AL Wireless

10 Gbps
Full duplex

ZENITH X

Models
➤ ZENITH X ST All-outdoor Single Transceiver Radio
➤ ZENITH X DT All-outdoor Dual Transceiver Radio

Transmission capacity
➤ Single unit ZENITH X ST up to 2 Gbps FDD
➤ Single unit ZENITH X DT up to 4 Gbps FDD
➤ Two units ZENITH X DT up to 8 Gbps FDD
➤ Traffic compression for up to 25% capacity increase

Main features
➤ Frequency bands 6, 11, 13, 15, 18, 23, 38 GHz
➤ High output power up to +27 dBm, ATPC
➤ Modulation scheme QPSK to 4096 QAM, Hitless ACM
➤ Ultra-wide channel bandwidth up to 240 MHz
➤ Two 10GbE interfaces, CPRI capable
➤ Single or Dual antenna ports
➤ PoE and Direct DC input

Highlights
➤ Up to quad carriers supported in a single compact ODU
➤ Two frequency bands option in a single ODU
➤ Integrated OMT, coupler and dual waveguide radio options
➤ Customer-replaceable diplexers for maximum cost savings/flexibility
➤ High Band or Low Band operation supported by a single ODU
➤ Radio Link Aggregation
➤ XPIC operations
➤ Optional AES encryption
➤ Advanced Ethernet features (SyncE, IEEE1588v2, QinQ, Header and payload compression...)
➤ Enhanced range and modulation performance using built-in advanced pre-distortion
➤ Overcurrent and overvoltage protection via Protected Terminal Box option

ZENITH X

General							
Operating frequency bands	6 GHz	11 GHz	13 GHz	15 GHz	18 GHz	23 GHz	38 GHz
TX/RX spacing	160/252.04/340 MHz	490/500/530 MHz	225/266 MHz	315/420/475/490 /640/644/728 MHz	1010/1560 MHz	1008/1200/1232 MHz	500/700/1260 MHz
Tx Power max.	+27 dBm	+26 dBm	+26 dBm	+26 dBm	+25 dBm	+24 dBm	+20 dBm
RSL @ BER = 10-6, QPSK | 256 | 4096 QAM 28MHz RF channel	-86.5 | -66 | -54 dBm	-86 | -65.5 | -53.5 dBm	-86 | -65.5 | -53.5 dBm	-85.5 | -65 | -53 dBm	-85.5 | -65 | -53 dBm	-85.5 | -65 | -53 dBm	-83.5 | -63 | -51 dBm
Throughput	up to 1.9 Gbps full-duplex with balanced capacity mode (Single ZENITH ST @ 224MHz)						
	up to 3.8 Gbps full-duplex with balanced capacity mode (Single ZENITH DT @ 224MHz)						
	up to 7.6 Gbps full-duplex (Two units ZENITH DT in 2x(2+0 XPIC) configuration) with balanced capacity mode @ 224MHz						
Transceiver	ZENITH ST - Single transceiver; ZENITH DT – Dual transceiver						
Channel Spacing	7 – 224 MHz/240 MHz						
Modulation	QPSK – 4096 QAM						
Frequency stability	< 10 ppm						
Power Control	ATPC, RTPC						
ACM	Hitless ACM						
System configurations	1+0, 1+0 SD, 1+0 FD, 2+0 SD, 2 x (1+0), 2+0 ACAP/ACCP, 4+0 ACAP/ACCP, 1+1, 2+2, 2 x (2+0 XPIC), 2x2 MIMO, 4x4 MIMO						
Other features	Sub-Carrier operations (Zenith X ST Dual carrier, ZENITH X DT Quad Stacked Sub-Carriers), Integrated XPIC (ZENITH X DT), Radio Link Aggregation, Advanced Digital Pre-distortion, Header and payload compression for further 25% capacity increase, Customer-replaceable diplexers						

Interfaces	
ZENITH X ST	1× GEth RJ45 (PoE); 1× 1/2.5 Gbps SFP or 2× 10 Gbps SFP+ ports
ZENITH X DT	1× GEth RJ45 (PoE); 1× 1 Gbps SFP or 1× 1 Gbps SFP + 2× 10 Gbps SFP+ ports, optionally CPRI capable

Management	
	Web interface, SNMPv2/v3, SSH, Telnet, USB/WiFi service access

Ethernet	
	MTU 16 000B, SyncE, PTP1588v2, 802.1q (VLAN tagging), 802.1p (priority queuing), 802.1ad (Q-in-Q), G.8031, G.8032, G.8131, G.8132, Connectivity Fault Management (CFM) per IEEE 802.1ag, Ethernet OAM per ITU-T Y.1731, Ethernet in the First Mile OAM per IEEE 802.3ah, Ethernet Local Management Interface (E-LMI) per MEF (Metro Ethernet Forum), Syslog, Radius

Antennas	
Size	0.3 m / 0.6 m / 0.9 m / 1.2 m or larger diameters, possible waveguide connection
Interface	Standard RBWN/CTT
OMT/Coupler	Built-in replaceable or external
Class	ETSI Class 2/3, FCC Part101A/B
Polarization	Single or Dual polarization

Power supply and cabling	
Power supply	36 – 60 VDC, PoE or Direct, auto polarity
Power Consumption	Frequency/Configuration dependent, up to 75W (ST) / up to 125W (DT)
ODU connection	S-STP/S-FTP Cat. 7 cable up to 100 m length, optical fiber
Other	Advanced Overcurrent and Overvoltage protection via Protected Terminal Box

Operating conditions	
Weather	IP67, All Weather
ODU	−33 to +55 °C
Protected terminal box	−25 to +55 °C

Dimensions and weight	
ODU	ZENITH X ST 22.6 x 22.1 x 11.6 cm, 6.1 kg; ZENITH X DT 23.9 x 23.2 x 12.5 cm, 9.2 kg
Protected Terminal Box	14.7 x 4.4 x 16.5 cm, 0.5 kg