

MIMO PMP 2x2

Family

Applications

- ▶ WISP access infrastructure
- ▶ Last mile for video surveillance and public safety infrastructures
- ▶ Flexible connectivity for SCADA systems
- ▶ Internet access for difficult to reach locations
- ▶ Backhauling for public Wi-Fi networks

WISP's do not merely deliver connectivity; they manage a complex and challenging business. Their customers demand high performance, guaranteed data security and zero downtime. WISP engineers have to manage their operations using sophisticated network solutions from multiple vendors. Their competition is increasing whilst their ARPU is decreasing. At SensorTec Wireless, we designed the MIMO PMP 2x2 Family of solutions to address the exact needs of wireless professionals.

MIMO PMP 2x2 Family provides the ultimate solution for all types of professionals in the wireless technologies arena.

High performance = High revenue

The MIMO PMP 2x2 Family base station provides a high throughput and quality of service to a larger number of subscribers, ultimately helping to generate additional revenue streams and profits.

Integrated router for complicated network scenarios

The MIMO PMP 2x2 Family has a built-in router functionality, eliminating the cost of installing an additional SOHO router at the customer's premises. Potential cyber-security issues can be quickly addressed with a built-in firewall.






Reliable solution for demanding tasks

The family of solutions guarantees many years of uninterrupted operation, thanks to its completely sealed enclosure, which is resistant to moisture and salt damage. All MIMO PMP 2x2 Family products also come equipped with an advanced lightning protection.






Versatile model range of subscriber terminals

The subscriber units provided with this product family are dual band, able to operate in both the 5 GHz and 6 GHz frequency bands. They can be fitted with a range of integrated and external antennas to cater for both short distances as well as longer ones of 25 km and further.

