

MediaAccess TG389ac

Wireless .11ac
Smart Gateway
for FTTH & Ethernet WAN Scenarios



I speak
Geo

TG389ac design not final



TELECOM

DATA

VOICE

VIDEO

On the Edge with Gigabit Speeds & Services

The TG389ac is a carrier grade smart Ethernet gateway featuring one Gigabit Ethernet WAN port, helping you respond to the growing end-user demand for more bandwidth. Thanks to its powerful core and scalable service memory, the TG389ac enables true gigabit connectivity between LAN devices and the network.

On the LAN side, the TG389ac includes next to advanced Voice over IP (VoIP) functions, four Gigabit Ethernet LAN ports and next-gen dual band concurrent IEEE 802.11ac and IEEE 802.11n Wi-Fi to stream data, including rich media content, anywhere in the home.

This Ethernet Gateway also extends your broadband offers with advanced applications and services, making it the perfect solution to increase your ARPU and subscriber stickiness in highly competitive environments.

The Perfect Fit for Fiber Deployments

The TG389ac is a perfect fit for the following scenarios:

- Two-box fiber deployments with a separate ONT (Optical Network Terminal) or media converter
- FTTB (Fiber to the Building) or FTTH (Fiber to the Home) via an Ethernet connection

Features at a Glance

- 1 GE WAN port
- 4 GE LAN ports
- Dual-band concurrent Wi-Fi interfaces:
 - IEEE 802.11n 2.4 GHz (2x2)
 - IEEE 802.11ac 5 GHz (3x3)
- Wi-Fi offloading for improved wireless performance
- 2 FXS ports for phone or fax
- 2 USB 2.0 master ports
- Seamless media sharing (UPnP A/V™ and DLNA®)
- Future-proof full service platform supporting:
 - Geo communication framework and apps
- Non-service-affecting platform software upgrades (dual bank memory)
- Extensive remote management
- IPv4 & IPv6 enabled
- Designed according to the latest ECO standards



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Next-Gen Wireless Technology for Next-Gen Speeds

Featuring next-generation IEEE 802.11ac Wi-Fi, this enhanced wireless solution with beamforming technology and traffic offloading from the host CPU enables even higher throughput and better coverage over the much less crowded 5 GHz radio, for real-time content delivery.

As a dual band concurrent wireless gateway, the TG389ac also guarantees uninterrupted transmission of data services over IEEE 802.11n using the 2.4 GHz band.

Flexible & Future-Proof Software Stack

The TG389ac is enriched with Technicolor Homeware, a reliable and managed middleware for gateways that speaks Qeo (www.i-speak-qeo.com) to open up the connected home and deliver an unlimited spectrum of value added services and applications.

Featuring a platform agnostic architecture, Technicolor Homeware is a fully portable solution that ensures the fastest time to market. Moreover, its modularity and enhanced life cycle management make it easy to add or remove components to or from a software release, while enabling second & third party development.

Leveraging open source, Technicolor Homeware embraces different execution environments and supports current and emerging trends, transforming the gateway into a full-blown app platform.

“I speak Qeo”

The TG389ac has been developed to run Qeo, Technicolor's open, agile and distributed communication framework that addresses the issue of disparate ecosystems used for device interaction. With Qeo, you can seamlessly bridge all your connected devices, applications and over-the-top cloud solutions, regardless of brand or ecosystem. As a universal software language, it lets you create totally new use cases for the connected life and the “Internet of Things” (IoT).

Qeo also includes tools to monitor and manage all Qeo enabled devices, helping you keep operational costs under control.

To learn more about Qeo, visit: www.i-speak-qeo.com

Voice over IP

The TG389ac offers VoIP functions for residential and business users. POTS phone connectors are provided to accommodate regular phones and faxes. Once the gateway is registered with a VoIP service, regular phone calls can be conducted over the Internet with all the benefits of IP telephony.

On top of a wide range of advanced voice services like caller ID, CLIR, call waiting, call forwarding, three-way conference and message waiting notification, the TG389ac is completely interoperable with the main IMS cores in the market.

Media Sharing

The TG389ac acts as a fully compliant DLNA 1.5 Digital Media Server (DMS) and enables distribution of all content from any device to any device in the home. You can stream music, data, pictures and video from your gateway to devices connected to your wired or wireless home network.

In addition, the TG389ac supports hot plugging of USB hard disk drives, allowing you to simply plug and play devices without the need to switch the gateway off first.

Easy to Use

Like all Technicolor modems and gateways, the TG389ac is an easy to use, easy to install gateway.

