technicolor

MediaAccess TC7200.20
Wireless Cable Gateway with Voice

8 x 4

CABLE	
	DATA
	VOICE
	VIDEO

Latest High-Bandwidth Technology

As cable standards keep evolving, Technicolor presents the TC7200.20, a wireless EuroDOCSIS 3.0 cable gateway. With this new offer Technicolor provides cable operators with high-bandwidth data transmission and enables them to stay ahead of content delivery with gaming and video over IP.

This generation of high-speed data service solutions offers up to eight bonded downstream channels and four bonded upstream channels, allowing operators to provide their customers with four data channels and four channels for dedicated IPTV services.

The TC7200.20 also provides a powerful platform to port new applications such as DLNA media server and hard disk sharing.

Full Band Capture Solution

Thanks to its fully integrated 1 GHz wideband capture, the TC7200.20 exceeds SCTE-40+ performance and eliminates all frequency limitations of traditional wideband tuners. The TC7200.20 enables use of the full Radio Frequency (RF) spectrum without the need for grouped channels. This helps the operator migrate his entire EuroDOCSIS 3.0 install base from one to eight DOCSIS downstream channels without having to re-align all his broadband channels to accommodate this new service.

Features at a Glance

- EuroDOCSIS® 3.0 compliant
- Dual mode DOCSIS®/EuroDOCSIS®
- Backward compatible with (Euro)DOCSIS® 2.0 (and older)
- 8 bonded downstream and 4 bonded upstream channels
- Full band capture tuner
- 4 GE LAN ports
- Wireless networking on-board:
  IEEE 802.11n 2.4 GHz or 5 GHz selectable (2x2)
- 2 FXS ports for phone or fax
- Voice EuroPacketCable™ 1.5 compliant
- Voice CLASS features
- 1 USB 2.0 master port for hard disk, printer,...
- MPEG2 over IP encapsulation solution
- Reliable high-performance platform
- Advanced security features
- IPv4 & IPv6 enabled
- Designed according to the latest ECO standards

Wi-Fi 5 GHz · WiFi CERTIFIED · Wi-Fi PROTECTED SETUP · Linux · HI-SPEED CERTIFIED USB · eco · RoHS COMPLIANT

High-Speed Wireless Interface

The TC7200.20 comes with a dual band selectable IEEE 802.11n wireless interface, enabling the home user to change the radio frequency of his wireless network depending on his usage: 2.4 GHz for high-speed data services, and 5 GHz for high-quality video streaming or gaming.

The TC7200.20 also supports up to 8 wireless networks (mSSID) per radio interface, enabling to set up independent virtual wireless access points. These additional wireless networks allow other wireless users to enjoy high-performance access without any compromise on the integrity of the basic network, thus keeping the original network access limited and secure.

Voice Performance

The TC7200.20 is EuroPacketCable 1.5 certified and, after a software upgrade, it can operate in PacketCable 2.0 or SIP mode. The TC7200.20 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.

Media Sharing

The TC7200.20 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 TC7200.20 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.

Video Streaming

The TC7200.20 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 TC7200.20 and is a first step for cable operator towards distributing IPTV without any change to their existing QAM (digital video) broadcast infrastructure.

Easy to Use

Like all Technicolor modems and gateways, the TC7200.20 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.

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.

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 TC7200.20 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.

ECO

Technicolor is committed to offer 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 TC7200.20 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 autosensing 10/100/1000 Base-T	
	auto-MDI/MDI-X Ethernet LAN switch	
	IEEE 802.11n 2.4 or 5 GHz on board	
	2 FXS POTS ports	
	1 USB 2.0 master port	
■ Interfaces other	Power button	
	WPS button	
	Reset button	
■ Dimensions	220 x 165 x 42 mm (8.66 x 6.50 x 1.65 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 compliant
■ Voice	EuroPacketCable™ 1.5 certified
■ CMTS interoperability	Any qualified EuroDOCSIS® / DOCSIS® CMTS

Receiver Specifications

- ■ Downstream modulation
  - 64, 256 QAM
- ■ Downstream frequency range
  - 108 - 862 MHz
- ■ Number of downstream channels
  - Up to 8
- ■ Maximum downstream data range
  - 440 Mbps (theoretical)
  - (55.62 Mbps x 8 channels)
- ■ Capture windows — Full Band Capture: possibility to have any of the 8 downstream channels over the full EuroDOCSIS® spectrum
- ■ Input signal level range — -15 dBmV / + 15 dBmV
- ■ Input impedance — 75 Ohm

Transmitter Specifications

- ■ Upstream modulation — QPSK
  - 8, 16, 32, 64 and 128 QAM
- ■ Upstream frequency range
  - 5 - 65 MHz
- ■ Number of upstream channels
  - 4
- ■ Maximum upstream data range
  - 122 Mbps (theoretical)
  - (30.72 Mbps x 4 channels)
- ■ Channel bandwidth — 200, 400 and 800 kHz, 1.6, 3.2 and 6.4 MHz
- ■ Output impedance — 75 Ohm

Wireless Specifications

- ■ Selectable dual band Wi-Fi access point, Wi-Fi certified®
  - 2.4 GHz or 5 GHz (2x2) IEEE 802.11n AP
- ■ Wi-Fi Protected Setup (WPS™)
- ■ Wi-Fi security levels — IEEE802.1x port-based authentication with RADIUS client
  - WPA2™-Personal / WPA™-Personal
  - WEP™
- ■ Up to 8 BSSIDs (virtual AP) support
- ■ 2x2 MIMO Wi-Fi features
  - SGi
  - STBC
  - 20/40 MHz coexistence (2.4 GHz)
  - 20/40/80 MHz mode (5 GHz)
- ■ Dynamic rates switching for optimal wireless rates
- ■ Manual/ auto radiochannel selection

Management

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

Services

■ Parental control	URL- and (optional) content-based website filtering
■ Content sharing	File server
	DLNA® DMS

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

■ Downloadable software	
■ Multiple client support	254
■ Quality of Service	32 DSIDs and 32 US Service Flows
■ Security	BPI+
■ HTTP server	

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Technical Specifications

Telephony

- Audio codecs — PCM A-law, PCM μ-law, G.729, G.729a, G.729e, G.728, iLBC and BV16
- Multi-line phone support — 2 phone lines; 3-party conference calls; Supports 2 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 / 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

- MediaAccess TC7200.20
- Power supply unit
- Ethernet cable
- Setup CD (optional)
- Quick Setup leaflet(s) (optional)
- Safety Instructions & Regulatory Information booklet (optional)

MediaAccess TC7200.20 back panel

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