



**Digital radio relay
for III+ and IV band**

R-460A

Simultaneous operation in the III+ and IV band

Device having software defined modulation methods (SRD)

Digital radio relay R-460A

Digital radio relay R-460A is intended to build high capacity radio lines (High Capacity Line of Sight - HCLOS). The radio relay operates in the III extended frequency band as well as in IV band. It belongs to the latest generation of devices having software defined modulation methods (Software Defined Radio).

It is equipped with advanced algorithms to protect against interferences and information interception. The radio relay R-460A is highly integrated, easily configurable and modular, developed in order to fulfil strict military requirements. The radio relay includes the following module:

- Unit controlling the radio relay R-460A-BBU;
- RFU unit for IV band of R-460A-RFU-IV;
- RFU unit for III+ band of R-460A-RFU-III.

Technical parameters

BASIC FUNCTIONALITIES

Possibility of transmission with the speed rate of up to 400 Mbps in the IV band (two separate frequencies up to 200 Mbps) and transmission with the speed rate of up to 100 Mbps in the III+ band

Cooperation with Switched Beam antenna and MIMO in the IV band. Switched Beam antenna has possibility to switch by sectors, simultaneous operation with 8 directions in band IV.

Frequency hopping under development.

MAIN PARAMETERS – IV BAND

Frequency range	4.4 GHz+5.0 GHz
Frequency tuning	1 MHz
Radio operation mode	FDD
Range with the speed rate of 200 Mbps in one way	30 km
Transmitter power	30 dBm RMS
Number of receivers	2
Number of transmitters	2
Modulation types	QPSK, 16QAM, 64QAM, 256QAM

MAIN PARAMETERS - III BAND

Frequency range	1350-2690 MHz
Frequency tuning	0,125 MHz
Radio operation mode	FDD
Range with the speed rate of 50 Mbps in one way	30 km
Transmitter power	37 dBm RMS
Number of receivers	1
Number of transmitters	1
Modulation types	QPSK, 16QAM, 64QAM, CPFSK

RESISTANCE TO INTERFERENCES

Frequency hopping	Yes - option
Directional antennas	
Selective receiver	

POWER SUPPLY

Power supply of BBU	+27 V (-18,+10[%]) or 230 VAC (external power supply)
Power supply of RFU	+48V (possible range 27-56 [V]) or 230 VAC (external power supply)
Power consumption	< 300W

OTHER TECHNICAL PARAMETERS

Mechanical and - climatic classification	N.7,N.9, N.10-O-II (A and B) Groups – BBU and N.14-O-II(A and B) group - RFU according to NO-06-A101÷108 (consistent with MIL-STD-810G) (multi-use and continuous operation equipment)
Electromagnetic compatibility	NO-06-A200:2012 (consistent with MIL-STD-461F) (KCE-02, KRE-02, KCE-03, KCS-01, KCS-06, KCS-07, KCS-08, KRS-02, KCS-03)
Operating temperature	from -30°C to +60°C
Automatic and manual power control in range	20 dB with step 1 dB
Pattern accuracy	+/-0,1 ppm
Data transfer between BBU and RFU	fiber
Controlling of external devices (e.g. rotor)	RS-422
Management	WWW, SAMI, SNMPv3