For convenience of the end user, the easy-to-access LEDs provide a clear indication of start-up sequence, operational status, and connectivity status.

Multiple integrated web pages also allow direct access to the status and settings, including privacy and security information.

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IPv6 Enabled

With the approaching IPv4 address pool depletion, our products need to be ready for IPv6. Technicolor is a frontrunner in the introduction of IPv6 on its devices, with the TG389ac being enabled for multiple IPv6 field scenarios. Internet Protocol version 6 is the next generation of Internet technologies aiming to effectively support the ever-expanding Internet usage and functionality, and also to address security concerns that exist in an IPv4 environment.

Technicolor aims to introduce IPv6 as smoothly as possible in customer networks. By providing in-depth knowledge of the networking stack, we guide our customers in their transition from IPv4 to IPv6.

Highest Security

The Technicolor firewall guarantees users the ultimate network security level. Through integration with Network (&Port) Address Translation (NAT), the firewall leverages all the Application Level Gateways (ALGs) provided in the NAT context to minimize undesired service impacts. The firewall provides Stateful Packet Inspection (SPI), and an integrated Intrusion Detection and Prevention System (IDS) engine monitors a wide range of attack patterns, and logs potential security breaches to a local cache or remote server.

The TG389ac also supports powerful wireless security mechanisms, such as Wi-Fi Protected Access (WPA, WPA2) together with the secure and user friendly Wi-Fi Protected Setup (WPS) connection and configuration mechanism for connecting wireless clients.

In addition, the TG389ac supports multiple wireless networks (mSSID) enabling to set up independent virtual wireless access points. These additional wireless networks allow other wireless users to enjoy high-performance access without any compromise on the integrity of the basic network, thus keeping the original network access limited and secure.

Easy to Manage

The TG389ac is completely designed according to the TR-069 data model through which the device can be configured remotely by the operator without interrupting the end user's experience.

In addition, the Device:2 data model is available to increase remote management capabilities such as life cycle management, diagnostics and applications.

ECO

Technicolor is committed to offer its customers sustainable products and implements a set of ECO features to reach the best possible environmental performance. In addition to carefully selected plastics and packaging to minimize the ecological footprint, the TG389ac benefits from a unique combination of hardware and software features that reduce power consumption substantially.

Professional Services

To reinforce our extensive portfolio of digital home solutions, Technicolor has a dedicated Professional Services team to make sure that every deployment is a success, from initial provisioning and integration to operations, upgrades, ongoing support and beyond.

Our wide array of services spans the entire customer project lifecycle, encompassing:

- Expert consulting
- Seamless system integration
- Warranty on all our products
- Qualified technical support and maintenance
- Efficient repair, refurbishment and recycling

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Technical Specifications

Hardware Specifications

- Interfaces WAN 1 Ethernet WAN 10/100/1000 Base-T port
- Interfaces LAN 4-port autosensing 10/100/1000 Base-T auto-MDI/MDI-X Ethernet LAN switch
- 2 FXS POTS ports
- 2 USB 2.0 highspeed master ports
- IEEE 802.11n 2.4 GHz on-board
- IEEE 802.11ac 5.0 GHz on-board
- Interfaces other Power button
- Info button
- ECO button
- WPS button
- Reset button
- Dimensions 221 x 171 x 39 mm (8.7 x 6.7 x 1.5 in.)
- AC Voltage 100 - 240 VAC (switched mode power supply)
- Temperature 0° - 40° C (32° - 104° F)
- Humidity 20% to 80%

Wireless Specifications

- Full dual band concurrent Wi-Fi access points, Wi-Fi certified®
 - 2.4 GHz (2x2) IEEE 802.11n AP
 - 5.0 GHz (3x3) IEEE 802.11ac AP
 - with IEEE 802.11ac compliant transmit beamforming
- Wi-Fi 2.4 GHz power Standard: Up to 20 dBm (100 mW EIRP)
- Wi-Fi Protected Setup (WPS™)
- Wi-Fi security levels WPA2™-Enterprise / WPA™-Enterprise
- WPA2™-Personal / WPA™-Personal
- WEP™
- Wi-Fi Multimedia (WMM®)
- Up to 4 BSSIDs (virtual AP) support per radio interface
- RX/TX switched diversity
- 2x2 MIMO 2.4 GHz Wi-Fi features
 - SGi
 - STBC
 - 20/40 MHz coexistence
- 3x3 MIMO 5.0 GHz Wi-Fi features
 - SGi
 - STBC
 - 20/40/80 MHz mode
- Dynamic rate switching for optimal wireless performance
- Manual/auto radio channel selection

