



NetCloud Services for Branch



# AP22 Spec Sheet



Cradlepoint AP22 Access Point is sold as part of an all-inclusive branch networking package.

**NetCloud Packages for branch include:**

- WiFi Access Points for small branch offices
- A NetCloud Service Plan tailored for branch networking and set for a specific term
- 24x7 support and limited lifetime warranty

## What to Buy

Description	Part Numbers
<b>U.S.</b>	
— NetCloud Essentials for Branch Access Points (Prime) with AP22	BCx-0A22-0U0
<b>Canada</b>	
— NetCloud Essentials for Branch Access Points (Prime) with AP22	BCx-0A22-0C0
<b>Europe (EU)</b>	
— NetCloud Essentials for Branch Access Points (Prime) with AP22-EU	BCx-0A22-0W0
<b>Asia-Pacific</b> (Australia, New Zealand, Singapore)	
— NetCloud Essentials for Branch Access Points (Prime) with AP22-AP	BCx-0A22-0W0

*x = 1, 3, or 5 years*

**NetCloud Essentials** packages and plans contain all the features and capabilities required for a broad range of branch applications. Essentials Packages include 24x7 support (phone support: 24 hour weekdays with emergency response on weekends, web: 24x7, chat: 24x5) and a limited lifetime warranty.

For additional capabilities, a **NetCloud Advanced** upgrade can be added to the NetCloud Essentials Package at any time.

See additional details of what is included in the Essential and Advanced NetCloud software: [cradlepoint.com/branch-networks](https://cradlepoint.com/branch-networks)

For more details on the AP22 Access Point, included with the NetCloud Packages for branch, see below.

## What's in the Box

- Semi-compact wireless access point designed for the commercial distributed branch market
- Mounting brackets and screws
- Quick Start Guide with warranty information

## Key Features

- Up to 300 Mbps for 2.4GHz radio
- Up to 876 Mbps for 5GHz radio
- 802.11ac Wave 2 support
- 2x2 MU-MIMO with 2 spatial streams per radio
- 3 integrated omni-directional antennas
- Full operational capacity with 802.3af PoE
- Wall and ceiling mounting support

## WiFi

- 802.11 2x2 DBDC ac wave 2 2.4 GHz and 5 GHz
- Up to 124 connected devices per radio
- 4 SSIDs per radio
- WPA2 Enterprise
- QoS—WMM/802.11e/802.1p
- VLAN 802.1Q

## Management

- Data rate management utilizes Cradlepoint NetCloud Manager (NCM)
  - Configuration & management
  - Firmware update via NCM
  - Basic Network/Group Configuration templates
- Zero-touch deploy when a Cradlepoint router is within the network
  - Uses Stream for auto-connect to NCM
  - Minimum Auto Provisioning when connected to Cradlepoint router
- Unique configurations per SSID with inheritance
- Hidden SSID support
- Basic Site Survey
- Basic Analytics
- SNMP
- CLI Management (SSH)—basic troubleshooting & connect to NCM
- AP Location Tracking via router (LLDP)

## Security

- WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i
- 802.1x with RADIUS for WPA2-Enterprise
- WEP
- Rogue AP Indicator
- MAC Address Filtering
- Advanced Security Mode (local user management only)
- Per-Client Web Filtering
- Network Availability Scheduling
- Content Filtering (basic)

## Specifications

The following features are delivered through the NetCloud Service.

