ASKEY–TCG310

D3.1 WiFi EMTA Cable Modem

The Askey TCG310 is a state of the art 802.11ac Dual-Band concurrent Access Point Embedded Media Terminal Adapter (EMTA).

This device is a CableLabs DOCSIS / EuroDOCSIS 1.0/1.1/2.0/3.0/3.1 and PacketCable 1.0/1.5/2.0 compliant EMTA that provides multi-Gigabit Internet access as well as high quality telephone voice and fax/modem services for residential, commercial and educational users on public and private networks, via an existing CATV infrastructure.

The TCG310 provides high performance home networking, including 4 Gigabit ports and a 802.11b/g/n/ac Dual-Band concurrent access point that enables users to have multiple high-speed LAN interfaces.

This device has features that help Multiple System Operators reduce the Total Cost of Ownership – including upstream diagnostics and a downstream spectrum analyser that help in providing in-home cable signal problem isolation.

4 Port ETH 1G | 802.11 AC Dual Band Concurrent | USB 3.0 | 2 Port VoIP

Features

- DOCSIS 3.1 dual 192Mhz downstream OFDM plus 32 SC-QAM channels
- DOCSIS 3.1 dual 96Mhz upstream OFDM plus 8 SC-WAM channels
- Up to 4Gbit downstream and 2Gbit upstream speed
- 1.2GHz Full-band capture with downstream spectrum and upstream diagnostic analyser
- Local Management – Intuitive webpage that indicates modem status, signal diagnostics and wireless spectrum information
- Enhanced device management tool with TR-69 IEEE 1905.1, SNMP and local webpage.
- Supports WiFi Hotspot, community WiFi and Pass-point
- Dual-band concurrent WiFi with latest 11ac MU-MIMO

Physical Interfaces

- 4 x Gigabit Ports
- 10/100/1000BaseT RJ-45 connector
- 1 x USB3.0 Host port
- 2 x IEEE802.11n/ac wireless
- To CATV network – Female F-Connector
- For phones – Two RJ-11 Connectors
- LEDs – Power, DS, US, Online, Ethernet 1,2,3,4
- USB, 2.4G, 5G, TEL1, TEL2

5G Wireless

- 802.11a/n/ac, MU-MIMO
- 4T4R 4stream 80Mhz channels.
- Supports 2x2 160Mhz channels
- Data rate up to 2.2Gbps
- Zero wait DFS and DSP-based Spectrum capture

2.4 G Wireless

- 802.11b/g/n compliant 3T3R
- Data rate up to 600Mbps

Networking

- Network Protocol IP/TCP/UDP/ARP/ICMP/DHCP/TP/TFTP/S
- NMP/HTTP/Syslog/Telnet server
- Multiple Client Support 254 (router) 32 (Bridge)
- Bridge – transparent Bridging between CPE and RF interface
- Virtual Network – VPN Tunnelling (Passthrough)
- VPN termination for remote access to home network
- VPN (IPSec) pass-through
- Service differentiation using port-based VLAN mapping (802.1Q)
- Security and Encryption Protocol – Kerberos/PKINIT/IPSec Algorithms: DES/3DES/AES/MD5/HMACMD5 SHA-1/HMAC-SHA-1
- Certificate – X.509 V3
- Public Key Type RSA/Diffie-Hellman
- Key Management – Kerberized IPSec/SNMP
- V2 V3

Call Control

- RTP layer– RFC1889/RFC1890
- PacketCable NCS v1.0/1.5 – Network-Based
- Call Signalling Protocol (PKT-SP-NCS)

Voice & Fax

- Audio Codes – PCM A-law, PCM µ-law,
- G.723.1, G.729, G.729a, G.729e, G.728, G.726,
- BV16 and BV32.
- Voice Activity Detection (VAD)
- Comfort Noise Generation (CNG)
- Echo cancellation G.165/G.168 up to 32ms
- Packet Tone – DTMF generation/Call
- Progress Generation/Custom Tone Generation
- Call discrimination Fax and Modem Detection
- FAX relay – T.38

Power

- Power adaptor Input 100V~240VAC Output 12VDC 4A
- Power Consumption 48W
- DC voltage tolerance 11.4~12.6V/932~1140mA

Operational Environment

- Operating Temperature – 0°C to 40°C
- Storage Temperature – -20°C to 70°C
- Humidity – 20% ~ 90% non-condensing
- MTBF Predication – > 100 000 hours @ 25°C
- Thermal testing temperature – 40°C

PCB Dimensions

- 210mm x 270mm