RADWIN Alpha Model

Point-to-Point Radio - Data Sheet (RW2000/ODU/Alpha/F54/UNI/EMB/250M)

RW-2954-63B0

Product Description

RW-2954-63B0 is a carrier-class radio that belongs to the RADWIN 2000 Alpha Series and supports 4.9 to 6 GHz frequency range.

The Radio complies with Universal, FCC/IC, MII, UBR, ETSI & ETSI/GER bands with a factory default of 5.4 GHz Universal.

RW-2954-63B0 delivers up to 250 Mbps throughput.

The unit includes an embedded antenna and connectors (2 x SMA) for the high gain slide-on TurboGain antenna. The connectors can be used for 3rd party external antenna.

Product Highlights

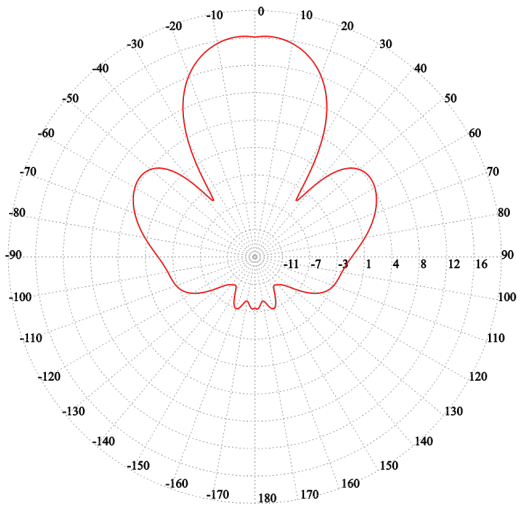
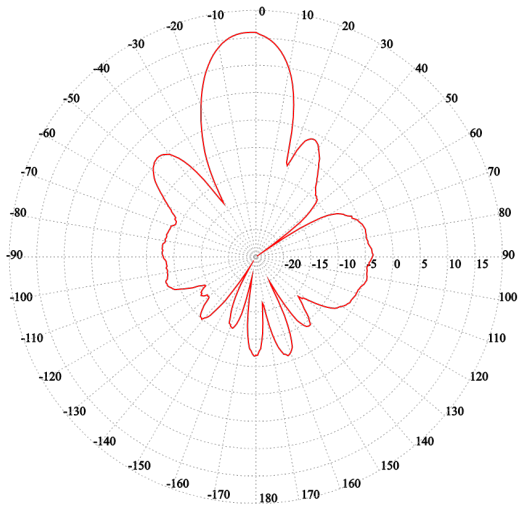
- Up to 250 Mbps net aggregated throughput
- Telco-grade, extremely robust in harsh conditions
- Supports intra-site synchronization to maximize capacity
- Configurable asymmetric throughput
- Advanced OFDM & MIMO technologies for operation in nLOS/NLOS and dense radio environments
- Multiple Antenna configuration: 16dBi embedded antenna, 22dBi antenna when using the TurboGain antenna, and has 2 external connectors for attaching external antenna
- IP-67
- Support AES 256 encryption over the air (from release 5.1.30)

Product Specifications:

