

DICOM® RF4050

VHF/UHF vehicular radio

- 30 MHz to 512 MHz frequency range
- True MANET network in VHF/UHF
- Simultaneous voice and IP data
- Virtual voice channels
- Multiple waveforms support
- Position reporting system (GPS, Galileo, GLONASS, Beidou)
- AES based COMSEC
- Up to 50 W power output
- Compact and robust design
- Jerk and Run support
- Vehicle Intercom interface
- 10 to 30 VDC power supply
- Mission Modules support
- Up to two internal co-site filters
- Legacy systems compatibility



The RF4050 multiband, multirole VHF/UHF vehicular radio is designed for communication on the tactical level of command of all services.

The RF4050 is intended for installation in all tracked and wheeled vehicles and base stations. The core component of the RF4050 is the RF40 handheld radio. To maintain communications in dismount operations, the system's "jerk-and-run" capability allows the handheld radio to be quickly removed and used separately.

Variety of waveforms

FM/AM - voice modes according to STANAG 4204/4205 support legacy ground-to-ground and ground-to-air communication.

WF40 - full fledged COMSEC-secured MANET-type network for voice and data communication in VHF and UHF with automatic rebroadcasting capability over several hops in only 250 kHz wide radio channel offering up to 270 kbit/s capacity for data.

This modern software defined radio platform is open for further legacy and custom waveform porting.

Mission Module

Expands the radio features according to actual mission needs. Open platform for installation of custom specific devices of different types. E.g., the MM40WR Mission Module offers a second independent broadband radio channel for voice and data transmission in MANET-type network. Available in L-band or S-band frequency configuration allowing data transmissions in dozens of megabits depending on the radio channel bandwidth setup.

GNSS

Built-in GNSS receiver for GPS, Galileo, GLONASS and Beidou systems with automatic despatch of positional reports (PLI) on the background of voice or data communication.

Co-site performance

The transceiver is manufactured with or without a co-site filter (option). Integrated co-site filters make it possible to operate multiple radios simultaneously at one site.

Intercom

The RF4050 provides interface for connection to vehicle intercom systems (e.g. VICM200 Combat).

Technical parameters:

Frequency range	30 MHz to 512 MHz	
Modulation type	FM, AM, CPM	
Transmission power	max. 50 W	
Supply voltage range	10 V to 33 V (MIL-STD-1275E)	
Power Consumption	Transmission RF 50 W	max. 290 W
	Reception	max. 20 W
Channel bandwidth	25 kHz, 250 kHz	
Waveforms	LOS FM/AM (STANAG 4204/4205)	
	WF40 (VHF/UHF MANET waveform)	
Communication encryption	AES	
GNSS receiver	built in (GPS/Galileo/GLONASS/Beidou)	
Data interfaces	Ethernet, USB	
Environmental		
Dimensions	202 mm x 220 mm x 226 mm	
Weight	max. 10 kg	
Operating temperature range	-40 °C to +60 °C	
Environmental specification	MIL-STD-810G	
EMC specification	MIL-STD-461F	

* option

RF4050 Recommended Set of Components

- RF40 handheld radio
- VA40 vehicular amplifier
- Frame - increased mechanical resistance of the radio to mechanical stresses.
- Vehicle antenna
- Handset
- Handset holder
- Cables (Power cable, RF cable (ANT), RF cable (GPS))

This is a recommended configuration of the RF4050 radio. The actual set is composed according to the customer's specification and is defined in the contract.



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