

# MediaAccessTC8706

Smart Cable Gateway  
with Battery Backup Solution



## CABLE

DATA

VOICE

VIDEO

## Future-proof Solution for Advanced Services over DOCSIS

As cable and wireless standards keep evolving, Technicolor presents the TC8706, a DOCSIS 3.0 dual band concurrent wireless embedded Multimedia Terminal Adapter (eMTA) smart gateway with best-in-class performance and dual band concurrent wireless support.

A dedicated applications processor and software execution environment make it a powerful and reliable platform in the home, ready for demanding services and applications.

The TC8706 has an extended life cycle thanks to its extensive remote management capabilities, including the ability to smoothly upgrade itself and add apps on the go.

Moreover, this new generation of smart high-speed data service solutions supports up to eight bonded downstream channels and four bonded upstream channels, and provides full connectivity to devices in the home including set-top boxes via MoCA. The optionally integrated DECT base station offers support for up to five DECT phones.

## Applications Core

As an easily updatable platform, the TC8706 is capable of providing subscribers with advanced services and apps within the home. Its dedicated applications processor and software service framework put services such as the following at your fingertips:

- DLNA Digital Media Server (DMS)
- Home Security and Automation
- Troubleshooting and Diagnostics
- Customer Self Help

## Features at a Glance

- DOCSIS® 3.0 certified
- Backward compatible with DOCSIS 2.0 (and older)
- 8 downstream and 4 upstream channels
- Voice PacketCable™ 1.5 & 2.0 compliant
- Full band capture
- 4 GE LAN ports
- MoCA 2.0
- Dual band Wi-Fi interface:  
IEEE 802.11n 2.4 GHz + 5GHz (3x3)
- 2 FXS ports (RJ-11)
- (optional) Integrated DECT multiline base station (CAT-iq™ 2.0 ready)
- 2 USB 2.0 master for hard disk, printer, 3G adapter, ...
- Generic Technicolor feature set
- Dedicated applications core
- HNAP for home security services (optional)
- SNMP
- TR-069 remote management (optional)
- IPv4 and IPv6 support



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## Full Band Capture Solution

Thanks to its fully integrated 1 GHz wideband capture, the TC8706 exceeds SCTE-40+ performance and eliminates all frequency limitations of traditional wideband tuners. The TC8706 enables use of the full radio frequency (RF) spectrum without the need for grouped channels. This helps the operator migrate its entire DOCSIS 3.0 install base from one to eight DOCSIS downstream channels without having to re-align all its broadband channels to accommodate this new service.

## High-Speed Wireless Interface

The TC8706 has a dual band concurrent IEEE 802.11n wireless interface, supporting an industry leading 3x3 spatial stream configuration at both 2.4GHz and 5GHz. Combined with internal amplifiers, the TC8706 takes home networking to a completely new level. The TC8706 also supports multiple SSIDs.

## Voice Performance

The TC8706 is PacketCable 2.0 compliant and is equipped with basic and extended CLASS features such as caller ID and call waiting.

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

## Advanced Security

The integrated 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. To secure data exchange between the gateways and the cable operators' servers, BPI+ communications privacy is used.

## MoCA

The TC8706 also includes an integrated MoCA 2.0 interface which enables the gateway to provide connectivity to set-top boxes and client devices connected within the home.

## WPS

With Wi-Fi Protected Setup (WPS) users can easily connect with the TC8706 wireless network by simply pushing a button or entering a PIN code.

It allows home users to easily connect to a secure network without any complex configuration and eliminates the need to remember or store their security information in an unsafe way.

## Easy to Use

Like all Technicolor modems and gateways, the TC8706 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, connectivity status and channel bonding status. Multiple integrated web pages allow direct access to the status and settings, including privacy and security information.

