Eon Instrumentation, Inc.
Since 1961

High Definition Monitor – 17”
(1280x1024 Resolution)

HDM-XGA-170-2 (2 RS343 Inputs)
EON P/N 20600-300

Technical Manual

EON Doc # 20600-865
(Rev IR – 07/28/19

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HDM-XGA-170-2 (2 RS343 Inputs)
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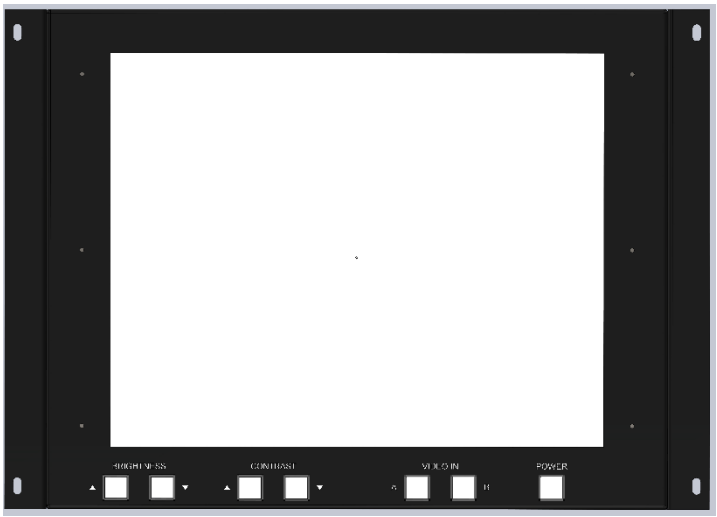
Feature Highlights

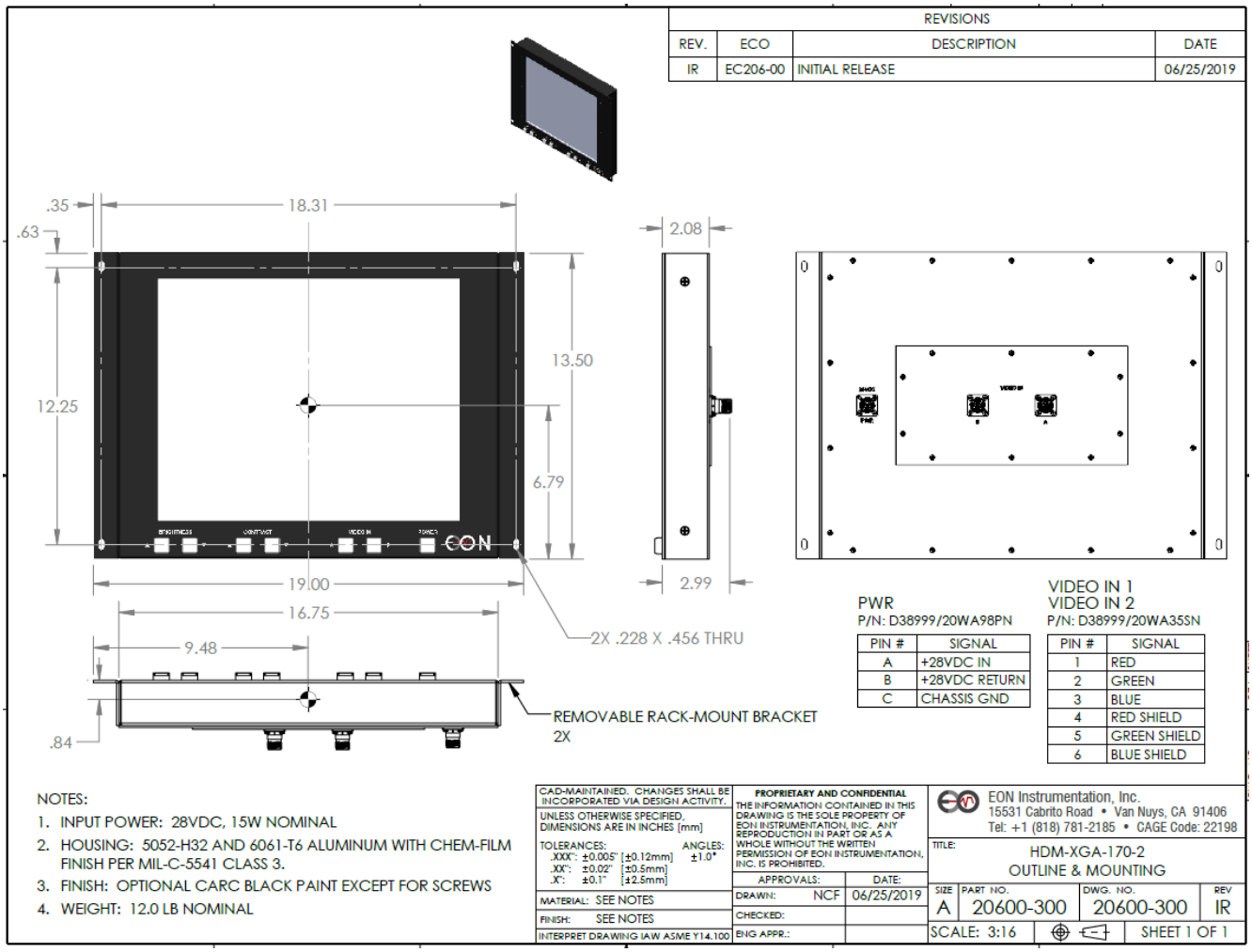
- **1280x1024 Pixel Resolution**
- **2 M/S 6pin Signal Input Rear Connectors**
- **2 Selectable STANAG-A RS343 Inputs latched through power cycling**
- **800 nit Brightness LCD with EMI and High Impact Shield**
- **Front Bezel Programmable Controls**
- **MilStd-810 Environmental Qual**
- **MilStd-461 EMI Qual**
- **MilStd-704 Qual Power**



