Wi-Fi 7 Dual-Radio Ceiling Access Point

(TN8CAP7)

PRODUCT INTRODUCTION

TN8CAP7 is a Wi-Fi 7 dual-band ceiling-mount wireless access point. Supporting 160 MHz bandwidth and simultaneous dual-band operation, it delivers a maximum aggregated connection speed of up to 5100 Mbps (2.4G: 688 Mbps, 5G: 4323 Mbps), making it ideal for building stable and high-speed wireless networks for users. The AP supports both 12V DC power supply and IEEE 802.3af/at PoE protocols, meeting deployment requirements in various scenarios.

TN8CAP7 features fast roaming technology, intelligently guiding client devices to associate with access points offering superior wireless quality, ensuring uninterrupted connectivity for terminals.

TN8CAP7 supports both local management and centralized AC (Access Controller) management. Administrators can easily perform remote configuration, management, and status monitoring, making it suitable for diverse environments such as schools, dormitories, hotels, and more.

HIGHLIGHT FEATURES

- Compliant with Wi-Fi 7 standards (IEEE 802.11a/b/g/n/ac/ax/be)
- Featuring 160MHz ultra-wide bandwidth and 5100M-class wireless speeds for smooth 4K HD video streaming
- Equipped with a 2.5G uplink Ethernet port, breaking through the Gigabit uplink bottleneck
- Supports MLO technology, enabling aggregation across two frequency bands to significantly enhance effective data throughput; automatically switches to other bands when interference or high load occurs on a specific band, improving anti-interference capability, reducing latency, and optimizing the online experience
- Utilizes MU-MIMO (Multi-User Multiple Input Multiple Output) technology, allowing multiple terminals to transmit simultaneously on the same channel for seamless connectivity without network contention
- Incorporates OFDMA (Orthogonal Frequency Division Multiple Access) technology, enabling multiple user data transmissions within each frame to greatly enhance Wi-Fi transmission efficiency
- Supports both standard IEEE 802.3af/at PoE and 12V DC power supply methods to meet installation requirements in different scenarios
- Provides fast wireless roaming to ensure uninterrupted connectivity for terminals
- Offers multiple management modes suitable for various application scenarios

PRODUCT SPECIFICATIONS

Hardware Features	
Product dimensions	331mm× 331mm× 48mm
Installation method	Ceiling-mounted installation, Wall-mounted installation
Wireless protocol	IEEE 802.11a/b/g/n/ac/ax/be
Physical port	1 x 10/100M/1000/2500M port（ Auto MDI/MDIX）
Physical button	Reset Button
Status indicator	A multi-color status lamp
Power input	IEEE802.3af/at（48V POE） DC 12V/1.5A（Outer diameter：5.5mm，internal diameter：2.1mm）
Maximum power consumption	12W
2.4G operating frequency	2412~2472MHz(Channels 1 to 13)
5G operating frequency	5180 - 5350 MHz (Channels 36 - 64) 5490 MHz - 5730 MHz (Channels 100 - 144) 5735 MHz - 5835 MHz (Channels 149 - 165)
Wireless rate	2.4G：688Mbps 5G：4323Mbps
Spatial stream	2.4G: 2 streams, 2×2 MU-MIMO 5G: 3 streams, 3×3 MU-MIMO
Maximum transmission power	2.4G：22dBm±2dB 5G：23dBm±2dB (The actual transmission power varies according to the regulations of different countries and regions.)
Antenna gain	2.4G：5dBi 2.4G：5dBi

Operating Environment	
Electrostatic standard	Air: 8kV, Contact: 6kV
Port lightning protection	± 2kV
Working temperature	-10℃～50℃
Working humidity	10% to 90% RH (no condensation)
Storage temperature	-40℃～70℃
Storage humidity	5% to 90% RH (no condensation)

Software Features	
Work mode	AP model
Status Monitoring	Equipment information monitoring Network connection status monitoring
Network Settings	Supports dual protocol stack of IPv4 and IPv6 Supports static IP and DHCP access methods Supports hardware accelerated forwarding Supports static routing Supports dynamic and static DHCP Server
Radio Frequency Settings	Supports switching between different countries/regions Supports modification of radio frequency working mode Supports automatic and manual setting of channels Supports manual setting of bandwidth Supports setting of the minimum connection signal for terminals Supports multi-level power adjustment for wireless transmission power Supports connection and exclusion of users with weak signals

Software Features	
Radio frequency settings	Support Short-GI Support WMM Support DTIM Support LDPC Support STBC Support AP isolation
Wireless efficiency technology	MLO MRU Preamble Puncture OFDMA MU-MIMO BSS Color
Wi-Fi settings	**Supports up to 8 SSIDs to work simultaneously** **Supports dual-band integration** **Supports WPA-PSK, WPA2-PSK, and WPA3-PSK authentication encryption** **Supports SSID VLAN** **Supports hiding SSID** **Supports wireless black and white list** **Supports guest network** **Supports SSID isolation** **Supports TWT terminal wake-up**
Terminal monitoring	Support monitoring of the IP, MAC address and online time of connected terminals Support setting up speed limits for both uplink and downlink for connected terminals
Security settings	Supports Internet access filtering based on IP, MAC, port, and domain name Supports application access filtering based on users and time Supports port forwarding
System Management	Support NTP time synchronization Support system operation logs and kernel logs Support configuration backup Support factory reset recovery Support system restart Support Apollo cloud platform and mobile APP management
System upgrade	Local upgrade Online upgrade
System language	EN CN