PRODIGY

PRODIGY CEILING-MOUNTED INDOOR AP

PD1-W21-221-T

Ceiling-mounted Indoor AP

PRODUCT Overview

- PD1-W21-221-T is the Terrabit-developed WiFi6 ceiling-mounted wireless AP oriented for high-density wireless scenarios such as enterprises, campus, hospitals, governments, hotels, and smart buildings.
- PD1-W21-221-T is designed with high-performance RF chip solution, with high throughput and strong concurrent access capability. PD1-W21-221-T stands out with the built-in omnidirectional MIMO high-power antenna to meet the wireless coverage to the greatest extent. PD1-W21-221-T supports both POE and Adaptor power supply solutions. It has a beautiful appearance and can be widely used for ceiling-mounting in various occasions such as gypsum board and cement roof. Therefore, PD1-W21-221-T is your best choice for building an economical wireless network solution.

PRODUCT CHARACTERISTICS

- High-performance Wireless Solutions

  PD1-W21-221-T is built with high-performance wireless chipset, and supports 802.11a/b/g/n/ac/Wave2/ax protocols, with high throughput and good stability. The 2.4G and 5G devices can support 2976Mbps air interface bandwidth to satisfy up to 150 users with service access, with strong concurrency capability.

  PD1-W21-221-T supports wireless load balancing. In high-density access scenarios, PD1-W21-221-T can achieve reasonable allocation of terminals within a single AP through the 2.4GHz and 5GHz spectrum while ensuring balanced traffic distribution among multiple APs to avoid congestion, which enables the AP to access more end users, and provides the better Internet service.

- Powerful Automatic Network Optimization

  PD1-W21-221-T supports wired and wireless QoS, automatic terminal identification, automatic channel selection, automatic power adjustment, dynamic receiving sensitivity and other carrier-level network optimization features while accessing a large number of users, which serves enterprises with easy-to-use and practical WLAN.

  PD1-W21-221-T can also cooperate with PD1-C61 series wireless controllers to achieve the "one-key wireless automatic optimization" and "background automatic optimization", ensuring that users complete network tuning by themselves when the wireless environment changes, without waiting for manufacturers or agents to come to service.

- Comprehensive Security Features

  PD1-W21-221-T supports WEP/WPA/WAP2 access modes, wireless IPS/IDS, the layer-2 user isolation, and centralized ACL control. PD1-W21-221-T supports docking with wireless AC and cloud platform, provides rich and practical diversified authentication functions for computers, mobile phones, tablets and other terminals, to facilitate user access authentication.

  PD1-W21-221-T provides illegal AP detection and subsequent processing, wireless attack defense, static black and white lists, to reduce the illegal intrusion on wireless networks.

- User-friendly Design Details

  PD1-W21-221-T is equipped with LED controllable design: the LED lights can be turned off during the night break to avoid irritating the eyes; all the LED lights can be turned on to improve the operation efficiency during the network inspection. All the LEDs can be controlled in batches through the AC, and can also be switched individually with each AP button, which is very flexible and convenient.

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- Rich Manageable Features

PD1-W21-221-T supports the integrated design of fat and thin APs, which can be individually configured, and can also be connected to Terrabit Networks PD1-C61- series wireless ACs to realize CLI, Web, SNMP management.

PD1-W21-221-T can also be managed through the Terrabit Networks cloud-based operation platform (COP) to achieve unified management of AC, switches, routers, security and other products, greatly improving the efficiency of operation and maintenance.

SYSTEM PERFORMANCE

Item	PD1-W21-221-T
Interface	
Port	1 GE PoE WAN, 1 GE LAN
Button	RESET
Wireless parameters	
Standard	802.11/a/b/g/n/ac/wave2/ax
	MIMO 2x2
	2976Mbps
Best performance	150 user access, 80 users recommend
	32 SSIDs
Working frequency	2.412-2.4835GHz, 5.150-5.250GHz
	5.250-5.350GHz, 5.470-5.725GHz
	5.745-5.825GHz
Antenna	Built-in 3dBi antenna (2.4GHz and 5GHz)
Output power(dBm)	23/channel
Maximum total transmitting power (The actual transmission power is subject to relevant regulations.)	2.4 GHz: 23 dBm (combined power)
	5 GHz: 23 dBm (combined power)
Modulation technology	OFDM: BPSK@6/9Mbps, QPSK@12/18Mbps, 16-QAM@24Mbps, 64-QAM@48/54Mbps DSSS: DBPSK@1Mbps, DQPSK@2Mbps, CCK@5.5/11Mbps MIMO-OFDM(11n): MCS 0-15 MIMO-OFDM(11ac): MCS 0-9 MIMO-OFDM(11ax): MCS 0-11
PoE power supply	802.3at

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SYSTEM PERFORMANCE

Item	PD1-W21-221-T
Modulation mode	11b: DSS: CCK@5.5/11Mbps, DQPSK@2Mbps, DBPSK@1Mbps 11a/g: OFDM: 64QAM@48/54Mbps,16QAM@24Mbps, QPSK@12/18Mbps, BPSK@6/9Mbps 11n: MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM 11ac: MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM 11ax: MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Power adjustment	Automatic
Reset	Supported
Status LED	on / Blinking/ error
Operating temperature/ Storage temperature Operating	-10°C~40°C/-40°C~70°C
humidity /Storage humidity	10%~95% (non-condensing)
Protection class	IP41
Power consumption	<18W
MTBF	>250000H

