

# MediaAccess TG784n v3

Wireless n VoIP Gateway



## TELECOM

DATA

VOICE

VIDEO

## One Gateway, multiple networks

The Technicolor TG784n v3 is especially suited for complex network scenarios where several access technologies, such as ADSL and Fiber To The x (FTTx) coexist. Thanks to its AutoWAN sensing feature the Technicolor TG784n v3 can automatically select among DSL, Ethernet WAN or 3G (via USB adapter) interfaces and connect without any manual operation. This means simplicity for the end user and reduced complexity for the operator.

## Faster, Farther

Home networking experience will definitely change with the Technicolor TG784n v3. With an improved coverage and throughput compared to any 11b/g or 1x1 11n access point, the Technicolor TG784n v3 enables real-time multimedia content streaming over the Wi-Fi network everywhere in the home.

## Features at a Glance

- Integrated ADSL2+ modem
- 1 GE WAN port with AutoWAN sensing™
- 1 GE and 3 FE LAN ports
- Wireless networking on-board: 2x2 802.11n (2.4 GHz)
- 1 FXO analogue port (optional)
- 2 FXS ports for phone and/or fax
- Seamless media sharing (UPnP A/V™ and DLNA®)
- 2 USB 2.0 masters for hard disk, printer, 3G adapter ...
- OSGi execution environment
- Remotely manageable: TR-069, TR-098, TR-104, TR-111
- Built-in stateful firewall, parental control
- Non-service-affecting platform software upgrades (dual bank memory)
- IPv6 ready



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## High-Performance Router

The Technicolor TG784n v3 is a high-performance router. With a simultaneous operation of 802.11b, 802.11g and 802.11n 2x2, speed, security and performance are guaranteed.

Featuring four Ethernet LAN ports including one Gigabit port, the Technicolor TG784n v3 offers seamless connection of wired and wireless devices from anywhere in the home at stunning speeds.

Furthermore, thanks to its Gigabit Ethernet WAN port, the Technicolor TG784n v3 can handle sustained routed traffic up to 400 Mbps, making it a future-proof solution for the Next Generation Networks (NGNs).

## Fast Validation Cycles

The Technicolor TG784n v3 runs the same Technicolor platform software that has been successfully deployed through the whole world and inherits all the know-how accumulated during 15 years of consistently being number one in the market with more than 75 million DSL modems shipped.

Highly configurable and easily customizable, the Technicolor TG784n v3 can be adapted to almost any network and customer scenario in no time, reducing validation cycles and accelerating the time-to-market.

## Easily Manageable

The Technicolor TG784n v3 offers best-in-class TR-069 interoperability with main ACS vendors and even completes the standard with proprietary vendor extensions to increase the range of functionality available.

TR-111 support allows simple management of LAN devices like TR-135-enabled set-top boxes (STBs) connected to the gateway and thanks to its TR-140 support even a hard disk connected to the USB port of the Technicolor TG784n v3 can be remotely managed. TR-104 for VoIP is implemented for the configuration and management of all voice services.

## Voice over IP

The Technicolor TG784n v3 offers phone POTS ports to accommodate phones and faxes. Once the gateway is registered with a Voice over IP (VoIP) service, regular phone calls can be conducted over the Internet with all the benefits of IP telephony. The gateway offers a wide range of services like caller ID, CLIP, CLIR, call waiting, call forwarding, three-way conferencing and message waiting notification.

## Advanced in Security

The Technicolor firewall guarantees users the ultimate level in network security. Through integration with NAT, the firewall leverages all the Application Level Gateways (ALGs) provided in the NAT context to minimize undesired service impact. 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 Technicolor TG784n v3 also supports powerful wireless security mechanisms, such as Wi-Fi Protected Access (WPA2) together with a secure and user-friendly connection and configuration mechanism for wireless clients (WPS).

## Services

The Technicolor TG784n v3 is based on the latest generation of chipsets that puts considerable processing power into the gateway for enabling multiple features which guarantee efficient and robust delivery of multimedia services from the core of the network right to the end user.

To maintain maximum performance, the Technicolor TG784n v3 incorporates flexible Quality of Service (QoS) mechanisms, including comprehensive traffic classification, traffic prioritization, IP rate limiting, IP acceleration and connection reservation to prevent peer-to-peer applications from blocking other services.

## Applications

With an integrated OSGi framework and (optionally) available Software Development Kits (SDKs), operators and third parties can develop their own applications for the Technicolor TG784n v3 and introduce innovative offerings in their markets in order to raise ARPU or lower operational expenses.

Dynamic download of OSGi bundles without a full platform software upgrade and unique certificates stored in each individual gateway allow for painless and secure deployments.

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## IPv6 Ready

With the approaching IPv4 address pool depletion, our products need to be ready for IPv6. 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 TG784n v3 has successfully passed the Gold 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.

## ECO

Technicolor offers its customers environmentally friendly products. In addition to carefully selected plastics and packaging to minimize the ecological footprint, the TG784n v3 benefits from a unique combination of hardware and software features that reduce power consumption substantially, such as the possibility of turning off all active LEDs and replacing them with one single ECO-LED.