Configuration				
Architecture	Outdoor Unit with an embedded antenna and connectos for external antenna (2 x SMA)			
PoE to ODU Interface	Outdoor CAT-5e; Maximum cable length: 100m for 10/100BaseT and 75m for 1000BaseT			
Radio				
Max Capacity	250 Mbps net aggregate throughput			
Range	Up to 120 km / 75 miles *			
Channel Bandwidth	Configurable: 10, 20, 40, 80 MHz (for the default band); Dynamic Channel BW selection (20/40/80 MHz)			
Modulation	MIMO-OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)			
Adaptive Modulation & Coding	Supported			
Automatic Channel Selection	Supported upon power up			
DFS	Supported (ETSI, ETSI/GER)			
Diversity	Supported			
Spectrum Viewer	Supported			
Max Tx Power	24 dBm per chain			
Duplex Technology	TDD			
Error Correction	FEC k = 1/2, 2/3, 3/4, 5/6			
Encryption	AES 128			
Support Indoor units	RADWIN PoE devices (9921-400X)			
Uplink / Downlink Allocation	Configurable: Symmetric or Asymmetric			
QoS	Packet classification to 4 priority queues according to 802.1P or Diffserv			
VLAN Support	802.1Q, QinQ, 4094 VLANs			
TDD Intra Site Synchronization	Supported			
TDD Inter Site Synchronization	Supported through common GPS receiver per site			
ODU Management	IPv4/IPv6 dual-stack; SNMPv1, SNMPv3; HTTP/HTTPS using web browser			
Option 82	Supported			
RADIUS Authorization	Supported			
RADIUS User authentication	Supported			
Syslog	Supported			
Supported Bands				
Band	**CBW 20MHz [GHz]**	**CBW 40MHz [GHz]**	**CBW 80MHz [GHz]**	**Radio Compliance**
5.4 GHz Universal (default)	5.465-5.730	5.455-5.740	5.455-5.760	Universal
5.8 GHz FCC/IC	5.730-5.845	5.730-5.845	5.730-5.845	FCC 47CFR Part 15.407; ISED RSS-247
4.9 GHz Universal	4.900-4.995	4.900-4.995	4.900-4.995	Universal
6.0 GHz Universal	5.690-6.060	5.680-6.070	5.680-6.090	Universal
5.9 GHz Universal	5.720-5.960	5.710-5.970	5.710-5.990	Universal
5.8 GHz Universal	5.725-5.850	5.725-5.850	5.725-5.850	Universal
5.1 GHz Universal	5.140-5.345	5.130-5.355	5.130-5.375	Universal
5.8 GHz MII	5.725-5.850	5.725-5.850	5.725-5.850	CMIIT RTA
5.1 GHz UBR	5.125-5.880	5.125-5.880	5.125-5.880	Universal
5.4 GHz ETSI	5.470-5.710	5.490-5.690	5.490-5.650	ETSI EN 301 893
5.8 GHz ETSI	5.735-5.865	-	-	ETSI EN 302 502
5.7 GHz ETSI/GER	5.735-5.865	5.735-5.865	5.735-5.865	ETSI EN 302 502; ECC Recommendation (06)04
Mechanical				
ODU Dimensions	18.2(w) x 18.2(h) x 6.0(d) cm			
ODU Weight	0.5 kg / 1.10 lbs			
Power				
Power Feeding	Power provided over ODU-IDU cable. Note: DC POE RW-9921-2059 is required in case of external antenna and floating ground DC feed			
Power Consumption	<13W			
Environmental				
Operating Temperatures	-35°C to 60°C / -31°F to 140°F			
Humidity	100% condensing, IP66			
Safety				
US/CAN (cTUVus)	UL 60950-1, UL 60950-22, CAN/CSA C22.2 60950-1, CAN/CSA C22.2 60950-22			
CE/IEC	EN/IEC 60950-1, EN/IEC 60950-22			
EMC				
FCC	47 CFR, Part15, Subpart B, Class B			
ETSI	EN 301 489-1, EN 301 489-4, EN 301 489-17			
CAN/CSA-CEI/IEC	CISPR 22-2010 Class B			

Integrated Antenna	
Gain	16 dBi
VSWR	1.7:1
3 dB Azimuth Beamwidth	17 Deg. (typ)
Polarization	Dual Linear (Vertical and Horizontal)
Sidelobes Level	-12 dB(typ)
Cross Polarization	-30dB (typ)
F/B Ratio	-25 dB
Port To Port Isolation	35 dB (typ)
Lightning Protection	DC Grounded

Antenna Pattern

Elevation @ 5.6GHz	Azimuth @ 5.6GHz
	

Ordering Info

Part Number: RW-2954-63B0

Description: RADWIN Alpha ODU, with an embedded antenna and connectorized for external antenna (2 x SMA), supporting multi frequency bands at 5.x GHz, factory default 5.4 GHz Universal.

* May be limited by regulation in the specific band being used

Datasheet information can be changed by manufacturer without prior notice

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