

CG6640E

EuroDOCSIS 3.0 Wireless Cable Modem Gateway

Introduction

Enables the delivery of innovative ultra-broadband high-speed data, and multimedia services as well as high-bandwidth home networking. All in one convenient package.

Highlights

- Easy to setup and use.
- Plug-and-Play installation.
- Wi-Fi® Pairing button for easy Wi-Fi.
- Protected Setup™ (WPS) wireless.
- Connection.
- Supports standard internet browser software.
- Front panel LEDs indicate status and simplify troubleshooting.
- User-friendly online diagnostics and configuration.
- Power switch for energy conscience users.



Advanced Services Ready DOCSIS/EuroDOCSIS 3.0- based Channel bonding of up to 8 downstream and 4 up-stream channels increasing data rates of well over 300 Mbps in DOCSIS and 400 Mbps in EuroDOCSIS in the received (down-stream) data stream and over 100 Mbps in the send (upstream) data stream. 1 GHz capable tuners Supports IPv4 and IPv6 to expand network address- ing capabilities.

Versatile and Convencient Backwards compatible to 802.11b/g and EuroDOCSIS 1.x and 2.0.

Integrated 802.11n wireless access point, 2x2 antenna array Single band radio : 2.4GHz Four Gigabit Ethernet ports enable flexible, high-speed connectivity with Auto Negotiate and Auto MDIX.

Compatible with Windows®, Macintosh® and Unix® and Linux computers Support for Multicast IP Services Enterprise-capable : Supports VPN pass-through (IPSec, PPTP, L2TP).

The Compal Broadband Networks' CG6640E EuroDOCSIS 3.0 Wireless Digital Cable Modem Gateway is a fully integrated all-in-one home networking, communication solution that combines the functionality of a EuroDOCSIS 3.0 digital modem, a four port 10/100/1000 Gigabit Ethernet switch with advanced firewall, and an 802.11n wireless access point in one convenient package.

The CG6640E is the perfect broad- band solution for the home, home office, or small business; allowing users to create a custom home network to share a single ultra-broadband connection, files, and networked peripherals, using wired or wireless connectivity. Cost-effective, efficient, and secure, the CG6640E enables users to maximize the potential of their existing resources, while benefiting from next generation high- bandwidth data.

Provides cable operators with an intelligent way to offer their customers high-speed data, and an enhanced high-bandwidth home networking experience using a single broadband communication solution.

Increased Data Rates

Utilising the power of EuroDOCSIS 3.0, the CG6640E enables channel bonding of up to 8 downstream and 4 upstream channels. This allows an operator to offer their customers advanced multi-media services, increasing data rates of well over 300 Mbps in DOCSIS and 400 Mbps in EuroDOCSIS in the received (downstream) data stream and over 100 Mbps in the send (upstream) data stream. The CG6640E's high-speed services enable operators to:

- Protect their installed base of premium high-speed data customers.
- Deliver high-bandwidth, multimedia services to residential customers.
- Deliver competitive, high-capacity commercial services to their business customers.

The CG6640E eliminates the need for stand-alone routers, hubs, and access points. Its four Gigabit Ethernet RJ-45 ports and integrated 802.11n wireless access point with an internal 2 x 2 antenna array and single on-board radios (2.4GHz) enable users to maximize the high-bandwidth potential of their home or business network.

The CG6640E includes an enhanced tuner that supports up to a 1 GHz downstream input allowing operators to increase the frequency spectrum for deployment of new high-value services, such as bandwidth on-demand, commercial services, interactive gaming, and IPTV to their customers.

Wireless Access

One way to avoid the challenges of re-wiring or contending with varying wiring in the home is to eliminate wires altogether. The CG6640E is equipped with a next-generation 802.11n Wi-Fi® access point with single band radio operation.

802.11n

802.11n, the most current superset of the widely used wireless standard utilized by consumers in more than 100 million deployed PCs and mobile devices, is a compelling networking option for operators and consumers. The CG6640E's 802.11n integrated access point eliminates the need for wires altogether—enabling users to easily/wirelessly network all of their 802.11 b/g/n equipped devices.

Radio Operation

The CG6640E is configured with a single radio (802.11 b/g/n at 2.4 GHz) to support LAN flexibility. This radio operation enables the CG6640E to work with the lowest common denominator Wi-Fi peripherals, allowing consumers to network previous and next-generation computers, gaming consoles, and other peripherals anywhere in the home.

USB 2.0 Host

USB print server and network storage with file system FAT16, FAT32, and NTFS is supported. Samba server and FTP server are supported to provide the access of the network storage function. With integrated home networking solutions, service providers can provide seamless interaction among consumer electronics, mobile handsets, and PC devices, enabling high-quality media streaming, and supporting efficient sharing of media within and outside of the connected home. Capable of supporting converged IP-based entertainment services, the CG6640E enables the delivery of advanced whole home entertainment services, and a consumer's personal media experiences.

Built-In Security

The CG6640E is equipped with a number of security features to offer consumers peace of mind, including:

- Firewall with DoS protection and intrusion prevention.
- DHCP, NAT, VPN endpoint, VPN tunneling.
- Wi-Fi Security WEP/WPA/WPA2 with an easy setup wizard.
- User-friendly, secure mobile pairing for Wi-Fi-enabled handsets.
- Power management enhancements optimize Wi-Fi handset battery performance.
- Wi-Fi Wizard removes end-user complexity for secure PC client setup.
- Push button configuration for WPS compliant clients.

Service Assurance

Supporting the Wi-Fi home network is a new challenge for the cable industry. As a leading worldwide provider of Euro- DOCSIS products, CBN is helping ease cable operators into Wi-Fi delivery. By combining the highest-performing and lowest cost of ownership modems in the industry, with easy-to-use Wi-Fi installation and pairing tools as well as advanced remote management features, CBN is offering an all-in-one approach to broadband home networking.

