

LED

HATTELAND®

SERIES 1

Maritime Multi Display Generation 2

- Multi-power (AC and DC built-in)
- Form fit
- Long-life availability
- Maximum flexibility with a wide range of display sizes and variations
- Maritime standard for the past 20 years

NEW

Building on the success on the longtime favorite, the HATTELAND® Maritime Multi Display (MMD) - Series 1, has now been relaunched as Generation 2 in 15 to 23 inch sizes!

The well-known technology remains the same, now enhanced with Multi-power (AC and DC built-in) to ensure compatibility with a wide range of applications within ship navigation, automation, safety, and security systems.



HATTELAND
TECHNOLOGY

an EMBRON Company

SPECIFICATIONS



	Resolution, Pixel Pitch [mm] & Active Area [mm/inch]	Aspect Ratio, Response Time, Light Intensity, Contrast Ratio, Viewing Angle & Colors Depth	Signal I/O Connectors	Power Inputs & Power Consumption	Dimensions (WxHxD) [mm/inch] & Compass Safe Distance [cm/inch]
15.0" Display JH 15T17 MMD	1024 x 768 (XGA) 0.297 (H) x 0.297 (V) H: 304.10 [11.97"] x V: 228.10 [8.98"]	4:3 8ms (typ), black to white 400 cd/m ² (typ) - 1500:1 (typ) 85 deg. (up/down/left/right) 16.7 million	2 x DVH IN, 1 x DP1.2 (DisplayPort) IN, 3 x BNC Composite Video IN 2 x SCOM RS-422/485 (T. Block), 1 x USB Type A (SCOM USB), 1 x RJ-45 (SCOM Ethernet), 1 x 9P DSUB (SCOM RS-232), 1 x 15P HD DSUB VGA OUT (Clone), 1 x 9P DSUB (Potmeter/User), If Touch Screen: 1 x 9P D-SUB, AC Power IN: 1 x Std IEC Inlet, DC Power IN: 1 x 2-pin (T. Block)	Multi-power: 100-240V AC - 50/60Hz + 24VDC Operating: 75W (max)	W:412.00 [16.22"] x H:345.00 [13.58"] x D:73.28 [2.89"] Standard: 110.00 [43.31"] - Steering: 70.00 [27.56"]
19.0" Display JH 19T14 MMD (Slim Frame)	1280 x 1024 (SXGA) 0.294 (H) x 0.294 (V) H: 376.32 [14.82"] x V: 301.05 [11.85"]	5:4 35ms (typ), black to white 350 cd/m ² (typ) - 1500:1 (typ) 85 deg. (up/down/left/right) 16.7 million	2 x DVH IN, 1 x DP1.2 (DisplayPort) IN, 3 x BNC Composite Video IN 2 x SCOM RS-422/485 (T. Block), 1 x USB Type A (SCOM USB), 1 x RJ-45 (SCOM Ethernet), 1 x 9P DSUB (SCOM RS-232), 1 x 15P HD DSUB VGA OUT (Clone), 1 x 9P DSUB (Potmeter/User), If Touch Screen: 1 x 9P D-SUB, AC Power IN: 1 x Std IEC Inlet, DC Power IN: 1 x 2-pin (T. Block)	Multi-power: 100-240V AC - 50/60Hz + 24VDC Operating: 75W (max)	W:460.00 [18.11"] x H:400.00 [15.75"] x D:82.00 [3.23"] Standard: 110.00 [43.31"] - Steering: 70.00 [27.56"]
19.0" Display JH 19T14 MMD	1280 x 1024 (SXGA) 0.294 (H) x 0.294 (V) H: 376.32 [14.82"] x V: 301.056 [11.85"]	5:4 35ms (typ), black to white 350 cd/m ² (typ) - 1500:1 (typ) 85 deg. (up/down/left/right) 16.7 million	2 x DVH IN, 1 x DP1.2 (DisplayPort) IN, 3 x BNC Composite Video IN 2 x SCOM RS-422/485 (T. Block), 1 x USB Type A (SCOM USB), 1 x RJ-45 (SCOM Ethernet), 1 x 9P DSUB (SCOM RS-232), 1 x 15P HD DSUB VGA OUT (Clone), 1 x 9P DSUB (Potmeter/User), If Touch Screen: 1 x 9P D-SUB, AC Power IN: 1 x Std IEC Inlet, DC Power IN: 1 x 2-pin (T. Block)	Multi-power: 100-240V AC - 50/60Hz + 24VDC or Single-power: 100-240V AC - 50/60Hz Operating: 75W (max)	W:483.00 [19.02"] x H:444.00 [17.48"] x D:82.00 [3.23"] Standard: 110.00 [43.31"] - Steering: 70.00 [27.56"]
