

MediaAccess C2100T for CenturyLink

Wireless .11ac
Smart Ultra-Broadband Gateway
with Integrated Video Bridge and HPNA



TELECOM

DATA

VOICE

VIDEO

Seamless Video over Next-Gen Wi-Fi

With its support of dual band concurrent Wi-Fi (IEEE 802.11n 2.4 GHz and the next-generation IEEE 802.11ac wireless standard for the 5 GHz band), the C2100T is a powerful and future-proof smart gateway enabling high-speed wireless HD video streaming inside the home. Thanks to its integrated wireless video bridge featuring a robust chipset and 4x4 antennas, it can support multiple HD TV channels over the clean 5 GHz radio. Furthermore, its advanced architecture guarantees a very low packet error rate on the wireless link, resulting in a 100% smooth and flicker-free wire-quality viewing experience.

Simultaneously, it guarantees uninterrupted transmission of data services over IEEE 802.11n using the 2.4 GHz band.

Optimizing your WAN Bandwidth

In this bandwidth-hungry era of IPTV, real-time HD video streaming and VoIP - to name but a few - operators need to stay competitive and keep costs down, among others by taking advantage of existing facilities as much as possible.

Our C2100T innovation helps you get the most out of your network by letting you re-use existing copper wiring and giving higher coverage from one DSLAM. Moreover, it is a powerful future-proof triple-play service gateway allowing VDSL2 connectivity while providing Voice over IP functions for residential users.

Features at a Glance

- Integrated VDSL2 modem, supporting Bonded ADSL2+ Bonded VDSL2 (up to 17a profile)
- 1 GE WAN port
- AutoWAN sensing™
- 4 GE LAN ports
- Dual-band concurrent Wi-Fi interfaces:
 - IEEE 802.11n 2.4 GHz (2x2) with high power
 - IEEE 802.11ac 5 GHz (4x4)
- HomePNA™
- 2 FXS ports for phone or fax
- 1 USB 2.0 master port
- Non-service-affecting platform software upgrades (dual bank memory)
- Extensive remote management
- IPv4 & IPv6 enabled
- Designed according to the latest ECO standards



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HomePNA for Premium In-Home Networking

The C2100T features a built-in HPNA 3.1 adapter that allows to distribute high-quality data and video inside the home over existing coax wires. Hence, it is ideal for IPTV deployments with minimal impact on subscribers' homes: set-top boxes can be directly connected to the gateway over the present network infrastructure. Furthermore, the HPNA adapter enables HD streaming speeds of up to 256 Mbps and an advanced QoS.

The Ultimate in Ultra Broadband

The accelerating growth of WAN and LAN traffic is pushing operators to look to ultra-high-speed network technologies to solve the bandwidth crunch. VDSL2 combined with Gigabit Ethernet enables extremely high bandwidth and guarantees superior quality in voice, data and video.

Some of the latest performance-enhancing technologies have been added on top, to get the utmost out of existing infrastructures:

- Bonding: works by combining multiple wire pairs to increase available capacity, or extend the copper network's reach. It typically combines two regular VDSL2 lines into a single, virtual "big pipe".
- G.vector: effectively cancels the crosstalk noise inherently present in VDSL2 bands. With vectoring, every line in a binder can operate at peak performance, as if there were no other VDSL2 lines in that binder.
- G.inp ("Impulse Noise Protection"): makes sure that no errors occur on the DSL connection, even under extreme conditions, so that high-quality video transmission is guaranteed at all times. It is based on the principle of retransmission.

Furthermore, the latest wireless technologies ensures robust in-home wireless distribution which reduces wiring complexity and provides true mobility without sacrificing Quality of Service (QoS) and Quality of Experience (QoE) or transfer speeds.

Easy to Use

Like all Technicolor modems and gateways, the C2100T 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.

Easy to Manage

The C2100T is compliant with the TR-069 data model through which the device can be configured remotely by the operator without interrupting the end user's experience.

Voice over IP

The C2100T offers VoIP functions for residential and business users. POTS phone connectors are provided to accommodate regular phones and faxes. Once the gateway is registered with a VoIP service, regular phone calls can be conducted over the Internet with all the benefits of IP telephony.