## ECO

Technicolor offers its customers environmentally friendly products. In addition to carefully selected plastics and packaging to minimize the ecological footprint, the TC8706 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

### Cable Certifications

- Data DOCSIS® 3.0 certified
- Voice PacketCable™ 2.0 compliant
- CMTS interoperability Any qualified DOCSIS® CMTS

### Hardware Specifications

- Interfaces WAN 1 RF connector F-Type
- Interfaces LAN 4-port auto-MDI/MDI-X 10/100/1000 Base-T port Ethernet LAN switch (RJ-45)  
MoCA 2.0 for LAN through WAN RF connector F-Type  
2 FXS POTS ports (RJ-11)  
Integrated DECT base station (optional)  
2 USB 2.0 master ports  
Wi-Fi IEEE 802.11b/g/n 2.4GHz + 5GHz 3x3 on-board
- Interfaces other WPS button  
Reset button
- Dimensions 242 x 52 x 218 mm (9.5 x 2.0 x 8.6 in.)
- Power supply 90-135 VAC, 50-60 Hz  
Lifeline battery backup
- Operating temperature 0° to 50° C (32° - 122° F)
- Operating humidity 20 % to 90 % non-condensing
- Storage temperature -20° to 70° C (-4° - 158° F)

### Receiver Specifications

- Downstream modulation QAM 64/256
- Downstream frequency range 54 - 1002 MHz
- Maximum downstream data range 340 Mbps (theoretical)  
(42.88 Mbps x 8 channels)
- Capture windows Full Band Capture: possibility to have any of the 8 downstream channels over the full DOCSIS® spectrum
- Up to 8 downstream channels
- Input signal level range -15 dBmV / + 15 dBmV
- Input impedance 75 Ohm

### Transmitter Specifications

- Upstream modulation QPSK and 8, 16, 32, 64 and 128 QAM
- Upstream frequency range 5 - 42 MHz
- Maximum upstream data range 131 Mbps (theoretical)  
(32.78 Mbps x 4 channels)
- 4 upstream channels
- Channel bandwidth 200, 400 and 800 kHz, 1.6, 3.2 and 6.4 MHz
- Output impedance 75 Ohm

### Management

- User-friendly GUI via HTTP
- Web-based user interface management and administration
- Logging and alert

### Wireless Specifications

- Dual band Wi-Fi IEEE 802.11b/g/n 2.4GHz high-power 200mW + 5GHz 3x3 access point  
Wi-Fi certified®
- WPA(2)™-personal support of Temporal Key integrity Protocol (TKIP), IEEE802.1x port-based authentication with RADIUS client
- Wi-Fi Protected Setup (WPS™)
- Up to 8 virtual SSID APs support
- Security and service segregation per SSID
- 6 internal antennas

### Security

- Stateful Packet Inspection Firewall (SPIF)
- Customizable firewall security levels
- Intrusion detection and prevention (DoS, SYN Flood, Ping of Death)
- URL- and content-based website filtering

### Networking

- Network protocol IP, TCP, UDP, ARP, ICMP, DHCP, TFTP, SNMP, HTTP
- Protocol filtering Ethernet and IP
- SNMP management SNMP v2, SNMP v3

### Software Specifications

- Downloadable software
- Multiple client support 254
- Class of Services 16 DSID
- Security BPI+
- HTTP server

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## Technical Specifications

### Telephony Specifications

- Audio codecs      PCM A-law, PCM  $\mu$ -law, G.729, G.729a, G.729e, G.728, iLBC and BV16
- Multi-line phone support 2 phone lines  
3-party conference calls  
Supports two complex voice codecs simultaneously
- Fax relay              T.38
- DTMF tone relay      RFC 2833
- Caller ID             Type I and Type II
- CLASS features      Basic and extended CLASS features
- Voice Activity Detection (VAD)
- Comfort Noise Generation (CNG)
- Echo cancellation    G.65 / G.168 up to 16 ms
- Packet tone          DTMF generation /  
Call progress generation /  
Custom tone generation
- Call discrimination    Fax and modem detection
- Telephony interface capabilities  
Loopback and on-demand diagnostics
- Modems              Up to V.90 (38.5 kbps)
- RFC2833 DMTF tone relay  
Enabled / disabled via SNMP
- REN                  5 REN
- Pulse dialing        DTMF/pulse tones and pulse/DTMF tones  
conversion
- RTP layer             RFC1889 / RFC1890
- RTCP statistics collection
- PacketCable protocols    PacketCable™ NCS  
Network-based call signalling  
protocol (PKT-SP-EC-MGCP)  
SIP protocol by software upgrade
- SIP based protocols

### Content of the Box

- Smart Cable Gateway with Battery Backup Solution
- Power supply cable

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