DATASHEET

HATTELAND TECHNOLOGY
an EMBRON Company

Manufacturer:	**Hatteland Technology AS**
Product:	**27.0 inch Single Cable Monitor (SCM)**
Type:	**HD 27T30 SCM-xyy-yyyy** where x = I (usb-c Power only) C (usb-c + AC) M (usb-c + AC and DC), y = (configuration)

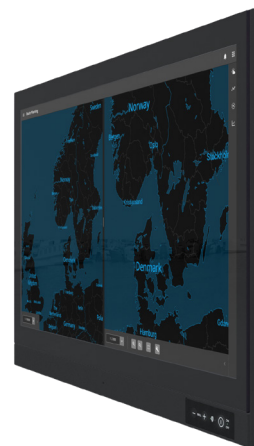| Last Revised:	**02 Sep 2024**
Revision#:	**10**

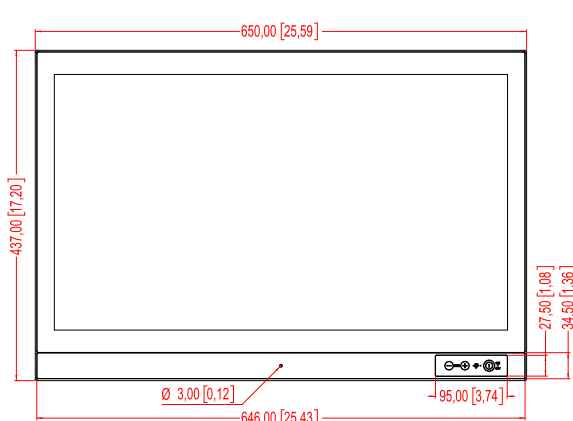## 27.0 inch Single Cable Monitor - Series E

Features:

The HATTELAND® Single Cable Monitors (SCM) delivers a reliable all-in-one solution for diverse maritime applications and enables tangible cost savings for maritime technology and equipment manufacturers as well as systems integrators.

The HATTELAND® Single Cable Monitor (SCM) portfolio features a range of monitor sizes, new USB-C interface technology which carrying DP, power and USB signals, Daisy chain capability, which enables single cable operation. Providing full flexibility to integrate the highest quality monitors in a wider range of maritime technology. Especially suited to developing new bridge solutions, the units make it possible to continue improving safety and efficiency through safe navigation, while still retaining focus on quality and cost.
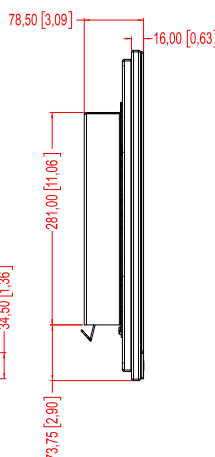
The units also meet the same extreme quality standards as the proven Series X Display range and feature LED Backlight Technology, full dimming (0-100%) all as standard. In addition there are options such as USB-C PD Sink, Multi-Power (AC/DC) inputs, Single AC and DC input. The product range can also accommodate and combine multi-touch screen and optical bonding. By factory deafult the unit is ECDIS Compliant.

FRONT VIEW

SIDE VIEW
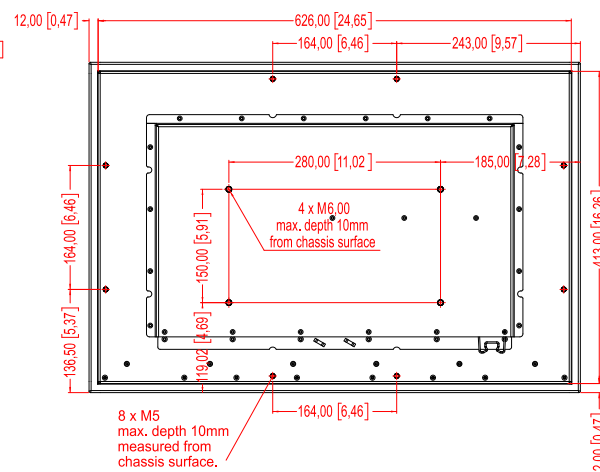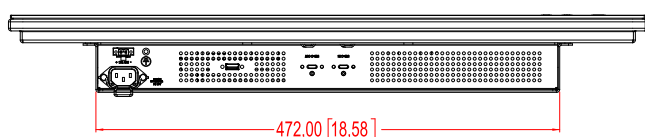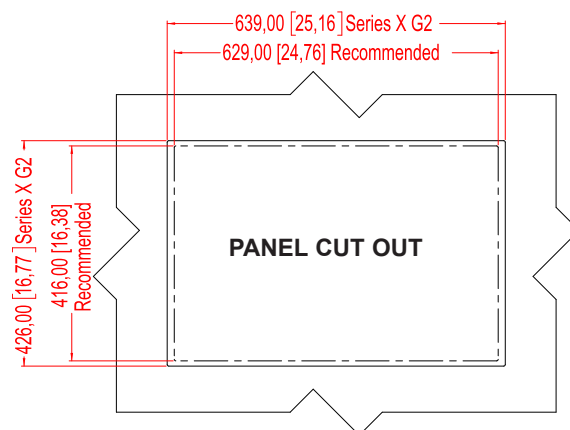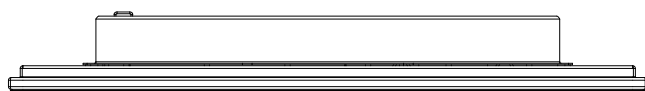

BACK VIEW

BOTTOM VIEW

TOP VIEW

PANEL CUT OUT

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.

