In Net-Centric operations, coordination and information sharing between distant combat groups and their command centers have traditionally been hampered by mobility and radio range constrains. Elbit Systems’ mTMR™ was specifically designed to overcome this challenge by providing a unique portable solution for routing multimedia (Voice, Data & Video) streams.

**Essential operational information—available wherever it’s needed**

The mTMR™ interconnects non-IP with IP radio networks, enabling multimedia information to flow seamlessly between Combat Net Radio (CNR) networks and WAN IP radio networks—SATCOM, Microwave Data Link, and others. It therefore serves as ‘soldier-carried multimedia relay’ that ensures connectivity with distant command posts and other operational platforms, regardless the unit’s location and the nature of the terrain.

**A military-grade, powerful multimedia routing solution easily carried by the foot soldier**

Consuming very low power driven by the radio batteries, the mTMR™ features a slim footprint and is easily carried by a single infantry soldier. The rugged, compact and lightweight mTMR™ unit conveniently fits into the soldier’s combat vest.
mTMR™
manpack Tactical Multimedia Router

State-of-the-art technologies
The mTMR™ combines advanced field-proven technologies for multimedia routing. With an intuitive operation method, mTMR™ supports voice, data & video streams exchange between separate CNR networks and a WAN radio. mTMR™ supports half/full duplex channels with multicast & unicast multimedia dissemination.

RoIP Interoperability
The mTMR™ implements RoIP—Radio over IP technology, for conferencing voice sessions between CNR users and VoIP terminals at the command center. mTMR™ incorporates a VoIP gateway with standard SIP (RFC 3261) protocol for interoperability with common VoIP terminals and SIP phones. mTMR™ enables voice tunneling between tactical radios, LAN/WAN interfaces and a local hand-set. mTMR’s DSP provides voice activity detection and silence suppression, along with advanced vocoders support. Together, these features enable the mTMR™ to make an optimal use of the available IP bandwidth.

Data & Video dissemination
The mTMR™ realizes a data and video routing solution between heterogeneous networks to overcome the major challenges which characterize the tactical network's environment, including dynamic topologies and unstable connectivity. Performing a unified “tactical internet”, the mTMR™ Linux-based architecture reveals standard IP interface for data and video applications, together with H.264 video server capability for multicast video dissemination.

Technical Specifications

Connectivity:
• Voice Radio Interface, including:
  - Analog audio interface with PTT and Rcv. Indication.
  - Serial RS-232 asynchronous data interface.
  - Serial RS-232 remote control interface.
  - Power input.
• Data / Video Radio Interface, including:
  - Serial RS-232 data interface, asynchronous and synchronous.
  - Serial RS-232 remote control interface.
  - Power input.
• WAN 10/100BaseT Ethernet interface (Satcom / IP data radio).
• LAN 10/100BaseT Ethernet interface (local PC terminal).
• H-250 Handset interface.

Voice services
• Voice conferencing—CNR network, local handset & remote VoIP users.
• VoIP gateway with SIP server for SIP Soft-Phone support.
• VoIP multicast addressing.
• VAD, silence suppression.
• G.711 a-law, u-law, G.726, GSM Codecs.
• Handset volume control.

Data & Video services
• Multicast, Unicast IP Data & Video routing.
• CNR data controller, supporting standard applications.
• H.264 video server.
• Configuration application.

General
• Voice & Data activity LED indications. WAN & LAN link indications.
• mTMR™ status indication.
• Input power: 11-14Vdc, 450mA (driven through radio interfaces).
• Dimensions: 185x185x32mm (WxDxH)
• Weight: 850 grams
• Ambient Temp: -30⁰C to +55⁰C (operating)
  -40⁰C to +70⁰C (storage)
• Environmental: according to Mil-Std 810F.
• RFI / EMI: according to Mil-Std 461E.

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