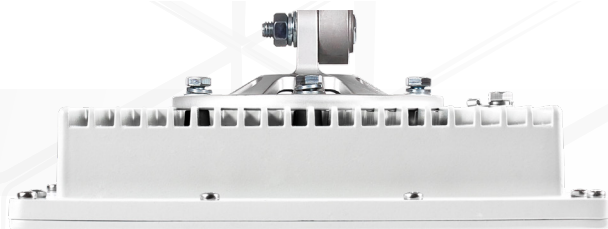
Technical Specifications

| System component | MIMO PMP 2x2 Family Base Stations | | | | |
|---------------------------------|---|--|--|--|--|
| Model | ST-BH5800Q | ST-BH5800i ST-BH6800i | ST-BH5800e ST-BH6800e | ST-B5360i | ST-B5360e |
| Device description | High-capacity base station sector with an integrated beamforming antenna | High-capacity base station sector with an integrated antenna | High-capacity base station sector for an external antenna | Medium-capacity base station sector with an integrated antenna and 10 simultaneous subscribers | Medium-capacity base station sector for an external antenna and 10 simultaneous subscribers |
| Throughput / Packet Performance | Up to 800 Mbps sector net throughput / Up to 290 000 packets per second | | | Up to 360 Mbps sector net throughput/ Up to 290 000 packets per second | |
| Distance | Middle-to-long range (30 km) | Middle range (20 km) | Long range (40+ km) | Middle range (20 km) | Long range (40+ km) |
| Frequency Bands / Antenna | ST-BH5800Q 4.9 – 6.05 GHz / 21 dBi dual-pol integrated sector beamforming antenna 90°x8° (20° Az-steerable beam) | ST-BH5800i 4.9 – 6.05 GHz / 16 dBi dual-pol integrated antenna 90°x8° ST-BH6800i: 6.05 – 6.425 GHz / 16 dBi dual-pol integrated antenna 90°x8° | ST-BH5800e 4.9 – 6.05 GHz / connectorized antenna (2 x N-type (Female) connectors) ST-BH6800e 6.05 – 6.425 GHz / connectorized antenna (2 x N-type (Female) connectors) | ST-B5360i 4.9 – 6.05 GHz / 16 dBi dual-pol integrated antenna 90°x8° | ST-B5360e 4.9 – 6.05 GHz / 16 dBi dual-pol integrated antenna 90°x8° |
| Radio | Radio technology: MIMO 2x2 with OFDM 64/128 Modulation types: BPSK 1/2 to QAM256 5/6 Duplex method: TDD Transmit power: up to 27 dBm Receiver sensitivity: -93 dBm Channel bandwidth: 20/40/80 MHz | | | Radio technology: MIMO 2x2 with OFDM 64/128 Modulation types: BPSK 1/2 to QAM256 5/6 Duplex method: TDD Transmit power: up to 27 dBm Receiver sensitivity: -93 dBm Channel bandwidth: 20/40 MHz | |
| Antenna | 21 dBi dual-pol integrated sector beamforming antenna 90°x8° (20° Az-steerable beam)° | 16 dBi dual-pol integrated sector antenna 90°x8° | 2 x N-type (Female) connectors | 16 dBi dual-pol integrated sector antenna 90°x8° | 2 x N-type (Female) connectors |
| Wired interfaces | 1x Gigabit Ethernet port (10/100/1000 Base-T), RJ-45 connector 1x SFP port 1x SYNC port | | | | |
| Power consumption | Consumption: Up to 30 W Power options: 90-240 VAC @ 50/60 Hz ±43..56 VDC 802.3at or Proprietary PoE | | | | |
| Form Factor and Dimensions | Outdoor Unit (ODU) ST-BH5800Q 21 dBi antenna  371 x 371 x 90 mm, 4.4 kg | Outdoor Unit (ODU) ST-BH5800i or ST-BH6800i 16 dBi antenna  371 x 371 x 90 mm, 4.4 kg | Outdoor Unit (ODU) ST-BH5800e or ST-BH6800e External antenna  240 x 248 x 87 mm, 2.2 kg | Outdoor Unit (ODU) ST-B5360i 16 dBi antenna  371 x 371 x 90 mm, 4.4 kg | Outdoor Unit (ODU) ST-B5360e External antenna  240 x 248 x 87 mm, 2.2 kg |
| | Indoor Unit IDU-BS-G (60W) 151 x 62 x 38 mm, 0.32 kg | | | | |

