

cnPilot Home & Business Routers

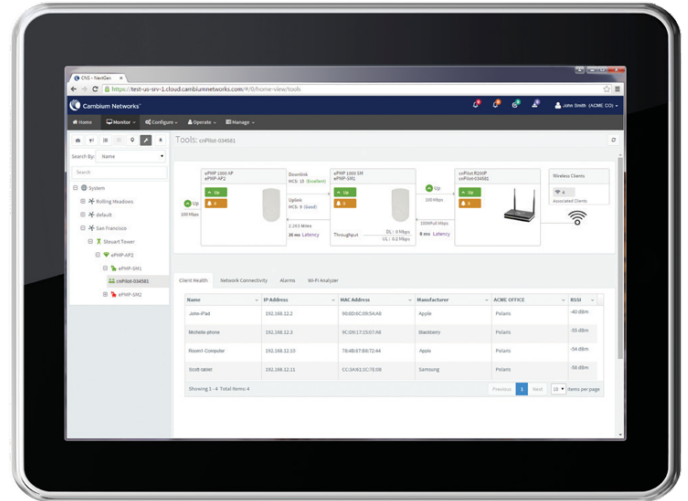
The ISP managed R190, R200 and R201

ISP Managed Home Wi-Fi - made easy

Cambium's managed Home & Small Business (HSB) routers are purpose built for Internet Service providers (ISPs).

The HSB router solution makes it easy for ISPs to deliver on their end goal on day 1 of turning on Internet service to their customers – working internet access that the customer client devices can connect to with ease, raising the ISP's customer satisfaction score.

And that's not all! These HSB routers along with cnMaestro management, also assist ISPs get significant visibility to the indoor home environment with visibility to client device and traffic data, significantly cutting down any support costs and offering insight into daily utilization and cost of operations



- ▶ **PoE out:** The R200P and R201P models can power on Cambium's ePMP or PMP 450 line of Subscriber modules or *Outdoor CPE* (Customer premise equipment) on the roof, making it easy for one equipment to perform at least 3 functions – Wi-Fi router, ATA service and PoE out providing input power to Cambium's outdoor CPEs
- ▶ **IPV6:** The Home & Small Business routers are IPV6 ready
- ▶ **Voice over IP (VoIP) ATA:** The devices come with option for up to 2 FXS ports to connect telephones and fax machines – and an opportunity for ISPs to derive Voice revenue over their Internet access
- ▶ **Multiple SSIDs:** Managed and controlled by the ISP
- ▶ **Spectrum analysis:** Run remote spectrum scans minimizing site visits for troubleshooting issues

- ▶ **Zero touch onboarding:** Virtual configuration and provisioning prior to install enables a low touch cost saving approach to large scale device installation and management
- ▶ **cnMaestro Controller & Manager:** Inventory management, software configuration, bulk device upgrades and alarms ensure full management and operations control of customer premises device
- ▶ **ezDetect:** cnMaestro's unique troubleshooting feature that saves on truck rolls, enables access to device, client connection and traffic data. Includes layer 2 packet access and the ability to run remote spectrum analysis
- ▶ **Cloud or On-premises (NOC) managed:** The HSB devices can be managed by a virtual software manager that can run locally in the ISPs network or in the cloud



R190 Series: R190V, R190W

Single band 802.11n routers with ATA



R200 Series: R200, R200P

Single band 802.11n routers with ATA and/or Cambium PoE options



R201 Series: R201, R201P, R201W

Dual band 802.11ac routers with ATA and/or Cambium PoE options

WLAN ROUTERS TO SUIT FUNCTIONS AND BUDGETS

	R190W	R190V	R200	R200P	R201	R201P	R201W
WLAN Routers	✓	✓	802.11n Single band 2.4 GHz	802.11n Single band 2.4 GHz	802.11ac Dual band 2.4 and 5 GHz	802.11ac Dual band 2.4 and 5 GHz	802.11ac Dual band 2.4 and 5 GHz
ATA - for Voice		✓	✓	✓	✓	✓	
Cambium PoE out				✓		✓	✓

Specifications

FEATURES	R190W	R190V	R200	R200P	R201	R201P	R201W
KEY INTERFACES							
TELEPHONE INTERFACES 2 FXS ports, RJ11		✓	✓	✓	✓	✓	
WAN	1 x 10/100 RJ45		1 x 10/100 RJ45		1 x GigE, RJ45		
LAN	3 x 10/100BaseT, RJ45		4 x 10/100BaseT, RJ45		4 x GigE, RJ45		
USB			1 USB 2.0 Host Port for shared printer or storage		1 USB 2.0 Host Port for shared printer or storage		
WiFi	2x2 Single band 11n 2.4 GHz		2x2 Single band 11n 2.4 GHz		2x2 Dual band 11ac 2.4 (11n) and 5 GHz (11ac)		
SSIDs 4 Per Radio	4	4	4		8		
Max Data Rate (Throughput)	300 Mbps		300 Mbps		1.16 Gbps across 802.11ac (5 GHz and		
PoE OUT for PMP 450 and ePMP Subscriber Module				✓		✓	✓
IPV6		✓		✓		✓	
FACTORY RESET BUTTON		✓		✓		✓	
LED INDICATORS: Power	✓	✓		✓		✓	
WLAN	✓	✓		✓		✓	
LAN 1-4	✓	✓		✓		✓	
Phone 1-2	n/a	✓		✓	✓	✓	n/a
Network							
PROTOCOL <i>DHCP/PPPoE/Static IP</i>	✓	✓	✓	✓	✓	✓	✓
<i>PPTP/L2TP VPN</i>	✓	✓	✓	✓	✓	✓	✓
<i>Dynamic DNS/DNS SRV (RFC 1706 and RFC 2782)</i>	✓	✓	✓	✓	✓	✓	✓
<i>DMZ</i>	✓	✓	✓	✓	✓	✓	✓
<i>NAT Traversal (Static NAT Route or by STUN)</i>	✓	✓	✓	✓	✓	✓	✓
<i>DHCP Client and DHCP server</i>	✓	✓	✓	✓	✓	✓	✓
<i>MAC address Clone</i>	✓	✓	✓	✓	✓	✓	✓
<i>IP Conflict Detection</i>	✓	✓	✓	✓	✓	✓	✓

