450 cd/m² (typical)
- Viewable Angle   : +/- 89 deg. (typical) (Up/Down/Left/Right)
- Active Display Area   : 1209.6 (H) x 680.4 (V) mm
- Max Colors   : 16.7 million

Supported Signals:
Resolutions:
VGA (640 x 350) to UHD (3840 x 2160*)
  Recommended for optimal picture quality. Review Timing Table in User Manual.

Power Specifications:
Multi-power Supply:
- 100-240V AC 50/60Hz + 24 VDC

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:
- 118W (typ) - 131W (max)

Environmental Considerations:

• Operating	: Temperature -15°C to +55°C
• Storage	: Temperature -30°C to +70°C
• Humidity	: Up to 95% (Operating / Storage)
• Shock - Vibration	: 5g/11ms - 0.7g (IEC 60945 / IACS E10)
• Air Pressure Maximum Altitude	: Operating: 4000m - Storage: 12912m
• Air Pressure Maximum Altitude (Bonded)	: Operating: 3000m - Storage: 3000m
• IP Rating	: Protection: IP66 front - IP22 rear (EN60529)
• Compass Safe Distance	: Standard: 240cm - Steering: 200cm

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.

Physical Considerations:
Product Dimensions and Weight:
- W:1292.60 [50.89"] x H:763.40 [30.06"] x D:121.60 [4.79"] mm [inch].
- Weight: Approx. 53kg / 117lbs

Product Carton Size and Weight (Shipping):
- L:1466 [57.71"] x W:935 [36.81"] x H:179 [7.04"] mm [inch]
- Approx weight: 87kg / 192lbs

Signal Terminals:
- HDMI 1.4 Input   : 2 x 19p HDMI (female) - Max 3840x2160@30Hz
- HDMI 2.0 Input   : 1 x 19p HDMI (female) - Max 3840x2160@60Hz
- DP 1.2 Input   : 1 x 20p DisplayPort (female) - Max 3840x2160@60Hz
                          Note: Max Cable length: <3m
- SCOM RS-422/485   : 1 x 5-pin Terminal Block 3.81 non-isolated + Buzzer
- SCOM+Touch   : 1 x USB TYPE A Connector (female)
- SCOM Ethernet   : 1 x RJ45 Connector for Remote Control
- SCOM RS-232   : 1 x 9p D-SUB (female) non-isolated
- User Interface   : 1 x 9p D-SUB (male) - Potentiometer Analog Input,
                          User Brightness (BRT), I2C and +5VDC & 12VDC OUT
- SW Interface   : 1 x USB TYPE A (female) for Firmware Update
- TDC Interface   : 1 x 15p D-SUB (male) for HD TDCMVD KIT-A1
- AC Power IN   : 1 x Std IEC Inlet
- DC Power IN   : 1 x 2-pin Terminal Block 5.08

User Controls:
Button Display Control™ (BDC):
- Brightness Control (-/+)
- Power Led: video signal = Green, no signal = Yellow, power off = Orange.

Tactile Display Controls (TDC):
- Power On/Off and On Screen Display Menu (OSD)*
- Brightness Control (-/+)
- Power led: video signal = Green, no signal = Yellow, power off = Red
- Hotkeys (left/right), Mode Status Indicators (ECDIS, Service)
- Buzzer (not visible) (75-85dB), Light Sensor (not visible)
*OSD Key Codes: 321=Get access to OSD, 362=Advanced Mode

Available Accessories:
- HD TDCMVD KIT-A1 : 1 x External Tactile Display Controls (TDC) (Included)
- HD REM SX1-A1   : 1 x External Remote Control, EN60945 Tested
- HD CTK-MVD-A1   : 1 x Chart Table Bracket Kit for 43 and 55 inch

Factory Options:
- Color Calibrated models (ECDIS)

Factory Default:
HD 55T40 MVD-MAx-Cxxx: 1 x 55 inch Monitor (Console version)
+ HD DCF STD-A1: 1 x Decorative Frame for 55 inch (factory mounted)
+ HD TDCMVD KIT-A1: 1 x External Tactile Display Controls (TDC) (Included)
= HD 55T40 MVD-MAx-Kxxx (This datasheet)
- Optical Bonding Technology
- Projected Capacitive Touch Screen (USB, Multitouch 10 fingers)*

*Note: Touch models have Anti-Glare Coating (AG) + Anti-Smudge Coating (AS).

APPROVALS & CERTIFICATES
These products have been tested / type approved by the following classification societies:

IEC 60945 4th (EN 60945:2002**)**   **IACS E10**   **EU RO MR** - Mutual Recognition by DNV   **ClassNK** - Nippon Kaiji Kyokai
ABS - American Bureau of Shipping   **BV** - Bureau Veritas   **CCS** - China Classification Society   **KR** - Korean Register of Shipping
LRS - Lloyd's Register of Shipping