RADWIN 5000 HPMP
HIGH CAPACITY
POINT-TO-MULTIPOINT

RIDE THE RADWIN 5000 HPMP WIRELESS HIGHWAY

The RADWIN 5000 high-capacity Point-to-Multipoint (HPMP) solution delivers up to 250 Mbps per sector. It is the ideal choice for last mile enterprise connectivity, high-end applications that require guaranteed bandwidth per subscriber.

RADWIN

RADWIN 5000 HPMP HIGHLIGHTS

» Up to 250 Mbps per base station sector

» Fixed and Nomadic capabilities

» Variety of subscriber units – 5, 10, 25, 50, 100 Mbps

» Upgrade subscriber units' capacity via a software key

» Small form factor MIMO subscriber units

» OFDM, MIMO 2x2 / Diversity enables real NLOS deployment

» Low and constant latency

» Long range – 40 Km / 25 miles

» Supporting Multiband : 2.3-2.4 or 2.5-2.7 or 3.3-3.8 or 4.9-6.0 or 5.9-6.4 GHz 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 RADWIN 5000 HPMP high capacity capabilities and NLOS outstanding performance to backhaul wireless and landline access systems such as Wi-Fi hot spots, 3G/LTE small cells 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

Product Key Benefits

Highest Base Station Capacity for the Best User Experience

RADWIN 5000 HPMP base station supports up to 250 Mbps per sector, delivering high capacity over a single radio unit. Together with high-capacity subscriber units (HSUs), RADWIN 5000 HPMP enables service capacity of up to 100 Mbps per subscriber.

Greater Spectrum Efficiency for Faster ROI

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

Secured Service Level Agreement (SLA) for Demanding Applications

RADWIN's Smart Bandwidth Management (SBM) maximizes throughput for active users; yet, when the base station is congested, SBM assures user bandwidth per subscription agreement to uniquely guarantee SLA.

Superb Performance in Harsh Conditions

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

Full Span of Asymmetric Traffic

RADWIN 5000 can deliver more than 90% of channel traffic in either an uplink or downlink direction. This capability is ideal for full asymmetrical applications (e.g. video surveillance, IPTV) as well as for symmetrical traffic.

Multi-Band Capabilities - All in a Single Unit

RADWIN 5000 HPMP radios support an extensive range of frequency bands in the same unit 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.

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 complimentary TDD synchronized solutions for last mile and backhaul deployments 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, 2.3 to 6.4 GHz, 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 Stations

HBS is a high capacity OFDM / MIMO 2x2 outdoor base station unit that can cover a single sector in MIMO mode, using dual polarized antenna, or dual sectors when working with two single-polarized antennas.RADWIN HBS portfolio supports fixed and nomadic applications, providing varying levels of capacity: 250, 100, 50Mbps, and a low visual impact HBS delivering 25 Mbps.

HSU – High Capacity Subscriber Units

RADWIN 5000 HPMP provides a variety of high capacity subscriber units (HSUs) that deliver 5, 10, 25, 50 and 100 Mbps for fixed and nomadic applications. The capacity of the units can easily be upgraded from 5 to 25 Mbps via a software key. This enables low initial investment while securing further capacity growth.

Three types of models are available:

HSU with Integrated MIMO Antenna

This low visual impact HSU model includes a dual polarized MIMO antenna that is attached to the radio unit for easy installation.

Connectorized HSU for External Antennas

This low visual impact HSU model includes dual connectors for a high gain external antenna that enables long range, high-capacity deployments.

HSU with Integrated MIMO Antenna for Video Cameras

This HSU model includes a dedicated PoE port for video camera connectivity together with an integrated antenna and AC power feed. The unit simplifies and reduces the costs of video camera installations.

Product Specifications

Capacity

	Base Station				Subscriber units					
	HBS 5025	HBS 5050	HBS 5100	HBS 5200	HSU 505	HSU 510	HSU 610	HSU 520	HSU 525	HSU 550
Maximum Net Aggregate Capacity	25 Mbps	50 Mbps	100Mbps[1]	250 Mbps	5 Mbps	10 Mbps	10 Mbps	25 Mbps	25 Mbps	50 Mbps

Frequency Bands & Antenna Configurations

	HBS 5025	HBS 5050	HBS 5100	HBS 5200	HSU 505	HSU 510	HSU 610	HSU 520	HSU 525	HSU 550
2.5 - 2.7 GHz			Con.					Int.19dbi Con.		
3.3 - 3.8 GHz			Con.			Int. 22 or 13dbi Con.		Int.22dbi Con.	Int.13dbi Con.	Int. 22dbi Con.
4.9 - 6.0 GHz	Int. 90º	Int. 90º Con.		Con.	Int.15dbi Con.	Int. 15dbi Con.	Int. 15dbi	Int. 23dbi	Int.15dbi Con.	Int. 23dbi Con.
5.9 - 6.4 GHz		Con.		Con.		Int.24dbi Con.			Int.- 24dbi Con.	Int.- 24dbi Con.
2.3 - 2.4 GHz		Con.		Con.	Int. 13dbi Con.					Int. 19dbi Con.
PoE Out	IEEE 802.3af						✓			