20.1" Display JH 20T17 MMD	1600 x 1200 (UXGA) 0.255 (H) x 0.255 (V) H: 408.00 [16.06"] x V: 306.00 [12.05"]	4:3 30ms (typ), rise + fall 260 cd/m ² (typ) - 1000:1 (typ) 85 deg. (up/down/left/right) 16.7 million	2 x DVH IN, 1 x DP1.2 (DisplayPort) IN, 3 x BNC Composite Video IN 2 x SCOM RS-422/485 (T. Block), 1 x USB Type A (SCOM USB), 1 x RJ-45 (SCOM Ethernet), 1 x 9P DSUB (SCOM RS-232), 1 x 15P HD DSUB VGA OUT (Clone), 1 x 9P DSUB (Potmeter/User), If Touch Screen: 1 x 9P D-SUB, AC Power IN: 1 x Std IEC Inlet, DC Power IN: 1 x 2-pin (T. Block)	Multi-power: 100-240V AC - 50/60Hz + 24VDC Operating: 75W (max)	W:534.00 [21.02"] x H:481.00 [18.94"] x D:87.00 [3.43"] Standard: 65.00 [25.59"] - Steering: 40.00 [15.75"]
23.1" Display JH 23T14 MMD	1600 x 1200 (UXGA) 0.294 (H) x 0.294 (V) H: 470.40 [18.52"] x V: 352.80 [13.89"]	4:3 12ms (typ), black-white-black or 8ms gray to gray 500 cd/m ² (typ) - 600:1 (typ) 85 deg. (up/down/left/right) 16.7 million	2 x DVH IN, 1 x DP1.2 (DisplayPort) IN, 3 x BNC Composite Video IN 2 x SCOM RS-422/485 (T. Block), 1 x USB Type A (SCOM USB), 1 x RJ-45 (SCOM Ethernet), 1 x 9P DSUB (SCOM RS-232), 1 x 15P HD DSUB VGA OUT (Clone), 1 x 9P DSUB (Potmeter/User), If Touch Screen: 1 x 9P D-SUB, AC Power IN: 1 x Std IEC Inlet, If DC Power IN: 1 x 2-pin (T. Block)	Multi-power: 100-240V AC - 50/60Hz + 24VDC Operating: 156W (max)	W:584.00 [22.99"] x H:534.00 [21.02"] x D:85.00 [3.35"] Standard: 110.00 [43.31"] - Steering: 70.00 [27.56"]

Product Features:

- LED Backlight Technology, PBP (Picture By Picture), Multi-power AC & DC or Single AC (where applicable), PIP (Picture In Picture), Hotkey Functionality, Dimmable 0-100%.

User Controls and Activity (where applicable):

- Power On/Off + On Screen Display Menu (push button), Brightness Control, Hotkeys (left/right - push buttons), Mode Status Illuminated LED-Ring Indicator.

Accessories include (where applicable):

- Mounting Bracket + EN6095 Tested version, Rotary Bracket, Sun Visor, VESA Adapter 75/100mm, Water Cover, Adapter Frames, Rack Adapter Frames, Custom Adapter Frames.

Factory Options (where applicable):

- Resistive / Capacitive Touch Screen, Color Calibrated models (ECDIS), Optical Bonding Technology, Keypad only or Keypad+Potmeter+Buzzer.

Testing and Type Approvals - Applies for all models above:

- IEC 60945 4th (EN 60945:2002), IACS E10, EN55024, EN55022 Class A, EU RO MR, DNV*, LRS*, ABS*, CCS, KR*, BV* and ClassNK*. *pending.

Datasheets, Technical Drawings and User Manual available at: www.hattelandtechnology.com/Series1_MMD_G2

