

CV6181E

EuroDOCSIS 3.0 Digital Voice Cable Modem

Introduction

CBN's Service Assured EuroDOCSIS 3.0 Solutions enable you to deliver increased bandwidth, enhance security, and cost-effectively deploy data services to your bandwidth-demanding consumers—all while maximizing current infrastructure investment and lowering capital spend.

Digital Voice Telephone Service

The CV6181E delivers up to two lines of primary-line digital voice telephone service (terminating in RJ-11 connectors) over cable's broadband connection to the home. Voice traffic is prioritized over Internet traffic, giving the user high-quality voice calls, even while surfing the Web. The CV6181E also supports a variety of rich CLASS features such as caller ID, call waiting, three-way calling, and call forwarding.

Next Generation High-Bandwidth Services and Home Networking in a Stylish Package

The CV6181E Digital Voice Cable Modem Gateway enables the delivery of innovative ultra-broadband data and multimedia services as well as high-bandwidth home networking. Designed for seamless mobility, CBN's CV6181E is a fully integrated all-in-one home networking solution that combines the functionality of a DOCSIS* /EuroDOCSIS 3.0 cable modem, one 10/100/1000 Ethernet port and the stylish package for the sophisticated consumer. It's the perfect networking solution for the home, home office, or small business, allowing users to create a custom network to share a single ultra-broadband connection, files, and networked peripherals. Cost-effective, efficient, and secure, the CV6181E enables users to maximize the potential of their existing resources, while benefiting from next generation high-bandwidth services.

Highlights

- Easy to setup and use Plug-and-Play installation
- Supports standard internet browser software
- Front panel LEDs indicate status and simplify troubleshooting
- User-friendly online diagnostics and configuration

- Advanced Services Ready DOCSIS*/EuroDOCSIS 3.0-based
- Channel bonding of up to 8 downstream and 4 upstream channels 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.
- 1GHz capable tuners
- Supports IPv4 and IPv6 to expand network addressing capabilities

- Versatile and Convenient
- Backwards compatible to DOCSIS*/EuroDOCSIS 1.x and 2.0

- One Gigabit Ethernet port enables flexible, high-speed connectivity with Auto Negotiate and Auto MDIX
- Compatible with Windows®, Macintosh®, and Unix® computers

- Support for Multicast IP Services



Increased Data Rates

Utilizing the power of EuroDOCSIS 3.0, the CV6181E enables channel bonding of up to 8 downstream and 4 upstream channels- which allows an operator to offer their customers advanced multimedia services, capable of data rates of well over 400 Mbps in EuroDOCSIS and 300Mbps DOCSIS* in the received (downstream) data stream and over 100 Mbps in the send (upstream) data stream. The CV6181E'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.

Specifications

GENERAL	
EuroDOCSIS/DOCSIS 3.0-based(Interoperable with EuroDOCSIS/DOCSIS*1.0,1.1,and 2.0)	
Cable Interface	F-Connector, female,75Ω
Network Interface	10/100/1000 Base-T(RJ-45)
Dimensions	7.3 in x 1.5 in x 6.1 in
Regulatory	CE, RoHS compliant, COC V4
InputPower	100 ~ 240 VAC, 50 / 60 Hz
ENVIRONMENTAL	
Operating Temperature	32 °F to 122 °F (0 °C to 40 °C)
Storage Temperature	-22 °F to 176 °F(-30 °C to 70 °C)
Operating Humidity	5 to 95% R.H. (non-condensing)

DOWNSTREAM	
Modulation	64 or 256 QAM
Capture Bandwidth	100MHz(edge to edge)
Maximum Theoretical Data Rate EuroDOCSIS	444.928 Mbps (8 channels) / 55.616 (single channel) @ 256 QAM at 6.952 Msym/s
Data Rate DOCSIS*	343.072 Mbps (8 channels) / 42.884 (single channel) @ 256 QAM at 5.36 Msym/s
Maximum Bandwidth Required EuroDOCSIS DOCSIS*	64MHz/2 48 MHz/2
Symbol Rate DOCSIS*	64 QAM 5.057 Msym/s; 256 QAM 5.361 Msym/s
Symbol Rate EuroDOCSIS	64 QAM 6.952 Msym/s; 256 QAM 6.952 Msym/s
Operating Level Range	-13 to 17 dBmV
Bonded Channel RF Level Tolerance	10dBmV

