technicolor

MediaAccess TC8737COX for Cox Communications

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

24 x 8

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

.11ac Wi-Fi · WiFi CERTIFIED · Wi-Fi PROTECTED SETUP · dlna · UPnP AV · Linux · eco

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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.

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

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 G.722
	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.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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