

SD8110 Smart Display Unit



Industrial 10" Vehicle Display and Processor

The SD8110 is a lightweight vehicle smart display for on-the-more applications.

Combining mission-critical display, processing and vehicle interfaces in a size, weight, power and cost effective package.

The SD8110's wide range of open-standard I/Os allow seamless integration with open standard vehicle architectures as well as most legacy systems.

Designed for operation in the most demanding vehicle environments ranging from Light Wheeled to Heavy Tracked Vehicles.

Features:

- Direct sunlight readable 10" touchscreen display with function keys.
- Intel® Xeon® processor with 6-Cores suitable for mission-critical applications.
- Display multiple sensor imagery.
- Optional air-gapped secondary processor with KVM for segregation of applications with different levels of security.
- Open-standards based.
- Embedded video processing with CPU-independent visualization.
- Embedded H.264 video encoder/decoder provides sensor video distribution, recording and playback.
- Embedded Gigabit LAN switch.
- Removable hard drive for portable storage.
- Expansion provisions enable platform customizations.
- Highly integrated LRU reduces Size, Weight, Power and Cost (SWaP-C) relative to distributed architectures.
- Sustained life cycle support for multi-year production orders.

Technical Information

Main Processor

CPU	9th generation Intel® Xeon® processor 9th generation Intel® Core™ i3 processor
Info. Assurance	Secure UEFI BIOS and TPM 2.0
Memory	32 GB DDR4 SDRAM with ECC
Graphics	Intel® UHD graphics NVIDIA/AMD GPU option
Mass Storage	Removable SSD/AES-256 SED: 128GB-2TB Embedded SSD/AES-256 SED: 8GB-256GB
Ethernet	4 Gigabit Network Interface Controller (NIC) 3 Gigabit switch Ports
USB	1 USB 3.1 6 USB 2.0
CAN bus	2 J1939 or MilCAN
Serial Ports	8 RS232/422/485
Audio	Intel® HD Audio
GPIO	10 contact closure, logic level or isolated 28V

Embedded Expansion

XMC	GPU options Secondary processor SDI and/or advanced video capture
mSATA	Storage options
mPCIe	I/O customization Video capture Wireless 3G/LTE/WiFi/BT

Optical Characteristics

Resolution	1024 x 768 (XGA)
Size	10.4"
Contrast Ratio	1000:1, HACR >5.6
Brightness	1000cd/m ²
Dimming Range	<0.15 to 1000 cd/m ²
Viewing Angle	±65°H, ±55°V at full brightness in all axes
Touch Screen	Resistive
Bezel	32 backlit key options Custom button configurations available

Video

Processing	FPGA-based instant-on video Picture-in-picture and multi-view display
Text overlay	Chroma-keyed or alpha-blended graphics overlay
Video Inputs	8 RS-170A analog composite: NTSC/PAL 1 VESA VGA analog component 1 DVI-D digital 2 3G-SDI digital
Video Output	5 RS-170A analog composite: NTSC/PAL 1 VESA VGA analog component
Embedded VoE	Dedicated video over ethernet processor Multi-channel H.264 encoder and decoder

Physical Characteristics

Size (w x h x d)	286 x 254 x 82 mm (11.3" x 10.0" x 3.2")
Weight	6.81 kg (15 lbs)
Connectors	Rugged circular
Input Power	12 to 32 VDC, 75 W typ.

Environmental Specifications

Operating temperature	-46°C to +71°C (-50°F to 160°F)
Storage temperature	-51°C to +71°C (-60°F to 160°F)
Vibration	MIL-STD-810
Shock	MIL-STD-810
Water tightness	IP67
Humidity	MIL-STD-810
Sand dust	MIL-STD-810
EMI/EMC	MIL-STD-461
Other	Wrench drop and bootkick

The smart display described here represents a general configuration of this family of products. Specifications are configurable for specific customer requirements. For pricing and availability interfaces, bezel buttons, casings, connectors and other information, please contact your General Dynamics representative.