

SD8112

Smart Display Unit



Vehicle display with Intel® Xeon® processing

The SD8112 is a lightweight, ultra-rugged, smart display capable of hosting C4ISR applications for tactical and combat vehicles.

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

The SD8112's wide range of open-standard I/Os allow seamless integration with legacy and GVA or VICTORY databus compliant vehicles.

Qualified for operations in the most demanding combat vehicle environments ranging from Light Tactical Wheeled to Heavy-Brigade Tracked Vehicles.

Features:

- 12" Sunlight-readable Touchscreen display
- Intel® Xeon® processor with 6-Cores suitable for mission-critical C4ISR applications
- Display multiple sensor imagery
- Optional air-gapped secondary processor with KVM for segregation of applications with different levels of security
- Open-standards based VICTORY or GVA ready architecture
- Embedded video processing with lowest latency CPU-independent visualization
- Embedded DSP H.264 video encoder/decoder provides sensor video distribution, recording and playback
- Embedded Gigabit LAN switch
- Removable hard drive for data at rest security
- Expansion provisions enable platform customizations
- Highly integrated LRU reduces Size, Weight, Power and Cost (SWaP-C) relative to distributed architectures
- Over 10,000 units deployed worldwide
- Sustained life cycle support for multi-year production orders
- ITAR-free

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	6 USB 2.0
CANBus	2 J1939 or MilCAN
Serial Ports	8 RS232/422/485
Audio	Intel® HD Audio
GPIO	8 contact closure, logic level or 28V sense

Embedded Expansion

Secondary Processor	Intel Quad Core Atom-E3950 8GB Memory 256GB SSD/AES-256 SED Embedded KVM switch
GPS	GB-GRAM SAASM PolarisLink COTS GPS
Wireless	WiFi 3G/LTE
Serial Data Bus	MIL-STD-1553

Optical Characteristics

Resolution	1024 x 768 (XGA)
Size	12.1"
Contrast Ratio	700:1
HACR	7:1
Brightness	1000 cd/m ²
Dimming Range	<0.15 to 1000 cd/m ²
Viewing Angle	±70°H, ±70°V
Touch Screen	Resistive
Bezel	32 backlit buttons DEF STAN 23-009 or customized button legends
Night Vision	MIL-STD-3009 Class A option

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 DEF STAN 00-82 decoder

Physical Characteristics

Size (w x h x d)	324 x 281 x 82.3 mm (12.75" x 11.07" x 3.24")
Weight	7.8kg (17.25 lbs)
Connectors	MIL-C-38999
Input Power	75W (typical) MIL-STD-1275

Environmental Conditions

Operating Temperature	-46°C to +71°C
Storage Temperature	-51°C to +71°C
Vibration	MIL-STD-810G Method 514.6, Procedure I » Category 4 Composite Wheeled vehicles » Category 20 Tracked vehicles
Shock	Operational: MIL-STD-810G Method 516.6, Procedure I Crash Hazard: Method 516.6, Procedure V Bench Handling: Method 516.6, Procedure VI
Immersion	MIL-STD-810G Method 512.5, Procedure I
Altitude	MIL-STD-810G Method 500.5, Procedures I & II
Humidity	MIL-STD-810G Method 507.5 Procedure II, Aggravated
Sand Dust	MIL-STD-810G, Method 510.5, Procedures I & II
Salt Fog	MIL-STD-810G, Method 509.5
EMI/EMC	MIL-STD-461F
Touchscreen Display	Wrench Drop and Bootkick
CBRN	FM 3-11 hardened
Nuclear	Nuclear Weapons Effects Hardened

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.