Touchstone® DG6450 Cable Gateway

DOCSIS® 3.1 Gateway with 802.11ax Wi-Fi

FEATURES

- 2x2 OFDM and OFDMA DOCSIS® 3.1 channels
- 32x8 SCQAM DOCSIS® 3.0 channels
- Dual Band Concurrent 4x4:4 2.4GHZ and 5GHz 802.11ax radios
- 1 NBase-T 2.5Gbps Ethernet port
- 2 port Gigabit Ethernet Router
- Switchable upstream filters for 85MHz or 204MHz operation.
- Full Capture Bandwidth Tuner
- MoCA® 2.0 (with channel bonding) for in Home Video and Data distribution over Coax
- Multiple SSID support with DFS channels and Dynamic Channel change
- Multiple operator controlled configuration options

PRODUCT OVERVIEW

The DG6450 Wireless Data Gateway delivers the gigabit broadband performance of DOCSIS 3.1. This feature-packed unit is intended to serve as the hub of the subscriber's home or business network, connecting all IP capable devices (Internet, Data and Video) throughout the customer's premises.

The DG6450, with its 4x4 802.11ax Dual Band wireless radios, offers superior Wi-Fi performance in dense environments, with high data rates for video over Wi-Fi at increased range. Built-in advanced features to manage the power of Wi-Fi clients offers longer time on battery operation.

The DG6450 is integrated with Plume. When used with additional Wi-Fi Extenders, the solution delivers high-performance Wi-Fi to every corner of the home, while offering ease of use for the consumer and reduced OPEX costs for the service provider. The DG6450 gateway can provide automated network optimization, interworking with the self-configuring extenders, the HomeAssure consumer App and the HomeAssure Cloud management platform for remote management, analytics and diagnostics.

The switchable US diplex filter is designed to produce superior RF performance and ease of deployment on a DOCSIS 3.1 network. Optimized DRAM, Flash and Multiple embedded processor cores are designed to allow new applications to be deployed on the gateway.

The DG6450 is designed to minimize support costs with multiple provisioning and remote management methods (SNMP, Configuration File, Remote WebGUI access, TFTP, and TR-069/181). Multiple remote access levels (User, Technician and MSO) also allow more ease and flexibility for manual configuration and control.

SPECIFICATIONS	
Physical	
Operating Temperature	0 to 40°C
Operating Relative Humidity	5-85% (Non condensing)
Storage Temperature	-40 to 70°C
Dimensions (H x W x D)	10.9in x 7.84in x 2.55in 277mm (H) x 199.5mm (D) x 65mm (W)
Weight	2.6lbs 1.2kg
Diagnostic LEDs (Top)	Subsystem based front panel LED for status of Power, US/DS, Online, 2.4GHz, 5GHz

SPECIFICATIONS	
Interfaces	
RF Interface	1 External 'F' type connector
Date Interfaces	1 x 2500 NBase-T 2 x 10/100/1000 Base-T Ethernet (RJ-45 connector)
MoCA	MoCA 2.0
Input Voltage (nominal)	12V DC
AC-DC	External

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SPECIFICATIONS

RF Downstream

Bonded Channels	Up to 32 SCQAM or 2 OFDM
Tuner Configuration	Full capture tuning range
Frequency Range (MHz)	108MHz - 1002MHz DOCSIS
Data Rate (Mbps Max.)	Up to 5Gbps
RF Input Sensitivity Level	-15 dBmV to +15 dBmV (DOCSIS)

RF Upstream

Bonded Channels	Up to 8 SCQAM or 2 OFDMA
Frequency Range	5MHz to 85MHz
Configurable Diplex Filter	85MHz-204MHz
Data Rate	Up to 1Gbps
RF Output Level	+65 dBmV (OFDMA) +54 dBmV (64 QAM, 4-8 upstreams) +57 dBmV (64 QAM, single upstream) +58 dBmV (16 QAM, single upstream)

SPECIFICATIONS

Wireless

Frequency Range	2.4GHz and 5GHz
Transmit Power (EIRP)	+34 dBm (2.4GHz, MCS0, HT20) +29 dBm (2.4GHz, MCS7, HT20) +34 dBm (5GHz, MCS0, HT20) +30 dBm (5GHz, MCS9, VHT80)
Spatial Streams	4 for 2.4GHz, 4 for 5GHz
Receive Levels	2.4GHz -<-88dBm 802.11n (MCS0), <-71dBm 802.11n (MCS7), HT20 5.0GHz -<-89dBm 802.11ac (MCS0) , <-60dBm 802.11ac (MCS9), VHT80
Antennas	8 transmit, and 8 receive (total)

MoCA

Frequency Range	1150MHz –1500MHz
Network Channel Bandwidth	50MHz
Max Transmit Power	+ 9 dBm max (adjustable)
Max PhyRate	1400 Mbps
Application Data Rate	800 Mbps bidirectional combined