

MD9016

Multi-Function Display Unit



Rugged multi-function vehicle display/video processor

The MD9016 is a lightweight, ultra-rugged, multi-function display capable of displaying high-resolution sensors for tactical and combat vehicles.

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

The MD9016's wide range of open-standard I/O allows seamless integration with open standard Vehicle Electronic Architectures as well as most legacy subsystems.

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

Features:

- High Resolution, Sunlight readable 16" UHD Touchscreen display
- Display native imagery from high-resolution sensors
- Eight backlit multi-function bezel buttons
- Optimized bezel and mounting for nested multi-monitor modular installations
- FPGA-based video processing enables lowest latency video processing with feature growth capabilities
- Designed to support centralized computing architectures
- Embedded H.265 video encoder/decoder provides sensor video distribution between stations
- Embedded USB switch routes button and touchscreen inputs to respective video hosts
- Sustained life cycle support
- ITAR Free

Technical Information

Optical Characteristics

Resolution	3840 x 2160
Size	15.6"
Contrast Ratio	800:1
HACR	5.66:1
Brightness	500 cd/m ²
Dimming Range	<0.15 to 500 cd/m ²
Viewing Angle	±70°H, ±70°V
Touch Screen	Resistive
Bezel	8 backlit programmable buttons
Night Vision	MIL-STD-3009 class B option
Latency	50 ms (signal-to-photon)

Physical Characteristics

Size (w x h x d)	381 x 254 x 51mm (15.3" x 10.0" x 2.6")
Mount Pattern	356 x 229mm (14.8" x 9.6")
Weight	6.1kg (13.5 lbs)
Connectors	MIL-C-38999
Input Power	45W (typical) MIL-STD-1275

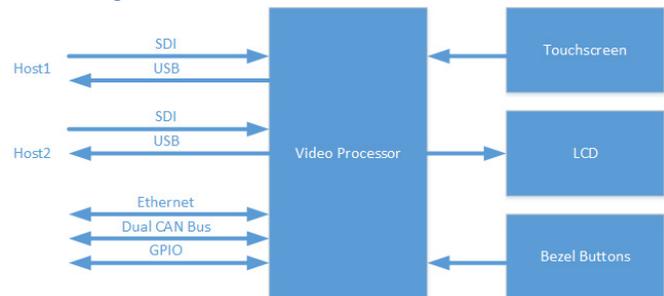
Functional Characteristics

Interfaces	2 SMPTE ST 2082/424/292 SDI	
	1 USB Composite HID for Buttons/Touchscreen for VID1 host	
	1 USB Composite HID for Buttons/Touchscreen for VID2 host	
	2 ISO 11898 CAN Bus	
	1 IEEE 802.3ab Gigabit Ethernet	
	10 General purpose inputs/outputs	
	Optional SMPTE 170M Analog Composite	
	Optional DDWG DVI Input	
	Optional VoE	Embedded Video over Ethernet Processor
		Multi-channel H.264/H.265 encoder and decoder
	DEF STAN 00-082 VIVOE uncompressed	

Environmental Conditions

Operating Temperature	-40°C to +60°C
Storage Temperature	-51°C to +71°C
Vibration	MIL-STD-810H Method 514.8, Procedure I » Category 4 Composite Wheeled vehicles » Category 20 Tracked vehicles
Shock	Operational: MIL-STD-810H Method 516.8, Procedure I Crash Hazard: Method 516.8, Procedure V Bench Handling: Method 516.8, Procedure VI
Immersion	MIL-STD-810H, Method 512.6, Procedure I
Altitude	MIL-STD-810H, Method 500.6, Procedures I & II
Humidity	MIL-STD-810H, Method 507.6 Procedure II, Aggravated
Sand Dust	MIL-STD-810H, Method 510.7, Procedures I & II
Salt Fog	MIL-STD-810H, Method 509.7
EMI/EMC	MIL-STD-461F
Touchscreen Display	Wrench Drop and Bootkick
CBRN	FM 3-11 hardened
Nuclear	Weapons Effects Hardened

Block Diagram



The multi-function 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.

Suggested Multi-Monitor Arrangement



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