Technical Specifications

| System component | MIMO PMP 2x2 Family Subscriber Terminals | | | | |
|--|---|--|--|---|--|
| Model | ST-CH5670ci-18 ST-CH6670ci-18 | ST-CH5670i-23 | ST-CH5670i-25 ST-CH6670i-25 | ST-CH5670i-28 ST-CH6670i-28 | ST-CH5670e ST-CH6670e |
| Device description | Integrated antenna subscriber terminal unit | Integrated antenna subscriber terminal unit | Integrated antenna subscriber terminal unit | Integrated antenna subscriber terminal unit | External antenna subscriber terminal unit |
| Throughput / Packet Performance | Up to 670 Mbps / Up to 180 000 packets per second | | | | |
| Distance | Short range (5-10 km) | Middle range (12-15 km) | Middle-to-long range (15-20 km) | Long range (25+ km) | Long range (30+ km) |
| Frequency Bands / Antenna | ST-CH5670i-18 4.9 – 6.05GHz / 18 dBi dual-pol integrated antenna ST-CH6670i-18 4.9 – 6.425 GHz / 18 dBi dual-pol integrated antenna | ST-CH5670i-23 4.9 – 6.05GHz / 23 dBi dual-pol integrated antenna | ST-CH5670i-25 4.9 – 6.05GHz / 25 dBi dual-pol integrated antenna ST-CH6670i-25 4.9 – 6.425 GHz / 25 dBi dual-pol integrated antenna | ST-CH5670i-28 4.9 – 6.05GHz / 28 dBi dual-pol integrated antenna ST-CH6670i-28 4.9 – 6.425 GHz / 28 dBi dual-pol integrated antenna | ST-CH5670e 4.9 – 6.05GHz / connectorized antenna (2 x N-type connectors) ST-CH6670e 4.9 – 6.425 GHz / connectorized antenna (2 x N-type connectors) |
| Radio | Radio technology: MIMO 2x2 with OFDM 64/128 Modulation types: BPSK 1/2 to QAM256 5/6 Duplex method: TDD Transmit power: Up to 25 dBm Receiver sensitivity: -91 dBm Channel bandwidth: 20/40/80 MHz | | | | |
| Wired interfaces | 1 x Gigabit Ethernet (10/100/1000 Base-T) RJ-45 connector | | | | |
| Power consumption | Consumption: Up to 15 W Power options: 110-240 VAC @ 50/60 Hz ±43..56 VDC, 802.3at or Proprietary PoE | | | | |
| Form Factor and Dimensions | Outdoor Unit (ODU) ST-CH5670i-18 or ST-CH6670i-18 18 dBi antenna  | Outdoor Unit (ODU) ST-CH5670i-23 23 dBi antenna  | Outdoor Unit (ODU) ST-CH5670i-25 or ST-CH6670i-25 25 dBi antenna  | Outdoor Unit (ODU) ST-CH5670i-28 or ST-CH6670i-28 28 dBi antenna  | Outdoor Unit (ODU) ST-CH5670e or ST-CH6670e External antenna  |
| | 188 x 188 x 45 mm, 1.3 kg | 305 x 305 x 66 mm, 1.75 kg | 350 x 350 x 71.5 mm, 2.3 kg | 600 x 600 x 68 mm, 5.8 kg | 188 x 190 x 86 mm, 1.2 kg |
| | Indoor Unit IDU-CPE-G(24W) 97x53.5x33.5 mm, 0.133 kg | | | | |

Features



Radio

Voice/RTP Aware Superpacketing
DFS
Automatic Bitrate Control
Automatic Transmit Power Control
Automatic Distance Learning
Channel Time Adjustment
Spectrum Analyzer mode
Channel testing tools

Networking

Ethernet-over-IP, IP-over-IP tunneling
ARP protocol support
MAC/IP filtering
Full-fledged 2nd layer switch
RIPv2 / OSPFv2 /static routing
L2/L3 Firewall
NAT (multipool, H.323-aware)
DHCP client/server/relay

Standard compliance

Radio (pending)
– EN 301 893 v.2.1.1
– EN 302 502 v.2.1.1
– FCC part 15.407
EMC (pending)
– EN 301 489-1
– EN 301 489-17
– FCC Part 15 Class B
Safety (pending)
– EN/IEC 62368-1:2014
– UL 62368-1:2014
RoHS (pending)
– RoHS3 Directives 2015/863/EU

Quality-of-service

17 priority queues
IEEE 802.1p support
IP TOS / DiffServ support
Full voice support
Traffic limiting (absolute, relative, mixed)
Traffic redirection

Environmental

Outdoor Units: -40..+60°C,
100% humidity, condensing
Indoor Unit: 0..+40°C,
95% humidity, non-condensing
IP66/IP67

Security features

Storm / flood protection
Password protection
Secure command-line access via SSH protocol

Product Highlights

- ▶ Single system covering multiple bands as one subscriber terminal operates in 4.9-6.4 GHz frequency bands
- ▶ Thanks to a built-in firewall and rich security features, traffic security is under your full control
- ▶ The most comprehensive networking feature set: full-fledged L2 switch supporting VLAN, Q-in-Q, STP, static and dynamic routing
- ▶ Base station sectors with smart beamforming technology supported to increase capacity two-fold and improve interference and noise immunity
- ▶ Advanced Quality-of-Service and Traffic Shaping features for in-depth service packages design
- ▶ Unique network reliability and management capabilities through proprietary MINT network architecture
- ▶ Backward compatibility with The MIMO PMP 2x2 Family units
- ▶ Cost-effective base station models ST-B5360i and ST-B5360e for low-density sectors



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