SPECIFICATIONS

Note: All specifications are subject to change without prior notice!
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TFT Technology:

- LED Backlight Technology, Color Active Matrix
- 27.0 inch viewable image size, Widescreen, Aspect Ratio 16:9
- a-SI (amorphous silicon) Thin Film Transistor (TFT)

TFT Characteristics:

- Native Resolution : 1920 x 1080 (FHD)
- Pixel Pitch (RGB) : 0.31125 (H) x 0.31125 (V) mm
- Response Time : 12 ms (typical) (on/off)
- Contrast Ratio : 3000:1 (typical)
- Light Intensity : 300 cd/m² (typical)
- Viewable Angle : +/- 89 deg. (typical) (Up/Down/Left/Right)
- Active Display Area : 597.6 (H) x 336.15 (V) mm
- Max Colors : 16.7 million

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 [2]

[2] Recommended for optimal picture quality

[2] USB- C PD Supports DisplayPort signal - up to 1920 x 1080 (FHD)

Power Specifications:

Power Supply Options:

- Multi-Power Option : 100-240V AC - 50/60Hz + 24VDC
- Single AC Power Option : 100-240V AC - 50/60Hz
- Single DC Power Option : 12-24VDC
- USB-C PD Sink [3] : 20VDC/3A (Requested)

[3] If already connected to USB-C (Supports PD sink) and additional external power is connected to the monitor, internal 12V PSU will start to deliverpower through USB-C. User may experience short interval of black screen blinking.

Power Consumption - Operating:

- AC+DC: 43W (typ) - 156W (max)
- AC: 43W (typ) - 125W (max)
- USB-C PD SINK: 43W (typ) - 156W (max)

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.

Physical Dimensions:

Product Dimensions and Weight:

- W:650.00 [25.59"] x H:437.00 [17.20"] x D:78.50 [3.09"] mm [inch]
- VESA 280x150mm supported
- Weight: 10.7kg / 23.59lbs

User Controls:

Behind front bezel - Glass Display Control™ (GDC) IP67:
- 3 x Buttons (Power On/Off, Brightness -/+)

Remote Control:
- DDC/CI over DP (over USB-C) [1]
- SCOM over DP (over USB-C) [1]

[1] See latest revision of user manual

Environmental Considerations:

- Operating Temperature : -15°C to +55°C
- Storage Temperature : -20°C to +60°C
- Humidity : Humidity up to 95% (Operating / Storage)
- IP-Rating Protection : IP66 front - IP20 rear (EN60529).
- Compass Safe Distance : Standard: 80cm - 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.

Input/Output Connectors:

Connector	Rear
• USB-C Input	: 1 x USB-C Female with DP, power (sink) and USB2.0
• USB-C Output	: 1 x USB-C Female with DP and USB2.0
• USB 2.0 Input	: 1 x USB 2.0 Host Type A Female
• If AC Power	: 1 x Std IEC inlet
• If DC Power	: 1 x 2-pin Terminal Block 5.08

Factory Options:

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

Accessories:

- HD CMB SE1-B1 : 1 x Console Mount Kit. EN60945 Tested*
- VSD203453-1 : 1 x 2m USB-C (male) extension cable for 4K@24b@60Hz*
- HD TMB SE1-B1 : 1 x Table Mount Bracket. EN60945 Tested
- HD VED SX1-A1 : 1 x VESA Adapter, not EN60945 Tested
- HT DPUSB-2-USBC-A1 : 1 x DP & USB2.0 (Male) to USB-C (Male) Adapter cable 2m
- HT HDMIUSB-2-USBC-A1 (Pending) : 1 x HDMI & USB2.0 (Male) to USB-C (Male) Adapter cable, 2m

*Included in delivery

APPROVALS & CERTIFICATES

This product 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	**KR** - Korean Register of Shipping
ABS - American Bureau of Shipping	**BV** - Bureau Veritas	**CCS** - China Classification Society	**ClassNK** - Nippon Kaiji Kyokai
LRS - Lloyd's Register of Shipping			

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Details: Supported USB-C PD SINK

USB-C PD Sink:

- USB-C PD sink power delivery only applicable with USB-C IN **1**
  Note: USB-C OUT does not provide USB-C PD power delivery function.
- Daisy chaining via standard MST protocol:
  - Up to 4* monitors with HD resolution
  - * Actual max of monitors connected is platform/OS dependent
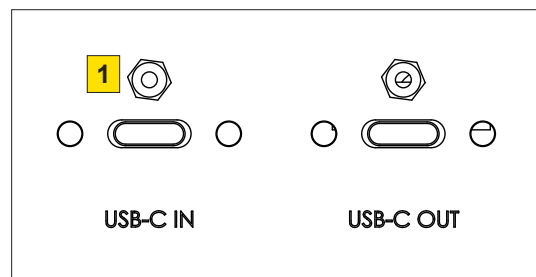- Communication and control of Display via DDC-CI.

USB-C IN   USB-C OUT

Illustration: USB-C Dasiy chaning, upto 3xFHD dispalys with touch. First display can be powered via USB-C.

Display
- HD/FHD
- HD 8-27"

Display
- HD/FHD
- HD 8-27"

Display
- HD/FHD
- HD 8-27"

USB-C
DP (MST)
USB2 (touch)
Power

USB-C
DP (MST)
USB2 (touch)

USB-C
DP (MST)
USB2 (touch)

Power

Computer with USB-C DP/PD (PD optional)
- DP 1.2 or greater
- DP MST

Optional
12-24V DC

Mandatory
12-24V DC

Mandatory
12-24VDC