

Manufacturer: **Hatteland Technology AS**
 Product: **43 inch Multi Vision Display (MVD)**
 Type: **HD 43T22 MVD-Max-CyTz** (Console)
 Where x=ECDIS Calibration (4 or 1), y=Optical Bonding (A or O), z=Multi-touch (P or A)

Last Revised: **16 Dec 2022**
 Revision#: **23**

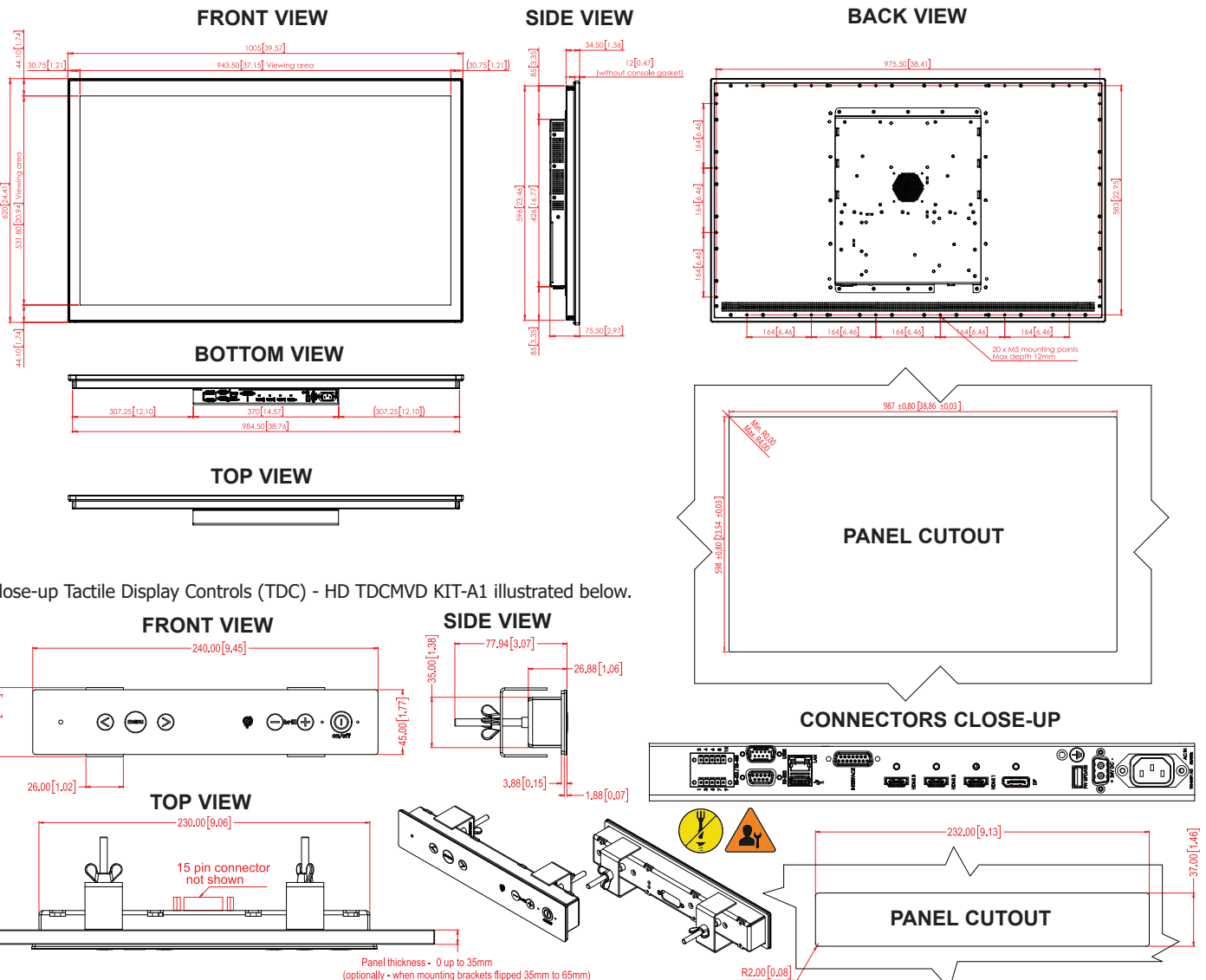
43 inch Multi Vision Display - Series X

Features:

The Series X Multi Vision Display (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 43 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 display 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 43 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 Display (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.



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
- 42.5 inch viewable image size, Widescreen, Aspect Ratio 16:9
- a-Si TFT active matrix, RGB vertical stripe

TFT Characteristics:

- Native Resolution : 3840 x 2160 (UHD, 4K)
- Pixel Pitch (RGB) : 0.2451 (H) x 0.2451 (V) mm
- Response Time : 8 ms (typical) (G to G)
- Contrast Ratio : 3000:1 (typical)
- Light Intensity : 500 cd/m² (typical)
- Viewable Angle : +/- 89 deg. (typical) (Up/Down/Left/Right)
- Active Display Area : 941.184 (H) x 529.416 (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:

- Operating: 312W (max)

Physical Considerations:

Product Dimensions and Weight:

- W:1005.00 [39.57] x H:620 [24.41] x D: 75.50 [2.97] mm [inch]
- Approx weight: 27.0 kg / 59.4lbs

Product Carton Size and Weight (Shipping):

- L:1175.00 [46.26"] x W:795.00 [31.30"] x H:33.00 [12.99"] mm [inch]
- Approx weight: 55.2kg / 121.4lbs

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
- 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
- FW Update : 1 x USB TYPE A (female) for Firmware Update
- GDCx Interface : 1 x 15p D-SUB (male) for GDC Hardware Comm.
- AC Power IN : 1 x Std IEC Inlet
- DC Power IN : 1 x 2p D-SUB Connector (male) - Amphenol FCC17

User Controls:

External Tactile Display Controls (TDC) - Art: HD TDCMVD KIT-A1

- Power On/Off Button, On Screen Display Menu Button (OSD)*, Power LED
 - Brightness Control (-/+) buttons
 - Hotkeys (left/right) buttons
 - ECDIS Indicator, Buzzer (75-85dB), Light Sensor
- *OSD Key Codes: 321=Get access to OSD, 362=Advanced Mode

Environmental Considerations:

- Operating : Temperature -15C° to +55C°
- Storage : Temperature -30C° to +70C°
- 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 : Operating: 3000m - Storage: 3000m (Bonded)
- IP Rating : Protection: IP66 front - IP20 rear (EN60529)
- Compass Safe Distance : Standard: 155cm - Steering: 120cm

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 TDCMVD KIT-A1 : 1 x External Tactile Display Controls (TDC) (Included with delivery)
- HD CMB SX2-G1 : 1 x Console Mount Kit. EN60945 Tested (Included with delivery)
- HD REM SX1-A1 : 1 x External Remote Control, EN60945 Tested
- P023259 : 1 x HM 43T22 EMI Shield Gasket Elastofom
- P022999 : 1 x IP66 Mount Gasket (EPDM), for Flush/Console mount

Please see user manual/datasheet for more information

Factory Options:

- Optical Bonding Technology
- Projected Capacitive Touch Screen (Multitouch, USB, Pen/Glove support)
- Color Calibrated models (ECDIS)

Prepared for:

- Tactor (Rotation Angle Value, X/Y Position, 1 x Button) supported Model
- Active Stylus Pen Supported Model

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

ClassNK - Nippon Kaiji Kyokai

CCS - China Classification Society by DNV

KR - Korean Register of Shipping

ABS - American Bureau of Shipping