GENERAL DYNAMICS
Mission Systems

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

Open-standard I/O enables seamless integration with open-standard Vehicle Electronic Architectures and legacy subsystems.

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

Features:

- Ultra High Resolution, Sunlight readable 16″ 4K Touchscreen display
- Seven backlit multi-function bezel buttons
- Optimized thin bezel and mounting for nested multi-monitor installations
- FPGA-based video processing enables lowest latency video with growth capacity
- Designed for MOSA electronic architectures
- Embedded H.265 VoE decoder/encoder enables sensor video distribution
- Embedded USB switch routes button and touchscreen events to multiple host processors as needed
- Sustained life cycle support

Technical Information

Optical Characteristics

Resolution	3840 x 2160
Size	15.6"
Contrast Ratio	800:1
HACR	5.66:1
Brightness	500 cd/m2
Dimming Range	<0.15 to 500 cd/m2
Viewing Angle	±70°H, ±70°V
Touch Screen	Resistive
Bezel	7 backlit programmable buttons
Latency	34 ms

Physical Characteristics

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

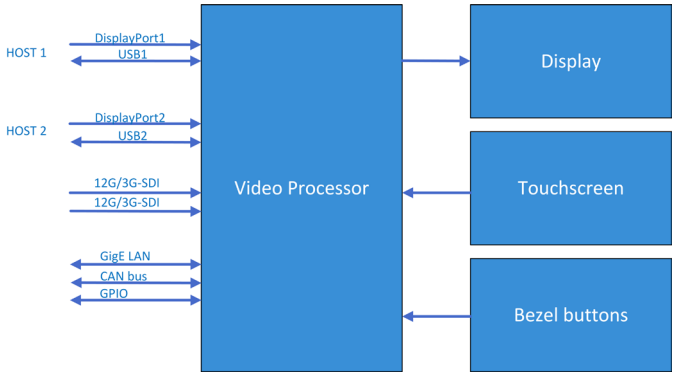
Functional Characteristics

Interfaces	2 SMPTE ST 2082/424/292 12G/3G-SDI
	1 USB Composite HID for Buttons/Touchscreen for VID1 host
	1 USB Composite HID for Buttons/Touchscreen for VID2 host
	2 ISO 11898/J1939 CAN Bus
	10 General purpose inputs/outputs
	Optional 1 IEEE 802.3ab Gigabit Ethernet
	Optional DDWG DVI Input
	Optional SMPTE 170M Analog Composite
	Optional Video over Ethernet
	Multi-channel H.264/H.265 encoder and decoder
	DEF STAN 00-082 VIVOE uncompressed

Environmental Specifications

Operating Temperature	-40°C to +60°C (-40°F to 140°F)
Storage Temperature	-51°C to +71°C (-60°F to 160°F)
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-461G
Touchscreen	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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