#### **RADWIN 2000 Alpha Series**

Point-to-Point Radio - Data Sheet (RW2000/ODU/Alpha/F54/UNI/INT/200M)



RW-2954-6HB0

### **Product Description**

RW-2954-6HB0 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 bands with a factory default of 5.4 GHz Universal.

RW-2954-6HB0 delivers up to 200 Mbps throughput.

The unit includes an integrated 22dBi antenna.

## **Product Highlights**

- Up to 200 Mbps net aggregated throughput
- Telco-grade, extremely robust in harsh conditions
- Supports intra-site synchronization to maximize capacity (via future SW upgrade)
- Configurable asymmetric throughput
- Advanced OFDM & MIMO technologies for operation in nLOS/NLOS and dense radio environments
- Integrated 22dBi antenna.



# **Product Specifications:**

Configuration						
Architecture	Outdoor Unit with an integrated antenna					
PoE to ODU Interface				r 10/100BaseT an	d 75m for 1000BaseT	
Radio				,		
Max Capacity	200 Mbps net aggregate throughput					
Range	Up to 40 km / 25 miles					
Channel Bandwidth	Configurable: 10, 20, 40, 80 MHz (for the default band)					
Modulation	MIMO-OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)					
Adaptive Modulation & Coding	Supported					
Automatic Channel Selection	Supported upon power up					
DFS	Not Supported					
Diversity	Supported					
Spectrum Viewer	Supported					
Max Tx Power	26 dBm					
Duplex Technology	TDD					
Error Correction	FEC k = 1/2, 2/3, 3/4, 5/6					
Encryption	AES 128					
Support Indoor units	RADWIN PoE devices (9921-102X)					
Uplink / Downlink Allocation	Configurable: S	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	Future support	by software upgr	ade			
TDD Inter Site Synchronization		, 10		(Future support b	by software upgrade)	
Supported Bands	1 11		'		, ,	
Band	CBW 10MHz [GHz]	CBW 20MHz [GHz]	CBW 40MHz [GHz]	CBW 80MHz [GHz]	Radio Compliance	
5.4 GHz Universal (default)	5.470-5.725	5.465-5.730	5.455-5.740	5.455-5.760	Universal	
4.9 GHz Universal	4.900-4.995	4.900-4.995	4.900-4.995	4.900-4.995	Universal	
6.0 GHz Universal	5.695-6.055	5.690-6.060	5.680-6.070	5.680-6.090	Universal	
5.9 GHz Universal	5.725-5.955	5.720-5.960	5.710-5.970	5.710-5.990	Universal	
5.9 GHz Universal	5.725-5.850					
		1 5.725-5.850	5.725-5.850	5.725-5.850	Universal	
5.1 GHz Universal		5.725-5.850 5.140-5.345	5.725-5.850 5.130-5.355	5.725-5.850 5.130-5.375	Universal	
5.1 GHz Universal  Mechanical	5.145-5.340		5.725-5.850 5.130-5.355	5.725-5.850 5.130-5.375		
Mechanical	5.145-5.340	5.140-5.345				
Mechanical ODU Dimensions	5.145-5.340 32.5(w) x 32.5(	5.140-5.345				
Mechanical	5.145-5.340	5.140-5.345				
Mechanical ODU Dimensions ODU Weight Power	5.145-5.340 32.5(w) x 32.5( 2 kg / 4.41 lbs	5.140-5.345 h) x 6.4(d) cm	5.130-5.355			
Mechanical ODU Dimensions ODU Weight Power Power Feeding	5.145-5.340 32.5(w) x 32.5( 2 kg / 4.41 lbs	5.140-5.345	5.130-5.355			
Mechanical  ODU Dimensions  ODU Weight  Power  Power Feeding  Power Consumption	32.5(w) x 32.5( 2 kg / 4.41 lbs	5.140-5.345 h) x 6.4(d) cm	5.130-5.355			
Mechanical  ODU Dimensions  ODU Weight  Power  Power Feeding  Power Consumption  Environmental	32.5(w) x 32.5( 2 kg / 4.41 lbs Power provided	5.140-5.345 h) x 6.4(d) cm d over ODU-IDU c	5.130-5.355			
Mechanical  ODU Dimensions  ODU Weight  Power  Power Feeding  Power Consumption  Environmental  Operating Temperatures	32.5(w) x 32.5( 2 kg / 4.41 lbs Power provided <13W	5.140-5.345 h) x 6.4(d) cm d over ODU-IDU c	5.130-5.355 able	5.130-5.375	Universal	