## Professional Services

Technicolor offers a wide array of services:

- **Hardware:** Optimize warranty and hardware operations such as repair, logistics, dedicated inventories, recycling, refurbishing, ...
- **Support & Maintenance contracts** providing a technical support line, software support, updates, upgrades, on-site support and training. Dedicated response time can be tailored to fit your organization with BRONZE, SILVER and GOLD agreements.
- **Develop specific software functions, features and GUIs** to create and deploy innovative subscriber services in your market.
- **Technicolor proposes Integration Services** on technologies, products and third-party software to accelerate your project whilst optimizing your time to market. We can also provide resources for project management, engineering and planning, and assist your team with device interoperability tests, proof of concept (POC) and trials.
- **Missions to optimize your Total Cost of Ownership (TCO)** by analyzing your hotline calls and proposing relevant actions to reduce your OPEX budgets.
- **Leveraging its many years of expertise** in creating gateway and set-top box products - with over 200 million devices delivered to diverse markets all around the world - Technicolor has built an experienced and dedicated design team able to propose a great variety of new, innovative design services, ranging from unique product aesthetics to product content.

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## Technical Specifications

### Hardware Specifications

- Interfaces WAN RJ-11 DSL line port for ADSL/POTS and ADSL/ISDN (optional)  
1 FXO POTS port (optional)
- Interfaces LAN 1 Ethernet WAN 10/100/1000 Base-T port  
3-port auto-MDI/MDI-X 10/100 Base-T and 1-port 10/100/1000 Base-T port Ethernet LAN switch  
2 FXS POTS ports  
2 USB 2.0 master ports  
Wi-Fi IEEE 802.11b/g/n on-board
- Extras WPS / WLAN button  
ECO button  
Reset button  
Power button
- Dimensions 37 x 166 x 222 mm (1.5 x 6.5 x 8.7 in.)
- Operation temperature 0° - 40° C (32° - 104° F)
- Humidity 20% to 80%
- AC Voltage 100-240 VAC (switched mode power supply)

### 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, M  
(G.dmt.bis),  
ITU-T G.992.4 Annex A, B, L, M  
(G.lite.bis)  
Maximum rate: 12 Mbps for downstream  
and 1.5 Mbps for upstream
- ADSL2+ compliance: ITU-T G.992.5 Annex A, B  
Maximum rate: 24 Mbps for downstream  
and 3 Mbps for upstream
- Supports Dying Gasp

### Management

- Customizable user-friendly GUI via HTTP and HTTPS
- Unified Management Interface (MBus)
- AutoWAN sensing™: automatic selection and configuration of WAN interface
- Web services API for remote access (portal, management, diagnostics, applications,...)
- 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
- GUI-embedded Easy Setup wizard
- On-demand Remote GUI assistance (helpdesk)
- Web-browsing intercept (install / diagnostics / captive portal)
- (Wireless) Technicolor Gateway Setup wizard
- TR-064 LAN side configuration
- Zero-touch autoprovisioning

### Services

- Printer sharing
- Content sharing
  - Samba file server
  - UPnP A/V™ media server and control point (optional)
  - Certified DLNA® DMS
  - HDD file systems: FAT32, NTFS (optional), HFS+ (optional)
  - Metadata support
  - Remote HDD file access
- 3G USB adapter support
- Dynamic DNS
- URL- and content-based website filtering (optional)
- Open architecture for 3rd-party application and UI development
- OSGi execution environment

### Wireless Performance and Security

- Wi-Fi IEEE 802.11b/g/n 2x2 access point Wi-Fi CERTIFIED®
- WPA™-Personal / WPA2™-Personal, WEP™
- Wi-Fi Multimedia (WMM®)
- Wi-Fi Protected Setup (WPS™)
- Up to 4 virtual SSID APs support
- Security and service segregation per SSID
- Dynamic rates switching for optimal wireless rates
- Manual/auto radio channel support
- RX/TX switched diversity

### Security

- Stateful Packet Inspection Firewall (SPIF)
- Customizable firewall security levels
- Intrusion detection and prevention (DoS, SYN Flood, Ping of Death, Fraggle, LAND, Teardrop...)
- Demilitarized Zone (DMZ)
- Multilevel access policy
- "SIM"-lock provider locking

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## Technical Specifications

### Networking

- Symmetrical NAT with Application Helpers (ALGs)
- Game and application sharing NAT port maps
- DHCP conditional serving & relay, DNS server & relay
- IGMPv3 proxy
- IGMP snooping
- DHCP spoofing
- Flexiport (automatic selection of Ethernet port bridged IPTV)
- IEEE 802.1q VLAN bridging, multiple bridge instances
- IPv6 ready

### Quality of Service (QoS)

- 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



Technicolor TG784n v3 back panel

### Voice over IP Features

- Voice functionality Signalling: SIP, MGCP (optional), H.323 (optional)  
Codecs: G.711a / u law, G.726, G.729, T.38  
Flexible telephone number per FXS, including common numbers  
SIP back-to-back user agent (optional)  
Interoperable with main market softswitches
- Optional FXO Full flexible dial plan for PSTN/VoIP outgoing calls  
Prefix for PSTN/VoIP switch  
Lifeline backup: manual and automatic PSTN / VoIP  
Incoming call detection on PSTN
- Supplementary and advanced services  
Call waiting (on call basis)  
Caller ID  
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  
3-way conferencing  
Message Waiting Indicator (MWI)  
Missed call email  
Click to dial  
Warm line  
Call completion to busy subscriber  
Forced FXO  
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

### Content of the Box

- Wireless n VoIP Gateway
- Power supply unit
- ADSL cable (RJ-11)
- Ethernet cable (RJ-45)
- Setup CD and Leaflet
- Filter or splitter (optional)

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