



VRC-611/E

Multi-Band Vehicular Radio Communication System

Benefiting from the state of the art technologies, VRC-611/E a multi-band Software Defined Radio (SDR) is designed and manufactured for establishing radio communication in frequency range of 30~512 MHz. Different communication capabilities, various modulation types, and wide frequency range cause to establish communication with various types of available radios in the frequency range. Due to frequency hopping capability and internal encryption unit with very complicated local ciphering algorithm, VRC-611/E provides a secure and reliable communication for the operator in battlefield. Benefitting from powerful wideband frequency hopping (30~512 MHz) and highly advanced encryption technologies, this radio is highly robust against jammers and deception. There are four selectable power levels (Low, Medium, High, and very high) considered in the radio so that it covers a wide transmission range. In addition, Fixed/Hopping frequency mode, Code/Plain voice and data transmission, SMS sending, Various types of analog/digital modulations, establishing selective/group/broadcast communication, Software upgrading/programming, Hailing/Plain override/Late Entry, GPS, network connection, and remote controlling (via the RS-485/LAN/ISDN) are the other capabilities of the VRC-611/E.

General specifications

Frequency range.....	30~512 MHz
Frequency channel spacing.....	8.33/12.5/25 KHz
Number of preset channels.....	100
Supply.....	23-28 V DC
Antenna type.....	Rod
Modulation type.....	FM,AM,FSK,CPM,QPSK
Vocoder types.....	MELP/CVSD/AMBE
Voice/Data operating modes.....	FIX FREQUENCY (PLAIN/CIPHER) FREQUENCY HOPPING (CIPHER)
Data transmission rate.....	up to 9.6Kbps

TX specifications

Output power.....	AM: 40W (PEP) FM: 500mW, 2W, 5W, 40W
Harmonic rejection.....	50dBc
Distortion.....	AM: less than 7%/FM: less than 5%

RX specifications

Sensitivity.....	AM: -104dBm (10dB SINAD) FM: -113dBm (10dB SINAD)
Distortion.....	AM: less than 7%/FM: less than 5%
Image rejection.....	70dB
IF rejection.....	80dB
Adjacent channel rejection.....	70dB

Physical & Environmental specifications

Dimension (H×W×D).....	280×320×105 mm
Weight.....	less than 14Kg
Operating temperature.....	-25°C ~ +65°C
Storage temperature.....	-40°C ~ +70°C
Environmental standard.....	MIL-STD-810F
EMC standard.....	MIL-STD-461