technicolor

MediaAccess TG788vn v2
Smart Wireless VoIP 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. The TG788vn v2 combines VDSL2 with some of the latest performance-enhancing technologies 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.

Future-Proof Design

As a high-end service memory platform, the TG788vn v2 is future-proof thanks to its scalable software architecture.

The most advanced features can be easily integrated, including demanding own and third-party applications such as home automation and home monitoring, or extended remote management and help desk functions.

Features at a Glance

■ Integrated VDSL2 modem
■ 4 FE LAN ports
■ Wi-Fi interface:
  IEEE 802.11n 2.4 GHz (2x2)
■ Wi-Fi Protected Setup (WPS™)
■ 2 FXS ports for phone or fax
■ 1 USB 2.0 master port for hard disk, printer, 3G adapter, ...
■ Seamless media sharing (UPnP A/V™ and DLNA®)
■ Future-proof full service platform supporting:
  OSGi execution environment
■ Extensive remote management
■ Innovative, easy customizable design
■ IPv4 & IPv6 enabled
■ Designed according to the latest ECO standards

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Easy to Use

The TG788vn v2 is easy to use through simple 'plug and play' and easy to install with the Technicolor Gateway Setup wizard, making the setup of a wireless home network as effortless as clicking a button.

The Technicolor Gateway Setup wizard performs comprehensive system checks before and during the installation and setup process, and validates all user inputs to guarantee the end user a secured wireless connection to the Internet.

For convenience of the end user, 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.

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 TG788vn v2 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.

The support of multiple SSIDs in the gateway enables support for up to four independent wireless access networks. These additional wireless networks allow other wireless users to enjoy the high-performance access without compromising the integrity of the basic network, thus keeping the original network access limited and secure.

Voice over IP

The TG788vn v2 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 TG788vn v2 is completely interoperable with the main IMS cores in the market.

IPv6 Ready

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 TG788vn v2 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.

In this context, the TG788vn v2 has successfully passed the Phase 2 (Gold Logo) standard IPv6 Ready accreditation.

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.

Easy to Manage

The TG788vn v2 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 TG788vn v2 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
■ Interfaces LAN	4-port autosensing 10/100 Base-T
	auto-MDI/MDI-X Ethernet LAN switch
	2 FXS POTS ports
	1 USB 2.0 master port
	IEEE 802.11n 2.4 GHz on-board
■ Interfaces other	Power button
	WPS button
	ECO button
	Reset button
■ Dimensions	195 x 60 x 230 mm (9.0 x 2.4 x 9.7 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	ANSI T1.413 Issue 2
	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 (POTS/ISDN)
	ITU-T G.993.5 (G.vector)
	ITU-T G.998.4 (G.inp)

Wireless Specifications

■ Wi-Fi access point, Wi-Fi certified®	
	2.4 GHz (2x2) IEEE 802.11n AP
■ Wi-Fi Protected Setup (WPS™)	
■ Wi-Fi security levels	WPA2™-Personal / WPA™-Personal
	WEP™
■ Wi-Fi Multimedia (WMM®)	
■ Up to 4 BSSIDs (virtual AP) support	
■ RX/TX switched diversity	
■ 2x2 MIMO 2.4 GHz Wi-Fi features	
	SGi
	STBC
	20/40 MHz coexistence
■ Dynamic rates switching for optimal wireless rates	
■ Manual/auto radio channel selection	

Management

■ Customizable user-friendly GUI via HTTP and HTTPS	
■ Web services API for remote access (portal, management, diagnostics, applications, ...)	
■ GUI-embedded Easy Setup wizard	
■ Technicolor Setup wizard supported	
■ On-demand remote GUI assistance (helpdesk)	
■ Web-browsing intercept (install/diagnostics/captive portal)	
■ Unified management interface (MBus)	
■ TR-069 CPE WAN Management Protocol (CWMP)	
	TR-098 Internet Gateway Device Management
	TR-143 network throughput performance tests
	and statistical monitoring
	TR-181i2 Device:2 data model
	TR-157a3 Life Cycle Management (LCM)
	TR-104 voice service provisioning and configuration
	TR-111 home network device management
	TR-140 storage service provisioning
■ TR-064 LAN side configuration	
■ Zero-touch autoprovisioning	

Services

■ 3G mobile fall-back WAN connection (through 3G USB adapter)	
■ Open architecture for 3rd party application and UI development	
■ 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
	Certified DLNA® DMS
	Metadata support
	Remote HDD file access
■ HDD file systems	FAT32
	Optional: NTFS, EXT2, EXT3, HFS+

Technical Specifications

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
- Flexiport (automatic selection of Ethernet port bridged IPTV)
- 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
  DSLite
- 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

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
	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

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Technical Specifications

Telephony

- 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)
  - Missed call email
  - Click to dial
  - Warm line
  - Call completion to busy subscriber
  - Abbreviated number
  - Common number in/outgoing call
  - Anonymous Call Rejection (ACR)
  - Distinctive ringing
  - Voice Mail on No Reply (VMNR)
  - 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 function
- ECO LED and button

Content of the Box

- Smart Wireless VoIP Gateway
- DSL cable (RJ-11)
- Ethernet cable (RJ-45)
- Power supply unit
- Setup CD (optional)
- Quick Setup leaflet(s) (optional)
- Safety Instructions & Regulatory Information booklet (optional)
- Filter(s) or splitter(s) (optional)
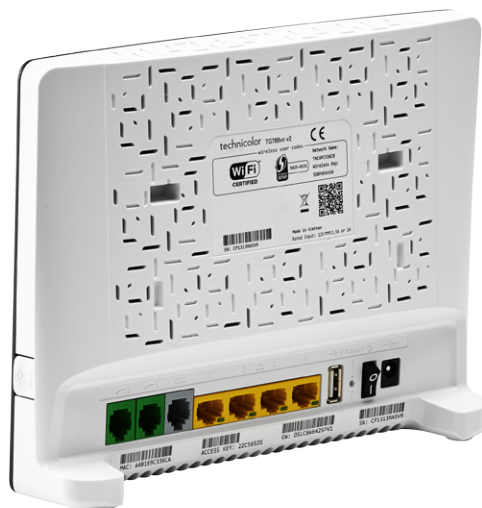
TG788vn v2 back panel

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