DATASHEET

HATTELAND TECHNOLOGY
an EMBRON Company

Manufacturer:	**Hatteland Technology AS**
Product:	**8.0 inch Single Cable Monitor (SCM)**
Type:	**HD 08T30 SCM-xyy-yyyy**
	x= I (usb-c power only) J (usb-c + DC), y=configuration

8.0 inch Single Cable Monitor - Series E
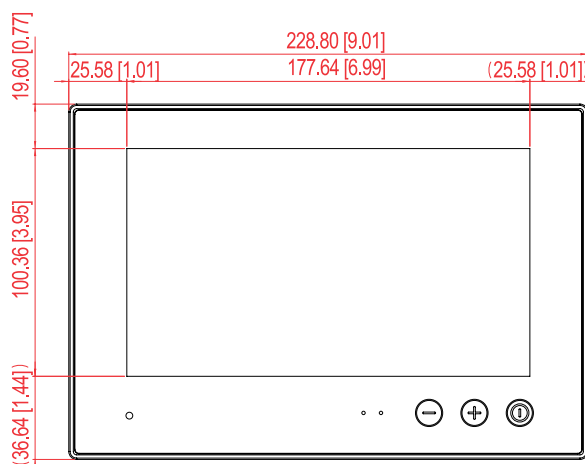
Features:

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.
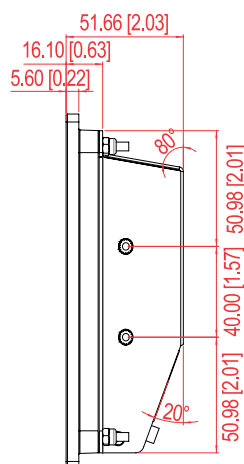
The units also meet the same extreme quality standards as the proven Series X Display range and feature LED Backlight Technology, full dimming (0-100%) all as standard. In addition there are options such as USB-C PD Sink, Multi-Power (AC/DC) inputs, Single AC and DC input. The product range can also accommodate and combine multi-touch screen and optical bonding. By factory deafult the unit is ECDIS Compliant.
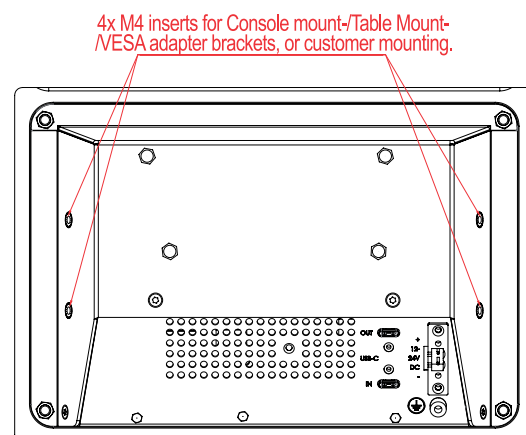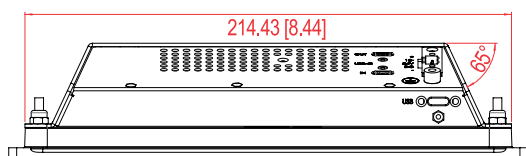
FRONT VIEW

SIDE VIEW

BACK VIEW

4x M4 inserts for Console mount-/Table Mount-/VESA adapter brackets, or customer mounting.

228.80 [9.01]
177.64 [6.99]
25.58 [1.01]
(25.58 [1.01])
19.60 [0.77]
100.36 [3.95]
(36.64 [1.44])

51.66 [2.03]
16.10 [0.63]
5.60 [0.22]
80°
20°
50.98 [2.01]
40.00 [1.57]
50.98 [2.01]

BOTTOM VIEW

214.43 [8.44]
65°

TOP VIEW

216.80 [8.54]
R10.00 [0.39]
144.60 [5.69]

PANEL CUTOUT

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

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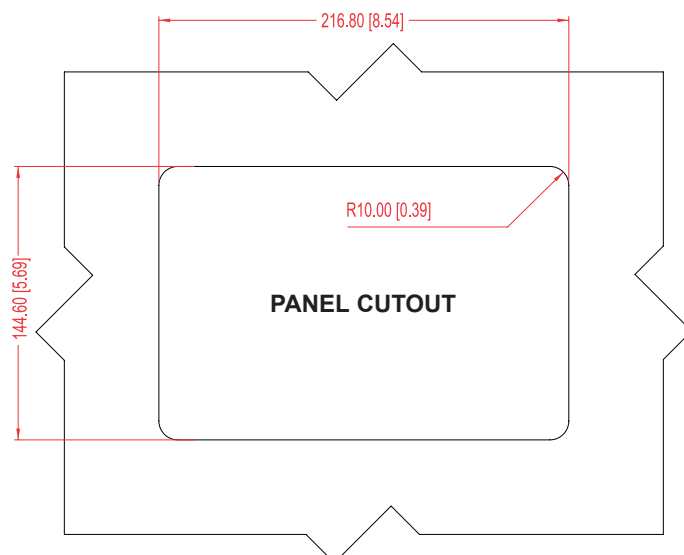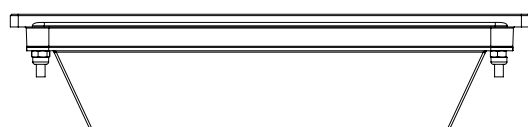
TFT Technology:
- 8.0 inch TFT Liquid Crystal Display module, IPS (in-plane-switching)
- a-si TFT Active Matrix
- Widescreen, Aspect Ratio 16:9
- LED Backlight Technology
- Readable with polarized sunglasses

