

## TECHNICOLOR CGA4233

### DOCSIS 3.1 SMART ULTRA-BROADBAND CABLE GATEWAY WITH VOICE FOR ABOVE GIGABIT SPEEDS

The CGA4233 is a DOCSIS 3.1 capable cable gateway offering triple-play services beyond Gigabit speeds, while providing VoIP functions for residential and business markets. Thanks to its integrated wireless video bridge featuring a robust chipset and 4x4 antennas, the CGA4233 can support seamless real-time HD video streaming over next generation IEEE 802.11ac Wi-Fi without any interruption of your data traffic.

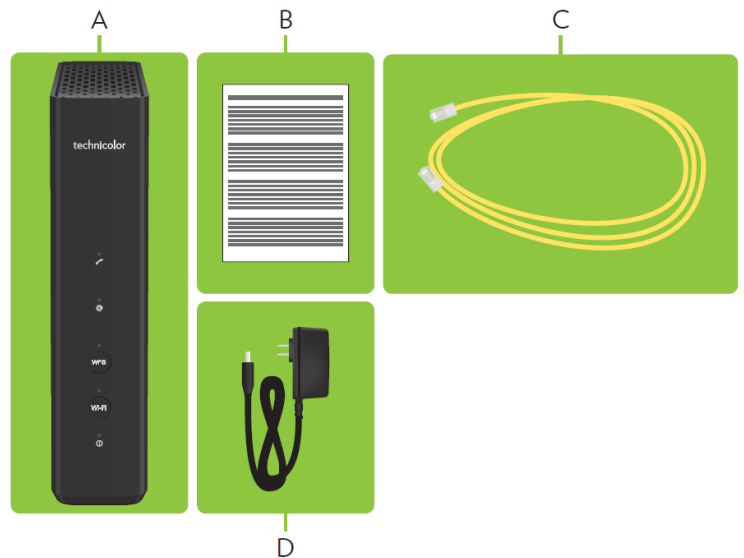


- DOCSIS 3.1 compliant
- 2 x 2 OFDM(A) bonded channels in DOCSIS 3.1 mode
- 32 x 8 bonded channels in DOCSIS/EuroDOCSIS 3.0 mode
- Up to 1.2 GHz full band capture tuner
- 4x GE LAN ports
- Wireless networking on-board:
  - IEEE 802.11n 2.4 GHz (3x3)
  - IEEE 802.11ac Wave 2 5 GHz (4x4)
- 2x FXS ports for phone or fax
- 1x superspeed USB 3.1 Gen 1 master port
- Backward compatible with DOCSIS/EuroDOCSIS 3.0
- Automatic switchable diplexer for up- and downstream
- Built in RF spectrum analyzer
- Capable to support Wi-Fi Doctor (sold separately) and Wi-Fi Conductor (sold separately)
- PacketCable 2.0, (Euro)PacketCable 1.5 and SIP compliant
- Future-proof full service platform
- RDK-B Open Source Software
- SNMP and TR-069 remote management
- Dual stack IPv4 and IPv6 DS-Lite enabled



## PACKAGE CONTENTS

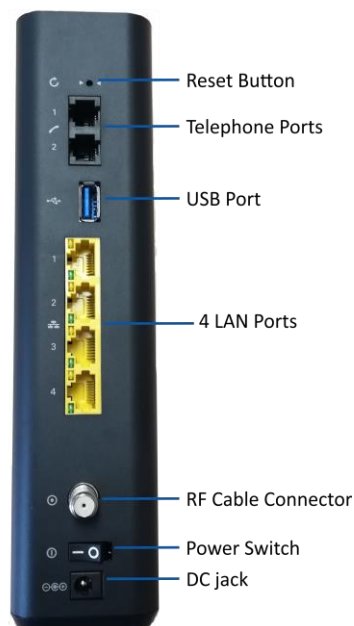
- A CGA4233 Gateway
- B Safety Instructions & Regulatory Information booklet
- C Ethernet Cable
- D Power Supply



