RADWIN Alpha Model

Point-to-Point Radio - Data Sheet (RW2000/ODU/Alpha/F58/FCC/INT/500M)



RW-2050-6HC5

Product Description

RW-2050-6HC5 is a carrier-class radio that belongs to the RADWIN 2000 Alpha Series and supports 5.1 to 5.8 GHz frequency range.

The Radio complies with FCC/IC & FCC bands with a factory default of 5.8 GHz FCC/IC.

RW-2050-6HC5 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
- Supports intra-site synchronization to maximize capacity
- 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 v	vith an integrated	antenna			
PoE to ODU Interface		Outdoor Unit with an integrated antenna Outdoor CAT-5e; Maximum cable length: 100m for 10/100BaseT and 75m for 1000BaseT				
Radio	Outdoor CAT 5	c, waxiiiiaiii cabi	e length. 100m to	1 10/10000351 4114 / 5111 101 100000351		
Max Capacity	500 Mhns net :	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 dpoil power dp Supported (FCC/IC, FCC)					
Diversity	Supported Supported					
Spectrum Viewer	Supported					
Max Tx Power	26 dBm per chain					
Duplex Technology		·				
Error Correction		TDD				
	FEC k = 1/2, 2/3, 3/4, 5/6					
Encryption Support Indoor units	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		1				
Band	CBW 20MHz [GHz]	CBW 40MHz [GHz]	CBW 80MHz [GHz]	Radio Compliance		
5.8 GHz FCC/IC (default)	5.730-5.845	5.730-5.845	5.730-5.845	FCC 47CFR Part 15.407; ISED RSS-247		
5.1 GHz FCC	5.170-5.250	5.170-5.250	5.170-5.250	FCC 47CFR Part 15.407		
F 0 011 F00/10	5.255-5.340			1 66 17 61 11 1 13:107		
5.2 GHz FCC/IC	3.233-3.340	5.255-5.340	5.250-5.340	FCC 47CFR Part 15.407		
5.4 GHz FCC/IC 5.4 GHz FCC	5.480-5.715	5.255-5.340 5.480-5.715	5.250-5.340 5.485-5.715			
· · · · · · · · · · · · · · · · · · ·				FCC 47CFR Part 15.407		
5.4 GHz FCC	5.480-5.715	5.480-5.715	5.485-5.715	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC	5.480-5.715	5.480-5.715 5.170-5.845	5.485-5.715	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical	5.480-5.715 5.170-5.845	5.480-5.715 5.170-5.845	5.485-5.715	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions	5.480-5.715 5.170-5.845 32.5(w) x 32.5(5.480-5.715 5.170-5.845	5.485-5.715	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions ODU Weight	5.480-5.715 5.170-5.845 32.5(w) x 32.5(2 kg / 4.41 lbs	5.480-5.715 5.170-5.845	5.485-5.715 5.170-5.845	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions ODU Weight Power	5.480-5.715 5.170-5.845 32.5(w) x 32.5(2 kg / 4.41 lbs	5.480-5.715 5.170-5.845 h) x 6.4(d) cm	5.485-5.715 5.170-5.845	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions ODU Weight Power Power Feeding	5.480-5.715 5.170-5.845 32.5(w) x 32.5(2 kg / 4.41 lbs	5.480-5.715 5.170-5.845 h) x 6.4(d) cm	5.485-5.715 5.170-5.845	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions ODU Weight Power Power Feeding Power Consumption	5.480-5.715 5.170-5.845 32.5(w) x 32.5(2 kg / 4.41 lbs	5.480-5.715 5.170-5.845 h) x 6.4(d) cm	5.485-5.715 5.170-5.845	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions ODU Weight Power Power Feeding Power Consumption Environmental	5.480-5.715 5.170-5.845 32.5(w) x 32.5(2 kg / 4.41 lbs Power provided <13W	5.480-5.715 5.170-5.845 h) x 6.4(d) cm d over ODU-IDU c	5.485-5.715 5.170-5.845 able	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions ODU Weight Power Power Feeding Power Consumption Environmental Operating Temperatures	5.480-5.715 5.170-5.845 32.5(w) x 32.5(2 kg / 4.41 lbs Power provided <13W	5.480-5.715 5.170-5.845 h) x 6.4(d) cm d over ODU-IDU c	