

RADWIN Alpha Model

Point-to-Point Radio - Data Sheet (RW2000/ODU/Alpha/F54/UNI/INT/500M)



RW-2954-6HC5

Product Description

RW-2954-6HC5 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, UBR, ETSI, ETSI/GER & FCC/IC bands with a factory default of 5.4 GHz Universal.

RW-2954-6HC5 delivers up to 500 Mbps throughput.

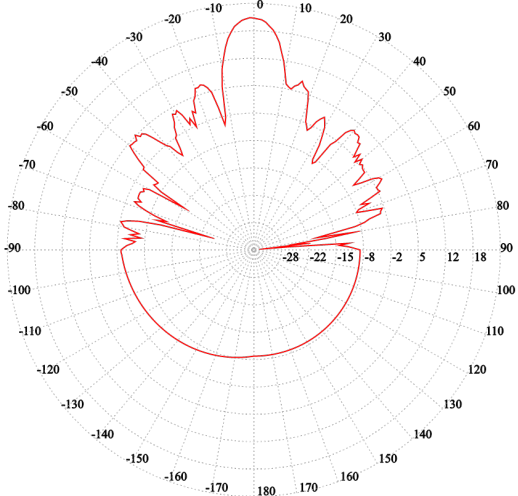
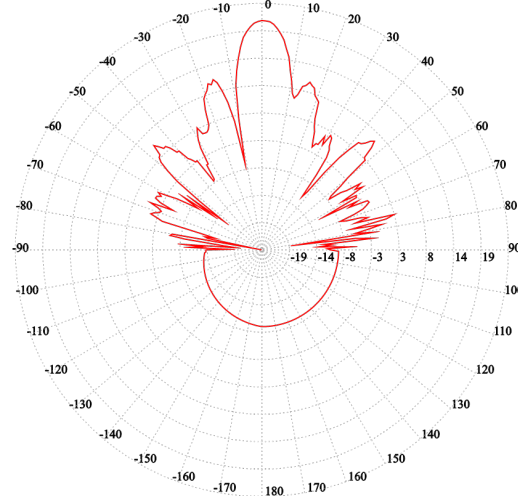
The unit includes an integrated antenna.

Product Highlights

- Up to 500 Mbps net aggregated throughput
- Telco-grade, extremely robust in harsh conditions
- Built-in GPS for intra and inter site TDD synchronization
- Configurable asymmetric throughput
- Advanced OFDM & MIMO technologies for operation in nLOS/NLOS and dense radio environments
- Integrated 22dBi antenna
- IP-67
- Can operate as SU PRO
- Support AES 256 encryption over the air (from release 5.1.30)

Product Specifications:

Configuration					
Architecture	Outdoor Unit with an integrated antenna				
PoE to ODU Interface	Outdoor CAT-5e; Maximum cable length: 100m for 10/100BaseT and 75m for 1000BaseT				
Radio					
Max Capacity	500 Mbps net aggregate throughput (up to 250 Mbps per direction)				
Range	Up to 40 km / 25 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	26 dBm per chain				
Duplex Technology	TDD				
Error Correction	FEC k = 1/2, 2/3, 3/4, 5/6				
Encryption	AES 256				
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 via built-in GPS receiver				
TDD Inter Site Synchronization	Supported via built-in GPS receiver				
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				
Dying gasp	**Supported (PoE voltage must be >= 55v)				
Supported Bands					
Band	CBW 10MHz [GHz]	CBW 20MHz [GHz]	CBW 40MHz [GHz]	CBW 80MHz [GHz]	Radio Compliance
4.9 GHz Universal	4.900-4.995	4.900-4.995	4.900-4.995	4.900-4.995	Universal
5.1 GHz UBR	5.125-5.880	5.125-5.880	5.125-5.880	5.125-5.880	Universal
5.1 GHz Universal	5.145-5.340	5.140-5.345	5.130-5.355	5.130-5.375	Universal
5.4 GHz ETSI	5.475-5.705	5.470-5.710	5.490-5.690	5.490-5.650	ETSI EN 301 893
5.4 GHz Universal (default)	5.470-5.725	5.465-5.730	5.455-5.740	5.455-5.760	Universal
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
5.8 GHz ETSI	-	5.735-5.865	-	-	ETSI EN 302 502
5.8 GHz FCC/IC	5.730-5.845	5.730-5.845	5.730-5.845	5.730-5.845	FCC 47CFR Part 15.407; ISSED RSS-247
5.8 GHz Universal	5.725-5.850	5.725-5.850	5.725-5.850	5.725-5.850	Universal
5.9 GHz Universal	5.725-5.955	5.720-5.960	5.710-5.970	5.710-5.990	Universal
6.0 GHz Universal	5.695-6.055	5.690-6.060	5.680-6.070	5.680-6.090	Universal
Mechanical					
ODU Dimensions	32.5(w) x 32.5(h) x 6.7(d) cm				
ODU Weight	2 kg / 4.41 lbs				
Mounting Kit	Included				
Power					
Power Feeding	Power provided over ODU-IDU cable				
Power Consumption	<13W				
Network Device					
AC POE	RW-9921-400x				
DC POE	RW-9921-2069				
Package Content					
Package	Radio unit with integrated antenna, pole/wall mounting kit, IP67 gland for POE port				
Environmental					
Operating Temperatures	-35°C to 60°C / -31°F to 140°F				
Humidity	100% condensing, IP67 (totally protected against dust and against immersion in water up to 1m)				
MTBF	4,075,000 hours (Telcordia SR332 @25°C)				
Wind Resistance operational	180Km/h				
Safety					
EU/Intl	EN/IEC 62368-1, EN/IEC 60950-22				
USA	cTUVus: UL 62368-1:2014, UL 60950-22				
EMC					
FCC	FCC 47 CFR, Part15, Subpart B, Class B				
ETSI	ETSI EN 301 489-1, ETSI EN 301 489-4, ETSI 301 489-17				
Canada	ICES-003, CISPR 32, Class B				
AS/NZS	CISPR 32, Class B				

Integrated Antenna	
Gain	21 dBi
Detailed Gain	4.900: 19.0dBi 4.950 - 5.050GHz: 18.0dBi 5.100 - 5.500GHz: 20.0dBi 5.550 - 5.800GHz: 22.0dBi 5.850 - 5.950GHz: 21.0dBi 6.000: 20.0dBi
VSWR	2.0 : 1
3 dB Azimuth Beamwidth	10 Deg. (Typ)
3 dB Elevation Beamwidth	Deg. (Typ)
Polarization	Dual Linear (Vertical and Horizontal)
Sidelobes Level	-12 dB(typ)
Cross Polarization	-25dB (typ)
F/B Ratio	-25 dB
Port To Port Isolation	30 dB (typ)
Lightning Protection	DC Grounded
Antenna Pattern	
Elevation @ 5.4GHz	Azimuth @ 5.4GHz
	

Ordering Info
Part Number: RW-2954-6HC5
Description: RADWIN Alpha ODU, with an integrated antenna, 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