## POWER SUPPLY

- 12 V DC
- 3.2 A
- 38.4 W

## FRONT AND BACK PANEL



## SPECIFICATIONS

<b>HARDWARE</b>	
Interfaces WAN	Interfaces WAN 1 F-Type RF connector, external threaded
Interfaces LAN	4-port autosensing 10/100/1000 Base-T Ethernet LAN switch IEEE 802.11n 2.4 GHz Wi-Fi IEEE 802.11ac Wave 2 5 GHz Wi-Fi 2 FXS POTS ports 1 USB 3.1 Gen 1 master port
Buttons & indicators	Up to 9 LEDs (model dependent) Wi-Fi on/off button WPS button Reset button (recessed) Power button
Power input	DC jack
Power supply	12 VDC external PSU
AC Voltage	100 - 240 VAC, 50 - 60 Hz (switched mode PSU)
Operating temperature	0 - 40 °C (32 - 104 °F)
Operating humidity	20 - 95 % HR non-condensing
Storage temperature	-20 - 70 °C (-4 - 158 °F)

<b>CABLE CERTIFICATIONS</b>	
Data	DOCSIS® 3.1 Certified EuroDOCSIS® 3.0 Certified
Voice	PacketCable™ 2.0 compliant EuroPacketCable™ 1.5 Certified
CMTS interoperability	Any qualified DOCSIS 3.1 CMTS Any qualified DOCSIS®/EuroDOCSIS® 3.0 CMTS

<b>RF DOWNSTREAM</b>	
Downstream modulation	64 - 4096 QAM
Downstream frequency range, software selectable	EuroDOCSIS 3.0 108 - 1218 MHz 258 - 1218 MHz
Number of downstream channels	DOCSIS 3.1 2 OFDM EuroDOCSIS 3.0 Up to 32 bonded
Maximum downstream rates	DOCSIS 3.1 Up to 3.6 Gbps Up to 5 Gbps with 32 SC-QAM  EuroDOCSIS 3.0 1780 Mbps (theoretical, 32 x 55.62 Mbps)
Capture windows	1.2 GHz full band capture
Channel bandwidth	DOCSIS 3.1 192 MHz EuroDOCSIS 8 MHz
Input signal level range	-15 dBmV / + 15 dBmV
Input impedance	75 Ohm

<b>RF UPSTREAM</b>	
Upstream modulation QPSK	8 - 4096 QAM
Upstream frequency range, software selectable	EuroDOCSIS 3.0 5 - 85 MHz 5 - 204 MHz
Number of upstream channels	DOCSIS 3.1 2 OFDMA  EuroDOCSIS 3.0 Up to 8 bonded
Maximum upstream rates	DOCSIS 3.1 Up to 1.5 Gbps  EuroDOCSIS 3.0 262 Mbps (theoretical, 8 x 32.78 Mbps)
Channel bandwidth	DOCSIS 3.1 96 MHz  EuroDOCSIS 3.0 200, 400, 800 kHz, 1.6, 3.2 and 6.4 MHz
Output impedance	75 Ohm
Upstream Diagnostics Analyzer	