Description and Characteristics:

Eon Instrumentation has developed Rugged Standalone High Definition Digital Monitors as another component in its **D**igital **V**ideo **A**rchitecture. The HDM-series compliment the analog and digital video cameras, distribution amplifiers, and data recorders available from Eon Instrumentation. The displays use a Liquid Crystal Display (LCD) with vibrant colors, a high pixel density and horizontal viewing angle of 85deg left/right of center. A bonded shield is standard to support emitted EMI and impact resistance. An optional sunlight readable LCD, resistive touchscreen, and NVIS overlay are available. VGA, composite video and multiple inputs are available for split screen operations. Power input of 18–36vdc is received through a MilStd D38999/20WA98PN connector. All signal inputs are through MilStd D38999 circular connectors or BNC. Connectors are located on a doghouse or flat plate built into the back of the monitor. This allows cables to be attached vertically to save depth needed for display mounting. Lighted pushbutton controls are located on the bottom of the frame. Standard functions allow for adjustment of brightness, contrast, channel input selection and on/off. Other adjustment control options such as potentiometers, perimeter pushbuttons or locking toggles can be integrated.

Outline & Mounting Drawing:



Power mating connector: 26WA98SN **Signal mating connector: 26WA35PN**

User Operation (Refer to Outline & Mounting Drawing):

Set Up:

Power Input: Attach mating power cable to PWR connector on Monitor Back

RS343 Video Signal Inputs: Attach mating signal cables to Channel A and/or Channel B connectors on Monitor Back

Pushbutton Controls:

On/off: latches power ON (button light on) or OFF (button light off)

Channel A: selects input A (button light on); Channel B (button light off)
Channel B: selects input B (button light on); Channel A (button light off)
The Channel selected remains through power interrupts or power cycling

Brightness: up/down in steps, incremental or auto scroll
Contrast: up/down in steps, incremental or auto scroll

EMI/Environmental Qualifications:

TABLE 1 –STANDARD DISPLAY EMI QUALIFICATION SPECIFICATIONS

EMI	Method	Level
Conducted Emissions	MIL-STD-461F	**CE101, CE102, CS106, CS114, CS115, CS116**
Radiated Emissions	MIL-STD-461F	**RE101, RE102, RS103**
HIRF and Lightning	Per RTCA/ DO-160D	**Compliant**
18 -36vdc power tests	MIL-STD-704/1275E	**Compliant**

TABLE 2- STANDARD DISPLAY ENVIRONMENTAL QUALIFICATION SPECIFICATIONS

Environment	Method	Level
Low Temperature (Cold Start)	MIL-STD-810F, 502.4, Proc II	**Temp Range, [°C]:** -20
Low Temperature (Operation on ground)	MIL-STD-810F, 502.4, Proc II	**Temp Range, [°C]:** -20
High Temperature (Operation)	MIL-STD-810F, 501.4, Proc II	**Temp Range [°C] :** +55
High Temperature (Storage)	MIL-STD-810F, 501.4, Proc I	**Temp Range, [°C] : +**70
Low Temperature (Storage)	MIL-STD-810F, 502.4, Proc I	**Temp Range, °C :** -40
Altitude (Storage)	MIL-STD-810F, 500.4, Proc I	**Altitude [Kft]:** 0 to 40
Humidity	MIL-STD-810G, 507.5	**Temp [°C]:**35-60 **Humidity [%RH]:** 5 – 95
Salt Spray	RTCA/DO-160D	**Solution pH:** 6.5-7.2 **Temp [°C]:** 35 Caterory X
Rain **Waterproofness**	MIL-STD-810F, 506.4, RTCA/DO-160D	Proc III Fallen Rate [mm/Hr]: 280 Caterory X
Sand and Dust	MIL-STD-810F, Method 510.4 Proc. I (Internal LRU)	**Temp [°C]:** 23-60 **Air Velocity:** 300-1750 ft/mn **Duration:** 12 hours
Vibration (operating)	MilStd 167-1A; MilStd 810F, 514.5, Pr I, Cat. 13	Type I – 25 hz; func 1hr/end 3hr
Shock, Functional	MIL-STD-810F, 516.5, Proc. I MIL-STD-901D	**Pulse shape**: Saw tooth **Duration [msec]**: 11 **Amplitude [g]:** 20 **Total Impacts:** 18 **Grade A**
Shock, Pitch/Roll/Yaw	DoD STD-1399	**301A SeaState 8**
Temperature Change	MIL-STD-810G, 503.5	+/- 20 deg C per minute