### WiFi:

- Dual-band concurrent 2x2 802.11a/b/g/n/ac wave 2 (Multi-user MIMO, 256 QAM)
- Spatial streams:
  - Single-User MIMO: up to 2 streams
  - Multi-User MIMO: up to 2 streams
- Channels: 20MHz, 40MHz, 80MHz
- Max Power Output: 20-27 dBm for 2.4GHz and 5GHz

**Port:** 1x Gigabit Ethernet port, 1 USB 2.0

**Temperature:** -10 °C to 50 °C (14 °F to 122 °F) operating

### Humidity (non-condensing):

- 10% to 90% operating
- 5% to 95% storage

**Power:** 802.3af PoE

### WiFi Power (FCC):

- (2.4 GHz band): 27 dBm
- (5.0 GHz band): 27 dBm

**Size:** 6.49d x 6.49w x 1.81h inches (165mm x 165mm x 46mm)

**Weight:** 6 oz (175 g)

**Certifications:**

- PTCRB, FCC, IC, WFA, ETSI
- Safety: UL/CUL
- Materials: WEEE, RoHS, RoHS-2, California Prop 65

## Accessories

- PoE Injector (sold separately)
  - Line Cords for PoE injectors (powers AP22)
  - US Part Number: 170732-000
  - EU Part Number: 170733-000
  - AU Part Number: 170733-001
  - UK Part Number: 170733-002

## Enterprise-Class WiFi Radio Specifications

**WiFi Radio Specification:**

- DBDC 2x2 802.11a/b/g/n/ac Wave 2 (MU MIMO, 256 QAM)
- One 10/100/1000 Ethernet port
- One USB 2.0 ports:
- Power: 802.3af Power over Ethernet port)
- Antennas: 3 integrated internal antennas
- Industry Standards & Certs: FCC, WFA, ETSI
- Frequencies supported:
  - 2.4 GHz (2412 – 2472 MHz)
  - 5 GHz
    - U-NII-1 (5.150-5.250 GHz)
    - U-NII- 2a (5.250-5.350 GHz) North America Only
    - U-NII-2c (5.470-5.725 GHz) North America Only
    - U-NII-3 (5.7225-5.825 MHz)

**Supported Data Rates:**

- 802.11n/ac: 6.5Mbps – 173.4Mbps (20MHz)
- 13.5Mbps – 400Mbps (40MHz)
- 29.3Mbps – 867Mbps (80MHz)
- 802.11a: 54, 48, 36, 24, 18, 12, 9 and 6Mbps
- 802.11b: 11, 5.5, 2 and 1 Mbps
- 802.11g: 54, 48, 36, 24, 18, 12, 9 and 6 Mbps

- Beam forming
- Band steering

**WiFi (Standards-based):**

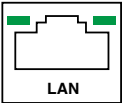
- 802.11k – Radio Resource Management - Client load balancing
- 802.11r – Fast Roaming
- 802.11v – Wireless Network Management

## Support & Warranty

The AP22 is only sold as a component of NetCloud Packages.

- NetCloud Packages include support for the full subscription term.
- All Cradlepoint hardware products are covered by a limited lifetime warranty for as long as they are under a NetCloud Service Plan.

