

**Modus – CPE520****Compact Integrated Antenna CPE Unit**

- **802.11an Wi-Fi client**
- **PtMP proprietary client**
- **PtP bridge**
- **5 GHz band/DFS,TPC**
- **up to 42 dBm EIRP**
- **data rate 6-72,2 Mbps / 20 MHz channel**
- **integrated antenna 20 dBi**
- **Ethernet 10/100 Mbps**
- **Power over Ethernet**
- **Eth and PoE surge protection**
- **Mikrotik RouterOS**
- **IEC IP67**
- **CE conformity**

The compact unit with integrated high performance 20dBi antenna is the ideal solution for the professional outdoor wireless subscriber or point-to-point link. Modus–CPE520 can provide connection to WISP AP/ Base Station from distance of 100-meters up to kilometers.

20dBi (MTI) antenna allows long distance links and signal stability. For a shorter distance the antenna narrow beamwidth provides higher resistance against neighbour interference.

The integrated antenna box containing all electronic parts is ideal for a simple installation without the troubles with RF cables and sealing. The unit can be self-installed by the customer without any difficulties.

The high quality material of enclosure and mounting components provides high durability and stability in any harsh environment.

Embedded Mikrotik RB711 with integrated 802.11an radio and RouterOS SW provides all necessary features and power for any WISP subscriber application. Traffic filtering, QoS for time sensitive data as VoIP are nated for this system as well.

The unit can be installed up to 100m from the end device (PC, switch), using Power over Ethernet (PoE) midspan 24V DC. Any pasive PoE 12-24 VDC is acceptable as well.

LEMP/ESD surge protection on EthPoE port and DC antenna grounding provides high resistance against lightning and another surge accidents.

A lightweight , heavy duty mounting kit (anodized aluminium and stainless steel) allows horizontal, vertical or 45°polarization and a wide angle tilt.

Technical specifications

Radio performance

Frequency bands	5,150 – 5,350 GHz (8 channels - indoor), 5,470 – 5,725 GHz (11 channels indoor / outdoor) CEPT WAS/RLAN, 5,725 – 5,875 GHz (ISM), 20 MHz channels available band 4,800 – 6,075 GHz, channels 5/10/20/40 MHz
Radio standard	802.11 an
Modulation	OFDM / BPSK, QPSK, 16QAM, 64QAM
Data rates	802.11a: 6,9,12,18,24,36,48,54 Mbps 802.11n: MCS0 (6,5/7,2 Mbps) to MCS7 (65/72,2 Mbps) - 20 MHz channel, up to 150 Mbps - 40 MHz channel
Transmitt power	Max. 42 dBm EIRP, selectable country regulation
Receiver sensitivity	802.11a: -92 dBm/6 Mbps to -76 dBm/54 Mbps 802.11n: -92 dBm/MCS0 to -73 dBm/ MCS7
Antenna	20dBi,5.15-5.85GHz ,linear polarization (V,H,45°),3dB beamwidth 17°, cross polarization -21dB max., F/B ratio -30dB max

Wireless protocol

Wi-Fi	Wi-Fi 802.11an bridge/WDS/client/NAT router
Nstreme polling	PtMP client, PtP master/slave
Nstreme v2 TDMA	PtMP client

Networking

Ethernet	10/100 Base – TX (RJ45)
Transparent bridge	MAC address/protocol ID/multicast/broadcast filters, Spanning tree, VLAN bridging
IP router	NAT, static routing, RIP v1/v2, OSPF v2, BGP v4 PPTP, PPPoE, L2TP, EoIP DHCP client/server
Data Rate Mgmt	CIR, MIR, QoS

Security

802.11abgh HW	64/128 WEP, WPA – PSK/TKIP, WPA – PSK/AES-CCM
SW	ACL, RADIUS authentication, firewall, IP Sec

Configuration / Management

Config	GUI for Windows (WinBox), monitoring, wireless link test, reset, reboot over Ethernet or wireless interface HTTP,Telnet, MACTelnet, SSH
Firmware upgrade	FTP,HTTP

Electrical parameters

Power consumption	max. 5 W
Power	pasive PoE midspan 24 VDC/18W
Surge protection	Ethernet, PoE, DC grounded antenna

Fysical parameters

Dimensions	240x240x80 mm (w x h x d), without mounting hardware
Weight	1,65 kg
Operating temperature	-30 to + 60°C
Storage temperature	-40 to + 75°C
Protection	IEC IP67

Mounting hardware

Mast bracket	up to 60mm diameter
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Standards

Radio	ETSI EN 300 328, ETSI EN 301 893
EMC	ETSI EN 301 489 – 17, EN 61000-4-5
Safety	EN 60950
Antenna	ETSI EN 302 085 V.1.2.2
Conformity	CE,RoHS

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