

# Cranberry Red Series Extended Range Wireless AP CN-AP-RED-2050 with Enterprise Cloud Management



✓ **CN-AP-RED-2050 Access Point single band high performance 802.11n wireless access point with an Extended Range up to 800 feet with Cloud Management.**

The Wireless Access Point supports 802.11n connectivity for applications demanding high bandwidth and quality of service, such as voice and video over Wi-Fi.

### Manage your Access Points from Anywhere using our Cloudberry Portal.

RED comes with the Cloudberry Cloud Controller system to manage your access points remotely no matter where they are located.

### Deploy RED without IT Administrators

RED can be configured remotely. Firmware updates are delivered seamlessly over the web. Access Points can be rebooted remotely.

### Managed Billing Service for Hot Spots

Install RED anywhere, and bill back for services in a distributed IT environment. Charge back based on Quality of Service for Audio, Video and excessive usage.

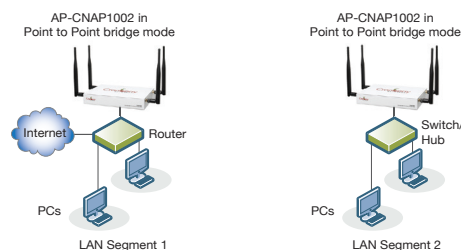
## Overview

The RED Access Point is a Single Band 802.11n Wireless Access Point is the basic building block of a wireless LAN infrastructure. It provides connectivity between Ethernet wired networks and radio-equipped wireless notebook systems, desktop systems, print servers, and other devices.

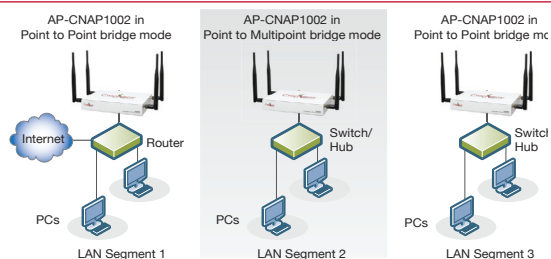
The RED provides wireless connectivity to multiple wireless network devices within a fixed range or area of coverage. The RED Single Band 802.11n Wireless Access Point is built for the Cloud. The RED comes with the Cloudberry Management portal, which provides remote Management and auto-access point discovery in a single user interface. As a mobile computing device moves out of the range of one access point, it moves into the range of another. As a result, wireless clients can freely roam from one Access Point to another and still maintain seamless connection to the network.

The RED is extremely simple to set up and can be managed via an intuitive Cloud GUI, CLI, or SNMP. The access point supports IEEE 802.3af Power-over-Ethernet (PoE) and ceiling/wall mount installation.

