WipAir Series

Superior Point-to-Point & Point-to-Multipoint Wireless Bridge

WaveIP's WipAir series is an advanced high performance Point-to-Point & Point-to-Multipoint wireless solution in 700 MHz – 6 GHz.
WipAir carrier-grade solution sets a benchmark of unrivaled performance, reliability, capacity, latency and RF robustness at the most competitive price in the market.

WipAir Series

- **WipAir 3000 – 135 Mbps net throughput**
- **WipAir 2000 – 40 Mbps net throughput**
- **WipAir 1000 – 20 Mbps net throughput**

Build as you grow

Software upgrades between WipAir models:
WipAir 1000 → WipAir 2000 → WipAir 3000

WipAir Exceptional Highlights

High Performance Radio

- High net throughput – up to **135 Mbps**
- **Dynamic asymmetric capacity**
- Best latency – **1ms** typical
- More than **100,000 PPS** (Packets Per Second)
- Configurable channel bandwidth – 5/10/20/40 MHz
- 128-bit AES encryption & MAC level authentication

RF Interference Robustness

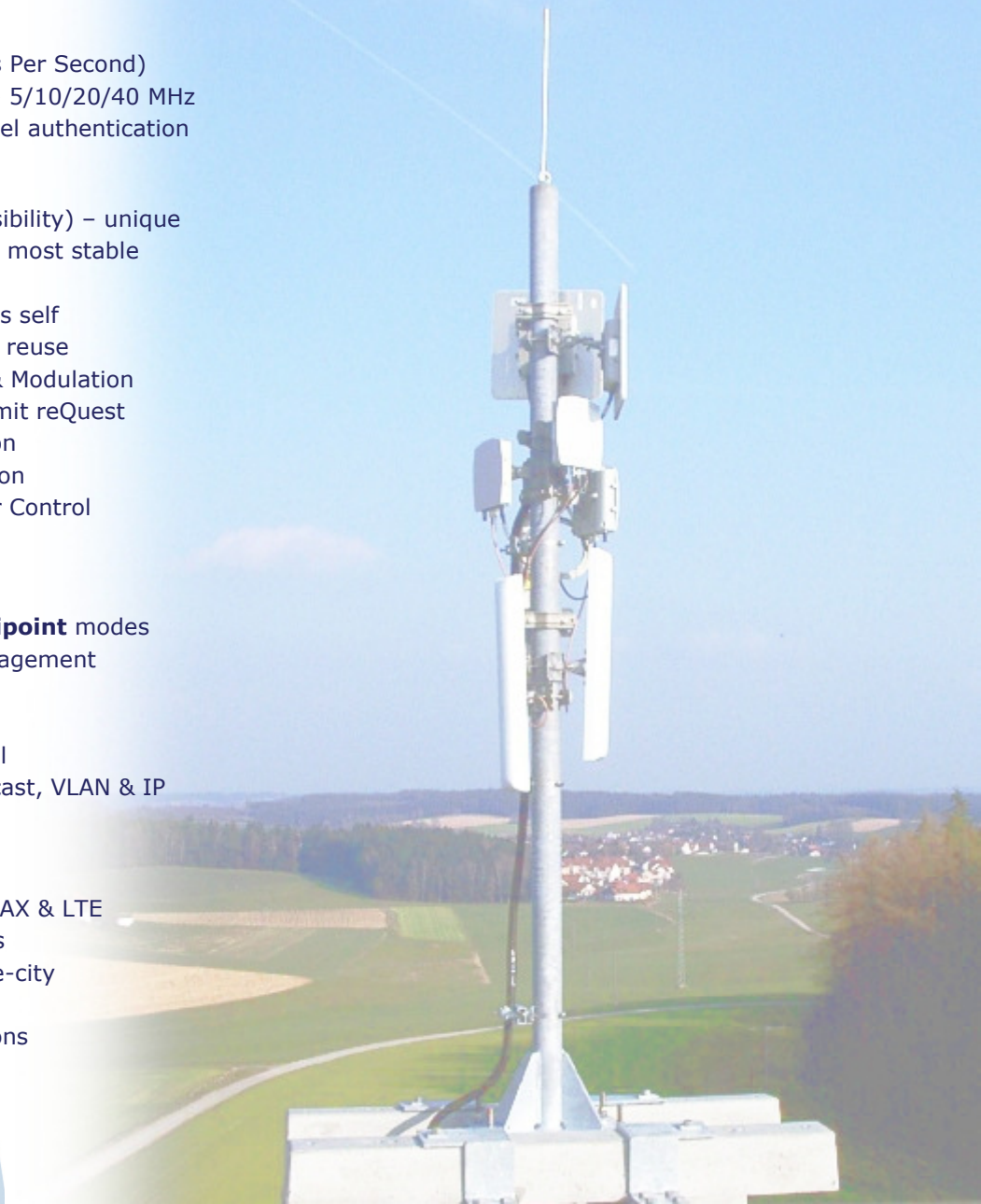
- **AIS** (Automatic Interference Sensibility) – unique technology that makes WipAir the most stable wireless solution in the market
- **Time Synchronization** eliminates self interference and allows frequency reuse
- **Hitless ACM** – Adaptive Coding & Modulation
- Fastest ARQ – Automatic Retransmit reQuest
- ACS – Automatic Channel Selection
- DFS – Dynamic Frequency Selection
- ATPC – Automatic Transmit Power Control
- FEC – Forward Error Correction