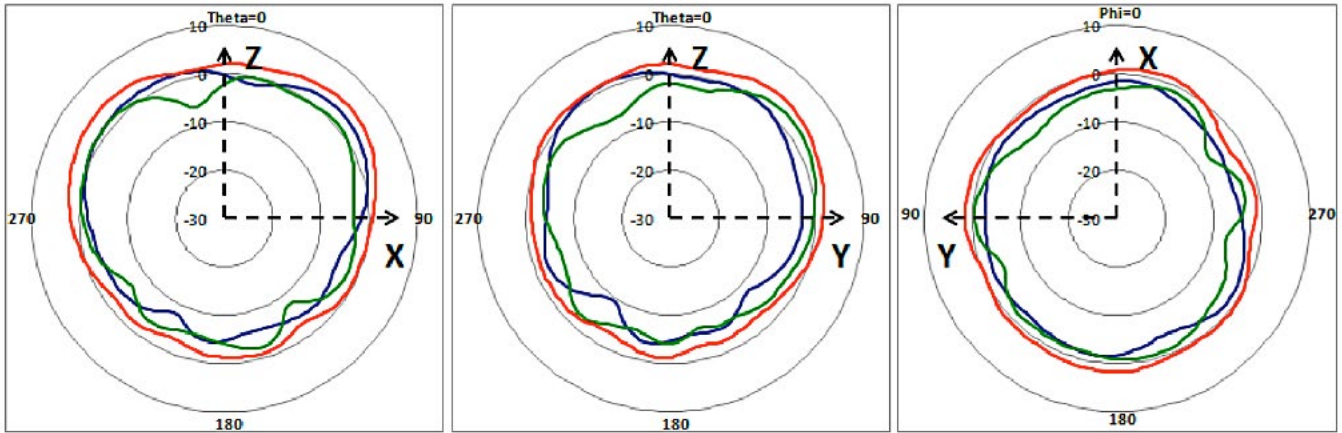
## LEDs

Indicator	Behavior
	<p><b>Power:</b></p> <ul style="list-style-type: none"> <li>— Green = Powered ON.</li> <li>— Pulsing Green = Booting kernel</li> <li>— Green Fade to White = Fully booted</li> <li>— White = Working properly</li> <li>— Red = No connectivity</li> <li>— Pulsing Red = Assigning IP Address</li> <li>— Pulsing Amber = Firmware update in process</li> <li>— Orange = Attention</li> <li>— Blinking Blue = Resetting</li> </ul>
	<p><b>LAN:</b></p> <ul style="list-style-type: none"> <li>— Speed (left-hand LED)</li> <li>— Link/Activity (Right-hand LED)</li> </ul>

# Antenna Radiation Patterns

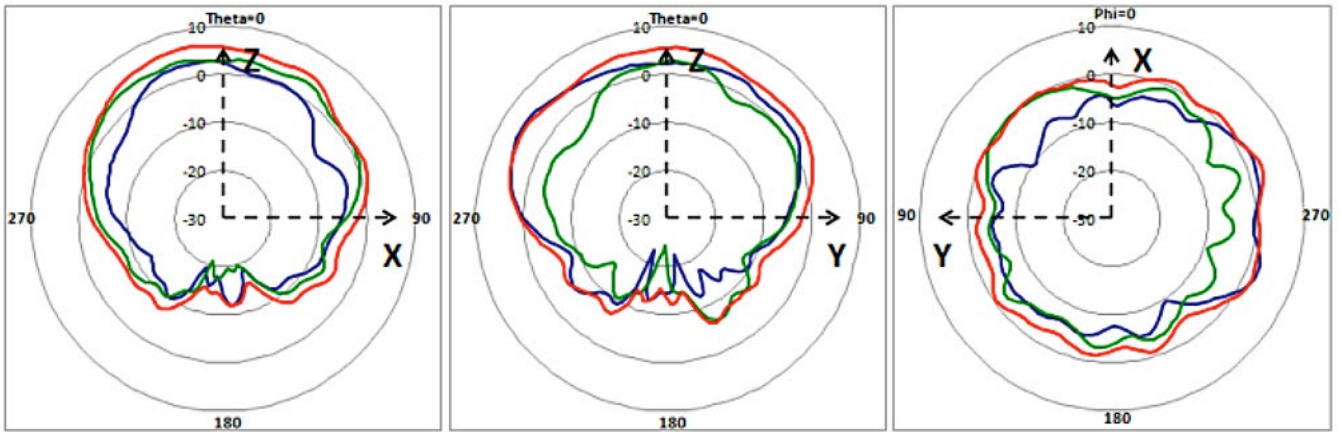
## 2x2 Radio Antenna Pattern - Antenna 1-2