Point-to-Point



Point-to-Multipoint



|  |   |
|--|---|
| <p><b>2.4 GHz Band Operating Frequency</b></p> <p><b>Multiple Operating Modes:</b></p> <p><b>Wireless Access Point</b></p> <p><b>Point-to-Point Bridge</b></p> <p><b>Point-to-Multi-Point Bridge</b></p> | <ul style="list-style-type: none"> <li>• The Wireless Access Point operates in the 2.4 GHz frequency band.</li> <li>• Operates as a standard 802.11b/g/n access point.</li> <li>• In this mode, the CN-AP-RED only communicates with another bridge-mode wireless access point (with or without clients). Network authentication should be used to protect this communication.</li> <li>• Select this mode only if the CN-AP-RED is the “Master” for a group of bridge-mode wireless access points. The other bridge-mode wireless access points send all traffic to the “Master”, and do not communicate directly with each other. Network Authentication should be used to protect this traffic.</li> </ul> |
| <p><b>Standards Compliance</b></p>   | <ul style="list-style-type: none"> <li>• Access Point complies with the IEEE 802.11b/g/n standards for Wireless LANs.</li> </ul>  |
| <p><b>Full WPA and WPA2 Support</b></p>  | <ul style="list-style-type: none"> <li>• WPA and WPA2 enterprise-class strong security with RADIUS and certificate authentication as well as dynamic encryption key generation. WPA-PSK and WPA2-PSK pre shared key authentication without the overhead of RADIUS servers but with all of the strong security of WPA.</li> </ul>  |
| <p><b>Upgradeable Firmware</b></p>   | <ul style="list-style-type: none"> <li>• Firmware is stored in a flash memory and can be upgraded easily, using only your Web browser/CLI/SNMP.</li> </ul>  |
| <p><b>Rogue AP Detection</b></p>   | <ul style="list-style-type: none"> <li>• The Rogue AP detection feature shows a list of unknown APs to the administrator.</li> </ul>  |
| <p><b>Access Control</b></p>   | <ul style="list-style-type: none"> <li>• The Access Control MAC address filtering feature can ensure that only trusted wireless stations can use the CN-AP-RED to gain access to LAN network.</li> </ul>  |
| <p><b>Hidden Mode</b></p>  | <ul style="list-style-type: none"> <li>• The SSID is not broadcast, assuring only clients configured with the correct SSID can connect.</li> </ul>  |
| <p><b>Secure Telnet Command Line Interface</b></p>   | <ul style="list-style-type: none"> <li>• The secure Telnet command line interface enables easy scripting of configuration of multiple CN-AP-REDS across an extensive network via the Ethernet interface.</li> </ul>   |
| <p><b>Configuration Backup</b></p>   | <ul style="list-style-type: none"> <li>• Configuration settings can be backed up to a file and restored.</li> </ul>   |
| <p><b>Autosensing Ethernet Connection</b></p>  | <ul style="list-style-type: none"> <li>• Connects to 10/100 Mbps IEEE 802.3 Ethernet networks.</li> </ul>   |
| <p><b>LED Indicators</b></p>   | <ul style="list-style-type: none"> <li>• Power over Ethernet, WLAN and CLOUD activity.</li> </ul>   |
| <p><b>Wireless Multimedia (WMM) Support</b></p>  | <ul style="list-style-type: none"> <li>• Supports WMM QoS (Wireless Multimedia prioritization)</li> <li>• Supports WMM Power Save</li> </ul>  |
| <p><b>Multiple BSSIDs</b></p>  | <ul style="list-style-type: none"> <li>• Supports 8 Multiple BSSID. Each BSSID is mapped to a VLAN. When a Access Point is connected to a wired network and a set of wireless stations, it is called a Basic Service Set (BSS). The Basic Service Set Identifier (BSSID) is a unique identifier attached to the header of packets sent over a WLAN that differentiates one WLAN from another when a mobile device tries to connect to the network.</li> </ul>   |
| <p><b>DHCL Server and Client Support</b></p>   | <ul style="list-style-type: none"> <li>• DHCP provides a dynamic IP address to PCs and other devices upon request. The CN-AP-RED can act as a client and obtain information from DHCP server; it can also act as a DHCP server and provide network information for wireless clients.</li> </ul>   |
| <p><b>SNMP Support</b></p>   | <ul style="list-style-type: none"> <li>• Support for Simple Network Management Protocol (SNMP) Management Information Base (MIB) management. Supports MIB I, MIB II, 802.11 MIB and Proprietary Configuration MIB.</li> </ul>   |
| <p><b>802.1Q VLAN (Virtual LAN) Support</b></p>  | <ul style="list-style-type: none"> <li>• A network of computers that behave as if they are connected to the same network even though they actually may be physically located on different segments of a LAN.</li> <li>• VLANs are configured through software rather than hardware, which makes them extremely flexible. VLANs are very useful for user/host management, bandwidth allocation and resource optimization.</li> </ul>   |

