



Eon Instrumentation, Inc.

SVGA Monitor – 8.4” (800x600 Resolution)

**HDM-SVGA-084-1 (2 SDI and 3 NTSC Inputs)
Eon P/N 21600-300**

Technical Manual

**Eon Doc # 21600-865
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Eon Instrumentation, Inc.**

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Feature Highlights



- **800x600 Pixel Resolution**
- **1 M/S 6pin (2pin/NTSC input) Signal Input Rear Connector**
- **2 BNC Signal Input Rear Connectors**
- **2 Selectable 3G-SDI Inputs and 3 selectable NTSC Inputs latched through power cycling**
- **1200 nit Brightness Sunlight Readable LCD with EMI and High Impact Shield**
- **Front Bezel Programmable Controls**
- **MilStd-810 Environmental Qual**
- **MilStd-461 EMI Qual**
- **MilStd-704 Qual Power**

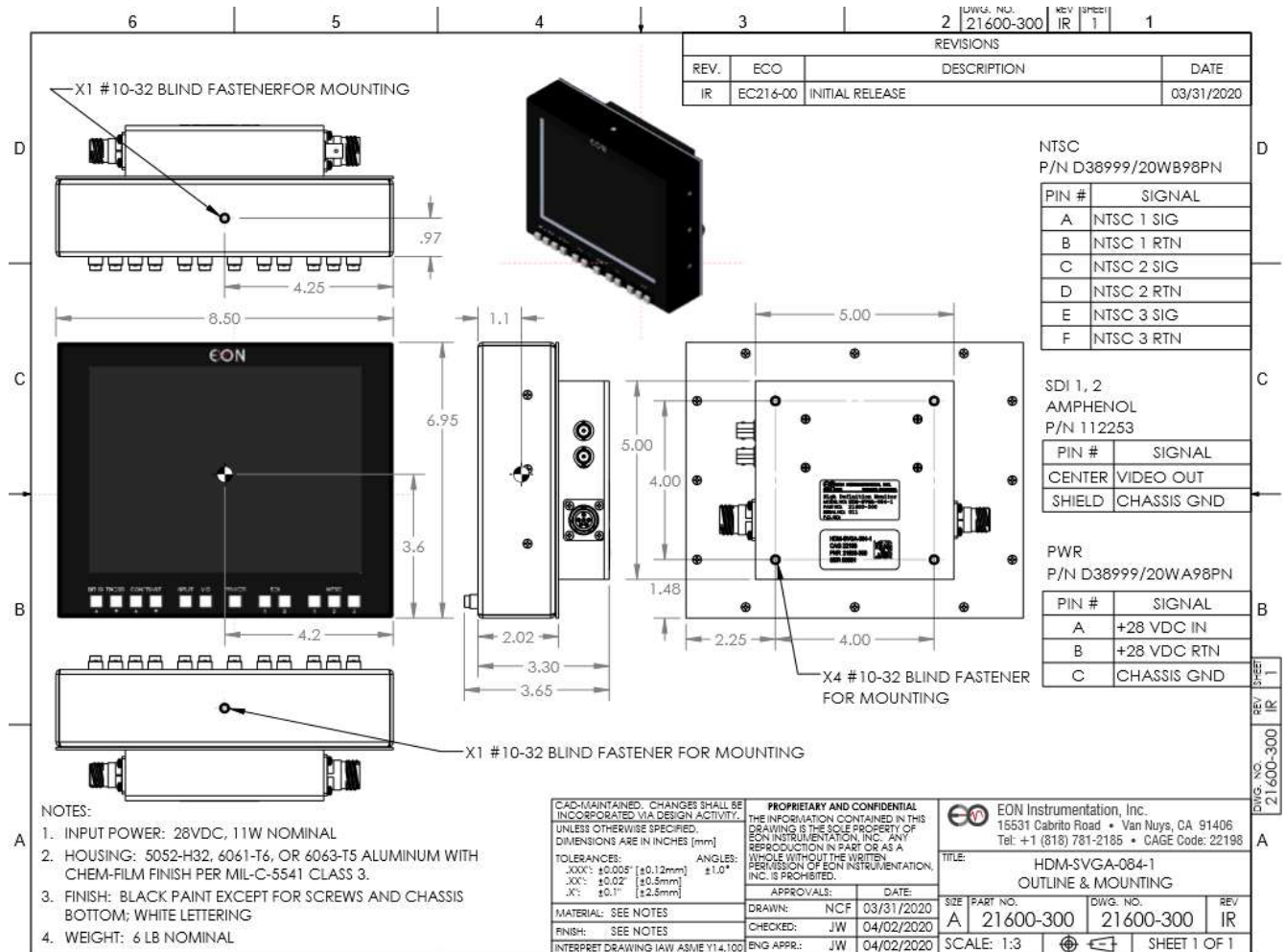
General Monitor Description and Characteristics:

