



TITAN 3000 (LTE-A Cat 15 IDU)

Global Telecom's *TITAN 3000* is an advanced LTE-A Cat 15 smart indoor CPE product designed to enable quick and easy 4G service deployment for residential and SOHO customers. It provides high speed LAN, WiFi and VoLTE / VoIP integrated services for users who need bandwidth and multimedia data service at home or in the office.

The *TITAN 3000*'s key features:

- three Gigabit LAN ports
- one RJ11 analog phone port
- high performance 4x4 MIMO and CA capabilities
- 802.11b/g/n/ac and 802.11ax (future) multiband WiFi
- advanced routing and firewall software for security
- IoT control function to connect up to 20 sensors/cameras

The 433MHz IoT control functions work with battery-based cameras and sensor devices. The *TITAN 3000* is an all-in-one solution that can deliver up to 600 Mbps data throughput with speed and performance comparable to wired broadband service.

New in 2020, Global Telecom's *TITAN 3000* supports all 4G frequency bands in North America and meets 3GPP Release 13 specifications. With built-in high gain 4x4 MIMO antennas at its core, the *TITAN 3000* offers stronger reception range from the base station -- yielding greater network efficiency and guaranteed carrier-class service. Incorporating OMA-DM, TR069 and FOTA via FTP and HTTPS into the device, the *TITAN 3000* allows easy centralized management while requiring zero configuration for immediate deployment.



- Compliant to 3GPP Release 13 specifications (LTE-A Cat 15)
- Cost effective & compact design with integrated high gain MIMO wideband antennas
- Advanced 4x4 MIMO support with Category 12 throughput
- 3 Giga ethernet ports, 1 VoLTE or VoIP Line, 802.11b/g/n/ac dual band WiFi and future 802.11ax WiFi6 support
- Router, bridge and bypass networking, IPv4 & IPv6 and multiple PDN support
- VPN & full L 2/ L3 GRE / L2TP tunneling client support
- Wireless fallback support option for networking redundancy
- 433 MHz LoRa IoT device networking support (battery-based cameras and sensors)
- OMA-DM and SIM-OTA support
- FOTA support via FTP, HTTP & HTTPS
- Standard TR-069 based CPE management support

TITAN 3000 Specifications

Physical

Dimensions	135 mm (L) x 90 mm (W) x 180 mm (H)
Weight	< 750 g
Power Consumption	< 18 W
Power Supply	12 V / 1.5 A DC Adapter

Environmental

Operating Temperature	-15°C to 55°C
Storage Temperature	-30°C to 85°C
Humidity	90% max (non-condensing)

Radio Interface

Radio Access	3GPP Release 13 / LTE-TDD / LTE-FDD
Operation Mode	2T4R / 4x4 MIMO
Frequency Band	B2 / B4 / B5 / B12 / B17 / B25 / B26 / B41 / B66 / B71
Modulations	DL QPSK / QAM16 / QAM64 / QAM256 UL QPSK / QAM16 / QAM64
CA Support	DL CA up to 4CC UL CA 2CC
QoS Support	Non-GBR and GBR
Output Power	23 ± 1 dBm (2Tx)
Antenna Gain	2-6 dBi

WiFi Interface

Radio Access	802.11b/g/n/ac and 802.11ax (future)
MIMO	2x2, 1200 Mbps
Tx Power	18 dBm
Antenna	4-5 dBi built-in antenna
Connected Users	64
Security	Open / WEP / WPA / WPA2

IoT Interface (433 MHz LoRa)

Radio	433 MHz
Antenna	1 dBi
Tx Power	Up to 20 dBm
Concurrent Channels	4
Cameras	Supports up to 8 cameras (low power operation up to one year on a single battery)
IoT Sensors	Supports up to 200 sensors

User Interface

Data Interface	1 GE WAN/LAN, 2 GE LAN, 1 USB 2.0
Line Interface	1 RJ11 LINE Port
LED Indicators	SYS / NET / RF1-3 / 2.4G WiFi / 5G WiFi / LINE
SIM Support	SIM Card Slot (2FF)
TF Card	32 or 64 MB

Networking Support

Multiple PDN Support	Up to 4 APNs
IP Protocol Support	IPv4 and IPv6 DS-Lite Support for 4G LTE

Device Networking

Basic Networking	Router and L3 bridge operation mode Built-in DHCP server for LAN devices DNS proxy support
DMZ & Port Forwarding	DMZ and virtual server support IP and port forwarding support
Firewall	Firewall & access control / application firewall support
VPN Networking	VPN pass-through support (PPTP, L2TP & IPsec) Built-in L2TP & GRE tunneling support
Management	NTP service support / Local & remote management restriction

VoIP Support

Compression	G.711 / G.721 / G. 7222 / G.723 / G.726 / G.729
Comfort Noise	Comfort noise generation & control
Echo Cancellation	G.165/168-2000
Silence Handling	Silence detection / suppression
Fax Support	T.30 and T.38
Delay / Jitter / Loss	Jitter and packet loss compensation
DTMF Relay	In-band DTMF / RFC2833 / SIP signal
Call Duration	24+ hours uninterrupted calls
Basic Voices	Local, domestic & international calling Flexible dial plan configuration support Tone customization for different countries
Complementary Services	Caller ID, caller ID suppression, call screening, speed dial, call tracing, hotline, unconditional call forwarding, call forwarding no answer, call forwarding on busy, call waiting, call back, call blocking, no disturbance, alarm, network and local 3-way call, data call

VoLTE Support

Basic Call	AMR-NB & AMR-WB Caller ID name & number display
Supplementary Call Features	Communication forwarding, barring incoming/outgoing calls, communication hold & waiting, ad-hoc 3-way conference, message waiting indication, communication diversion/forward
DSP Processing	Adaptive multi-rate speech codec (AMR) AMR wideband codec Narrowband 8 KHz & wideband 16 KHz support DTMF tone generation and detection Call progress tone generation

Device Management

User Device Management	CLI, Telnet, HTTP and HTTPS management interfaces
Network Management	Standard OMA-DM and TR-069 management
FOTA Support	FTP and HTTP OTA firmware upgrade
Device Security	User SIM and network PLMN locking support