

MD9012

Rugged Multi-Function Display



Rugged Multi-Function Vehicle Display/Video Processor

The MD9012 is a lightweight, ultra-rugged, multi-function display capable of displaying high-resolution sensors for on-the-move applications.

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

The MD9012'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 vehicle environments ranging from Light Wheeled to Heavy Tracked Vehicles.

Features:

- High Resolution, Sunlight readable Touchscreen display
- Natively display high-resolution sensors imagery
- Open-standards based
- Embedded video processing with lowest latency CPU-independent visualization
- Embedded H.265 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
- Sustained life cycle support
- ITAR Free

Technical Information

Optical Characteristics

| | |
|----------------|--------------------------------|
| Resolution | 2560 x 1700 |
| Size | 12.9" |
| Contrast Ratio | 800:1 |
| HACR | 5.66:1 |
| Brightness | 1000 cd/m ² |
| Dimming Range | <0.15 to 500 cd/m ² |
| Viewing Angle | ±70°H, ±70°V |
| Touch Screen | Resistive multi-touch |
| Bezel | 32 backlit buttons |

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 | Rugged circular |
| Input Power | 40W (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 Display port 1.2 2 3G-SDI digital |
| Video Output | 4 RS-170A analog composite: NTSC/PAL |
| Embedded VoE | Dedicated Video over Ethernet Processor Multi-channel H.264/H.265 encoder and decoder Uncompressed VIVOE decoder per DEF STAN 00-82 |

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, Procedure I, II, & III |
| Humidity | MIL-STD-810 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 |
| Other | Wrench Drop and pendulum impact |

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.