



RADWIN 5000 HPMP
HIGH CAPACITY
POINT TO MULTI-POINT

RIDE RADWIN 5000 HPMP WIRELESS HIGHWAY

RADWIN 5000 HPMP Point-to-MultiPoint delivers up to 200Mbps per sector and is the ideal choice for last mile enterprise connectivity and high-end applications that demand guaranteed bandwidth per subscriber.

RADWIN



WIN

RADWIN 5000 HPMP Highlights

- » Up to 200Mbps per Base Station sector
- » Unique mechanism guaranteeing SLA per subscriber
- » Variety of Subscriber Units – 50, 20, 10Mbps
- » Small Form Factor MIMO Subscriber Unit
- » OFDM MiMO 2x2 / Diversity enables nLOS deployment
- » Low latency
- » Long range – 40 km
- » Supporting Multiband 4.9 to 6GHz in the same unit
- » Coexists with RADWIN's Point-to-Point solutions

RADWIN 5000 HPMP APPLICATIONS

CARRIERS & ISPS

RADWIN 5000 HPMP is an excellent revenue generator for Carriers and ISPs that are looking to deploy last mile enterprise connectivity and deliver high-capacity broadband access to end users. Carriers can leverage upon RADWIN 5000 HPMP high capacity capabilities to backhaul wireless and landline access systems such as Wi-Fi hot spots, cellular base stations and DSLAMs.

GOVERNMENT & ENTERPRISE NETWORKS

RADWIN 5000 HPMP offers exclusive wireless broadband infrastructure for Government and Enterprise networks to dramatically reduce their total cost of ownership when implementing the following applications:

- » Connectivity of high resolution video surveillance
- » Wide range Inter-office connectivity
- » Mission critical broadband applications



RADWIN 5000 HPMP is ideal for carriers and ISPs providing last mile enterprise connectivity as well as government and enterprise networks delivering high capacity for mission critical applications.

Product Key Benefits

Highest Base Station Capacity for the Best User Experience

RADWIN 5000 HPMP base station supports up to 200Mbps per sector, delivering high capacity over a single radio unit. Together with High capacity Subscriber Units (HSUs), RADWIN 5000 HPMP enables a service capacity of up to 50Mbps per subscriber.

Greater Spectrum Efficiency for Faster ROI

RADWIN 5000 HPMP provides the highest spectrum efficiency available (5bps/Hz) in the Point-to-MultiPoint Sub 6GHz arena for greater throughput over narrower channel bandwidth.

Secured Service Level Agreement for Demanding Applications

RADWIN 5000 HPMP uniquely secures available bandwidth per end user for guaranteed Service Level Agreement (SLA). Subscriber's capacity is unaffected by the transmission performance fluctuation of other Subscribers, due to interference or other causes.

Superb Performance in Harsh Conditions

RADWIN 5000 HPMP incorporates advanced interference mitigation techniques that assure superior operation in harsh conditions, either in licensed or unlicensed bands. Combined with OFDM, MIMO 2x2 and antenna diversity, RADWIN 5000 HPMP establishes robust performance in nLOS /NLOS deployments.

Multi-Band Capabilities -All in a Single Unit

RADWIN 5000 HPMP radios, including Base Station and Subscriber Units, support an extensive range of frequency bands in the same unit (4.9 - 6GHz or 3.3 - 3.8GHz) for flexible radio planning.

Low Visual Impact Subscriber Units

RADWIN 5000 HPMP offers a variety of HSUs, some guaranteeing exceptionally low visual impact due to the small form factor integrated MIMO antenna. With built-in connectors, these HSUs maintain the flexibility to utilize an external antenna whenever needed.

TDD synchronization, enabling dense deployments with maximum performance

RADWIN 5000 Base station enables TDD synchronization of all collocated sectors within a site and between base stations located in different sites. This Synchronization prevents mutual interference between closely situated Radio units and saves tower space and spectrum.

Co-exist with RADWIN PtP

RADWIN 5000 HPMP and RADWIN Point to Point solutions create a complimentary TDD synchronized solutions for last mile and backhaul deployments, both using the same RADWIN Network Management System (RNMS).

RADWIN 5000 HPMP Components

RADWIN 5000 HPMP Base Station and Subscriber units comply with IP67 for effective deployment in harsh conditions. Supporting multi frequency bands, 4.9 to 6.06GHz or 3.3 to 3.8GHz these units comply with a variety of regulations: ETSI, FCC, IC (Canada) WPC (India) and MII (China). All Radio units consume low power and are fed through a PoE device.



HBS –High Capacity Base station

HBS is a high capacity OFDM / MiMO 2x2 outdoor Base station radio unit that covers a single sector in MIMO mode or dual sectors in diversity mode. The unit is light and compact and includes connectors for an external antenna.

RADWIN 5000 HPMP provides a variety of Subscriber units that deliver 10, 20 and 50Mbps. Three types of models are available to maximize transmission performance as well as simplify the installation process and reduce operational efforts.