Advanced Networking

- **Point-to-Point** & **Point-to-Multipoint** modes
- WEB, EMS, SNMP and Telnet management
- QoS based on 802.1q & 802.1p
- VLAN tagging/stripping
- Up/downstream bandwidth control
- Packet filtering – based on broadcast, VLAN & IP
- Over the air remote management

Typical Applications

- IP data backhaul for Cellular, WiMAX & LTE
- Backbone for Metro WiFi Networks
- Video surveillance in HLS and safe-city
- Multiple backhaul solutions
- Rural/Suburban or remote Locations
- High bandwidth campus solutions
- Temporary & Emergency systems



Specifications

Radio

Radio Frequency	700MHz, 900 MHz, 2.0-2.3 GHz, 2.3-2.7 GHz, 3.3-3.8 GHz, 4.9 GHz, 5.x GHz							
Net Throughput	20, 40, 135 Mbps							
PPS	>100,000 Packets Per Second							
Range	More than 130 Km							
Channel Size	Configurable – 5 / 10 / 20 / 40 MHz							
Waveform	Advanced OFDM							
Output Power	Configurable up to 26 dBm, 40 dB dynamic range							
Handling Interference	AIS – Automatic Interference Sensibility Hitless ACM – Adaptive Coding & Modulation ACS – Automatic Channel Selection FEC – Forward Error Correction, k = 1/2, 2/3, 3/4, 5/6 Fast ARQ – Automatic Retransmit reQuest							
Encryption & Security	128-bit AES & MAC level authentication							
Modulation	BPSK	QPSK		16QAM		64QAM		
FEC	1/2	1/2	3/4	1/2	3/4	2/3	3/4	5/6
Data Rate @ 5 MHz (Mbps)	1.625	3.25	4.875	6.5	9.75	13	14.625	16.25
Data Rate @ 10 MHz (Mbps)	3.25	6.5	9.75	13	19.5	26	29.25	32.5
Data Rate @ 20 MHz (Mbps)	6.5	13	19.5	26	39	52	58.5	65
Data Rate @ 40 MHz (Mbps)	15	30	45	60	90	120	135	150
Sensitivity @ 20 MHz (dBm)	-87	-85	-83	-80	-78	-72	-70	-67

Networking and Management

Topology	Point-to-Point (PTP), Point-to-Multipoint (PTMP)
Access Technology	Time Division Duplex (TDD) – Dynamic or Symmetric
Data Latency	1ms typical
Network modes	Layer 2 Bridge, VLAN, VLAN / broadcast / IP filters
VLAN	Transparent, VLAN filter, tagging/stripping
QoS	8 priority queues based on 802.1q & 802.1p
Traffic shaping	SLA (Service Level Agreement) provisioning for uplink and downlink independently
Management	WEB, EMS, SNMP, Telnet, Built in throughput test and RF Analyzer tools

Physical and Environmental

Physical Interface	2x 10/100 Base-T (ODU)
Connector Type	RJ-45
Mechanical	19 x 19 x 4 cm (external antenna port)
PoE Adapter: • Input Power • Mechanical	 100-240 VAC, 47-63 Hz 10 x 5 x 2.5 cm
Mounting	Wall or pole
Power Consumption	<6Watt
Operating Temperature	-30°c to 55°c
Operating Humidity	100% non condensing (Rainproof)
Power	Power over Ethernet (PoE) - 48 VDC

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