

The APC 2S-20 presents a 2.4GHz CPE product with superior performance building long distance links. This product is equipped with an extreme output power (up to 31 dBm) 802.11n radio that was created with a unique hardware design and coupled with a reliable, feature-rich operating system. This device also has a robust, IP-65 compliant enclosure which is combined with a high-gain grid antenna, and emits EIRP up to 125 W. The APC 2S-20 is generally designed for CPE applications but can also act as an access point thus allowing point to point network

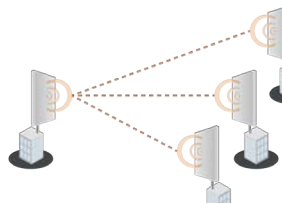
applications.

The included, robust software engine allows the APC 2S-20 to work as bridge or as a router, provides a user-friendly Adobe Flex - based GUI with instant changes, includes useful installation tools (Site survey, Antenna alignment, Delayed reboot, Spectrum analyzer, ping, traceroute) and also is compatible with Wireless Network Management System for one of the most advanced management tools on the market.

Usage examples

PTMP

Deliberant APC 2S-20 is an ideal device for point-to-multiple point applications as a medium to long range client device.



PTP

APC 2S-20 is a great device for medium to long range point-to-point applications.



| Product/ distance recommendation | PTMP mode | PTP mode | PTP mode (full capacity) |
|----------------------------------|----------------|-----------------|--------------------------|
| APC 2S-20 | 15 km/ 9.32 mi | 40 km/ 24.86 mi | 7 km/ 4.35 mi |

Wireless

| | |
|----------------------|-------------------------------------------------------------------------------------------------------------------------|
| WLAN standard | IEEE 802.11 b/g/n, iPoll (proprietary) |
| Radio mode | SiSo 1x1 |
| Operating modes | Access point (auto WDS), Station, Station WDS, iPoll Access Point, iPoll Station |
| Radio frequency band | 2.4 GHz |
| Transmit power | Up to 31 dBm (country dependent) |
| Receive sensitivity | Varying between -95 and -75 dBm depending on modulation |
| Channel size | 20, 40 MHz |
| Modulation schemes | 802.11 g/n: OFDM (64-QAM, 16-QAM, QPSK, BPSK) 802.11 b: DSS (CCK, DQPSK, DBPSK) |
| Data rates | 802.11 n: 150, 135, 120, 90, 60, 30 Mbps 802.11 g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11 b: 11, 5.5, 2, 1 Mbps |
| Error correction | FEC, Selective ARQ |
| Duplexing scheme | Time division duplex |

| Receive sensitivity (dBm) | 802.11N/iPoll | 15 Mbps | 30 Mbps | 45 Mbps | 60 Mbps | 90 Mbps | 120 Mbps | 135 Mbps | 150 Mbps |
|---------------------------|---------------|---------|----------|---------|---------|---------|----------|----------|----------|
| | | -94 | -91 | -89 | -86 | -83 | -78 | -77 | -75 |
| 802.11g | 6 Mbps | 9 Mbps | 12 Mbps | 18 Mbps | 24 Mbps | 36 Mbps | 48 Mbps | 54 Mbps | |
| | -95 | -94 | -92 | -90 | -88 | -84 | -80 | -78 | |
| 802.11b | 1 Mbps | 2 Mbps | 5.5 Mbps | 11 Mbps | - | - | - | - | |
| | -95 | -95 | -95 | -93 | - | - | - | - | |

| Output power (dBm) | 802.11N/iPoll | 15 Mbps | 30 Mbps | 45 Mbps | 60 Mbps | 90 Mbps | 120 Mbps | 135 Mbps | 150 Mbps |
|--------------------|---------------|---------|----------|---------|---------|---------|----------|----------|----------|
| | | 30 | 30 | 30 | 30 | 28 | 28 | 28 | 26 |
| 802.11g | 6 Mbps | 9 Mbps | 12 Mbps | 18 Mbps | 24 Mbps | 36 Mbps | 48 Mbps | 54 Mbps | |
| | 31 | 31 | 31 | 31 | 31 | 31 | 29 | 29 | |
| 802.11b | 1 Mbps | 2 Mbps | 5.5 Mbps | 11 Mbps | - | - | - | - | |
| | 27 | 27 | 27 | 27 | - | - | - | - | |