<b>WI-FI</b>	
Full dual band concurrent Wi-Fi access points, Wi-Fi certified®	<ul style="list-style-type: none"> <li>• 2.4 GHz (3x3) IEEE 802.11n AP</li> <li>• 5 GHz (4x4) IEEE 802.11ac Wave 2 AP</li> </ul>
2.4 GHz Wi-Fi power	Standard: Up to 20 dBm (100 mW EIRP) High Power (optional): Up to 33 dBm (2000 mW EIRP)
5 GHz Wi-Fi power	Up to 36 dBm (4000 mW EIRP)
Wi-Fi Protected Setup (WPS™)	
Wi-Fi security levels	<ul style="list-style-type: none"> <li>• WPA2™-Enterprise / WPA™-Enterprise</li> <li>• WPA2™-Personal / WPA™-Personal</li> <li>• IEEE802.1x port-based authentication with RADIUS client</li> </ul>
Wi-Fi Multimedia (WMM®) and WMM-Power Save	
Up to 8 BSSIDs (virtual AP) per radio interface	
3x3 MIMO 2.4 GHz Wi-Fi features	SGi STBC 20/40 MHz coexistence
4x4 MU-MIMO 5 GHz Wi-Fi features	SGi STBC LDPC (FEC) 20/40/80/160 MHz mode Multi-User MIMO
RX/TX switched diversity	
Dynamic rates switching for optimal wireless rates	
Manual/ auto radiochannel selection	
<b>VOICE AND TELEPHONY</b>	
Audio codecs	ITU-T G.711 PCM A-law, PCM μ-law, ITU-T G.728, G.729a, G.722.1 Wideband ITU-T G.722.2 iLBC, BV16 SMV (optional)
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	3 REN per device
Pulse dialing	DTMF/pulse tones Pulse/DTMF tones conversion
RTP layer	RFC 1889 RFC 1890
RTCP statistics collection	
<b>MANAGEMENT</b>	
User-friendly GUI via HTTP	
Web-based user interface management and administration	
Command Line Interface (CLI)	Telnet SSH v
TR-069 CPE WAN Management Protocol (CWMP)	TR-098 Internet Gateway Device (IGD) data model TR-104 voice service provisioning and configuration TR-143 network throughput performance tests and statistical monitoring TR-181i2 Device:2 data model
SNMP	SNMP v1, SNMP v2, SNMP v3
Software upgrade	via WAN RF connection only
Zero-touch autoprovisioning	

<b>SERVICES</b>	
Open architecture for 3rd party application and UI development	
Life Cycle Management (LCM) for developing advanced services support	
3G/LTE/4G mobile fall-back WAN connection (through USB adapter)	
Capable to support Wi-Fi Doctor® (sold separately) and Wi-Fi Conductor (sold separately)	
Wireless hotspot	
Parental control	URL-based website filtering Time-based access control
<b>NETWORKING</b>	
Routing modes	Transparent bridging Routed modes
Multiple client support	32 (bridged mode)
Network protocols	Dual stack IP (IPv4, IPv6) TCP, UDP ARP, ICMP, DHCP TFTP, SNMP, HTTP, Telnet
Discovery protocols	UPnP
Protocol filtering	Ethernet and IP
Symmetrical NAT with application helpers (ALGs)	
Game and application sharing NAT port maps	
DHCP conditional serving & relay	
DNS server & relay	
IGMPv3 proxy (Fastleave)	
IEEE 802.1q VLAN bridging, multiple bridge instances	
<b>IPv6 NETWORKING</b>	
IPv4 / IPv6 dual IP stack	
Transitioning	DS-Lite
<b>QUALITY OF SERVICE</b>	
Class of services	32 downstream IDs 32 upstream service flows
Traffic prioritization	DOCSIS 1.0, 1.1 (management of service flows)
IP QoS	Flexible classification (ALG aided) IP rate limiting (two-rate remarking/dropping) DSCP (re)marking Dynamic link fragmentation
Ethernet QoS	Priority or C-VLAN/S-VLAN tagging Ethernet switch port queuing and scheduling
Wireless QoS	WMM (BE, BK, VI, VO access categories) queuing and scheduling
<b>SECURITY</b>	
Baseline Privacy Interface Plus (BPI+)	
Stateful Packet Inspection Firewall (SPIF)	
Customizable firewall security levels	
Intrusion detection and prevention	
DeMilitarized Zone (DMZ)	
Multilevel access policy	
Security and service segregation per SSID	
<b>ECO DESIGN</b>	
WMM-Power Save	
<b>PACKAGE CONTENTS</b>	
CGA4233	
Power supply unit	
Ethernet cable	
Quick Setup leaflet(s) (optional)	
Safety Instructions & Regulatory Information booklet	