

The radio-relay station R-427 is designed for the organization of radio-relay communication lines (networks), providing connection lines of mobile communication centers to the fixed and mobile communication grid of the Armed Forces, to the public network.



Basic technical characteristics of the radio-relay station R-427

№	Basic technical characteristics and parameters	Description of characteristics and parameters
1	Operation frequency range, MHz	1362-1398, 1427-1463 MHz
2	Construction design	Transmitter-receiver, drop cable, passive antenna assembly
3	Transmitter-receiver versions	«B» – transmission 1427-1463 MHz, receive 1362-1398 MHz «N» – transition 1362-1398 MHz, receive 1427-1463 MHz
4	Data transmission rate	0.7~43.0Mbit/s (with a capability of assignment of up to 4 E1/T1 and/ or Ethernet)
5	Interface ports quantity	E1/T1 – 4pcs. Ethernet -4pcs.
6	Duplex diversion	65.0 MHz (frequency division duplex)
7	Frequency spectrum pitch	0.01 MHz
8	Types of used antennas	Parabolic grid antenna Ø 0.6m Parabolic grid antenna Ø0.9m Shrouded antenna «wave channel», length - 1.2m
9	Antenna mass-dimensional characteristics, max	Parabolic grid antenna Ø 0.6m – 6.0kg Parabolic grid antenna Ø0.9m – 9.5kg Shrouded antenna «wave channel» - 3.0kg, length - 1.2m
10	Antenna gain factor (mid-range)	Parabolic grid antenna Ø 0.6m -16.1dBi Parabolic grid antenna Ø0.9m – 19.6dBi «Wave channel» antenna – 16.1dBi
11	Antennas beam width (antenna lobe at ½ power)	Parabolic grid antenna Ø 0.6m – 24.3° Parabolic grid antenna Ø0.9m – 16.2° Shrouded antenna «wave channel» - 26.0°
12	Wave resistance of antenna-feeder path (impedance)	50 Ohm
13	Antennas mount	Multi-purpose mount, tubular mast in diameter: 76 ~ 120mm (parabolic antenna Ø 0.6m); 76 ~ 133mm (parabolic antenna Ø 0.8m); 76 ~ 133mm (Shrouded antenna «wave channel»).
14	Bandwidth value, MHz	1.0/ 1.75/ 2.0/ 3.5/ 4.5/ 5.0/ 7.0/ 8.0
15	Pattern (specified) interval length upon condition of direct visibility, max, km	60 – at the rate of up to 2Mbit/s 45 - at the rate of up to 4Mbit/s 35 - at the rate of up to 8Mbit/s 25 - at the rate of up to 16Mbit/s 20 - at the rate of up to 32Mbit/s 15 - at the rate of up to 43Mbit/s



16	Types of modulation signals	4QAM/ 16QAM/ 32 QAM/ 64QAM/ 128QAM
17	Automatic function of modulation and encoding type adjustment	Available
18	Transmitter output power for modulation signal different types, max.	4QAM - +36dBm; 16QAM - +35dBm; 32 QAM- +34dBm; 64QAM- +32dBm; 128QAM- +32dBm.
19	Function of transmitter output power automatic adjustment	Available
20	Types of management	1. Using a common web-browser («Opera», «Chrome», etc.), connection to the Ethernet port via LAN-cable; 2. Using Telnet terminal, connection to Ethernet port via LAN-cable; 3. Using NMS or SNMP terminal, connection to the Ethernet port via LAN-cable; 4. Using embedded Windows-XP Software «HyperTerminal», connection to RS-232 COM port.
21	Management interface when using Web-browser	Embedded graphical interface with a capability of monitoring and data recording, logging, realization of management schedules running, etc.
22	Cooperating station manageability	A possibility of the corresponding station full management from any interval side, including WS-s simultaneous frequency changing.
23	Lead cable length, m	Up to 40m (coaxial cable)
24	Temperature range of external equipment, °C	-40 ~ +60
25	Temperature range of internal equipment, °C	-10 ~ +60
26	Receiver-transmitter mass-dimensional data	Weight, max. – 5.2kg Form-factor - 19", 2U
27	Electrical power supply, V	-40.5 ~ -57
28	Power consumption, max.	For «1+0» configuration – 45W For «1+1» configuration – 90W
29	Interface connectors and control layout	On the front panel
30	Order wire communication	Digital channel, 64kBit/s
31	Order wire communication terminal	Pin handset, Ø3.5mm
32	Correspondent calling via the order wire channel	By pressing a call button on the front panel of the receiver-transmitter with audible warning