Con. - Connectorized unit; Int. - Integrated Antenna
Note 1: 250Mbps for 3.4-3.7GHz in ETSI regulation

Radio

Number of HSUs per HBS	Up to 32 HSUs or HMUs simultaneously
Range	Up to 40 Km / 25 miles
Frequency Bands	Multiband radio supporting 5.9-6.4 GHz or 4.9-6 GHz or 3.3-3.8 GHz or 2.5-2.7 GHz or 2.3-2.4 GHz
Channel Bandwidth	Configurable: 5, 10, 20 , 40 MHz
Modulation	2x2 MIMO-OFDM (BPSK/QPSK/16QAM/64QAM)
Adaptive Modulation & Coding	Supported
Sector Bandwidth Allocation	Configurable: Symmetric or Asymmetric
DFS (FCC & ETSI)	Supported
End to End Latency	Typical: 4msec to 12msec
Diversity	Supported at HBS & HSU
Spectrum Viewer	Supported at HBS & HSU
Max Tx Power	25 dBm at HBS & HSU
Duplex Technology	TDD
TDD Synchronization	Inter & Intra site synchronization (co-existence with RADWIN PtP)
Encryption, US Security	AES 128, FIPS-197

Interfaces

Ethernet Interface	HBS: 10/100/1000BaseT HSU / HMU: 10/100BaseT

Networking

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

Management

HBS & HSU/HMU Management Application	RADWIN Manager or Web based management
Protocol	SNMPv1, SNMPv3, Telnet, HTTP
NMS Application	RADWIN NMS (RNMS)

Mechanical

ODU Dimensions	HBS 5200, 5100, 5050 connectorized: 19.5(w) x 27.0(h) x 8.0(d) cm HBS 5050 with integrated antenna: 20(w) x 50(h) x 14(d) cm HBS 5025 with integrated antenna: 24.1(w) x 19.7(h) x 8.3(d) cm HSU 5.x, 2.x GHz 505, 510, 525 connectorized: 17.1(w) x 19.6(h) x 7.2(d) cm HSU 5.x, 2.x GHz 505, 510, 610, 525 with integrated antenna: 24.1(w) x 19.7(h) x 7.7(d) cm HSU 3.x, 2.5, 6.4GHz 510, 520, HSU 550 connectorized: 19.5(w) x 27.0(h) x 8.0(d) cm
ODU Weight	HBS 5200, 5100, 5050 connectorized: 1.8 kg / 3.6 lbs HBS 5050 with integrated antenna: 1.7 kg / 3.5 lbs HBS 5025 with integrated antenna: 2.2 kg / 4.8 lbs HSU 5.xGHz 505, 510, 525 connectorized: 1.1 kg / 2.4 lbs HSU 5.xGHz 505, 510, 525 with integrated antenna: 1.3 kg / 2.8 lbs HSU 3.x, 2.5, 6.4 GHz 510, 520, HSU 550 connectorized: 1.8 kg / 3.6 lbs

Power

Power Feeding	Power provided over PoE interface
Power Consumption	HBS <25W HSU520,550, HSU505, 510, 525, 610<12W

Environmental

Operating Temperatures	-35°C to 60°C / -31°F to 140°F For -55°C / -67°F advise local RADWIN REP
Humidity	100% condensing, IP67

Radio Regulations

FCC	FCC 47CFR, Part 15, Subpart C and Subpart E , FCC 47CFR, Part 90, Subpart Y, FCC 47CFR, Part 90 Subpart Z – Restricted Mode, FCC 47CFR, Part 27, Subpart M
IC	IC RSS-210 issue 7, IC RSS-111 issue 3, IC RSS-192 issue 3, IC RSS-197 issue 1-Restricted Mode
ETSI	ETSI EN 302 502, ETSI EN 301 893, EN 302 326-2 V1.2.2
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

About RADWIN

RADWIN provides a complete wireless offering for the Sub 6 GHz domain. Recognized as the market leader, RADWIN provides competitively priced products that deliver unmatched reliability, flexibility and installation simplicity. RADWIN's solutions serve multiple applications including broadband access, backhaul connectivity, private networks and wireless broadband in motion. RADWIN's solutions are deployed in over 150 countries around the world by Tier 1 service providers, carriers and private and public organizations.

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