Eon Instrumentation has developed a family of Rugged Standalone 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 and viewing angle of 80° left/right of center. A bonded shield is standard to support emitted EMI and impact resistance. Optional sunlight readable LCD, resistive touchscreen, and NVIS overlay are available. All signal inputs are either through MilStd D38999 circular connectors or 75 Ω BNC. Connectors are located on a doghouse built into the back of the monitor. This allows cables to be attached without adding the depth needed for display mounting. Lighted pushbutton controls are located on the bottom of the frame. Standard functions allow for adjustment of brightness and contrast. Other adjustment control options such as potentiometers, perimeter pushbuttons or locking toggles can be integrated.

HDM-SVGA-084-1

The HDM-SVGA-084-1 includes SDI and NTSC video and multiple inputs for split screen operations. Power input of 18–36VDC is received through a MilStd D38999/20WA98PN connector. The controls allow for one of each input type to be active at any time while switching between split screen (1 SDI and 1 NTSC), full screen SDI, or full screen NTSC.

Outline & Mounting Drawing:



Power mating connector: 26WA98SN

NTSC Signal mating connector: 26WB98SN

SDI Signal mating connector: Any BNC plug

User Operation (Refer to Outline & Mounting Drawing):

Set Up:

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

SDI Video Signal Inputs: Attach mating 75 Ω BNC cables to SDI 1 and/or SDI 2 BNC connectors on the monitor doghouse.

NTSC Video Signal Inputs: Attach mating D38999/26WB98SN 6 pin (2 pins per NTSC input) to the NTSC connectors on the monitor doghouse.

Pushbutton Controls:

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

The unit will enter split screen mode on power cycle or power interrupts, displaying selected SDI on top and selected NTSC on the bottom.

SDI 1: selects input SDI 1 (button light on); deselects SDI 2 (button light off)

SDI 2: selects input SDI 2 (button light on); deselects SDI 1 (button light off)

The selected input remains through power interrupts or power cycling and is selected independently of NTSC inputs.

NTSC 1: selects input NTSC 1 (button light on); deselects NTSC 2 & NTSC 3 (button light off)

NTSC 2: selects input NTSC 2 (button light on); deselects NTSC 1 & NTSC 3 (button light off)

NTSC 3: selects input NTSC 3 (button light on); deselects NTSC 1 & NTSC 2 (button light off)

The selected input remains through power interrupts or power cycling and is selected independently of SDI inputs.

SPLIT: monitor will switch to horizontal split screen from full screen (SDI or NTSC), displaying selected SDI on top and selected NTSC on the bottom. If already in split screen this pushbutton will do nothing.

VID: latches ON (selected NTSC full screen) or OFF (selected SDI Full screen).

Brightness: up/down in steps, incremental or hold down for auto scroll.

Contrast: up/down in steps, incremental or hold down for auto scroll.

Standard EMI/Environmental Qualification Specifications:

TABLE 1 –STANDARD DISPLAY EMI QUALIFICATION

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

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