

Y-Trunk



5...8 GHz (FULL IDU)
OPERATES IN ALL WEATHER CONDITIONS
24/7 SERVICE ACCESS
INCREASED FADE RESISTANCE
TWO RECEIVERS IN EACH TRUNK
UP TO 1.8 Gbps CAPACITY RESERVE / AGGREGATION UP TO 4 TRUNKS
INTERFACES
4 × GE + 24 × E1 + 4 × STM-1
TRANSPARENT TRANSMISSION L2 SWITCHING

Works even in extreme climatic conditions

The full indoor equipment creates multi-channel (up to 4 and more trunks) radio relay links with increased reliability and stability in regions with harsh weather conditions. The equipment is located inside heated rooms, providing comfortable conditions for equipment maintenance.

Maximum reliability and stability

Y-Trunk was developed by experienced specialists to create multi-channel radio links with maximum reliability and stability for the transfer of hybrid traffic up to 450 Mbps in each trunk.

Maximum radio link power

Additional power and low-noise amplifiers are used, allowing to get up to 8 dB power gain. The trunk multiplexer makes it possible to combine several barrels with minimal losses (from 3 dB) for an efficient work on one waveguide.

Reliable and secure network monitoring

The control and service channel of the user are always transmitted to QPSK modulation and have higher power compared to the payload transfer channel. To protect local and network parameters against accidental or unauthorized access, Y-Trunk uses a hierarchical password system.

SPECIFICATIONS

Band name	5	6	6.5	7	8
Frequencies, GHz	4.4...5.0	5.925...6.425	6.425...7.11	7.25...7.55	7.9...8.4
ITU-R recommendation	F.746	F.383	F.384	F.385	F.386
Duplex spacing, MHz	312	266	340	161	266
Frequency tuning	programmed, in an RF filter band with 250 kHz step				
System configuration	trunk redundancy: 1 + 0 / 1 + 1 / 2 + 0 / 3 + 1 / 2 × (1 + 1) / 4 + 0 trunk configuration: ACCP ¹ / ACAP ² / CCDP ³ (XPIC) ⁴				
Radio channel protection	FD — frequency diversity; SD — spatial diversity; SDR — spatial diversity reception per trunk				
Traffic redundancy	full — in accordance with system configuration; partial (PRT) — protected traffic is transmitted according to N+1 scheme, unprotected traffic — to N+0 by backup trunks				
Interface	up to 4 × Gigabit Ethernet (SFP), 4 × STM-1 (SFP), 24 × E1, 4 × Fast Ethernet				
Service channels	2 × Fast Ethernet (2 × 250 / 1 × 500 kbps), service line (FXS)				
Network monitoring and control	Master M special software, web utility Fluto, integration with NMS/OSS (option)				
Control protocol (interface)	NP — native protocol (Fast Ethernet, USB), SNMPv2c (Ethernet)				

Maximum output power, dBm

Bandwidth, MHz	28 / 40 / 56
16QAM	+35
32QAM	+34
64QAM	+33
128QAM	+32
256QAM	+31
512QAM	+30
1024QAM	+30

Power adjustment range 0...-25 dB, 1 dB step, manual/ATPC

Capacity, Mbps

Bandwidth, MHz	28	40	56
16QAM	89.6	128.0	156.8
32QAM	112.0	160.0	224.0
64QAM	134.4	192.0	268.8
128QAM	156.8	224.0	313.6
256QAM	179.2	256.0	358.4
512QAM	201.6	288.0	403.2
1024QAM	224.0	320.0	448.0

Rx sensitivity at BER = 10⁻⁶, dBm

Band name	5			6...8	
Channel bandwidth, MHz	28	40	56	28	56
16QAM	-83	-81.5	-80	-83	-80
32QAM	-80	-78.5	-77	-80	-77
64QAM	-77	-75.5	-74	-77	-74
128QAM	-74	-72.5	-71	-74	-71
256QAM	-71	-69.5	-68	-71	-68
512QAM	-68	-66.5	-65	-68	-65
1024QAM	-65	-63.5	-62	-65	-62
AGC range, dB					≥ 50

Other

	Transceiver path	Cooling system	Access unit
Power consumption, W	90 (1 trunk)	35 (1...4 trunks)	30
Power voltage, V	-39...-72		
Operating temperature, °C	+5...+45		
Dimensions, mm	designed for 19", 42U rack (2020 × 620 × 600)		

¹ ACCP (Adjacent Channel Co-Polarization). — ² ACAP (Adjacent Channel Alternate Polarization). — ³ CCDP (Co-Channel Dual Polarization). — ⁴ XPIC (Cross Polarization Interference Cancellation).