

MediaAccess TC8737COX for Cox Communications

Wireless .11ac Ultra-Speed
Smart Cable Gateway
with Battery Backup Solution



CABLE

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 TC8737COX 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.

Latest High-Bandwidth Technology

The TC8737COX is a DOCSIS 3.0 wireless embedded Multimedia Terminal Adapter (eMTA) smart gateway with best-in-class performance.

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 TC8737COX 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 24 bonded downstream channels and 8 bonded upstream channels for speeds of up to 930 Mbps downstream and 216 Mbps upstream. The TC8737COX incorporates a switchable triplexer for upstream filter to switch between low and mid-split filters.

The TC8737COX also provides full connectivity to devices in the home including set-top boxes via MoCA.

Features at a Glance

- DOCSIS® 3.0
- Backwards compatible with DOCSIS® 2.0 (and older)
- 24 downstream and 8 upstream channels
- Full Band Capture / Spectral Analysis
- Switchable triplexer for Upstream Low and Mid split
- 4 GE LAN ports
- Dual band concurrent Wi-Fi interfaces:
 - IEEE 802.11n 2.4 GHz (3x3) High Power
 - IEEE 802.11ac 5 GHz (3x3) High Power
- MoCA 2.0
- 2 FXS ports for phone or fax
- Voice PacketCable™ 1.5 & 2.0 compliant
- 2 USB 2.0 master ports
- Seamless media sharing (UPnP A/V™ and DLNA®)
- HNAP for home security services (optional)
- MPEG2 over IP encapsulation solution
- Future-proof full service platform supporting:
 - Dedicated applications core
- TR-069 remote management
- IPv4 & IPv6 enabled
- Designed according to the latest ECO standards



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Full Band Capture Solution

Thanks to its fully integrated 1 GHz wideband capture and spectral analysis, the TC8737COX exceeds SCTE-40+ performance and eliminates all frequency limitations of traditional wideband tuners. The TC8737COX 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 24 DOCSIS downstream channels without having to re-align all its broadband channels to accommodate this new service.

Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.

Applications Core

As an easily updatable platform, the TC8737COX 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:

- Home Security and Automation
- Troubleshooting and Diagnostics
- Customer Self Help

Voice Performance

The TC8737COX is PacketCable 1.5 and 2.0 compliant, and is equipped with basic and extended CLASS features such as caller id and call waiting.

Video Streaming

The TC8737COX contains an MPEG2 to IP encapsulation solution allowing the capture of the DVB-C free-to-air video signal on the RF network and the distribution of this video signal over IP on the local network of the customer.

This feature is available upon software upgrade of the TC8737COX and is a first step for cable operator towards distributing IPTV without any change to their existing QAM (digital video) broadcast infrastructure.

MoCA

The TC8737COX 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.

Easy to Use

Like all Technicolor modems and gateways, the TC8737COX 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.

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 TC8737COX 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.

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.

Media Sharing

The TC8737COX 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 TC8737COX 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.

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Technical Specifications

Hardware Specifications

■ Interfaces WAN	1 RF connector F-Type
■ Interfaces LAN	4-port autosensing 10/100/1000 Base-T auto-MDI/MDI-X Ethernet LAN switch MoCA 2.0 for LAN through WAN RF connector F-Type 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
■ Interfaces other	Power button 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° - 50° C (32° - 122° F)
■ Operating humidity	20 % to 90 % non-condensing
■ Storage temperature	-20° - 70° C (-4° - 158° F)

Cable Certifications

■ Data	DOCSIS® 3.0
■ Voice	PacketCable™ 1.5 & 2.0 compliant
■ CMTS interoperability	Any qualified DOCSIS® CMTS

Receiver Specifications

■ Downstream modulation	QAM 64/256
■ Downstream frequency range	108 - 1002 MHz
■ Number of downstream channels	Up to 24
■ Maximum downstream data range	930 Mbps (theoretical) (38.8 Mbps x 24 channels)
■ Capture windows	Full Band Capture: possibility to have any of the 24 downstream channels over the full DOCSIS® spectrum
■ 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	Software selectable 5 - 42 MHz (24x4) 5 - 85 MHz (24x8)
■ Channel bandwidth	200, 400 and 800 kHz, 1.6, 3.2 and 6.4 MHz
■ Number of upstream channels	Up to 8
■ Maximum upstream data range	216 Mbps (theoretical) (27 Mbps x 8 channels)
■ Output impedance	75 Ohm
■ Upstream Spectral Analysis	

Wireless Specifications

■ Full dual band concurrent Wi-Fi access points, Wi-Fi certified®	2.4 GHz (3x3) IEEE 802.11n AP 5.0 GHz (3x3) IEEE 802.11ac AP with IEEE 802.11ac compliant transmit beamforming
■ Wi-Fi power	High Power: up to 400 mW EIRP
■ Wi-Fi Protected Setup (WPS™)	
■ Wi-Fi security levels	IEEE 802.1x port-based authentication with RADIUS client WPA2™-Enterprise / WPA™-Enterprise WPA2™-Personal / WPA™-Personal WEP™
■ Wi-Fi Multimedia (WMM®) and WMM-Power Save	
■ Up to 8 BSSIDs (virtual AP) per radio interface	
■ RX/TX switched diversity	
■ 3x3 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 mode
■ Dynamic rates switching for optimal wireless rates	
■ Manual/auto radio channel selection	

MoCA Specifications

■ MoCA 2.0	
■ Full backward compatibility to MoCA 1.1	
■ Support for up to 16 MoCA network nodes	
■ Throughput up to 400 Mbps	
■ Expanded range of operating frequencies – 1150 MHz to 1650 MHz	
■ Supports both Parameterized and Prioritized QoS	

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Technical Specifications

Management

- User-friendly GUI via HTTP
- Web-based user interface management and administration
- Logging and alert
- TR-069 CPE WAN Management Protocol (CWMP)
TR-181i2 Device:2 data model

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
- Content sharing
UPnP A/V™ media server and control point
DLNA®
Metadata support

Security

- Stateful Packet Inspection Firewall (SPIF)
- Customizable firewall security levels
- Intrusion detection and prevention (DoS, SYN Flood, Ping of Death)
- Security and service segregation per SSID

Networking

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

Platform Software Specifications

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

Telephony Specifications

- Audio codecs
PCM A-law, PCM μ -law,
G.729, G.729a, G.729e, G.728
Wideband
iLBC and BV16
G.722
- 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.165
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)
- RFC 2833 DMTF tone relay
Enabled / disabled via SNMP
- REN
5 REN
- Pulse dialing
DTMF
pulse tones and pulse
DTMF tones conversion
- RTP layer
RFC 1889
RFC 1890
- RTCP statistics collection
- PacketCable protocols
PacketCable™ NCS
Network-based call signalling
protocol (PKT-SP-EC-MGCP)
SIP protocol by software upgrade
- SIP based protocols

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Technical Specifications

Environmental Features

- Power control features Turn on or turn off external interfaces
Dynamic power consumption reduction

Content of the Box

- MediaAccess TC8737COX
- Ethernet cable (RJ-45)
- Power supply cable
- Battery
- Setup CD (optional)
- Quick Setup leaflet(s) (optional)
- Safety Instructions & Regulatory Information booklet (optional)



TC8737COX back panel

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