

# PX wifi Terminal Equipment

## 1. Summary

PX wifi terminal equipment is used to construct two-layer Ethernet transmission channel in CATV Cable network. Transmit and receive the Ethernet signals by CATV coaxial cable, without affecting the existing CATV signals. WEC701W C4 coaxial cable broadband access terminal adopts the industry recognized solution HomePlugAV AR7411. Connect with slave equipment via coaxial WAN port. Local provide four 100M full-duplex Ethernet interface, can

simultaneously connect with computer, digital TV set-top box, IP telephones, etc. Provide wireless WIFI 11N router function, use wireless WIFI access to the Internet.

PX wifi supports two SSID as required. One for operator's network maintenance, another for user's wireless internet access, based on IEEE802.11n standard, can extend the wireless network scope; provide stable transmission up to 150Mbps. It is compatible with IEEE802.11b and IEEE802.11g standards.

PX wifi user side has two accounts with different permissions: maintenance account and home gateway user account. Users log in use username and password to configure or manage on wifi slave. WAN connection of wifi slave supports four subinterface settings. Build independent channels of management, video services, voice services and internet services. WAN connection can add, modify and delete the subinterface. Each subinterface has routing mode and bridge mode. PX wifi as a data hub of home network and external network, can classify the data stream according to user side interfaces (including wired and wireless interface) service discovery results, QoS adaptive the different data stream; support bandwidth control, can limit the maximum upstream bandwidth and downstream bandwidth of each subnet bridge, to prevent the entire Cable transmission network impact when user side other network equipment is abnormal or has man-made attack. Support priority identification, identify data packages of specific service (such as RTP data flow) according to service discovery results, including 802.1d identification and DSCP identification. Support six priority queues and different scheduling algorithms, including: SP, DWRR and CAR.

PX wifi supports encryption transmission, protect the sensitive data.



## 2. Performance Characteristics

1. Meet IEEE HomePlug AV, 802.11n, IEEE 802.11g, IEEE 802.11b, IEEE802.3, IEEE802.3u;
2. EOC coaxial cable WAN access, provide four interfaces: TV, PHONE, WiFi wireless and wired; support CSMA/CA, CSMA/CD, TCP/IP, PPPoE, DHCP, ICMP and NAT protocols;
3. Provide 1 WAN port and 4 LAN ports (10/100M adaptive), support port auto MDI/MDIX;
4. Provide two working modes: Bridge Mode and Routing Mode;
5. Support Quality of Service (QoS)-802.11e;
6. Support remote and Web management, full Chinese configuration interface;
7. Support multi-SSID function;
8. Support NAT/NAPT IP share, WAN supported protocols: PPPoE/Static IP/PPTP/DHCP;
9. Provide stable transmission up to 150Mbps;
10. Support virtual server and DMZ host;
11. Support 128 bit WEP and the newest wireless security standards such as WPA-PSK and WPA2-PSK;
12. Support UPnP function and DDNS function;
13. Support IP filtering, port filtering and MAC address filtering;
14. Built-in DHCP server, built-in firewall to prevent DoS attack;
15. Provide system security log and traffic statistics function;
16. Provide Web management page reset, and support online software upgrades;
17. WiFi support 3dBi high-gain omnidirectional antenna;
18. External DC12V 1A power adapter.

## 3. Technical Parameters

Product Model	PX wifi slave
<b>Ports</b>	
WAN	One screw-thread Cable interface
LAN	Four 10/100M adaptive RJ45 port
TV	One CATV coaxial line interface
<b>Supported standards and protocols</b>	
IEEE HomePlug AV, IEEE 802.11n, IEEE 802.11g, IEEE 802.11b, IEEE 802.3, IEEE802.3 CSMA/CA, CSMA/CD, TCP/IP, DHCP, ICMP, NAT, PPPoE	
<b>WiFi Parameters</b>	
Frequency range	2.4~2.4835GHz
Transmission rate	11n: 270/243/216/162/108/81/54/27Mbps 135/121.5/108/81/54/40.5/27/13.5Mbps 130/117/104/78/52/39/26/13Mbps 65/58.5/52/39/26/19.5/13/6.5Mbps
	IEEE 802.11g: 54/48/36/24/18/12/9/6 (self-adaptive)

	IEEE 802.11b: 11/5.5/2/1M (self-adaptive)
Working channel number	13
Spread-spectrum technology	DSSS (Direct Sequence Spread Spectrum)
Data modulation	DBPSK, DQPSK, CCK and OFDM(BPSK/QPSK/16-QAM/64-QAM)
Sensitivity @ PER (Packet Error Rate)	270M: -68dBm@10% PER; 130M: -68dBm@10% PER; 108M: -68dBm@10% PER; 54M: -68dBm@10% PER; 11M: -85dBm@8% PER; 6M: -88dBm@10% PER; 1M: -90dBm@8% PER; (typical value)
Transmission distance	Indoor 120m, outdoor 360m at most (depend on the environment)
RF power	20dBm EIRP
Antenna	3dBi high-gain omnidirectional antenna
<b>EOC Parameters</b>	
working frequency	7.5-65MHz
Output power	≥110dBuV
Modulation mode	OFDM
Physical layer bandwidth	700Mbps
IP layer throughput	Exclusive or shared 320Mbps
RF impedance	75Ω
<b>CATV RF</b>	
Working band	87-1000MHz
Return Loss	>16dB
Insertion Loss	≤1dB
<b>Network media</b>	
10Base-T: Category 3 or above 3 UTP; 100Base-TX: Category 5 UTP	
<b>LED Indicators</b>	
WAN	Normally on: connected; flashing: data transmission
LAN	Normally on: connected; flashing: data transmission
Others	Power(power supply), EOC (EOC chip initialization indicator), V (wireless indicator)
<b>General Characteristics</b>	
Dimension (L×W×H)	180(mm)*110(mm)*31(mm)
Use environment	Working temperature: -20°C~55°C; Working humidity: 10%~90% no condensation; Storage temperature: -40°C~70°C; Storage humidity: 5%~90%no condensation.
External power supply	Power adapter output: DC 12V/1A