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CVA4004

Ultra-Broadband Data-only Cable Modem
for above Gigabit Speeds

CVA4004TCH1

The CVA4004TCH1 is Technicolor's latest DOCSIS® 3.1 cable modem offering data services beyond Gigabit speeds.

Highest Performance with DOCSIS 3.1

The CVA4004TCH1 matches perfectly with the requirements of cable operators willing to propose ultimate Broadband access to their customers.

The CVA4004TCH1 cable modem is fully compliant with the latest DOCSIS 3.1 specification as published by CableLabs® and is capable of delivering downstream cable speeds of up to 3.6 Gbps by using 2 Orthogonal Frequency-Division Multiplexing (OFDM) downstream channels (and up to 5 Gbps in the case of 2 OFDM plus 32 Single Carrier QAM) and up to 1.5 Gbps upstream by using 2 Orthogonal Frequency-Division Multiple Access (OFDMA) upstream channels.

This enhanced and superior performance allows cable operators to propose multi-Gigabit data services to their customers through various applications, from IP connectivity to ultra-high speed internet access and gaming.

Future Proof High-Bandwidth Technology

The CVA4004TCH1 can be deployed by cable operators on their current network, seamlessly integrating as a DOCSIS 3.0 cable modem offering 32 bonded downstream and 8 bonded upstream channels.

Once cable operators upgrade their network to the new DOCSIS 3.1 standard, the CVA4004TCH1 supports this migration without any need of intervention at the customer premises due to some of its unique features such as:

- DOCSIS 3.0 backwards compatibility
- a fully integrated up to 1.2 GHz full band capture wideband tuner
- a switchable diplexer that allows to transition from existing mid-band split to high band split on the same hardware.

Advanced Security

To secure data exchange between the cable modem and the cable operators' servers, BPI+ communications privacy is used.

Features at a Glance

- DOCSIS® 3.1 compliant
- Backward compatible with DOCSIS® 3.0
- 2 x 2 OFDM(A) bonded channels in DOCSIS 3.1 mode
- 32 x 8 bonded channels in DOCSIS 3.0 mode
- Automoatic Switchable diplexer for up & downstream
- Up to 1.2 GHz full band capture tuner
- Built in RF spectrum analyzer
- 1x 2.5 Gigabit LAN port
- SNMP remote management
- Dual stack IPv4 & IPv6 enabled
- Super secure bootloader

Easy to Use

Like all Technicolor modems and gateways, the CVA4004TCH1 is an easy to use, easy to install device and can be wall-mounted easily in the home.

For convenience of the end user, the easy-to-access LEDs provide a clear indication of start-up sequence, operational status, and connectivity status.

Integrated web pages also allow direct access to the status and settings, including privacy and security information.

CVA4004
CVA4004TCH1 Data Only

Technical Specifications

Hardware

- CPU — 1.5 GHz dual-core CPU
- Memory — 256 MB Flash
  512 MB RAM
- Interfaces WAN — 1 F-type RF connector, external threaded
- Interfaces LAN — 1 10/100/1000/2500 Base-T Ethernet port
- Buttons & LEDs — Reset button (recessed)
  2 status bicolor LEDs
- Power input — DC jack
- Power supply — 12 VDC, 24 W external PSU
- AC Voltage — 110 - 120 VAC, 50 - 60 Hz
- Dimensions — 50 x 160 x 190 mm (1.97 x 6.30 x 7.48 in.)
- Operating temperature — 0 - 40 °C (32 - 104 °F)
- Operating humidity — 5 - 95 % RH non-condensing
- Storage temperature — -20 - 70 °C (-4 - 158 °F)

Cable certifications

- Data — DOCSIS® 3.1 compliant
- CMTS interoperability — Any qualified DOCSIS 3.1 CMTS
  Any qualified DOCSIS® 3.0 CMTS

RF downstream

- Downstream modulation — 64 - 4096 QAM
- Downstream frequency range
  - DOCSIS 3.1 — 108 - 1218 MHz or 258 - 1218 MHz
  - DOCSIS 3.0 — 108 - 1218 MHz
- Number of downstream channels
  - DOCSIS 3.1 — 2 OFDM
  - DOCSIS 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
  - DOCSIS 3.0 — 1372 Mbps (theoretical, 32 x 42.88 Mbps)
- Capture windows — 1.2 GHz full band capture
- Channel bandwidth
  - DOCSIS 3.1 — max. 192 MHz bands
  - DOCSIS 3.0 — 6 MHz
- Input signal level range — -15 dBmV / + 15 dBmV
- Input impedance — 75 Ohm

RF upstream

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

Management

- Customizable user-friendly GUI via HTTP
- Web-based user interface management and administration
- Command Line Interface (CLI)
  SSH v2
- SNMP — SNMP v1, SNMP v2, SNMP v3
- Operation, Administration & Maintenance (OAM)
  ITU-T Y.1731
- Software upgrade — via WAN RF connection only
- Zero-touch autoprovisioning

Networking

- Routing modes — Transparent bridging
- Multiple client support — 32
- Class of services — 16 downstream IDs
  16 upstream service flows
- Network protocol — Dual stack IP (IPv4, IPv6)
  TCP, UDP, ARP
  ICMP, DHCP
  TFTP, SNMP, HTTP.
- Protocol filtering — Ethernet and IP

Quality of Service

- IEEE 802.1Q classification
- Queuing, policing, shaping

Security

- Baseline Privacy Interface Plus (BPI+)

Package contents

- CVA4004TCH1
- Ethernet cable (RJ-45)
- Power supply unit
- Quick Setup leaflet(s) (optional)
- Safety Instructions & Regulatory Information booklet