technicolor

MediaAccess TG799vac for TeliaSonera

Wireless .11ac
Smart Ultra-Broadband Gateway
with embedded DECT

I speak Qeo

TELECOM
DATA
VOICE
VIDEO

Next-Gen Wireless Technology for Next-Gen Speeds

Featuring the next-generation IEEE 802.11ac wireless standard for the 5 GHz band, this dual band Wi-Fi solution makes optimal use of the wireless spectrum. With its optimized antenna configuration, the TG799vac enables even higher throughput and better coverage over the much less crowded 5 GHz radio, for real-time content delivery.

At the same time, it guarantees uninterrupted transmission of data services over IEEE 802.11n using the 2.4 GHz band.

Flexible & Future-Proof Software Stack

The TG799vac 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.

Features at a Glance

- Integrated VDSL2 modem
- 1 GE WAN port
- AutoWAN sensing™
- 4 GE LAN ports
- Dual-band concurrent Wi-Fi interfaces:
  - IEEE 802.11n 2.4 GHz (2x2) with high power (optional)
  - IEEE 802.11ac 5 GHz (3x3)
- 2 FXS ports for phone or fax
- DECT multiline base station, CAT-iq™ 2.0 ready
- 2 USB 2.0 master ports
- Seamless media sharing (UPnP A/V™ and DLNA®)
- Future-proof full service platform supporting:
  - Qeo 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

MediaAccess TG799vac for TeliaSonera

Wireless .11ac
Smart Ultra-Broadband Gateway
with embedded DECT

Best-In-Class Ultra Broadband

The accelerating growth of WAN and LAN traffic is pushing operators to look to ultra-high-speed network technologies to solve the bandwidth crunch. VDSL2 combined with Gigabit Ethernet enables extremely high bandwidth and guarantees superior quality in voice, data and video.

A dedicated Gigabit Ethernet WAN port and AutoWAN sensing make the TG799vac the ideal service gateway for deployment in Fiber To The Home (FTTH) scenarios.

Some of the latest performance-enhancing technologies have been added on top, to get the utmost out of existing infrastructures:

- G.vector: effectively cancels the crosstalk noise inherently present in VDSL2 bands. With vectoring, every line in a binder can operate at peak performance, as if there were no other VDSL2 lines in that binder.

- G.inp ("Impulse Noise Protection"): makes sure that no errors occur on the DSL connection, even under extreme conditions, so that high-quality video transmission is guaranteed at all times. It is based on the principle of retransmission.

Furthermore, the latest wireless technologies ensure robust in-home wireless distribution which reduces wiring complexity and provides true mobility without sacrificing Quality of Service (QoS) and Quality of Experience (QoE) or transfer speeds.

"I speak Qeo"

The TG799vac 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 TG799vac 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 TG799vac is completely interoperable with the main IMS cores in the market.

DECT Integrated Base Station

Thanks to its integrated DECT base, new lines can be added by simply pairing new cordless handsets, while legacy phone and fax equipment can still be connected to the FXS port.

The TG799vac DECT base works seamlessly with the MediaConnect TH78, Technicolor's next-gen CAT-iq v2.0 certifiable DECT handset.

Easy to Use

Like all Technicolor modems and gateways, the TG799vac 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.

Media Sharing

The TG799vac 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 TG799vac 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.

MediaAccess TG799vac for TeliaSonera

Wireless .11ac
Smart Ultra-Broadband Gateway
with embedded DECT

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 TG799vac 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 TG799vac 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 TG799vac 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.

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 TG799vac 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.

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 TG799vac 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

MediaAccess TG799vac for TeliaSonera

Wireless .11ac
Smart Ultra-Broadband Gateway
with embedded DECT

Technical Specifications

Hardware Specifications

- Interfaces WAN — 1 RJ-11 DSL line port
  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 master ports
  IEEE 802.11n 2.4 GHz on-board
  IEEE 802.11ac 5 GHz on-board
  Integrated DECT base station
- Interfaces other — Power button
  Info button
  ECO button
  WPS button
  DECT pairing/paging button
  Reset button
- Dimensions — 235 x 195 x 42 mm (9.25 x 7.68 x 1.65 in.)
- AC Voltage — 100 - 240 VAC (switched mode power supply)
- Temperature — 0° - 40° C (32° - 104° F)
- Humidity — 20% to 80%

DSL Modem Specifications

- Supports multi mode standards
- ADSL compliance — ITU-T G.992.1 Annex A (G.dmt)
  ITU-T G.992.2 Annex A (G.lite)
  ITU-T G.994.1 (G.hs)
  Maximum rate: 8 Mbps for downstream
  and 1 Mbps for upstream
- ADSL2 compliance — ITU-T G.992.3 Annex A, L (G.dmt.bis)
  ITU-T G.992.4 Annex A, L (G.lite.bis)
  ITU-T G.998.4 (G.inp)
  Maximum rate: 12 Mbps for downstream
  and 1 Mbps for upstream
- ADSL2+ compliance — ITU-T G.992.5 Annex A, M
  ITU-T G.998.4 (G.inp)
  Maximum rate: 24 Mbps for downstream
  and 3 Mbps for upstream
- VDSL2 compliance — ITU G.993.2
  SOS
  SRA
  INM
  Up to 17 MHz profiles
  ITU-T G.993.5 (G.vector)
  ITU-T G.998.4 (G.inp)
- Supports Dying Gasp (optional)

