GENERAL DYNAMICS
Mission Systems

SD8012
Smart Display Unit

12.1" Vehicle Display with Intel Quad-Core Processing

The SD8012 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 SD8012'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 wheeled to heavy tracked vehicles.

Features:

- 12" Sunlight-readable Touchscreen display
- Quad Core™ i7 Intel© processor suitable for mission-critical C4ISR applications
- 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
- Expansion provisions enable platform customizations
- Highly integrated LRU reduces Size, Weight, Power and Cost (SWaP-C) relative to distributed architectures
- TRL9 mass production for US Army JLTV platform
- Sustained > 10 year forecast life cycle

Main Processor

CPU	Intel© Dual Core™ i7-3517UE
	Intel© Quad Core™ i7-3612QE
Info. Assurance	Secure UEFI BIOS and TPM 2.0
Memory	16 GB DDR3 SDRAM with ECC
Graphics	Intel© HD Graphics 4000
	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
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

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	60W (typical) MIL-STD-1275

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

Environmental Conditions

Operating Temperature	-40°C to +60°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.

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