5.485-5.715 5.170-5.845 able	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions ODU Weight Power Power Feeding Power Consumption Environmental Operating Temperatures Humidity Safety	5.480-5.715 5.170-5.845 32.5(w) x 32.5(2 kg / 4.41 lbs Power provided <13W -35°C to 60°C / 100% condensi	5.480-5.715 5.170-5.845 h) x 6.4(d) cm d over ODU-IDU c -31°F to 140°F ng, IP67 (totally p	5.485-5.715 5.170-5.845 able	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions ODU Weight Power Power Feeding Power Consumption Environmental Operating Temperatures Humidity	5.480-5.715 5.170-5.845 32.5(w) x 32.5(2 kg / 4.41 lbs Power provided <13W -35°C to 60°C / 100% condensi	5.480-5.715 5.170-5.845 h) x 6.4(d) cm d over ODU-IDU c	5.485-5.715 5.170-5.845 able	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions ODU Weight Power Power Feeding Power Consumption Environmental Operating Temperatures Humidity Safety EU/Intl USA	5.480-5.715 5.170-5.845 32.5(w) x 32.5(2 kg / 4.41 lbs Power provided <13W -35°C to 60°C / 100% condensi	5.480-5.715 5.170-5.845 h) x 6.4(d) cm d over ODU-IDU c -31°F to 140°F ng, IP67 (totally p	5.485-5.715 5.170-5.845 able	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions ODU Weight Power Power Feeding Power Consumption Environmental Operating Temperatures Humidity Safety EU/Intl USA EMC	5.480-5.715 5.170-5.845 32.5(w) x 32.5(2 kg / 4.41 lbs Power provided <13W -35°C to 60°C / 100% condensions EN/IEC 62368-2 cTUVus: UL 609	5.480-5.715 5.170-5.845 h) x 6.4(d) cm d over ODU-IDU co -31°F to 140°F ng, IP67 (totally post) L, EN/IEC 60950-2	5.485-5.715 5.170-5.845 able	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407 FCC 47CFR Part 15.407		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions ODU Weight Power Power Feeding Power Consumption Environmental Operating Temperatures Humidity Safety EU/Intl USA EMC FCC	5.480-5.715 5.170-5.845 32.5(w) x 32.5(2 kg / 4.41 lbs Power provider <13W -35°C to 60°C / 100% condensi EN/IEC 62368-2 cTUVus: UL 609 FCC 47 CFR, Pa	5.480-5.715 5.170-5.845 h) x 6.4(d) cm d over ODU-IDU c -31°F to 140°F ng, IP67 (totally p L, EN/IEC 60950-2 950-1, UL 60950-2	5.485-5.715 5.170-5.845 able	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407 FCC 47CFR Part 15.407 dust and against immersion in water up to 1m)		
5.4 GHz FCC 5.1 GHz FCC Mechanical ODU Dimensions ODU Weight Power Power Feeding Power Consumption Environmental Operating Temperatures Humidity Safety EU/Intl USA EMC	5.480-5.715 5.170-5.845 32.5(w) x 32.5(2 kg / 4.41 lbs Power provider <13W -35°C to 60°C / 100% condensi EN/IEC 62368-2 cTUVus: UL 609 FCC 47 CFR, Pa	5.480-5.715 5.170-5.845 h) x 6.4(d) cm d over ODU-IDU c -31°F to 140°F ng, IP67 (totally p L, EN/IEC 60950-2 250-1, UL 60950-2 rt15, Subpart B, C 9-1, ETSI EN 3014	5.485-5.715 5.170-5.845 able	FCC 47CFR Part 15.407 FCC 47CFR Part 15.407 FCC 47CFR Part 15.407 dust and against immersion in water up to 1m)		



Integrated Antenna			
Gain	22 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 @ 5.8	GHz	Azimuth @ 5.8GHz	
-50 -60 -70 -80 -90 -110 -120 -130 -140 -150 -160 -170 -180 -170	30 40 50 60 70 80 80 110 110 120 130 140	-100 -100 -100 -100 -100 -100 -100 -100	

Ordering Info

Part Number: RW-2050-6HC5

Description: RADWIN Alpha ODU, with an integrated antenna, supporting multi frequency bands at 5.x GHz, factory default 5.8 GHz FCC/IC.

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

Datasheet information can be changed by manufacturer without prior notice

