GENERAL DYNAMICS
Mission Systems

SD9112H

Smart Display Unit

Rugged vehicle display with Intel® Xeon® processing

The SD9112H is a lightweight and ultra-rugged smart display capable of high-performance computing and visualization of high-resolution sensors for on-the-move applications.

Combining high reliability display, processing and vehicle interfaces in a size, weight, power and cost effective package.

The SD9112H's wide range of open-standard I/O allows seamless integration with open standard vehicle electronic architectures, as well as most legacy subsystems.

Qualified for operations in the most demanding vehicle environments ranging from light wheeled to heavy tracked vehicles.

Features:

- High-resolution, sunlight-readable 12.9" touchscreen display
- Intel® Xeon® processor up to 6-cores/12-thread suitable for demanding application
- Natively display high resolution sensor imagery
- Open-standards based architecture
- Embedded video processing with lowest latency CPU-independent visualization
- Embedded Gigabit LAN switch
- Expansion provisions enable platform customizations
- Removable storage
- 32 backlit multi-function bezel buttons for control on-the-move
- Highly integrated LRU reduces Size, Weight, Power and Cost (SWaP-C) relative to distributed architectures
- Controlled lifecycle support

Technical Information

Main Processor

CPU	Intel® Xeon® E-2276ML
Security	UEFI BIOS with TPM 2.0 Secure boot for hardware root of trust Signed embedded firmware Secure firmware update
Memory	16 GB ECC DDR4 SDRAM
Graphics	Intel® UHD graphics P630
Storage	[Option] Removable 2.5" 960 GB SATA 3 SSD [Option] Removable 2.5" 960 GB OPAL 2.0 SED SATA 3 SSD [Option] Internal 240 GB SATA 3 SSD [Option] Internal 320 GB OPAL 2.0 SED NVMe

External Interfaces

Computing	2 Gigabit network interfaces 3 USB 2.0 1 Serial RS-232 or RS-422 1 Audio output 2 CAN bus [Option] 1 Channel dual redundant MIL-STD-1553 [Option] Isolated secondary processor, Atom™ X6425E, 16GB LPDDR4, 240 GB SSD, 4 GigE, 2 USB 2.0
System	2 Gigabit network switch ports 1 Serial RS-232 or RS-422 8 Contact closure inputs
Video	2 SDI inputs or output [Option] 4 Composite video input [Option] 1 Component vide input [Option] 2 additional SDI input or output [Option] 2 Composite switchable output [Option] 2 Composite buffered output [Option] 1 DisplayPort 1.2 input [Option] 1 DisplayPort 1.2 output

Video

Processor	Hardware accelerated low-latency video processing [Option] NVIDIA® Jetson Orin NX 16GB co-processor, 240 GB SSD
Multiview™	Customizable Picture-in-Picture
Overlays	Chroma-keyed desktop or alpha-blended graphics
Video encode	Video encoding, H.264 (AVC) or H.265 (HEVC)
Video decode	Video streaming, H.264 (AVC) or H.265 (HEVC)

Display Characteristics

Resolution	2560 x 1700, 238 PPI
Size	12.9"
Contrast ratio	500:1, > 4:1 in sunlight
Dimming range	< 0.15 to > 500 cd/m^2
Touchscreen	Resistive with tethered stylus
Buttons	32 backlit physical buttons

Embedded Expansion

Removable storage	Removable storage bay for SSD or SED
Mini-PCIe/mSATA	Specialty interfaces or embedded storage (see options)
XMC	Specialty features and interfaces (see options)
M.2	Specialty interfaces or embedded storage (see options) 1 B-key 2242 1 E-key 2230/2242 1 M-key 2230/2242/2260/2280

Physical Characteristics

Size (w x h x d)	324 x 254 x 91 mm (12.75" x 10.00" x 3.60")
Mounting	4-point Top/Bottom 263 mm (10.35") pitch, #14-20
Weight	7.8 kg (17.25 lbs)
Connectors	Sealed rugged circular
Input power	MIL-STD-1275, 85 W (typical)

Environmental Conditions

Operating temperature	-40°C to +60°C
Storage temperature	-51°C to +71°C
Environmental	MIL-STD-810H, vibration, shock, immersion, altitude, aggravated humidity, dust, salt, fog
EMI/EMC	MIL-STD-461G, ground army
Touchscreen display	Wrench drop and pendulum impact
CBRN	FM 3-11 hardened

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

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