TFT Characteristics:
- Native Resolution : 1280 x 720 (HD)
- Pixel Pitch (RGB) : 0.138 (H) x 0.138 (V) mm
- Response Time : 20ms (typ) (Tr+Tf)
- Contrast Ratio : 1000:1 (typ)
- Light Intensity : 680 cd/m^2 (typ)
- Viewable Angle : 85 deg. (up/down/left/right) (typical)
- Active Display Area : 176.64 (H) x 99.36 (V) mm
- Max Colors : 16.7 million (24bit)
  Pixel Defect Policy:
  https://www.hattelandtechnology.com/hubfs/pdf/misc/ind100351-1_pixeldefectpolicy.pdf

Supported Signals:
Resolutions:
- VGA : 640 x 480 (including 640 x 350)
- SVGA : 800 x 600 (including 720 x 400)
- XGA : 1024 x 768
- HD : 1280 x 720 [2]
- SXGA : 1280 x 1024
- UXGA : 1600 x 1200
- FHD : 1920 x 1080 [3]

[2] Recommended for optimal picture quality
[3] USB-C Output Supports DP signal - up to 1920 x 1080 (FHD)

Power Specifications:
Power Supply Options:
- Single DC Power Option : 12-24VDC
- USB-C PD Sink [3] : 20VDC/3A (Requested)

Power Consumption:
- Operating: 14W (typ) - 22W (max)
- USB-C PD Sink [3] : 60W (Requested)

[3] USB-C PD Sink will request 20V/3A (60W) from source.

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

Physical Dimensions:
Product Dimensions and Weight:
- W:228.00 [9.01"] x H:156.60 [6.17"] x D:51.60 [2.03"] mm [inch]
- Weight approx: 1.1kg / 2.4lbs

User Controls:
Behind front bezel - Glass Display Control™ (GDC) IP67:
- 3 x Buttons (Power On/Off, Brightness -/+), Status LED
- Buzzer (through glass), Light Sensor (behind glass)

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 (+70°C/16h)
- Storage : Temperature -30°C to +70°C
- Humidity : Up to 95%
- IP-Rating : Protection: IP67 front - IP22 rear (EN60529)
- Air Pressure max Alt. : Operating: 3000m - Storage: 3000m
- Compass Safe Distance : Standard: 30cm - Steering: 5cm

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 with DP, power (sink) and USB2.0, Female
• USB-C Output	: 1 x USB-C with DP and USB2.0, Female
• USB	: 1 x USB-C with USB2.0 Female
• DC Input	: 1 x 2-pin Terminal Block 5.08

Factory Defaults:
- Projected Capacitive Touch Screen (Multitouch)
- Optical Bonding Technology
- AG Coated Front Glass, no sharp edges
- 1 x P014441 (IP66 Mount Gasket (EPDM)
- 1 x HD CMB SCM-B1 (Console Mount Kit. EN60945 Tested)

Factory Options:
- T21 Front
- Customized Front

Available Accessories:
- HD CMB SCM-B1 : 1 x Console Mount Kit. EN60945 Tested
- HD TMB SCM-A4 : 1 x Table/Ceiling Mount Bracket. Not EN60945 Tested
- HD 08TAP SX1-A1 : 1 x Frame Adapter for HD 08T21 Cutout (Retrofit)
- HD VED SCM-L1 : 1 x VESA Adapter (75/75,100/100). Not EN60945 Tested)
- HD 08COV STD-A1 : 1 x UV Sun Cover
- P014338 : 1 x IP66 Mount Gasket (EPDM), Flush/Console mount
- VSD 203453-1 : 1 x USB-C external cable for 4K@24b@60Hz. 2m
- HT DPUSB-2-USBC-A1 : 1 x DP & USB2.0 (Male) to USB-C (Male) Adapter, 2m
- HT HDMIUSB-2-USBC-A1: 1 x HDMI & USB2.0 (Female) to USB-C (Male) Adapter, 2m (Pending)

Please see user manual/datasheet/drawings for more information

Available Models:
- **HD 08T30 SCM-IA1-FOGG**
  8.0" SCM Bonded USBC-PDSink Black GDC Buzzer PCTouch/AG
- **HD 08T30 SCM-JA1-FOGG**
  8.0" SCM Bonded USBC-PDSink + DC Black GDC Buzzer PCTouch/AG

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			

SPECIFICATIONS

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

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Details: Supported USB-C PD SINK

USB-C PD Sink:

- Daisy chaining via standard MST protocol:
  - Up to 4* monitors with HD resolution
- Communication and control of Display via DDC-CI or SCOM.
- USB2 in USB-C is connected via USB HUB in each monitor.
- Display unit will be tested and verified using OS with existing support for MST, Windows
- USB-C Input supports Power Delivery (reciving), DP and USB-2.0.
- USB-C Output only supports DP and USB-2.0
- USB-C Power delivery input is set to request 20V 3A, but will only consume according to Power Consumption data (page 2)
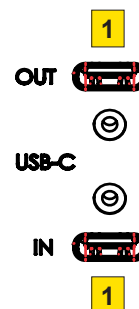
*Actual max of monitors connected is platform/OS dependent

OUT 1

USB-C

IN 1

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

Power

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