Wireless Specifications

- Full dual band concurrent Wi-Fi access points, Wi-Fi certified®
  2.4 GHz (2x2) IEEE 802.11n AP
  5 GHz (3x3) IEEE 802.11ac AP
  with IEEE 802.11ac compliant transmit
  beamforming
- 2.4 GHz Wi-Fi power — Standard: up to 20dBm (100mW EIRP)
  High Power (optional): up to 24dBm (250mW EIRP)
- Wi-Fi Protected Setup (WPS™)
- Wi-Fi security levels — WPA2™-Personal / WPA™-Personal
  WEP™
- Wi-Fi Multimedia (WMM®) and WMM-Power Save
- 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 GHz Wi-Fi features
  SGi
  STBC
  20/40/80 MHz
- 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-104 voice service provisioning and configuration
  TR-111 home network device management
  TR-140 storage service provisioning
  TR-143 network throughput performance tests
  and statistical monitoring
  TR-157a3 Life Cycle Management (LCM)
  TR-181i2 Device:2 data model
- Zero-touch autoprovisioning

MediaAccess TG799vac for TeliaSonera

Wireless .11ac
Smart Ultra-Broadband Gateway
with embedded DECT

Technical Specifications

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 — IPP
  LPD
- Content sharing — Samba file server
  UPnP A/V™ media server and control point
  DLNA® DMS
  Metadata support
- HDD file systems — FAT32, NTFS, EXT2, EXT3, EXT4, HFS+

Security

- Stateful Packet Inspection Firewall (SPIF)
- Customizable firewall security levels
- Intrusion detection and prevention
- 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)(oA) – IPoE(oA)
- Transitioning — 6rd/6to4/6in4
  DS-Lite
- Stateful connection tracking / stateful inspection firewall
- DHCPv6 — Stateful/stateless DHCPv6 client
  Stateless DHCPV6 server
  Relay
  Prefix Delegation
- ICMPv6

Quality of Service

- ATM QoS — UBR, VBR-nrt, VBR-rt, CBR shaping,
  queuing and scheduling
  CLP tagging
- IP QoS — Flexible classification (ALG aided)
  IP rate limiting (two-rate remarking/dropping)
  DSCP (re) marking
  Dynamic link fragmentation
- Ethernet QoS — Priority or C-VLAN/S-VLAN tagging
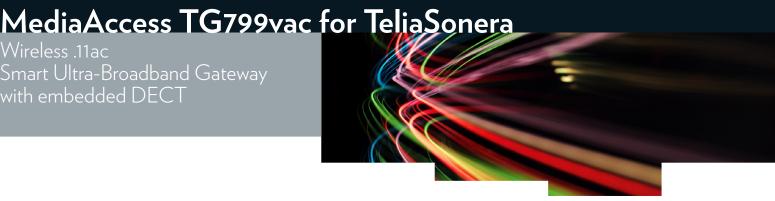 Switch port queuing and scheduling
- Wireless QoS — WMM (BE, BK, VI, VO access categories)
  queuing and scheduling

DECT Specifications

- CAT-iq™ 2.0 multi-line (enhancement to DECT 6.0 for use in IP based devices)
- Far reaching
- Improved voice quality
- Wideband voice support
- Shared phonebook
- Centralized call logging
- Up to 5 simultaneous handsets
- Extended functionality for the MediaConnect TH78 handset

MediaAccess TG799vac for TeliaSonera

Wireless .11ac
Smart Ultra-Broadband Gateway
with embedded DECT

Technical Specifications

Voice over IP Specifications

■ Voice technologies	Voice over IP (VoIP)
■ Voice signalling	SIP
■ Voice codecs	G.711, G.726, G.729
	Wideband G.722
	G.722.2 (optional)
	T.38
■ Echo cancellation	G.168 compliant

■ Comfort Noise Generator (CNG)
■ Voice Activity Detection (VAD)
■ Flexible telephone number per FXS and DECT handsets, 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)
Call completion to busy subscriber
Abbreviated number
Common DECT number
Anonymous Call Rejection (ACR)
Distinctive ringing
DNS SRV

■ Interoperable with main market softswitches

Environmental Features

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

Content of the Box

■ MediaAccess TG799vac
■ DSL cable (RJ-11)
■ Ethernet cable (RJ-45)
■ Power supply unit
■ Quick Setup leaflet(s) (optional)
■ Safety Instructions & Regulatory Information booklet (optional)
■ Filter(s) or splitter(s) (optional)

TG799vac back panel

technicolor