HSU with Integrated Small Form Factor MIMO Antenna

This HSU model includes a low visual impact dual polarized MIMO antenna that is attached to the Radio Unit for easy installation in close proximity to the Base Station. The Radio Unit has dual connectors to attach high gain external antennas when needed. The model is available in HSU510 & HSU520, supporting 10 & 20Mbps respectively.



HSU with High Gain Integrated MIMO Antenna

This HSU model includes a high gain dual polarized antenna attached to the Radio Unit for maximum performance in medium range and high capacity deployments. The model is available in HSU520 & HSU550 and supports 20 & 50Mbps respectively.



Connectorized HSU for External Antennas

This HSU model includes dual connectors for a high gain external antenna that enables long range high capacity deployments. The model is available in HSU550 that supports 50Mbps.

Product Specifications

Configuration

	Base Station	Subscriber Unit		
	HBS- 5200	HSU-5550	HSU-5520	HSU-5510
Connectorized ODU (Outdoor Radio Unit)	Supported	Supported	N/A	N/A
ODU with High gain Integrated antenna – 23dbi	N/A	Supported	Supported	N/A
Connectorized ODU with Small Form Factor antenna (15dbi)	N/A	N/A	Supported	Supported
PoE to ODU Interface	Outdoor CAT-5e; Maximum cable length: 100 m @ 10/100BaseT, 75 m @ 1000BaseT			

Radio

Max net aggregate capacity	100 Mbps @20MHz 200 Mbps @40MHz ¹	50Mbps	20Mbps	10Mbps
Number of HSUs per HBS	Up to 16 HSUs			
Range	Up to 40 km / 25 miles			
Frequency bands	Multiband Radio supporting 4.900 to 6.06GHz or Multiband 3.300-3.800GHz ²			
Channel Bandwidth	Configurable: 10 ¹ , 20 , 40 ¹ MHz			
Modulation	2x2 MIMO-OFDM (BPSK/QPSK/16QAM/64QAM)			
Adaptive Modulation & Coding	Supported			
Sector Bandwidth allocation	Configurable: Symmetric or Asymmetric ¹			
DFS (FCC & ETSI)	Supported			
End to End Latency	Typical: 4msec to 10msec			
Diversity	Supported ¹ at HBS & HSU			
Spectrum Viewer	Supported ¹ at HBS & HSU			
Max Tx Power	25 dBm typical at HBS & HSU			
Duplex Technology	TDD			
TDD Synchronization	Inter & Intra site synchronization (supporting RADWIN PtP)			
Encryption	AES 128			

Interfaces

Ethernet Interface	HBS: 10/100BaseT, 1000BaseT HSU: 10/100BaseT
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Networking

Sub convergence layer	Layer 2
QoS	Supported ¹ Packet classification to 4 queues according to 802.1p and Diffserv
VLAN	Supported ¹ 802.1Q, 802.1P, QinQ

Management

HBS & HSU Management Application	RADWIN Manager
Protocol	SNMP and Telnet ¹
NMS Application	RADWIN NMS (RNMS)

Note¹ –Feature will be provided by Q3/2011 via a software upgrade

Note² –Dedicated product, due on Q3/2011

Mechanical

ODU Dimensions	Connectorized HBS : 19.5(w) x 27.0(h) x 8.0(d) cm Connectorized HSU: 19.5(w) x 27.0(h) x 8.0 (d) cm Small Form Factor HSU: 19.5(w) x 27.0(h) 9.0 (d) cm High gain Antenna HSU: 37.1(w) x 37.1(h) x 11.0(d) cm
ODU Weight	Connectorized HBS: 1.8 kg / 3.6 lbs Connectorized & Small Form Factor HSU: 1.8 kg / 3.6 lbs High gain antenna HSU: 3.5 kg / 7 lbs

Power

Power Feeding	Power provided over PoE interface
Power Consumption	HBS <25W, HSU< 20W

Environmental

Operating Temperatures	-35°C to 60°C / -31°F to 140°F
Humidity	100% condensing, IP67

Radio Regulation

FCC	FCC 47CFR, Part 15, Subpart C and Subpart E , FCC 47CFR, Part 90, Subpart Y, FCC 47CFR, Part 90 – Restricted Mode ²
IC	IC RSS-210, IC RSS-111, IC RSS 192, issue-3 ²
ETSI	ETSI EN 302 502, ETSI EN 301 893, EN 302 326-2 V1.2.2 ²
WPC	WPC GSR-38
MII	MII for 5.8 GHz

Safety

FCC/IC (cTUVus)	UL 60950-1, UL 60950-22, CAN/CSA C22.2 60950-1, CAN/CSA C22.2 60950-22
ETSI	EN/IEC 60950-1, EN/IEC 60950-22

EMC

FCC	47 CFR Class B, Part15, Subpart B
ETSI	EN 300 386, EN 301 489-1, EN 301 489-4
CAN/CSA-CEI/IEC	CISPR 22-04 Class B
AS/NZS	CISPR 22-2004 Class B

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