AL Wireless

360 Mbps
full duplex

ZENITH R
Low cost freeband solution

Main features
→ Frequency bands 17 and 24 GHz
→ Output power up to +5 / +10 dBm
→ Modulation scheme QPSK to 256 QAM
→ Transmission capacity up to 360 Mbps
   full duplex
→ Channel bandwidth 3.5 − 56 MHz
→ 1× 1Gbps RJ45 and 1× 1Gbps SFP interface
→ Adaptive coding and modulation (ACM)
→ Automatic transmit power control (ATPC)
→ Build-in spectrum analyzer
→ Automatic polarization detection
→ PoE 802.3at support
→ WiFi and USB service interface, mobile app
→ Compact All Outdoor design

Ethernet features
→ MTU up to 10240 Bytes
→ Full support of VLANs including QinQ
→ QoS support, 4 queues
→ RSTP support
→ Advanced RMON statistic and counters
→ Packet Fragmentation to minimize jitter
→ Low latency

Management system
→ HTTP/S, Telnet, SSL management
→ In-band management
→ SNMPv3 protocol, SNMP traps

Typical applications
→ Mobile RAN networks:
   Backhaul for access sites with 3/4G base-stations
→ Rural and urban xDSL networks:
   High capacity connections to micro exchanges
→ Fixed line access networks:
   Broadband connections for enterprise customers
→ Internet service providers:
   Backbones and last miles

→ Electric Smart Grid networks:
   Sub-station interconnect
→ Public safety and security networks:
   Tetra radio backhaul and border sites access
→ Oil and gas networks:
   High capacity connections to field
   and pipeline infrastructure

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General				
Operating frequency range (GHz)	17.100 - 17.300 | 24.000 - 24.250			
TX/RX spacing (MHz)	Selectable, min 60 MHz			
Channel spacing (MHz)	3.5 – 56 MHz			
Modulation	QPSK/16/32/64/128/256 QAM			
Capacity full duplex (Mbps)	28 MHz/QPSK	28 MHz/256 QAM	56 MHz/QPSK	56 MHz/256 QAM
	37	170	86	360
Frequency stability	< 10 ppm			
Forward error correction	LDPC			
System configurations	1+0			

Radio				
RX sensitivity BER = 10^{-6} (dBm)	28 MHz/QPSK	28 MHz/256 QAM	56 MHz/QPSK	56MHz/256 QAM
	-90 | -89	-69 | -68	-85 | -84	-64 | -63
TX power range (dBm)*	-25 to +5 | -30 to +10	-25 to +5 | -30 to +10	-25 to +5 | -30 to +10	-25 to +5 | -30 to +10
ATPC	Yes			
ACM	Yes			

Interfaces
1× 1Gbps (10/100/1000) IEEE 802.3ac 1000BASE-T, 1× 1000Base-SX / 1000Base-LX SFP, user replaceable

Management
WebGUI, Telnet, SSH, USB, WiFi, SNMPv1, SNMPv2, SNMPv3

Ethernet
VLAN, QinQ, QoS, MTU 10240 B

Antennas	
UNI1 - 0.35 m gain (dBi)	32.5 | 35.5
UNI2 - 0.65 m gain (dBi)	38 | 41
UNI3 - 0.9 m gain (dBi)	41.5 | 44
UNI4 - 1.2 m gain (dBi)	43.5 | 46
Class	RPE Class 2 or Class 3
Polarization	Dual polarization

Power supply and cabling	
Range (V)	PoE 40 – 60 VDC (IEEE 802.3at), 20 – 60 VDC direct
Power consumption (W)	25
ODU connection	S-STP/S-FTP Cat. 7 cable up to 100 m length, optical fiber

Operating temperature	
ODU (°C)	−30 up to +55
Protected terminal box (°C)	−25 up to +55

ODU / Terminal box dimensions and weight	
Width × Height × Depth (cm)	24.4 × 24.4 × 15.7 / 14.7 × 16.3 × 4.4
Weight (kg)	2.5 / 0.5

* EIRP power limitation may be applied in some countries   *For more technical information please see www.al-wireless.com.*

AL Wireless a.s.
Sokolská 1605/66, Nové Město
120 00 Praha 2
Czech Republic

phone: +420 228 226 500
e-mail: info@al-wireless.com
web: www.al-wireless.com