CPE510

Features:

- Built-in 13dBi 2x2 dual-polarized directional MIMO antenna
- Adjustable transmission power from 0 to 27dBm/500mw
- System-level optimizations for more than 15km+ long range wireless transmission
- TP-LINK Pharos MAXstream (Time-Division-Multiple-Access) technology improves product throughput, capacity and latency performance, ideal for PTMP applications
- Centralized Management System – Pharos Control
- AP / Client / Repeater / Bridge / AP Router / AP Client Router (WISP) operation modes
- Passive PoE Adapter supports up to 60 meter (200 feet) Power over Ethernet deployment and allows the device to be reset remotely

Description:

TP-LINK’s 5GHz 300Mbps 13dBi Outdoor CPE, the CPE510 is dedicated to cost effective solutions for outdoor wireless networking applications. With its centralized management application, it is flexible and ideal for point-to-point, point-to-multipoint and outdoor Wi-Fi coverage applications. Professional performance, coupled with user-friendly design, makes CPE510 an ideal choice for both business and home users.
Typical Applications:

- **Long-distance Wireless Connection**
  Using two CPE510 to establish a long distance wireless connection, ideal for wireless supervision and wireless Internet sharing applications.

- **WISP CPE**
  CPE510 as powerful clients in point to multi-point links.

- **Outdoor Access Point**
  CPE510 as a powerful 5GHz access points.
Software Overview:

**PHAROS** is TP-LINK’s next generation outdoor product series dedicated to long-range outdoor wireless networking solutions.

- **Advanced TP-LINK MAXstream TDMA Technology**
  As network scale increases, wireless competition and collisions among CPEs and base stations will be so enormous that the real throughput of the network will drop, resulting in a serious impact on end-user experience, to mitigate these effects, TP-LINK’s Pharos series uses MAXstream TDMA Technology.

- **Pharos Control – Centralized Management System**
  Pharos series also comes equipped with centralized management software that helps users easily manage all the devices in their network from a single PC - Pharos Control. Functions like device discovery, status monitoring, firmware upgrading, and network maintenance can be managed using Pharos Control.

- **PharOS**
  User-friendly web-based management system allows professionals to do more specific configurations.
**Hardware Overview:**

- **Professional Outdoor Design**
  - Weatherproof enclosure with pole mounting design
  - Secondary Ethernet port with software enabled PoE output allows for seamless IP camera connectivity.
  - Shielded Ethernet ports and grounding terminal provide double protections against ESD attacks

- **Easy Deployment and Maintenance**
  - Passive PoE adapter makes installation easier, and its Remote Reset button allows for device to be reset remotely from power supply location.
Specifications:

**HARDWARE FEATURES**

Processor: Qualcomm Atheros Enterprise AR9350B 560MHz CPU, MIPS 74Kc

Memory: 64MB DDR2 RAM, 8MB Flash

Interfaces:
- 1 10/100Mbps Shielded Ethernet Port (LAN0, Passive PoE in)
- 1 10/100Mbps Shielded Ethernet Port (LAN1, Passive PoE Passthrough)
- 1 Grounding Terminal
- 1 Reset Button

Power Supply:
- Passive Power over Ethernet via LAN0 (+4,5pins; -7,8pins)
- Input voltage range: 16-27VDC (24V Passive PoE Adapter is provided)

Power Draw: 11 Watts Max

Note: When deployed using Passive PoE, the power drawn from the power sourcing equipment will be higher by some amount depending on the length of the interconnecting cable.

Dimensions (L x W x H): 224 × 79 × 60 mm

Protection:
- 15KV ESD Protection
- 6000V Lightning Protection

Enclosure:
- Outdoor ASA stabilized plastic material
- IPX5 waterproof Certification

**WIRELESS FEATURES**

Wireless Standards: IEEE 802.11a/n (with Pharos MAXtream disabled)

Proprietary Protocol: TDMA Mode (with Pharos MAXtream enabled)

Operating Frequency: 5.15~5.85GHz

Note: Available operating frequency may vary depending on the limitations of the countries or regions in which the device is used. (Dynamic Frequency Selection is supported)

Wireless Speed:
- Up to 300Mbps (40MHz, Dynamic)
- Up to 144.4Mbps (20MHz, Dynamic)
- Up to 72.2Mbps (10MHz, Dynamic)
- Up to 36.1Mbps (5MHz, Dynamic)

Maximum Transmit Power: 27dBm/500mw (Adjustable power by 1dBm)

Note: Maximum transmission power may vary across different channels depending on the limitations of the countries or regions in which the device is used.

Operation Modes:
- AP / Client / Bridge / Repeater / AP Router Mode / AP Client Router (WISP Client) Mode

Wireless Security:
- WPA/WPA2, WPA-PSK/WPA2-PSK (AES/TKIP) Encryption, 64/128/152-bit WEP Encryption

**RF Specifications**

- **Data Rates**
  - 802.11a
    - 6-24Mbps: 27, -95
    - 36Mbps: 27, -83
    - 48Mbps: 27, -76
    - 54Mbps: 27, -75

- **Data Rates**
  - 802.11n
    - MCS0: 27, -93
    - MCS1: 27, -90
    - MCS2: 27, -88
    - MCS3: 27, -83
    - MCS4: 27, -80
    - MCS5: 27, -76
    - MCS6: 26, -74
    - MCS7: 25, -73
    - MCS8: 27, -93
    - MCS9: 27, -90
    - MCS10: 27, -88
    - MCS11: 27, -83
    - MCS12: 27, -80
    - MCS13: 27, -76
    - MCS14: 27, -74
    - MCS15: 27, -73
### Specifications:

#### ANTENNA FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
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<tbody>
<tr>
<td>Gain</td>
<td>13dBi</td>
</tr>
<tr>
<td>Beamwidth</td>
<td>45° (H-Plane) / 30° (E-Plane)</td>
</tr>
<tr>
<td>VSWR</td>
<td>1.6 Max</td>
</tr>
<tr>
<td>Polarizations</td>
<td>Horizontal/Vertical</td>
</tr>
<tr>
<td>Cross-pol Isolation</td>
<td>18 dB Min</td>
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#### OTHERS

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Certification</td>
<td>CE, FCC, RoHS, IPX5</td>
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</table>
| Package Contents  | CPE510
Passive PoE Adapter
Power Cord
Installation Guide
Pole Mounting Straps |
| System Requirements | Microsoft Windows 98SE, NT, 2000, XP, Vista™ or Windows 8, Windows 7, MAC OS, NetWare, UNIX or Linux.
Note: We recommend you to use one of following Web browsers for better experience: Google Chrome, Safari, and Firefox. IE browsers are not recommended. |
| Environment       | Operating Temperature: -30°C~70°C (-22°F~158°F)
Storage Temperature: -40°C~70°C (-40°F~158°F)
Operating Humidity: 10%~90% non-condensing
Storage Humidity: 5%~95% non-condensing |