Environmentally Friendly

CBN's Wireless Cable Modem Gateways are helping service providers lower their carbon footprint by helping them lower energy consumption. CBN is globally committed to be part of the solution to climate change, and working for years to continually improve the environmental profile of our products, operations and supply chain. We are in step with our customers and their increasing interest in partnering with a company that will help them reduce their environmental impact.

CBN designed the next generation portfolio of customer premises equipment (CPE) to minimize its impact on the environment. CBN's products comply with international environmental and energy efficient standards. The devices and power supplies are compliant with European Code of Conduct regulations. In addition, the devices and power supplies are lead-free and RoHS compliant. Finally, all new Wireless Cable Modem Gateways use environmentally friendly package designs. The gateways are available in single bulk pack boxes – eliminating the use of suspension plastic and reducing box size – thereby reducing waste and transport costs. CBN gateway packaging is 100% recyclable and is marked with standard recycling codes to make it easier for our customers to identify recycling opportunities.

Specification

GENERAL	
Standards	DOCSIS/Euro-DOCSIS 3.0 and PacketCable/Euro-PacketCable 1.0 certified; interoperable with DOCSIS/Euro-DOCSIS 2.0, 1.0 and 1.1 and compatible with Packet Cable/Euro Packet- Cable 1.5
Cable Interface	F-Connector, female, 75 Ω
Network Interface	Four 10/100/1000 Ethernet Ports
Wireless Interface	802.11b/g/e/i /n Wi-Fi
Dimensions	(H) 208.49 mm x (L) 179mm x (W) 50mm
Regulatory	RoHS compliant, CE, ENERGY STAR qualified, COC compliant
Input Power	100 to 240 VAC, 50 to 60 Hz
Environmental	
Operating Temperature	132 °F to 104 °F (0 °C to 40 °C)
Storage Temperature	-22 °F to 158 °F (-30 °C to 70 °C)
Operating Humidity	5 to 95% R.H. (non-condensing)

Specifications(continued)

DOWNSTREAM	
Modulation	64 or 256 QAM
Maximum Theoretical Data Rate**	
DOCSIS	343.072 Mbps (8 channels) / 42.884 (single channel) @ 256 QAM at 5.36 Msym/s
EuroDOCSIS	444.928 Mbps (8 channels) / 55.616 (single channel) @ 256 QAM at 6.952 Msym/s
Maximum Bandwidth Required	
DOCSIS	6MHz * 8 channels
EuroDOCSIS	8MHz * 8 channels
Symbol Rate	
DOCSIS	64 QAM 5.057 Msym/s; 256 QAM 5.361 Msym/s
EuroDOCSIS	64 QAM 6.952 Msym/s; 256 QAM 6.952 Msym/s
Operating Level Range	
CG6640E	-13 to +17 dBmV (256 QAM)
	-17 to +13 dBmV (64 QAM)
Frequency Range	108 to 1002 MHz
Input Impedance	75 Ω (nominal)
UPSTREAM	
Modulation	8, 16, 32, 64, 128 QAM or QPSK
Maximum Channel Rate	120 Mbps (4 channels)
@128QAM Bandwidth	200 kHz, 400 kHz, 800 kHz, 1.6 MHz, 3.2 MHz, 6.4 MHz***
Symbol Rates	160, 320, 640, 1280, 2560, and 5120*** ksym/s
Operating Level Range	
TDMA	+17 to 57 dBmV (32 QAM, 64 QAM)
	+17 to 58 dBmV (8 QAM, 16 QAM)
	+17 to 61 dBmV (QPSK)
S-CDMA	+17 to 56 dBmV (all modulations)
Output Impedance	75 Ω (nominal)
Frequency Range	
CG6640E	5 to 65 MHz (edge to edge)
NETWORK	
Gateway	DHCP, NAT, VPN tunneling; static routing and dynamic IP routing (RIPv1, RIPv2);
	SPI firewall with DoS protection and intrusion prevention; port and packet;
	full suite of ALGs; UPnP IGD 1.0
Wireless LAN	802.11b/g/n Wi-Fi, WDS bridging, 802.11e WMM admission control. Up to 4 SSIDs, QoS. Both BW 20MHz and 40MHz.
Power Management	802.11e WMM power save/UAPSD (Unscheduled-Automatic Power Save Delivery)
802.11i Security	WEP-64/128, WPA-PSK, WPA, WPA2, TKIP, AES, 802.1x, 802.11i (pre-authentication)
Mobile Pairing	User-friendly Wi-Fi protected setup (WPS) for secure mobile pairing with compatible dual-mode handset
Transmit Power Output	
IEEE 802.11b	18 dBm +1/-1.5 dB at all rates in all channels
IEEE 802.11g	16 dBm +1/-1.5 dB at 54 Mbps in all channels
IEEE 802.11n	15 dBm +1/-1.5 dB at MCS7/MCS15 in all channels
Receiver Sensitivity	> -90 dBm at 11 Mbps;
	> -75 dBm at 54 Mbps;
	> -72 dBm at MCS7 (BW:20MHz);
	> -68 dBm at MCS7(BW:40MHz)
Routing	Bridge mode and gateway mode
COMPATIBILITY	
PC	80486, Pentium, or later; Windows Vista™, 2000, XP, and 7; Linux® with Ethernet connection
	(older versions of Windows, although not specifically supported, will work with this cable modem)
Macintosh®	Power PC or later; OS 9 or higher; Ethernet connection
UNIX®	Ethernet connection

All features, functionality, and other product specifications are subject to change without notice or obligation.

