DOCSIS® 3.1 CPE Solutions

Real-World Innovation for the Well Connected Home
Service Providers today face a number of challenges when delivering Gigabit speeds using DOCSIS 3.1—and most are not solely related to bandwidth. As we enter the Gigabit era, Service Providers must be well equipped to meet the needs of a new application landscape, to handle massive video, Virtual Reality, gaming and IoT traffic, and to overcome the security and management concerns that can significantly impact the service experience within the home—and the costs of providing it.

**A New Era of Real-World **

**BROADBAND Challenges**

In-Home Wi-Fi™ Optimization
Wi-Fi is now the primary means of connecting devices to services in the home. With Gigabit access speeds, Wi-Fi is defining the consumer experience of the broadband service, making quality Wi-Fi essential.

Security
Security and privacy are second to speed on the priority list of gateway features for consumers*. As more sophisticated services are rolled out, there is an increasing need to protect the home network.

The IoT Explosion
The proliferation of IoT devices has created a need for specialized radio types and resulted in a battle for control of the home IoT hub.

*ARRIS Connectivity and Entertainment Index Survey 2018
Supporting Broadband and Home Network **EVOLUTION**

In today’s age of video and IoT traffic growth, keeping ahead in the broadband bandwidth stakes is essential, but we know that it’s not all about speed. It’s about making services practical to deploy and profitable to operate. That’s why we engineered our DOCSIS 3.1 portfolio around the unique traffic characteristics of today and added innovative management and security features that help you ensure the quality and security of the end-to-end service experience.
Robust FEATURES for Today’s Home Network

**Multigigabit broadband**
CommScope’s gateways and modems deliver the full multigigabit potential of DOCSIS, with high-performance LAN features such as 2.5GigE, MoCA 2.0 and Wi-Fi 6 enabling the consumer to make use of that capacity.

**Optimized Video over Wi-Fi**
CommScope offers a set of features that are designed to deliver high quality, immersive video experiences over Wi-Fi from the gateway to the set-top. These solutions include video QoS, dedicated video SSID and dynamic and adaptive airtime management capabilities to optimize video flows based on key characteristics over multiple APs. Essential features for transitioning set-top video services to all IP delivery.

**CommScope HomeAssure™ Wi-Fi Connected Home Solution**
The CommScope HomeAssure Solution delivers high-performance Wi-Fi throughout the home. CommScope HomeAssure enabled gateways control additional self-configuring Wi-Fi extenders, automatically optimizing Wi-Fi performance.

Designed for Service Providers, it minimizes support costs by making it easy for consumers to self-install and manage their network via an app. The Cloud platform provides remote management and data-driven analytics for proactive service improvement and help-desk enablement.

Lastly, there is the Touchstone Development Partner Program, which enables third-party providers to host their Wi-Fi management solutions on CommScope gateway platforms.

**Comprehensive Security for the Broadband Network**
To help Service Providers ensure that the broadband service environment is secured from end-to-end, CommScope now enables the signing of firmware images and the authentication of downloaded code. This requires firmware and application images to be signed by CommScope securely and then authenticated by the gateway before they can run. In addition, we’ve implemented a “Trusted Store”, which allows for the secure storage of assets. We are also offering anti-cloning capabilities that protect the investment for the Service Provider and an anti-rollback mechanism to ensure that a gateway will not revert to a previous, vulnerable software version.

**A True IoT Service Hub**
To support the breadth of IoT opportunities, CommScope offers options for built-in IoT radios and software stacks that empower the home gateway to serve as the hub for the IoT devices. With on-boarding, authentication and management of connected IoT devices, CommScope gateways allow Service Providers to extend their offerings to include innovative, unified smart home services.

**Telephony and Data Gateways for Every Service Tier**
At CommScope, we know that the realities of broadband service delivery aren’t compatible with a “one-size-fits-all” gateway solution. That’s why we’ve built a broad portfolio of telephony and data gateways designed to help you meet virtually any subscriber or service need. From basic broadband to screaming fast +5Gbps service, with built-in support for IP video and whole home Wi-Fi, we’re always adding to the innovations that make our gateways just right for your subscribers’ needs.
CommScope DOCSIS 3.1 SOLUTIONS

Why CommScope for DOCSIS 3.1 Solutions?

CommScope is the global leader in Cable broadband CPE. We are trusted by service providers of all sizes to deliver quality products, when and where they needed, with a focus on reducing total cost of ownership. Known for innovation, we offer ready-for-market products and bespoke designs for tier-1 customers, backed up by our comprehensive portfolio of life-cycle services from consultancy to support & maintenance.

Touchstone® TG9452/DG9450 DOCSIS 3.1 Wireless Telephony Gateway

The TG9452 and DG9450 are high-end, high-performance DOCSIS 3.1 gateway targeting the 2.5Gbps data tier featuring Wi-Fi 6 and a 2.5GigE port ideal for gamers and virtual reality applications.