### 2.4GHz



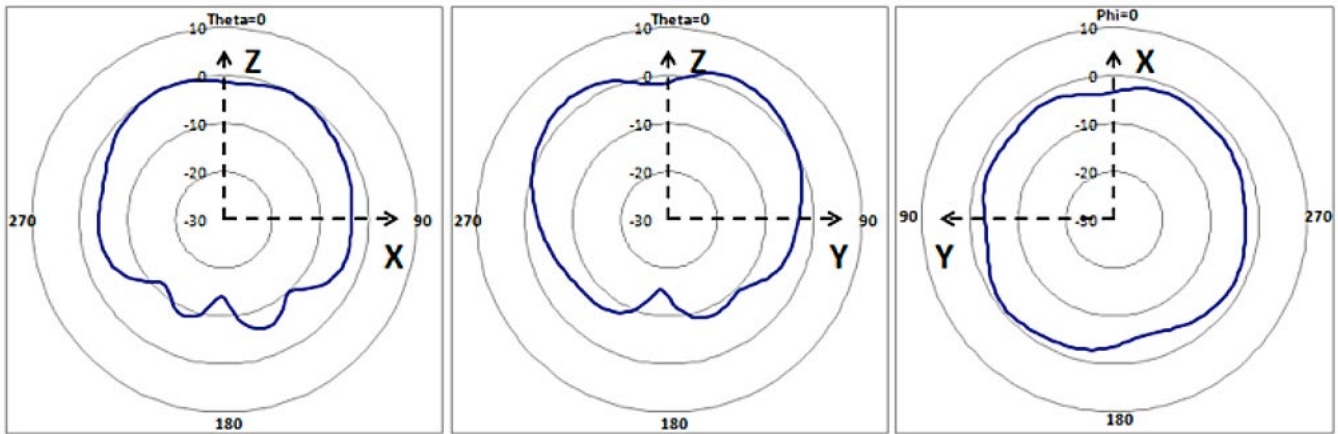
Radiation Pattern for ANT. 1(green) & 2 (blue) for 2450MHz; (red is directional gain)

### 5 GHz



Radiation Pattern for ANT. 1 (green) & 2 (blue) for 5550MHz; (red is directional gain)

### 1x1 Radio Antenna Pattern - Antenna 3

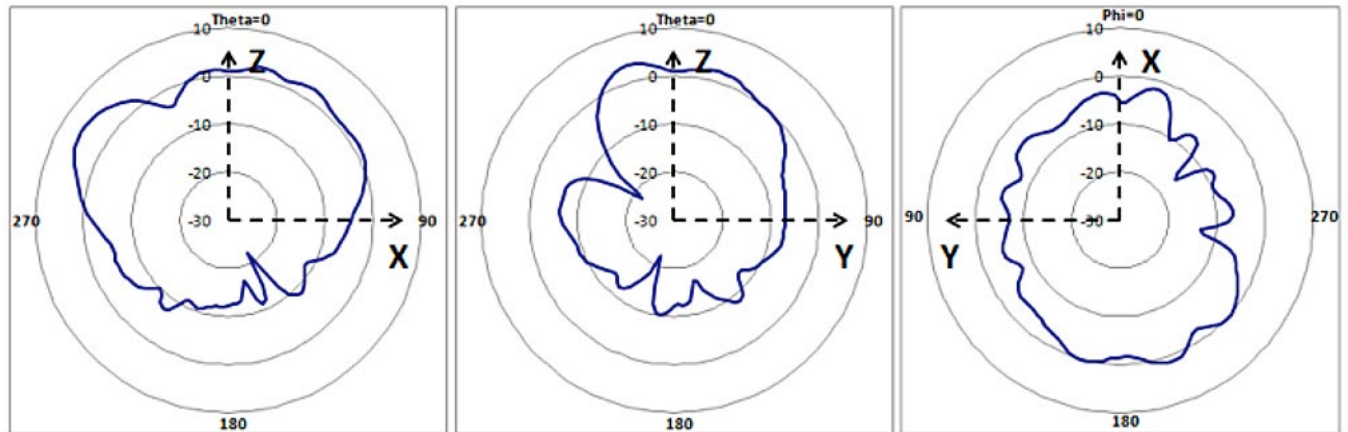


#### 2.4 GHz

Radiation Pattern for ANT. 3 (blue) for 2450MHz

#### 5 GHz

Radiation Pattern for ANT. 3 (blue) for 5550MHz





# Hardware

## Top & Sides

