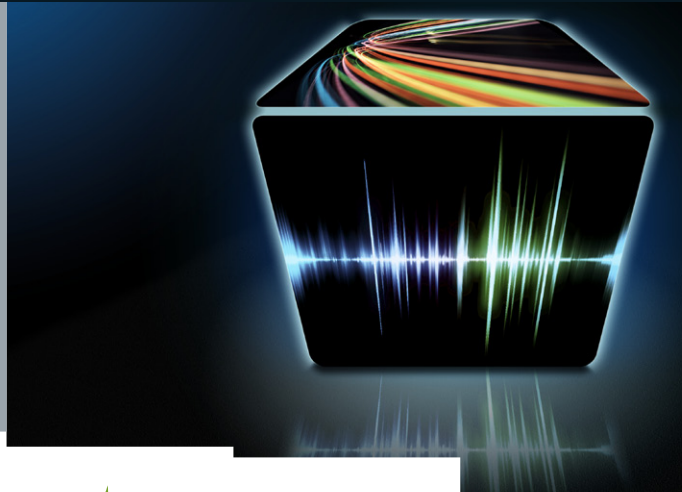


# MediaAccessTC7210

Wireless .11ac  
Voice Cable Gateway



## CABLE

DATA

VOICE

## Next-Gen Wireless Technology for Next-Gen Speeds

The TC7210 is one of the first dual band concurrent Wi-Fi cable gateways to feature the next-generation IEEE 802.11ac wireless standard for the 5 GHz band. With its 3x3 antenna configuration, this enhanced wireless voice cable solution enables even higher throughput and better coverage over the much less crowded 5 GHz radio, for real-time content delivery. Simultaneously, it guarantees seamless transmission of data services over IEEE 802.11n using the 2.4 GHz band.

## Latest High-Bandwidth Technology

The TC7210 is a EuroDOCSIS 3.0 wireless Embedded Multimedia Terminal Adapter (EMTA) gateway introducing the next generation in high-speed data services. This new cable solution offers next to four bonded upstream channels, 16 bonded downstream channels for wired download speeds of up to 800 Mbps. Operators can now offer their customers even faster broadband access as well as demanding IPTV services.

Other value-added applications such as a DLNA media server and hard disk sharing are also at your fingertips thanks to the TC7210's dedicated application processor.

## Full Band Capture Solution

Thanks to its fully integrated 1 GHz wideband capture, the TC7210 exceeds SCTE-40+ performance and eliminates all frequency limitations of traditional wideband tuners. The TC7210 enables use of the full radio frequency (RF) spectrum without the need for grouped channels. This helps the operator migrate its entire (Euro)DOCSIS 3.0 install base from one to 16 (Euro)DOCSIS downstream channels without having to re-align all its broadband channels to accommodate this new service.

## Features at a Glance

- EuroDOCSIS® 3.0 certified
- Dual mode DOCSIS®/EuroDOCSIS®
- Backward compatible with (Euro)DOCSIS® 2.0 (and older)
- Voice EuroPacketCable™ 1.5 certified
- Full band capture
- 4 GE LAN ports
- Wireless networking on-board: IEEE 802.11n 2.4 GHz 2x2 and IEEE 802.11ac 5 GHz 3x3 simultaneously
- 2 FXS ports (RJ-11)
- 1 USB master port
- Advanced security features
- MPEG2 over IP encapsulation solution
- IPv4 and IPv6 support
- Designed to meet the latest ECO standards



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## Voice Performance

The TC7210 is EuroPacketCable 1.5 certified and, after a software upgrade, it can operate in PacketCable 2.0 or SIP mode. The TC7210 supports all standard codecs including iLBC and BV16 and is equipped with basic and extended CLASS features such as caller ID and call waiting. Gateway and voice operations support data throughput and complex voice calls simultaneously.

## Advanced Security

The integrated firewall provides Stateful Packet Inspection (SPI), and an integrated Intrusion Detection and Prevention System (IDS) engine which 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 gateway and the cable operators' servers, BPI+ communications privacy is used.

## Easy to Use

Like all Technicolor modems and gateways, the TC7210 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 (number of used downstream and upstream channels). Multiple integrated web pages also allow direct access to the status and settings, including privacy and security information.

With Wi-Fi Protected Setup (WPS) users can easily connect with the TC7210 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.

## Video Streaming

The TC7210 contains an MPEG2 over IP encapsulation solution allowing the support of IPTV with existing QAM (digital video) broadcast infrastructure.

## Media Sharing

The TC7210 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 TC7210 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.

## ECO

Technicolor is committed to offers 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 TC7210 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 RF connector F-Type
■ Interfaces LAN	4-port auto-MDI/MDI-X 10/100/1000 Base-T Ethernet LAN switch (RJ-45) 2 FXS POTS ports (RJ-11) 1 USB 2.0 master port Wi-Fi IEEE 802.11n 2.4 GHz on board Wi-Fi IEEE 802.11ac 5.0 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	120-240 VAC, 50-60 Hz
■ Operating temperature	0° to 40° C (32° - 104° F)
■ Operating humidity	20 % to 90 % non-condensing
■ Storage temperature	-20° to 70° C (-4° - 158° F)

### Cable Certifications

■ Data	EuroDOCSIS®3.0 certified
■ Voice	EuroPacketCable™ 1.5 certified
■ CMTS interoperability	Any qualified EuroDOCSIS® / DOCSIS® CMTS

### Receiver Specifications

■ Downstream modulation	QAM 64/256
■ Downstream frequency range	108 - 1002 MHz
■ Maximum downstream data range	880 Mbps (theoretical) (55.61 Mbps x 16 channels)
■ Capture windows	Full Band Capture: possibility to have any of the 16 downstream channels over the full EuroDOCSIS® spectrum
■ Number of downstream channels	Up to 16
■ 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 - 65 MHz
■ Maximum upstream data range	131 Mbps (theoretical) (32.78 Mbps x 4 channels)
■ Number of upstream channels	4
■ 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\*

- Full dual band concurrent Wi-Fi access points, Wi-Fi certified®
  - 2.4 GHz (2x2) IEEE 802.11n AP
  - 5.0 GHz (3x3) IEEE 802.11ac AP with Beamforming technology
- WPA(2)™-Personal support of Temporal Key Integrity Protocol (TKIP), IEEE 802.1x port-based authentication with RADIUS client
- Wi-Fi Protected Setup (WPS™)
- Up to 16 BSSIDs (virtual AP) support
- Security and service segregation per SSID
- Wi-Fi Hotspot functionality with SoftGRE standard
- Dynamic rates switching for optimal wireless rates
- 5 internal antennas

\*Wireless configuration can be tailored to customer requirements

### 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
- Quality of Service 32 DSDIs and 32 US Service Flows
- 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 support 2 phone lines  
3-party conference call  
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)
- RFC2833 DMTF tone relay Enabled / disabled via SNMP
- REN 5 REN
- Pulse dialing DTMF/pulse tones  
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

### Environmental features

- Power control features Ability to turn off any or all modules  
Slow down or turn off processors  
Turn on or turn off external interfaces  
Dynamic power consumption reduction

### Content of the Box

- EMTA gateway
- Power supply unit
- Ethernet cable (RJ-45)
- CD-ROM
- Quick Installation Guide

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