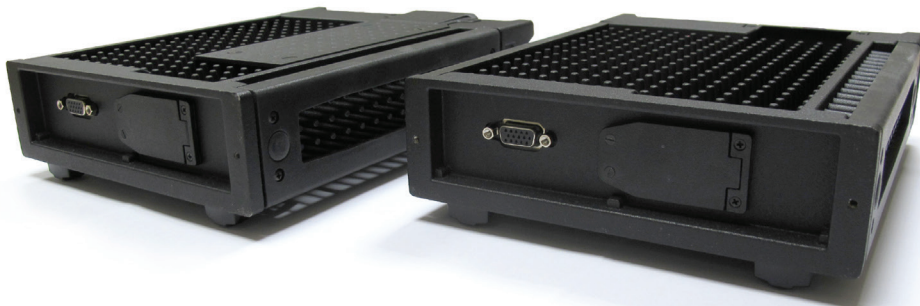


MATE

MULTIPURPOSE ADVANCED
TRANSCIVER EQUIPMENT





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Technical Specifications

Receiver Specifications

- Frequency Range : 136-174 MHz (VHF)
: 380-470 MHz (UHF)
- Sensitivity : ≤ -119 dBm (VHF)
: ≤ -118 dBm (UHF)
- Intermodulation Rejection: ≥ 75 dB
- Audio Distortion : ≤ 5% (rated audio power)
- : ≤ 5% (17dB below rated audio power)
- BER : ≤ 0.01%
- Stand-by Current-Reception (Rx) Current : ≤500 mA, ≤1.2 A

Transmitter Specifications

- Frequency Range : 136-174 MHz (VHF)
: 380-470 MHz (UHF)
- Dual Band Transmission
- Power Range : 10-40 W (VHF)
: 10-30 W (UHF)
- Single Band Transmission Power Range : 10-90 W (VHF)
: 10-70 W (UHF)
- Frequency Accuracy : ≤0.5 ppm
- Modulation Fidelity : ≤3 %
- Transmission (Tx) Current: ≤8.0 A

Transceiver General Properties

- Weight : 2425 g
- Dimensions : 61x 177 x 246 mm
- Operating Temp. Range : -30°C /+60°C
- Storage Temp. Range : -40°C /+85°C
- Power Supply : 13.6VDC ± 20%
- Processor : ARM9
- Operating System : Linux

Standards

- R & TTE Directive
- ETSI EN 300 086-2
- ETSI EN 300 113-2
- ETSI EN 301 489-1,5
- ETSI EN 60950
- MIL-STD-810C/D/E/F/G
- TIA-102.CAAB-D
- TIA-603-D

MATE is the latest and most advanced radio transceiver designed by ASELSAN. Thanks to the capabilities of its hardware and software, it presents a modular and flexible structure. By exploiting this structure, this transceiver can be used as

- Mobile radio transceiver
- Desktop radio transceiver
- Mobile repeater transceiver
- Fixed repeater transceiver
- Telephone interconnection device

MATE's hardware is able to operate in both VHF and UHF bands, to receive and transmit analog, digital clear and digital encrypted signals, to establish different types of connections with different devices.

MATE's software can be modified easily since it has Linux operating system. There are several services running on MATE as a solution to different use scenarios. It is possible to develop new services in addition to the existing services. This device can be used in P25, DMR and SK2 (ASELSAN proprietary protocol) communication systems.

MATE configuration can be changed with basic software or hardware-related modifications such as adding a fan for high transmission power levels or updating its firmware.

MATE configurations and use scenarios can be listed as follows:

Mobile Radio Transceiver: It can be used as a terminal mounted on a vehicle. Tablet Control Unit, Handheld Control Unit, keyboard, mouse, printer, digital camera etc. can be used with this device depending on the scenario. It can also be used in manpack configuration.

Desktop Radio Transceiver: It can be used as a terminal in public safety management centers. Its transmission output power can increase to the levels higher than the mobile radio configuration's transmission power. Tablet Control Unit, Desktop Control Unit, keyboard, mouse, printer, digital camera etc. can be used with this device depending on the scenario.

Mobile Repeater Transceiver: This configuration is used to create local coverage for radio users. Terminals operating in direct mode channels can communicate with each other through this device. It can be mounted on vehicles; therefore, location of the repeater can be easily changed according to the requirements of coverage.

Fixed Repeater Transceiver: This configuration is used in system (network) mode. It is mounted in base stations. It communicates with central switching unit; therefore, it becomes a component of a wide area communication system.

Telephone Interconnection Device: This configuration is used to support telephone calls in non-system (direct) mode.

- SIP/VOIP support
- Works both in simplex and duplex channels
- Plug and play
- Radio-to-telephone call
- Telephone-to-radio call (both individual and group)
- No need for any server or switch