Antenna

| | |
|------|-----------------------------------|
| Type | Integrated high-gain grid antenna |
| Gain | 20 dBi |

Wired

| | |
|-----------|---------------------|
| Interface | 10/100 Base-T, RJ45 |
|-----------|---------------------|

Networking

| | |
|-----------------|--------------------------------------|
| Operating modes | Bridge, Router |
| WAN | Static IP, DHCP client, PPPoE client |
| NAT | Routing w/ or w/o NAT |
| Static routing | Supported |
| DHCP | Client, Server, Relay |
| Port forwarding | Supported |
| VLAN | Supported for management and data |

Softwave

| | |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------|
| General | Ability to define/limit frequency, channel width, EIRP, modulation |
| Advanced wireless functionality | ATPC (automatic transmit power control), auto-channel, auto-modulation, |
| Operating mode | Router, Bridge |
| Wireless operating modes | AP auto WDS, Station, Station WDS, Virtual radios (VSSID), iPoll access point, iPoll client |
| Wireless security | WPA/WPA2 Personal, WPA/WPA2 Enterprise, WACL, User isolation, UAM (web portal authentication) |
| Wireless QoS | WMM |
| WAN protocols | Static IP, DHCP client, PPPoE client |
| Network | NAT, static routing, firewall, port forwarding, VLAN, traffic shaping |
| Services | DHCP server, SNMP server, NTP client, Alerts, Remote syslog, Wireless and Ethernet statistics, bandwidth limiting |
| Management | HTTP(S) GUI, SSH CLI, SNMP read, WNMS, troubleshooting file, reset via reset tool |
| Tools | Site survey, Link test, Antenna alignment, Ping, Traceroute, Spectrum analyzer, delayed reboot |

Physical

| | |
|------------------------------|------------------------------------------------------------------------|
| Dimensions of grid reflector | Length 430 mm (16.93 "), width 640 mm (25.2 "), height 130 mm (5.12 ") |
| Length of antenna feed | 640 mm (25.2 ") |
| Weight | 2.2 kg (77.6 oz) |
| Power supply | 12 - 24 V DC passive PoE |
| Power source | 100 – 240 VAC via included adapter |

Environmental

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|-----------------------|--------------------------------|
| Power consumption | 4.5 W |
| Operating temperature | -40°C (-22 F) ~ +65°C (+149 F) |
| Humidity | 0 ~ 90 % (non-condensing) |

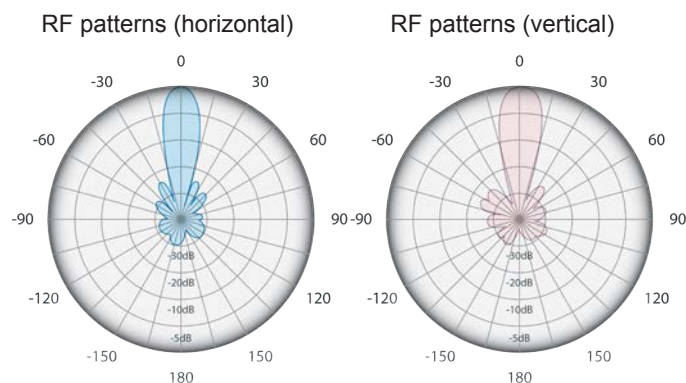
Management

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|----------------------|-------------------------------------------------------------------------------------------------------------------|
| System configuration | User-friendly web GUI, Command line via SSH, centralized Wireless Network Management System, reset via reset tool |
| System monitoring | SNMP v1/2c/3 server, Syslogs, system alerts via e-mail and SNMP trap |

Regulatory

| | |
|---------------|--------------------------------|
| Certification | FCC/CE/Safety/ RoHs compliance |
|---------------|--------------------------------|

Antenna specifications



| | |
|----------------------------|---------------|
| Frequency range | 2.4 - 2.5 GHz |
| Gain | 20 dBi |
| Polarization | Single linear |
| Max VSWR | 1.7:1 |
| Beamwidth | 16 deg |
| Elevation Beamwidth | 17 deg |



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