

ROAD RUNNER

MTI-M4-128 *V*ehicular

MOBILE HIGHEST DATA RATE INMARSAT TERMINAL

MTI's M4-128 VEHICULAR PRODUCT DESCRIPTION

MTI'S M4-128V is a vehicle-mounted, dual channel Inmarsat terminal. That enables user's to make high speed data (mini-m voice calls, 3.1 audio calls, 64 kbps or 128 kbps High-Speed Data/ISDN calls) via Inmarsat 3rd generation satellites while the vehicle is in motion. Users may also operate MTI's M4-128V terminal remotely from indoors while vehicle is parked, by using 6.4 mm cable up to 500 feet long. MTI's M4-128V is a single-antenna design. It requires only one ODU/Antenna (about the same size as the single-channel model) to operate two M4 channels for a 128 kbps data call.

This product has evolved from MTI's land mobile dual-channel model Nomad 128. Existing users may upgrade their land transportable model by adding the ODU/PIU. MTI'S M4-128V meets or exceeds Inmarsat specifications for I-3 spot beam operations.

OPERATOR FRIENDLINESS

MTI'S M4-128V has a large graphic display, which provides the operator with a clear picture of all the important functions at a single glance. The back lighted display includes a graphic aid that makes antenna pointing as simple as moving a cursor to your approximate location on a world map.

MTI Advantages:

- ❖ Indoor Unit Remoteable Up to 500-ft. Away from Radome
- ❖ Optional Junction cable can be wired to fit into patch panel
- ❖ Large LCD panel for easier user operation
- ❖ Built-In Lithium Ion Battery Pack
- ❖ Flexible Two channel configurations



VEHICLE MOUNTED ANTENNA



INDOOR CONTROL CONSOLE (IDU)



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Technical Specifications

Outdoor Unit (ODU):

- Housing: Fiberglass radome inside useable space 650 mm (D) x 365 mm (H)
- Weight: 10.9 kg
- Mounting: Magnet or Bolt

Power & Interface Unit (PIU):

- Dimensions: 38 x 238 x 150 mm (H x W x D)
- Weight: 0.7 kg
- Components: DC/DC Converter 12/24V DC in, 24v output for IDU and 48v for ODU module/demodulate baseband data (IDU to & from ODU)
- Modem:

Indoor Console Unit (IDU):

- Dimensions: 38 x 238 x 150 mm (H x W x D)
- Weight: 1.37 kg
- Components: Lithium-Ion battery, 5400 mAh 14.4V. Terminal Control Unit: PCB unit ISDN interface card

Environmental Conditions:

- Operating Temperature: -25° to +55°C
- Humidity: Up to 95% @ 40°C
- Precipitation: Up to 50 mm/hr
- Wind Speed: Up to 200 km/hr Relative
- Icing: Up to 25mm (survival only)

Vibration Operational:

- Random vibration of 1.05 g RMS in each of three perpendicular axes. Spectrum of vibration is 5-20 Hz: 0.02 g²/Hz, 20 – 150 Hz: -3dB/octave

Vibration survival:

Random vibration of 1.7 g RMS in each of three perpendicular axes for 2 hours each. Spectrum at 5-20 Hz: 0.05 g²/Hz, 20 – 150 Hz: -2dB/Octave

Vehicle Motion:

- Shock: 20g / 11ms half sine-Wave shock
- Velocity: 110 km/hr maximum
- Turning Rate: 40° /s

Radio Frequency Characteristics:

- Tx frequency tuning range: 1626.5 – 1660.5 MHz
- Rx frequency tuning range: 1525.0 – 1559.0 MHz
- Channel frequency spacing: 1.25 KHz steps
- G/T: - 7 dB/K minimum
- EIRP: M4 HSD: 19-25 dBW in 2 dB steps; Mini-M 8-14 dBW in 2 dBW steps

External Interfaces:

- Telephone: RJ11 two wire-jacks, 600 ohm, with echo suppression and DTMF Dialing
- ISDN interface: RJ45 (Euro S/T bus)

Specifications subject to change



Antenna:

Directional RHCP antenna with self tracking stabilized platform

Transceiver Unit:

PCB Modules

Stabilizer:

ACU and step motor

Available Options:

Extra IDU/ODU 6.4 mm cable (50 ft to 500 ft)

Certifications:

- Overall: Meets or exceeds all specs in Inmarsat-M4 Systems Definition Manual (SDM).
- Electromagnetic Compatibility: Radiated: EN 55022 class B, Conducted: EC801



Inmarsat Spot beam coverage map

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