**DOCSIS SUBSYSTEM**
- DOCSIS 3.1 2x2 OFDM/OFDMA channels
- Switchable US 5-42MHz/5-85MHz with FBC
- DS operation 108-1002MHz

**NETWORKING SUBSYSTEM**
- 4x4 Wi-Fi 6 5GHz Wi-Fi
- 4x4 Wi-Fi 6 2.4GHz Wi-Fi
- 1 x 2.5 GigE port
- 2 x 1 GigE ports
- MoCA 2.0

**GENERAL FEATURES**
- 2 RJ-11 ports for voice (TG9452 only)
- High performance CPU
- Data-only gateway option (DG9450)

**ARRIS HomeAssure™ Enabled**

TG9452/DG9450

**High Performance Tier**
- IP Video Service
- Wi-Fi 6 Whole Home Wi-Fi
- 2.5 Gbps Data Service Tier

**SOFTWARE FEATURES**
- RDK-B based routing & application software
- CommScope VoIP (PacketCable 2.0) support
- Wi-Fi management features
- Comprehensive support for TR-069 models
- PNM based diagnostic capabilities

**INDUSTRIAL DESIGN**
- External PSU
- Optimized for thermal and antenna operations
Touchstone® TG3452/DG3450
DOCSIS 3.1 Wireless Telephony Gateway

The TG3452 and DG3450 are high-end, high-performance DOCSIS 3.1 gateway targeting the 2.5Gbps data tier with MoCA robust Wi-Fi.

**DOCSIS SUBSYSTEM**
- DOCSIS 3.1 2x2 OFDM/OFDMA channels
- EuroDOCSIS 3.0 32x8 SC-QAM channel bonding
- Switchable US 5-85MHz/5-204MHz with FBC
- DS operation 108-1002MHz

**NETWORKING SUBSYSTEM**
- 4x4 802.11ac 5GHz Wave2 Wi-Fi
- 3x3 802.11n @ 2.4GHz Wi-Fi
- MoCA-2.0 (channel bonding)
- 4 GigE ports; 1 USB-3.0 port

**GENERAL FEATURES**
- 2 RI-11 ports for voice (TG3452 only)
- Data-only gateway option (DG3450)
- High performance CPU

**Performance Tier**
- Data, IP Video and Voice Services
- Whole Home Wi-Fi
- 2.5Gbps Data Service Tier
- MoCA home networking

**SOFTWARE FEATURES**
- RDK-B based routing & application software
- CommScope VoIP (PacketCable 2.0) support
- Wi-Fi management features
- Comprehensive support for TR-069 models
- PNM based diagnostic capabilities

**INDUSTRIAL DESIGN**
- Single PCB design for cost optimization
- External PSU; external battery back option
- Optimized for thermal and antenna operation

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Touchstone® TG3442SP
DOCSIS 3.1 Wireless Telephony Gateway

The TG3442SP DOCSIS 3.1/EuroDOCSIS 3.0 gateway is optimized to deliver wireless Gigabit services with robust Wi-Fi performance and LAN interfaces.

**DOCSIS SUBSYSTEM**
- DOCSIS 3.1 2x2 OFDM/OFDMA channels
- EuroDOCSIS 3.0 32x8 SC-QAM channel bonding
- Switchable US 5-85MHz/5-204MHz with FBC
- DS operation 258-1218

**NETWORKING SUBSYSTEM**
- 4x4 802.11ac 5GHz Wave2 Wi-Fi
- 3x3 802.11n @ 2.4GHz Wi-Fi
- 4 GigE ports; 1 USB-3.0 port

**GENERAL FEATURES**
- On/Off switch
- 2 RJ-11 ports for voice

**Performance Tier**
- Data, IP Video and Voice Services
- Whole Home Wi-Fi
- 2.5Gbps Data Service Tier

**SOFTWARE FEATURES**
- RDK-B based routing & application software
- CommScope VoIP (PacketCable 2.0) support
- Wi-Fi management features
- Comprehensive support for TR-069 models
- PNM based diagnostic capabilities

**INDUSTRIAL DESIGN**
- Single PCB design for cost optimization
- External PSU
- Optimized for thermal and Wi-Fi antenna performance
Dedicated Modems, Routers and Wireless Extenders

Often times, the realities of service delivery call for standalone CPE solutions that allow Service Providers to decouple DOCSIS delivery and in-home services. So we offer a comprehensive portfolio of data modems, telephony modems, routers and Wi-Fi extenders that allow our customers to choose a dedicated device for the unique needs of their services, subscribers and businesses.

THE COMMSCOPE DOCSIS 3.1 PORTFOLIO

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CommScope pushes the boundaries of communications technology with game-changing ideas and groundbreaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world’s most advanced networks. It’s our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com.