Input Impedance	75 (nominal)
Frequency Range	EuroDOCSIS and DOCSIS *108 to1002MHz(edge to edge),Optional 91 to 1002 MHz (edgeto edge)
Frequency Plan	
EuroDOCSIS	Annex A
DOCSIS*	Annex B
Security	DOCSIS 3.0 Security (BPI+,EAE, AES, and SSD)
Network Managemet	SNMP v2 & v3
Provisioning	Supports IP addressing using IPv4 and/or IPv6 (dual stack)

UPSTREAM	
Modulation	QPSK and 8, 16, 32, 64, 128 QAM
Maximum Channel Rate	131.072 Mbps (4 channels)/32.768 Mbps
DOCSIS*	(single channel): @ 128 QAM at 6.4 MHz
EuroDOCSIS	131.072 Mbps (4 channels)/32.768 Mbps
	(single channel): @ 128 QAM at 6.4 MHz
Channel Width	200 kHz, 400 kHz, 800 kHz, 1.6 MHz, 3.2 MHz, 6.4 MHz
Symbol Rates	160, 320, 640, 1280, 2560, 5120 ksym/s
Operating Level Range	Level range per channel (Multiple Transmit Channel mode disabled, or only Multiple Transmit Channel mode enabled with one channel in the TCS)
DOCSIS*/ EuroDOCSIS	Pmin to +57 dBmV (32 QAM, 64 QAM)
TDMA	Pmin to +58 dBmV (8 QAM, 16 QAM) Pmin to +61 dBmV (QPSK)
S-CDMA	Pmin to +56 dBmV (all modulations), where: Pmin = +17 dBmV, 1280 kHz modulation rate Pmin = +20 dBmV, 2560 kHz modulation rate Pmin = +23 dBmV, 5120 kHz modulation rate

<p>Level range per channel (two channels in the TCS)</p> <p>TDMA</p> <p>S-CDMA</p>	<p>Pmin to +54 dBmV (32 QAM, 64 QAM)</p> <p>Pmin to +55 dBmV (8 QAM, 16 QAM)</p> <p>Pmin to +58 dBmV (QPSK)</p> <p>Pmin to +53 dBmV</p> <p>(all modulations), where: Pmin = +17 dBmV, 1280 kHz modulation rate</p> <p>Pmin = +20 dBmV, 2560 kHz modulation rate</p> <p>Pmin = +23 dBmV, 5120 kHz modulation rate</p>
<p>Level range per channel (three or four channels in the TCS)</p> <p>TDMA</p> <p>S-CDMA</p>	<p>Pmin to +51 dBmV (32 QAM, 64 QAM)</p> <p>Pmin to +52 dBmV (8 QAM, 16 QAM)</p> <p>Pmin to +55 dBmV (QPSK)</p> <p>Pmin to +53 dBmV</p> <p>(all modulations), where: Pmin = +17 dBmV, 1280 kHz modulation rate</p> <p>Pmin = +20 dBmV, 2560 kHz modulation rate</p> <p>Pmin = +23 dBmV, 5120 kHz modulation rate</p>
Output Impedance	75 (nominal)

UPSTREAM(CONTINUED)

Frequency Range	DOCSIS* 5-42 MHz(edge to edge), EuroDOCSIS 5-65 MHz (edge to edge) and optional DOCSIS* 5-85 MHz(edge to edge)
Compatibility	PC:90496,Pentium,or later;WindowsVista™,2000,or XP or 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

TELEPHONY	
Line Type	2-wire
Hook State Signaling	Loop start
Maximum Loop Length	1000ft(AWG 26/0.4mm@65°C)
DTMF Level Sensitivity Range	0 to – 20 dBm
Speech Coding	64 kbps PCM, μ -law or A-law companding; support for G.711,G.726,G.729,G723.1,iLBC,and BV16/32 codecs
Line Terminationz	Configurable based on market needs
Loss Plan Receive	(D/A) 11 dB;transmit(A/D)4 dB(configurable based on market needs)
Loss Plan Tolerance	± 1 dB(one-way)
60/50 Hz	>20dB(referenced to off-hook loss at 1,004Hz)
Ringling Wave Form	Sinusoidal Balanced 45Vrms
Ringling Crest Factor	1.2<CF<1.6
Ring Trip (maximum)	200mS



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