| SOFTWARE                       |  | HARDWARE  |   |
|--------------------------------|--|---|---|
| <b>AP Modes</b>                | <ul style="list-style-type: none"> <li>• Access Point mode</li> <li>• Point-to-point mode</li> <li>• Point -to-Multipoint mode</li> </ul>  | <b>Ethernet</b>   | <ul style="list-style-type: none"> <li>• Support for 10/100/1000 Gigabit Ethernet</li> </ul>  |
| <b>Wireless Security</b>       | <ul style="list-style-type: none"> <li>• WEP</li> <li>• WPA</li> <li>• WPA2</li> <li>• IEEE 802.1x RADIUS Authentication</li> <li>• EAP TLS</li> <li>• TTLS</li> <li>• PEAP</li> <li>• SSH</li> <li>• MAC Access Control</li> <li>• Rogue AP Detections</li> </ul> | <b>Console Access</b>   | <ul style="list-style-type: none"> <li>• RS232C based console access</li> </ul>   |
| <b>VLAN</b>                    | <ul style="list-style-type: none"> <li>• 802.1Q VLAN (Virtual LAN) Support</li> </ul>  | <b>Frequency Band</b>   | <ul style="list-style-type: none"> <li>• 2.4 GHz</li> </ul>   |
| <b>QoS</b>                     | <ul style="list-style-type: none"> <li>• WMM based QoS supported</li> </ul>  | <b>Modulation Technology</b>  | <ul style="list-style-type: none"> <li>• OFDM with BPSK, QPSK, 16 QAM, 64 QAM; DBPSK, DQPSK, CCK</li> </ul>   |
| <b>Bridging</b>                | <ul style="list-style-type: none"> <li>• 802.11D and Spanning Tree</li> </ul>  | <b>Hardware Encryption</b>  | <ul style="list-style-type: none"> <li>• 64-bits, 128- and 152-bits WEP, AES, TKIP data encryption</li> </ul>   |
| <b>System Software Upgrade</b> | <ul style="list-style-type: none"> <li>• TFTP upgrade</li> <li>• FTP upgrade</li> <li>• HTTP upgrade</li> </ul>  | <b>Memory</b>   | <ul style="list-style-type: none"> <li>• 16MB FLASH and 64MB RAM</li> </ul>   |
| <b>IP Address Management</b>   | <ul style="list-style-type: none"> <li>• Static Client</li> <li>• DHCP Client</li> <li>• DHCP server</li> <li>• DNS resolution</li> </ul>  | <b>Supported Data Rates</b>   | <ul style="list-style-type: none"> <li>• 1, 2, 5.5, 6, 9 ,11, 12, 18, 24, 36, 38, 54, &amp; 108 Mbps (Auto-rate capable)</li> </ul>                                       |
| <b>SNMP</b>                    | <ul style="list-style-type: none"> <li>• SNMP v1 and v2c</li> <li>• SNMPv3 users</li> <li>• SNMPv3 groups</li> <li>• SNMPv3 trap targets</li> <li>• SNMPv3 trap filters</li> <li>• SNMP agent</li> </ul>   | IEEE 802.11g  | <ul style="list-style-type: none"> <li>• Best = 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2, 14.44, 28.88, 43.33, 57.77, 86.66, 115.56, 130, &amp; 144.44 Mbps</li> </ul> |
| <b>MIB support</b>             | <ul style="list-style-type: none"> <li>• 802.11b/g MIB</li> <li>• 802.11n MIB</li> <li>• Enterprise MIB</li> <li>• Ethernet MIB</li> <li>• Bridge MIB</li> </ul>   | IEEE 802.11ng   | <ul style="list-style-type: none"> <li>• Best = 6.5, 13, 19.5, 26, 39, 52, 58.5, 65, 13, 26, 39, 52, 78, 104, 117, &amp; 130 Mbps</li> </ul>                              |
| <b>Network Management</b>      | <ul style="list-style-type: none"> <li>• GUI, Telnet, SSH, Syslog, CLI and and CLOUD MANAGEMENT</li> </ul>   | Data Rates for Channel Width=20MHz and Guard Interval=short (400ms) | <ul style="list-style-type: none"> <li>• Best = 15, 30, 45, 60, 90, 120, 135, 150, 30, 60, 90, 120, 180, 240, 270, &amp; 300 Mbps</li> </ul>                              |
| <b>Logging</b>                 | <ul style="list-style-type: none"> <li>• Event Logging</li> <li>• Remote Syslog</li> <li>• Console display and clear</li> <li>• Web display and clear</li> </ul>   | Data Rates for Channel Width=40MHz and Guard Interval=short         | <ul style="list-style-type: none"> <li>• Best = 13.5, 27, 40.5, 54, 81, 121.5, 135, 27, 54, 81, 162, 216, 243, &amp; 270 Mbps</li> </ul>                                  |
| <b>System Clock</b>            | <ul style="list-style-type: none"> <li>• Manual date and time setting</li> <li>• Time zone</li> <li>• Daylight saving</li> <li>• NTP support</li> </ul>  | <b>Power Supply</b>   | <ul style="list-style-type: none"> <li>• IEEE PoE (802.3af switch)</li> </ul>   |
| <b>System Information</b>      | <ul style="list-style-type: none"> <li>• System configuration</li> <li>• Wireless configuration</li> <li>• Wireless client status</li> </ul>   | <b>CERTIFICATION/STANDARDS</b>                                      |   |
|                                |  | <b>FCC ID</b>   | <ul style="list-style-type: none"> <li>• 2ACBBCN-AP2050</li> </ul>  |
|                                |  | <b>Regulatory Certification</b>                                     | <ul style="list-style-type: none"> <li>• FCC, CE, TELEC</li> </ul>  |
|                                |  | <b>IEEE</b>   | <ul style="list-style-type: none"> <li>• 802.11b/bg/ng</li> </ul>   |
|                                |  | <b>ENVIRONMENTAL</b>  |   |
|                                |  | <b>Temperature</b>  | <ul style="list-style-type: none"> <li>• Operating temperature: 0 to 50° C</li> <li>• Storage Temperature -10 to 60° C</li> </ul>   |
|                                |  | <b>Humidity</b>   | <ul style="list-style-type: none"> <li>• Operating humidity: 10-90%, non-condensing</li> </ul>  |
|                                |  | <b>PHYSICAL</b>   |   |
|                                |  | <b>Dimensions (LxWxH)</b>   | <ul style="list-style-type: none"> <li>• 150 x 150 x 35 mm</li> </ul>   |
|                                |  | <b>Weight</b>   | <ul style="list-style-type: none"> <li>• 0.43 kg (0.94lb)</li> </ul>  |

## Ordering Information

| Part No.       | Description                   |
|----------------|-------------------------------|
| CN-AP-RED-2050 | 802.11n Wireless Access Point |



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