Mechanical  ODU Dimensions  ODU Weight  Power  Power Feeding  Power Consumption  Environmental  Operating Temperatures  Humidity	32.5(w) x 32.5( 2 kg / 4.41 lbs Power provided <13W	5.140-5.345 h) x 6.4(d) cm d over ODU-IDU c	5.130-5.355 able	5.130-5.375		
Mechanical  ODU Dimensions  ODU Weight  Power  Power Feeding  Power Consumption  Environmental  Operating Temperatures  Humidity  Safety	32.5(w) x 32.5( 2 kg / 4.41 lbs Power provided <13W  -35°C to 60°C / 100% condensi	5.140-5.345  h) x 6.4(d) cm  d over ODU-IDU c  -31°F to 140°F ng, IP67 (totally p	able	5.130-5.375	Universal  mmersion in water up to 1m)	
Mechanical  ODU Dimensions  ODU Weight  Power  Power Feeding  Power Consumption  Environmental  Operating Temperatures  Humidity  Safety  US/CAN (cTUVus)	32.5(w) x 32.5( 2 kg / 4.41 lbs Power provided <13W  -35°C to 60°C / 100% condensi	5.140-5.345  h) x 6.4(d) cm  d over ODU-IDU c  -31°F to 140°F ng, IP67 (totally p	able  orotected against of the CSA C22.2 60950-2	5.130-5.375	Universal  mmersion in water up to 1m)	
Mechanical  ODU Dimensions  ODU Weight  Power  Power Feeding  Power Consumption  Environmental  Operating Temperatures  Humidity  Safety  US/CAN (cTUVus)  CE/IEC	32.5(w) x 32.5( 2 kg / 4.41 lbs Power provided <13W  -35°C to 60°C / 100% condensi	5.140-5.345  h) x 6.4(d) cm  d over ODU-IDU c  -31°F to 140°F ng, IP67 (totally p	able  orotected against of the CSA C22.2 60950-2	5.130-5.375	Universal  mmersion in water up to 1m)	
Mechanical  ODU Dimensions  ODU Weight  Power  Power Feeding  Power Consumption  Environmental  Operating Temperatures  Humidity  Safety  US/CAN (cTUVus)	32.5(w) x 32.5( 2 kg / 4.41 lbs Power provided <13W  -35°C to 60°C / 100% condensi  UL 60950-1, UL EN/IEC 60950-2	5.140-5.345 h) x 6.4(d) cm d over ODU-IDU c -31°F to 140°F ng, IP67 (totally p 60950-22, CAN/0 L, EN/IEC 60950-2	5.130-5.355  able  protected against of the control	5.130-5.375	Universal  mmersion in water up to 1m)	
Mechanical  ODU Dimensions  ODU Weight  Power  Power Feeding  Power Consumption  Environmental  Operating Temperatures  Humidity  Safety  US/CAN (cTUVus)  CE/IEC  EMC  FCC	32.5(w) x 32.5( 2 kg / 4.41 lbs Power provided <13W  -35°C to 60°C / 100% condensi  UL 60950-1, UL EN/IEC 60950-1	5.140-5.345 h) x 6.4(d) cm d over ODU-IDU c -31°F to 140°F ng, IP67 (totally p 60950-22, CAN/0 L, EN/IEC 60950-2 Subpart B, Class	5.130-5.355  able  protected against of the control	5.130-5.375	Universal  mmersion in water up to 1m)	
Mechanical  ODU Dimensions  ODU Weight  Power  Power Feeding  Power Consumption  Environmental  Operating Temperatures  Humidity  Safety  US/CAN (cTUVus)  CE/IEC  EMC	32.5(w) x 32.5( 2 kg / 4.41 lbs Power provided <13W  -35°C to 60°C / 100% condensi  UL 60950-1, UL EN/IEC 60950-1	5.140-5.345 h) x 6.4(d) cm d over ODU-IDU c -31°F to 140°F ng, IP67 (totally p 60950-22, CAN/0 L, EN/IEC 60950-2 Subpart B, Class EN 301 489-4, EN	5.130-5.355  able  protected against of the control	5.130-5.375	Universal  mmersion in water up to 1m)	



Integrated Antenna					
Gain	21 dBi				
VSWR	2.0:1				
3 dB Azimuth Beamwidth	10 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			
-50 -60 -70	20 30 40 50 60 70 80 22 -15 -8 -2 5 12 18 90 100 110 120 130	-100 -150 -150 -150 -150 -150 -150 -150			

#### Ordering Info

Part Number: RW-2954-6HB0

**Description:** RADWIN 2000 Alpha ODU, with an integrated antenna, supporting multi frequency bands at 5.x GHz, factory default 5.4 GHz Universal.

Datasheet information can be changed by manufacturer without prior notice

