

# TECHNICOLOR TC7230

## DOCSIS 3.0 WIRELESS 11AC VOICE CABLE GATEWAY

- EuroDOCSIS 3.0
- Dual Mode DOCSIS/EuroDOCSIS
- Backward compatible with (Euro)DOCSIS 2.0 (and older)
- 24 bonded Downstream and eight bonded Upstream Channels
- Voice EuroPacketCable 1.5 compliant
- 4x GbE LAN Ports
- Wireless Networking on board:
  - IEEE 802.11n 2.4 GHz (2x2)
  - IEEE 802.11ac 5.0 GHz (3x3)
- 2x FXS Ports for Phone or Fax
- 1x USB 2.0 Master Port
- Futureproof full Service Platform supporting:
  - Qeo Communication Framework and Apps
  - IPv4 and IPv6 DS-Lite Support



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) Wi-Fi IEEE 802.11n 2.4 GHz on-board Wi-Fi IEEE 802.11ac 5.0 GHz on-board 2 FXS POTS ports (RJ-11) 1 USB 2.0 master port
Interfaces other	Power button WPS button Reset button
Dimensions	218 x 63 x 160 mm (8.6 x 2.5 x 6.3 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 compliant
CMTS interoperability	Any qualified EuroDOCSIS® / DOCSIS® CMTS
RECEIVER SPECIFICATIONS	
Downstream modulation	QAM 64/256
Downstream frequency range	108 - 1002 MHz
Maximum downstream data range	1.2 Gbps (theoretical) (55.61 Mbps x 24 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 24
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 - 85 MHz
Maximum upstream data range	240 Mbps (theoretical) (32.78 Mbps x 8 channels)
Number of upstream channels	8
Channel bandwidth	200, 400 and 800 kHz, 1.6, 3.2 and 6.4 MHz
Output impedance	75 Ohm

<b>MANAGEMENT</b>	
User-friendly GUI via HTTP	
Web-based user interface management and administration	
Logging and alert	
<b>WIRELESS SPECIFICATIONS*</b>	
Full dual band concurrent Wi-Fi access points, Wi-Fi certified®	<ul style="list-style-type: none"> <li>2.4 GHz (2x2) IEEE 802.11n AP</li> <li>5.0 GHz (3x3) IEEE 802.11ac AP with IEEE 802.11ac compliant transmit beamforming</li> </ul>
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	
Wi-Fi Hotspot functionality with SoftGRE standard	
Security and service segregation per SSID	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	
<b>SERVICES</b>	
Support of QoS communication framework and apps, including access to real time diagnostics	
Parental control	URL- and content-based website filtering Content sharing file server DLNA® DMS
<b>SECURITY</b>	
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	
<b>NETWORKING</b>	
Network protocol	IP, TCP, UDP, ARP, ICMP, DHCP, TFTP, SNMP, HTTP
Protocol filtering	Ethernet and IP
SNMP management	SNMP v2, SNMP v3
<b>SOFTWARE</b>	
Downloadable software	
Multiple client support	254
Class of Services	32 DSIDs and 32 Service Flows
Security	BPI+
HTTP server	
<b>TELEPHONY</b>	
Audio codecs	PCM A-law, PCM $\mu$ -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	
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	
EMTA Gigabit-Class Wireless .11ac Voice Cable Gateway Gigabit-ClassWireless.11acVoiceCableGateway	
Power supply unit	
Ethernet cable (RJ-45)	
CD-ROM	
Quick Installation Guide	

\*Wireless configuration can be tailored to customer requirements