

Tactical Mobile Router – TMR304

Enterprise Class L3 Router



The TMR304 overcomes challenges associated with high bandwidth overhead, by analyzing network feedback and delivering information through an appropriate bearer.

Transport protocols transfer variable length messages with reliability, efficiency, reasonable latency and end-to-end congestion control.

Disruption Tolerant Networking (DTN) technology provides message delivery mechanisms using store and forward techniques to eliminate end-to-end connectivity.

Features

- Standard Internet transport protocols, like UDP and TCP rely on end-to-end connectivity.
- Disruption Tolerant Networking (DTN) technology.
- Comprehensive FEC-based Protocol (CFP).
- Built-in-Test, Power and Ethernet status LEDs.
- Auto-selection of UDP, TCP, CFP and DTN transport protocols based on path quality.
- Message Delivery Service with Transport Performance Enhancing Proxies, Web Proxies.

Tactical mobile router features:

- Tactical Domain Name Service with RFC 1034/1035 DNS interface
- Network Quality of Service (QoS) using Differentiated Services Code Point (DSCP)
- Open Shortest Path First (OSPF) routing for desired links
- Low Bandwidth Routing Protocol (LBRP) for disadvantaged links
- RFC4838 DTN for disrupted paths
- Multi-protocol inter-domain route re-distribution
- Radio aware protocols for link metrics
- IPv4, with support for IPv6
- RFC 2131 Dynamic Host Control Protocol (DHCP) server
- Network Time Protocol (NTP) server
- Network management via web browser
- Easily customized Linux software base
- Small form factor reduces space, weight and power needs
- MIL-STD-810D and MIL-STD-461E qualification for reliable operation in harsh environments
- MIL-STD-1275B vehicle power

Interfaces:

- Ethernet:
 - Qty. (4) x 10/100/1000 Mbps
 - Qty. (4) x 10/100 Mbps
 - Qty. (1) x 10/100 Mbps Isolated
- Audio:
 - Qty. (1) x Audio I/F Port
- Radio:
 - Qty. (6) x Analog Audio (Voice)
 - Supports Radio Data via Ethernet and serial
- Serial:
 - Qty. (6) x RS-232
 - Qty. (1) x RS-232/RS-422
 - Qty. (3) x USB 2.0
- Accurate Timing:
 - Qty. (4) x 1 PPS
 - Qty. (9) x PTPv2
 - Optional integrated Chip Scale Atomic Clock (Stratum I)
- Processing:
 - Qty. (1) x Dual-core ARM v9
 - Qty. (1) x Single-core ARMv7
 - Qty. (1) x DSP
 - Qty. (1) x Marvell Advanced L3 Router IC
- Emergency IC:
 - Supports distribution of Instant-On Emergency IC

Display and Controls:

- Built-in-Test, Power, and Ethernet status LEDs
- Unit Reset and Backlight mode switches

Reliability:

- MTBF greater than 10,000 hours
- MIL-HDBK-217F, (Ground Mobile Environment @ 25°C)

Physical Characteristics:

- Height 109 mm (4.29")
- Width 180 mm (7.09")
- Depth 152 mm (6.00")
- Weight 2.24 kg (4.95 lbs)

Environmental Characteristics:

- -40°C to +60°C (-40°F to +140°F) operating
- -51°C to +80°C (-60°F to +176°F) storage
- MIL-STD-810D tested for vibration (wheeled and tracked), transit drop, shock, salt fog, sand and dust, fluid contamination, NBC decontamination, immersion, fungus and altitude

Electromagnetic Effects:

- MIL-STD-461E

Input Power Requirements:

- 24 to 32 VDC (MIL-STD-1275B), Max. consumption 22 Watts

Best-of-Breed Confidence

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The product described here represents a general configuration of this family of products. Specifications are configurable for specific customer requirements. For pricing and availability please contact your General Dynamics representative.