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 C2100T 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 C2100T 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	2 RJ-11 DSL line ports 1 Ethernet WAN 10/100/1000 Base-T port
■ Interfaces LAN	4-port autosensing 10/100/1000 Base-T auto-MDI/MDI-X Ethernet LAN switch HPNA 3.1 interface 2 FXS POTS ports 1 USB 2.0 master port IEEE 802.11n 2.4 GHz on-board IEEE 802.11ac 5 GHz on-board
■ Interfaces other	WPS button Reset button
■ Dimensions	255 x 154 x 35 mm (10.0 x 6.0 x 1.3 in.)
■ AC Voltage	100 - 240 VAC (switched mode power supply)
■ Temperature	0° - 40° C (32° - 104° F)
■ Humidity	20% to 80%

DSL Modem Specifications

■ Supports multi mode standards	
■ ADSL compliance	ITU-T G.992.1 Annex A (G.dmt) ITU-T G.992.2 Annex A (G.lite) ITU-T G.994.1 (G.hs) Maximum rate: 8 Mbps for downstream and 1 Mbps for upstream
■ ADSL2 compliance	ITU-T G.992.3 Annex A (G.dmt.bis) ITU-T G.992.4 Annex A (G.lite.bis) ITU-T G.998.4 (G.inp) Maximum rate: 12 Mbps for downstream and 1 Mbps for upstream
■ ADSL2+ compliance	ITU-T G.992.5 Annex A ITU-T G.998.4 (G.inp) ITU-T G.998.1 ATM Bonding ITU-T G.998.2 Ethernet Bonding Maximum rate: 24 Mbps for downstream and 1.5 Mbps for upstream (per DSL line)
■ VDSL2 compliance	ITU G.993.2 SOS SRA INM Up to 17a MHz profiles (on bonded interface) ITU-T G.993.5 (G.vector) ITU-T G.998.4 (G.inp) ITU-T G.998.1 ATM Bonding ITU-T G.998.2 Ethernet Bonding

Management

- User-friendly GUI via HTTP and HTTPS
- Web services API for remote access
(portal, management, diagnostics, applications, ...)
- Web-browsing intercept (install/diagnostics/captive portal)
- AutoWAN sensing™: automatic selection and configuration of WAN interfaces
- TR-069 CPE WAN Management Protocol
TR-098 Internet Gateway Device Management
TR-104 voice service provisioning and configuration
TR-111 home network device management
TR-143 network throughput performance tests
and statistical monitoring
- Zero-touch autoprovisioning

Wireless Specifications

- Full dual band concurrent Wi-Fi access points, Wi-Fi certified®
2.4 GHz (2x2) IEEE 802.11n AP
5 GHz (4x4) IEEE 802.11ac AP
with IEEE 802.11ac compliant transmit
beamforming
- Wi-Fi 2.4 GHz power High Power, up to 23 dBm (200 mW EIRP)
- Wi-Fi Protected Setup (WPS™)
- Wi-Fi security levels WPA2™-Enterprise / WPA™-Enterprise
WPA2™-Personal / WPA™-Personal
WEP™
- Wi-Fi Multimedia (WMM®)
- Up to 4 BSSIDs (virtual AP) support per radio interface
- RX/TX switched diversity
- 2x2 MIMO 2.4 GHz Wi-Fi features
SGi
STBC
20/40 MHz coexistence
- 4x4 MIMO 5 GHz Wi-Fi features
SGi
STBC
LDPC (FEC)
20/40/80 MHz mode
- Dynamic rate switching for optimal wireless performance
- Manual/auto radio channel selection

Security

- 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

Networking

- Symmetrical NAT with application helpers (ALGs)
- Game and application sharing NAT port maps
- DHCP conditional serving & relay
- DNS server & relay
- IGMPv3 proxy (Fastleave)
- IGMP snooping (full routed)
- DHCP spoofing
- IEEE 802.1q VLAN bridging, multiple bridge instances
- Multicast to unicast translation on Wi-Fi interfaces

IPv6 Networking

- IPv4 / IPv6 dual IP stack
- Supported models PPP(oE)(oA)
IPoE(oA)
6rd/6to4/6in4
DS-Lite
- Transitioning
- Stateful connection tracking / stateful inspection firewall
- DHCPv6 Stateful/stateless DHCPv6 client
Stateless DHCPv6 server
Relay
Prefix Delegation
- ICMPv6

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Technical Specifications

Quality of Service

- ATM QoS UBR, VBR-nrt, VBR-rt, CBR shaping, queuing and scheduling
- IP QoS CLP tagging
 - 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
- Wireless QoS Switch port queuing and scheduling
 - WMM (BE, BK, VI, VO access categories)
 - queuing and scheduling

HomePNA Specifications

- HomePNA™ 3.1 Certified

Voice over IP Specifications

- Voice technologies Voice over IP (VoIP)
- Voice signalling SIP
- Voice codecs
 - G.711
 - Wideband G.722.2
 - T.38
- Echo cancellation G.168 compliant
- Comfort Noise Generator (CNG)
- Voice Activity Detection (VAD)
- Flexible telephone number per FXS handset, including common numbers
- Interoperable with main market softswitches

Content of the Box

- MediaAccess C2100T for CenturyLink
- DSL cable(s) (RJ-11)
- Ethernet cable (RJ-45)
- Power supply unit
- Quick Setup leaflet(s) (optional)
- Safety Instructions & Regulatory Information booklet (optional)
- Filter(s) or splitter(s) (optional)



C2100T front panel



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technicolor



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