Management

- Customizable user-friendly GUI via HTTP and HTTPS
- Web services API for remote access
 - (portal, management, diagnostics, applications, ...)
- Web-browsing intercept (install/diagnostics/captive portal)
- AutoWAN sensing™: automatic selection and configuration of WAN interfaces
- TR-069 CPE WAN Management Protocol
 - TR-098 Internet Gateway Device Management
 - TR-111 home network device management
 - TR-143 network throughput performance tests and statistical monitoring
 - TR-157a3 Life Cycle Management (LCM)
 - TR-181i2 Device:2 data model
 - TR-104 voice service provisioning and configuration
 - TR-140 storage service provisioning
- TR-064 LAN side configuration
- Zero-touch autoprovisioning

Services

- Support of Qeo communication framework and apps, including access to real time diagnostics
- Open architecture for 3rd party application and UI development
- 3G/4G mobile fall-back WAN connection (through mobile USB adapter)
- Parental control URL- and (optional) content-based website filtering
- Time-based access control
- Printer sharing
- Content sharing Samba file server
- UPnP A/V™ media server and control point
- DLNA® DMS
- Metadata support
- Remote HDD file access
- HDD file systems FAT32, NTFS, EXT2, EXT3, HFS+

Security

- Stateful Packet Inspection Firewall (SPIF)
- Customizable firewall security levels
- Intrusion detection and prevention (DoS, SYN Flood, Ping of Death, Fraggle, LAND, Teardrop, etc.)
- DeMilitarized Zone (DMZ)
- Multilevel access policy
- Security and service segregation per SSID

Networking

- Symmetrical NAT with application helpers (ALGs)
- Game and application sharing NAT port maps
- DHCP conditional serving & relay, DNS server & relay
- IGMPv3 proxy (Fastleave)
- IGMP snooping (full routed)
- DHCP spoofing
- IEEE 802.1q VLAN bridging, multiple bridge instances
- Multicast to unicast translation on Wi-Fi interfaces

IPv6 Networking

- IPv4 / IPv6 dual IP stack
- Supported models: PPP(oE) – IPoE
- Transitioning:
 - 6rd/6to4/6in4
 - DS-Lite
- Stateful connection tracking / stateful inspection firewall
- DHCPv6:
 - Stateful/stateless DHCPv6 client
 - Stateless DHCPv6 server
 - Relay
 - Prefix Delegation
- DNS v4/v6 Proxy
- ULA
- ICMPv6
- IPv6 Quality of Service
- MLDv1/v2

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Technical Specifications

Quality of Service

- IP QoS
 - Flexible classification (ALG aided)
 - IP rate limiting (two-rate remarking/dropping)
 - DSCP (re) marking
 - TCP ACK optimization
 - Dynamic link fragmentation
 - Per service class connection/resource reservation
- Ethernet QoS
 - Priority or C-VLAN/S-VLAN tagging
 - Switch port queuing and scheduling
- Wireless QoS
 - WMM (BE, BK, VI, VO access categories) queuing and scheduling

Voice over IP Specifications

- Voice technologies
 - Voice over IP (VoIP)
- Voice signalling
 - SIP
- Voice codecs
 - G.711, G.726, G.729, Wideband G.722.2 (optional), T.38
- Echo cancellation
 - G.168 compliant
- Comfort Noise Generator (CNG)
- Voice Activity Detection (VAD)
- Flexible telephone number per FXS handset, including common numbers
- Supplementary and advanced services
 - Caller ID
 - Call waiting (on call basis)
 - Call forwarding (no answer/busy/unconditional)
 - Call transferring
 - Call hold, call return
 - Calling Line Identification Presentation (CLIP)
 - Calling Line Identification Restriction (CLIR)
 - Calling Name Identification Presentation (CNIP)
 - Calling Name Identification Restriction (CNIR)
 - Fax transparency / V.92 transparency
 - 3-way conference
 - Message Waiting Indicator (MWI)
 - Warm line
 - Call completion to busy subscriber
 - Abbreviated number
 - Common number in/outgoing call
 - Anonymous Call Rejection (ACR)
 - Distinctive ringing
 - Support for secondary outbound proxy
 - DNS NAPTR, DNS SRV
- Interoperable with main market softswitches

Environmental Features

- ECO mode for more intelligent power saving
- Wi-Fi on/off button
- ECO LED and button

Content of the Box

- Wireless .11ac Smart Gateway for FTTH & Ethernet WAN Scenarios
- Ethernet cable (RJ-45)
- Power supply unit
- Quick Setup leaflet(s) (optional)
- Safety Instructions & Regulatory Information booklet (optional)



TG389ac back panel

technicolor



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