ROUTE MODE <i>Route/Bridge, customer configurable</i> <i>Support IEEE 802.1Q VLAN/802.1p</i> <i>Layer 3 (DSCP) settings for SIP, RTP and Data</i>	✓	✓	✓	✓	✓	✓	✓
QUALITY OF SERVICE <i>Support IEEE 802.1Q VLAN/802.1p</i> <i>Layer 3 (DSCP) settings for SIP, RTP and Data</i>	✓	✓	✓	✓	✓	✓	✓
Wireless INTERFACES							
PROTOCOL				802.11 b/g/n			802.11 b/g/n/ac
SECURITY <i>WEP, WPA-PSK (TKIP), WPA-PSK (AES), WPA2-PSK (TKIP), WPA2-PSK (AES), Mixed mode</i>	✓	✓	✓	✓	✓	✓	✓
OTHERS <i>AP isolation, MBSSID AP isolation, WMM, MAC Filter, WDS, WPS</i>	✓	✓	✓	✓	✓	✓	✓
Call Features							
IP SIGNALING <i>SIP V2 (RFC3261/3262/3263/3264)</i>		✓	✓	✓	✓	✓	
VOICE CODEC <i>G.711 (A-law, μ-law), G.722, G.723, G.729</i>		✓	✓	✓	✓	✓	
FAX OVER IP <i>RealTime FAXoverIP via T.38</i>		✓	✓	✓	✓	✓	
<i>T.30FaxwithG.711</i>		✓	✓	✓	✓	✓	
VOICE FEATURES <i>Adaptive jitter buffer</i>		✓	✓	✓	✓	✓	
<i>Voice Activity Detection</i>		✓	✓	✓	✓	✓	
<i>Comfort Noise Generation</i>		✓	✓	✓	✓	✓	
<i>Echo Cancellation</i>		✓	✓	✓	✓	✓	
CALL FEATURES <i>3-way Conference</i>		✓	✓	✓	✓	✓	
<i>Call hold, Call forwarding, Call transfer, Call waiting,</i>		✓	✓	✓	✓	✓	
<i>Speed dial, Hotline, Dial plan</i>		✓	✓	✓	✓	✓	
<i>CallerID, Blacklist, Call log</i>		✓	✓	✓	✓	✓	

FEATURES	R190W	R190V	R200	R200P	R201	R201P	R201W
NETWORK MANAGEMENT							
Integrated Management <i>cnMaestro Cloud Based Management</i>	✓	✓	✓	✓	✓	✓	✓
CONFIGURATION <i>Web GUI interface</i>	✓	✓	✓	✓	✓	✓	✓
<i>Interactive Voice Response (IVR)</i>	✓	✓	✓	✓	✓	✓	✓
AUTO PROVISIONING <i>TFTP, HTTP</i>	✓	✓	✓	✓	✓	✓	✓
SNMP <i>SNMPv2</i>	✓	✓	✓	✓	✓	✓	✓
TIME <i>SNTP</i>	✓	✓	✓	✓	✓	✓	✓
ADMIN <i>Administrator and User</i>	✓	✓	✓	✓	✓	✓	✓
ALT MGMT <i>TR069</i>	✓	✓	✓	✓	✓	✓	✓
SYSLOG <i>Local, Remote</i>	✓	✓	✓	✓	✓	✓	✓
POWER SUPPLY							
AC/DC ADPATOR	AC INPUT: 100 -240V, 50-60 Hz DC OUTPUT: 5V, 1A	AC INPUT: 100 -240V, 50-60 Hz DC OUTPUT: 12V, 2A	AC INPUT: 100 -240V, 50-60 Hz DC OUTPUT: 12V, 2A		AC INPUT: 100 -240V, 50-60 Hz DC OUTPUT: 12V, 2A		AC INPUT: 100 -240V, 50-60 Hz DC OUTPUT:
ENVIRONMENTAL							
OPERATION TEMP <i>+5°C to +45°C 5°C to +45°C</i>	✓	✓	✓	✓	✓	✓	✓
STORAGE TEMP <i>-25°C to +85°C</i>	✓	✓	✓	✓	✓	✓	✓
RELATIVE HUMIDITY <i>10%~90% No Condensing</i>	✓	✓	✓	✓	✓	✓	✓
Weight	0.5KG	0.5KG	0.75 kg		0.8 kg		
DIMENSION (H x W x D)	180 mm x 110 mm x 30 mm		180 mm x 110 mm x 30 mm		175 mm x 155 mm x 35 mm		
REGULATORY							
EMC <i>FCC part 15B Class B, ETSI EN301 489-1, ETSI EN 301 489-17, EN61000-6-1, EN61000-6-3, CE, RoHS</i>	✓	✓	✓	✓	✓	✓	✓
SAFETY <i>IEC 60950-1, UL 60950-1, EN 60950-1,</i>	✓	✓	✓	✓	✓	✓	✓