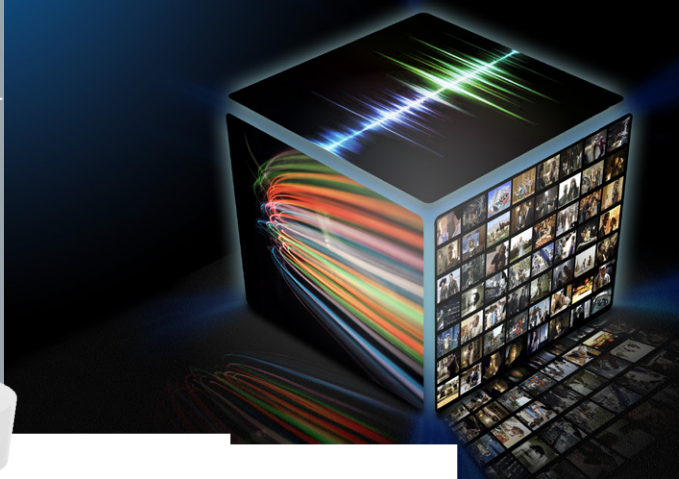


MediaAccess TG799TSvac Xstream for TeliaSonera

Wireless .11ac
Smart Ultra-Broadband Gateway
with Integrated Video Bridge and DECT



TELECOM

DATA

VOICE

VIDEO

Seamless Video over Next-Gen Wi-Fi

With its support of dual band concurrent Wi-Fi (IEEE 802.11n 2.4 GHz and the next-generation IEEE 802.11ac wireless standard for the 5 GHz band), the TG799TSvac Xstream is a powerful and future-proof smart gateway enabling high-speed wireless HD video streaming inside the home. Thanks to its integrated wireless video bridge featuring a robust chipset and 4x4 antennas, it can support multiple HD TV channels over the clean 5 GHz radio. Furthermore, its advanced architecture guarantees a very low packet error rate on the wireless link, resulting in a 100% smooth and flicker-free wire-quality viewing experience.

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

Leapfrogging Performance

Equipped with a next-gen dual core ARM processor and hardware accelerator for CPU offload, the TG799TSvac Xstream surpasses any current DSL gateway's performance. Combining these features with Level 2 cache, this smart gateway is ideally suited to run demanding applications simultaneously.

What's more, the TG799TSvac Xstream comes with USB 3.0 master ports for support of mass storage devices while delivering up to 700 Mbps transfer speeds (which is around five times faster than USB 2.0).

Features at a Glance

- Powerful dual core ARM processor
 - Surpassing any current DSL gateway's performance
 - Letting you run demanding applications simultaneously
- 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)
 - IEEE 802.11ac 5 GHz (4x4)
- 2 FXS ports for phone or fax
- Integrated DECT multiline base station (CAT-iq™ 2.0 ready)
- 2 USB 3.0 master ports
- Seamless media sharing (UPnP A/V™ and DLNA®)
- Future-proof full service platform supporting:
 - AllSeen communication framework and apps
 - Android application framework
- Enabled to support Wi-Fi Doctor® (sold separately) and Wi-Fi Controller (sold separately)
- Non-service-affecting platform software upgrades (dual bank memory)
- IPv4 & IPv6 enabled
- Designed according to the latest ECO standards



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Flexible & Future-Proof Software Stack

The TG799TSvac Xstream is enriched with Technicolor Homeware, a reliable and managed middleware for gateways that speaks AllSeen's open, agile and distributed communication framework (www.AllSeenAlliance.org) 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 AllSeen"

Technicolor is a proud premier member of the AllSeen Alliance. The TG799TSvac Xstream has hence been developed to run AllSeen's open, agile and distributed communication framework that addresses the issue of disparate ecosystems used for device interaction. With AllSeen, you can seamlessly bridge all your connected devices, applications and over-the-top cloud solutions, regardless of brand or ecosystem.

As the largest initiative to unify the language that connected life devices speak, AllSeen lets you create totally new use cases for the "Internet of Things" (IoT).

To learn more about AllSeen, visit: www.AllSeenAlliance.org

To leverage the value of Qeo, Android is proposed as application framework, enabling integration of enriched applications in this smart gateway.

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 TG799TSvac Xstream 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:

- Gvector: 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.

Voice over IP

The TG799TSvac Xstream 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 TG799TSvac Xstream 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 TG799TSvac Xstream DECT base works seamlessly with the MediaConnect TH78 and MediaConnect TH89, Technicolor's next-gen CAT-iq v2.0 certifiable DECT handsets.

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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 TG799TSvac Xstream 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 TG799TSvac Xstream 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.

Media Sharing

The TG799TSvac Xstream 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 TG799TSvac Xstream 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 TG799TSvac Xstream 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.

Easy to Manage

The TG799TSvac Xstream 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 Device2 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 TG799TSvac Xstream 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 TG799TSvac Xstream 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 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 Integrated DECT base station 2 USB 3.0 superspeed master ports IEEE 802.11n 2.4 GHz on-board IEEE 802.11ac 5 GHz on-board
■ Interfaces other	Power button Info button ECO button WPS button DECT pairing/paging button Reset button
■ 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, B (G.dmt) ITU-T G.992.2 Annex A, B (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, B, L (G.dmt.bis) ITU-T G.992.4 Annex A, B, 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, B, 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	

Wireless Specifications

■ Full dual band concurrent Wi-Fi access points, Wi-Fi certified®	2.4 GHz (2x2) IEEE 802.11n AP 5 GHz (4x4) IEEE 802.11ac AP with IEEE 802.11ac compliant transmit beamforming
■ Wi-Fi Protected Setup (WPS™)	
■ Wi-Fi security levels	WPA2™-Enterprise / WPA™-Enterprise 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
■ 4x4 MIMO 5 GHz Wi-Fi features	SGi STBC LDPC (FEC) 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-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	

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Technical Specifications

Services

- Support of AllSeen communication framework and apps, including access to real time diagnostics
- Android and Life Cycle Management (LCM)
 - for developing advanced services support
- Open architecture for 3rd party application and UI development
- 3G/4G mobile fall-back WAN connection (through 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

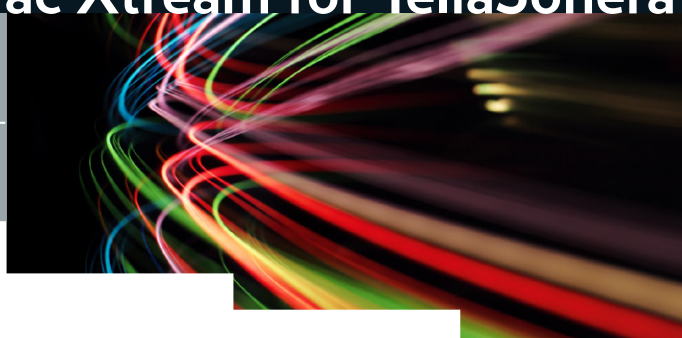
- ATM QoS
 - UBR, VBR-nrt, VBR-rt, CBR shaping, queuing and scheduling
 - CLP tagging
- IP QoS
 - Flexible classification (ALG aided)
 - IP rate limiting (two-rate remarking/dropping)
 - DSCP (re) marking
 - Dynamic link fragmentation
- Ethernet QoS
 - Priority or C-VLAN/S-VLAN tagging
 - Switch port 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 and TH89 handsets

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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 TG799TSvac Xstream
- 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)



TG799TSvac Xstream back panel

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