technicolor

MediaAccess TC7200.20
Wireless Voice Cable Gateway

eco

Latest High-Bandwidth Technology

As cable standards keep evolving, Technicolor presents the TC7200.20, a EuroDOCSIS 3.0 wireless Embedded Multimedia Terminal Adapter (EMTA) 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.

High-Speed Wireless Interface

The TC7200.20 has an IEEE 802.11n wireless interface, offering speeds up to 120 Mbps. The TC7200.20 also supports up to 8 virtual wireless networks (mSSID).

Features at a Glance

- EuroDOCSIS® 3.0 compliant
- Dual mode DOCSIS/EuroDOCSIS®
- Backward compatible with DOCSIS/EuroDOCSIS® 2.0 (and older)
- Voice EuroPacketCable™ 1.5 compliant
- Full band capture
- 4 GE LAN ports to connect multiple devices such as PCs, laptops, set-top boxes,... or uplink to a GE switch
- Wireless networking on-board: IEEE 802.11b/g/n 2x2 (2.4 GHz and 5 GHz selectable)*
- 2 FXS ports for phone or fax
- 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
- IPv6 enabled

Wi-Fi CERTIFIED Wi-Fi PROTECTED SETUP Wi-Fi 5 GHz Linux HI-SPEED CERTIFIED USB

*Wireless configuration can be tailored to customer requirements

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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.

Voice Performance

The TC7200.20 offers POTS phone connectors to accommodate phones and faxes. The TC7200.20 is EuroPacketCable 1.5 compliant and is equipped with basic and extended CLASS features (such as caller ID and call waiting).

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.

The TC7200.20 also supports powerful wireless security mechanisms such as Wi-Fi Protected Access (WPA2).

Media Sharing

Thanks to a dedicated application processor, the TC7200.20 offers some convenient media sharing applications.

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 over IP encapsulation solution allowing the support of IPTV with existing QAM (digital video) broadcast infrastructure (upon software upgrade).

Easy to Use

Like all Technicolor modems and gateways, the TC7200.20 is an easy-to-use, easy-to-install gateway.

For instance, 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). Additionally the TC7200.20 boasts an extensively customizable user-friendly GUI that allows direct access to the status and settings, including privacy and security information.

With Wi-Fi Protected Setup (WPS) users can easily connect with the TC7200.20 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.

ECO

Technicolor offers its customers environmentally friendly products. 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.

For instance, an integrated tuner provides advanced power management. Additional power control features are supported with the ability to turn off any or all modules, to slow or shut down processors and to switch off all external interfaces, for even lower power consumption.

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

Hardware Specifications

■ Interfaces WAN	1 RF connector F-Type
■ Interfaces LAN	4-port autosensing 10/100/1000 Base-T auto-MDI/MDI-X Ethernet switch
	Wi-Fi IEEE 802.11b/g/n on board
	2 FXS POTS ports
■ Interfaces other	Power button
	Reset button
	WPS button
■ Power supply	120-240 VAC, 50-60 Hz
■ Dimensions (h x d x w)	220 x 42 x 165 mm (8.7 x 1.6 x 6.5 in.)
■ 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)

Receiver Specifications

■ Downstream modulation	
	QAM 64/256
■ Downstream frequency range	
	108 - 1002 MHz
■ Maximum downstream data range	
	440 Mbps (theoretical, 55.61 Mbps x 8 channels)
■ Capture windows	Full Band Capture: possibility to have any of the 8 downstream channels over the full EuroDOCSIS® spectrum
■ Number of downstream channels	
	Up to 8
■ 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*

- ■ Wi-Fi IEEE 802.11n access point, Wi-Fi certified®
- ■ Dual concurrent Wi-Fi with 2.4 GHz 2x2, or 5.0 GHz 2x2 (selectable) support*
- ■ 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 8 BSSIDs (virtual AP) support
- ■ Security and service segregation per SSID
- ■ Up to 120 Mbps data rates
- ■ 2x2 streams
- ■ 2 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)

Networking

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

Services

■ Printer sharing	
■ URL- and content-based website filtering	
■ HDD file systems: FAT32, NTFS, EXT2, EXT3, HFS+ (optional)	
■ Content sharing	Samba file server
	UPnP A/V™ media server and control point (optional)
	DLNA® compliant DMS
	Metadata support

Software Specifications

■ Downloadable software	
■ Multiple client support	254
■ Class of Services (CoS)	16 SIDs
■ Security	BPI+
■ HTTP server (CM status)	

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Technical Specifications

Telephony Specifications

■ 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 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 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	

Content of the Box

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

Technicolor TC7200.20 back panel

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