SOFTWARE SPECIFICATIONS

802.11ax compliance	Operating frequency bands	5GHz+2.4GHz
	11ax Max Link Rate	2400MbpsMbps + 573Mbps
	A-MPDU	Supported
	A-MPDU	Supported
	OFDMA	Supported
	MU-MIMO	Supported
	Transmit Beamforming (TxBF)	Supported
	Maximum Likelihood Demodulation (MLD)	Supported
	Maximum Ratio Combining (MRC)	Supported
	Space-Time Block Code (STBC)	Supported
	Operating frequency bands	Supported

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SOFTWARE SPECIFICATIONS

802.11ac compliance	Operating frequency bands	5GHz
	A-MPDU	Supported
	A-MSDU	Supported
	Transmit Beamforming (TxBF)	Supported
	Maximum Likelihood Demodulation (MLD)	Supported
	Maximum Ratio Combining (MRC)	Supported
	Space-Time Block Code (STBC)	Supported
	Low Density Parity Check Coding (LDPC)	Supported
	MU-MIMO	Supported
802.11n compliance	Operating frequency bands	2.4GHz+5GHz
	A-MPDU	Supported
	Maximum Likelihood Demodulation (MLD)	Supported
	Transmit Beamforming (TxBF)	Supported
	Maximum Ratio Combining (MRC)	Supported
	Space-Time Block Code (STBC)	Supported
	Low Density Parity Check Coding (LDPC)	Supported
WLAN	Maximum number of users per band	128
	WPA-PSK/WPA2-PSK/WPA3-PSK	Supported
	RTS/CTS	Supported
	Guest network	Supported
	Smart device SSID	Supported
	Wired networking	Automatic detection and authorization
	Wireless Mesh networking	Automatic detection and authorization
	Automatic path switching	Supported
	Automatic link fault detection and recovery	Supported
Advanced networking features	Automatic network-wide channel adjustment	Supported
	Automatic network-wide bandwidth adjustment	Supported
	Automatic network-wide power adjustment	Supported
	Automatic network management	Automatic networking with distributed APs, which allows you to add or replace APs as needed
Security policy	Encryption	AES, WPA3
	802.11i	Supported
	Authentication	MAC Address/PSK
	Client isolation	1. Layer-2 wireless client isolation
		2. SSID isolation
	Forwarding security	Packet filter, MAC address filter, and broadcast storm suppression
	SSID-VLAN binding	Supported
	Management frame protection (802.11w)	Supported
Advanced Wi-Fi features	802.11e	WMM
	Priority	Ethernet port 802.1P identification and marking
		Mapping from wireless priorities to wired priorities
	AI-QoS	Mapping based on application traffic and air interface queue

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SYSTEM PERFORMANCE

Working mode

- Supports AP Mode
- Routing mode
- Bridging Mode

IP functions

- Supports IPv4, DHCP, NTP protocols
- Supports static IP allocation, dynamic DHCP and PPPoE dial-up

Wireless management

- Supports CAPWAP management protocol
- Supports Option43, DNS to discover AC
- Supports Layer 2 and Layer 3 networking of AC and AP
- Supports cross-NAT of AC and AP
- Supports Layer 2 and Layer 3 user roaming
- Supports clock, version and configuration synchronization of AC and AP

Application added

- Supports for RTLS probes
- Supports docking wireless positioning system

Wireless access

- Supports 802.11 protocol suite
- Supports multiple SSID management, and SSID hiding
- Supports no SSID, VLAN binding function. Supports SSID-based user limit and isolation
- Supports each SSID to specify the parameter template separately
- Supports country code setting

User authentication

- Supports local authentication and Cloud authentication
- Supports multiple authentication methods such as local account, SMS, WeChat, and Voucher
- Supports user black and white lists
- Supports account-based access period control and bandwidth control

Security

- Supports PSK authentication method
- Supports WEP, WPA, WPA2, WPA3 wireless encryption
- Supports IP-based, MAC-based filtration
- Supports DDoS, De-Auth anti-attack
- Supports Rogue AP detection

QoS

- Supports 802.11e/WMM
- Supports global trac rate limit
- Supports AP-based, VLAN-based, User-based trac rate limit
- Supports frequency-based, AP-based flow load balancing

Wireless optimization

- Supports one-click network optimization, customs wireless RF parameters
- Default 8 wireless scene templates, supports user-defined templates
- Supports 5G prior access, supports restrict access of lowrate users

Management and maintenance

- Supports aditional device management such as Telnet, SSH, Web, SNMP and TR069 Supports
- ping, tracert, debug and other diagnostic tools templates
- Supports CAPWAP-based AC centralized management
- Supports COP unified management
- Support AP indicator on and off

ORDERING INFORMATION

Model	Description
PD1-W21-221-T	PD1-W21-221-T ceiling-mounted intelligent WiFi6 AP, 1 GE PoE WAN, 1 GE LAN and 1 console port, built-in MIMO antennas, 2976Mbps wireless, supports PoE and adaptor power supply (excluding power adaptor)