



Bringing Fiber Speeds to DOCSIS®

Introducing Marlin CXA438Z DOCSIS® 3.1+ Data Modem & CVA438Z eMTA



Power Up Your Cable Offers with DOCSIS® 3.1+

For many service providers, DOCSIS® is the backbone of their broadband offerings. These operators face the ongoing challenge of upgrading their core services to stay competitive with fiber optics and other cable providers, all while managing infrastructure costs effectively.

Enter DOCSIS® 3.1+, a remarkable advancement over DOCSIS® 3.1, supporting enhanced performance and efficiency – and the ultimate step before transitioning to DOCSIS® 4.0 models.

ULTRA POWERFUL INTERNET CONNECTION WITH D3.1+



Low Investment, High Impact

Upgrade your gateway fleet significantly at no infrastructure cost



8 Gbps Downstream

Offer unprecedented download speeds, high stability & low latency



Be a Forerunner

Get ahead of the competition with a breakthrough product

Marlin CXA438Z modem & CVA438Z eMTA are your go-to CPE if you are looking to power up your cable offer at an affordable cost.

3.1+

Introducing Marlin CXA438Z & CVA438Z

DOCSIS® 3.1+ Modem & eMTA

Developed by Vantiva, the industry leader in DOCSIS® CPE, Marlin CXA438Z & CVA438Z make it possible to **achieve unprecedented broadband speeds and offer new value-added services without costly upgrades** to existing infrastructures.

DOUBLING DOWNLOAD SPEEDS WITH DOCSIS® 3.1+

Marlin CXA438Z modem meets cable operators' needs for ultimate broadband access. As the first CableLabs® certified DOCSIS 3+ CPE it offers **downstream speeds up to 8 Gbps, closing the gap with fiber technology**. Coupled with upstream speeds up to 1.7 Gbps, it enables multi-Gigabit data services for faster downloads, uninterrupted gaming, and multiple 4K video streams.

FUTURE-PROOF NETWORK INTEGRATION

This platform can be **seamlessly deployed on current networks, functioning as a DOCSIS 3.0 or DOCSIS 3.1 modem. When upgrading to the DOCSIS 3.1+ standard, the CXA438Z / CVA438Z support the migration without customer intervention**, thanks to a fully integrated up-to-1.2 GHz full band capture wideband tuner, and a switchable diplexer for transitioning from mid-band to high band split on the same hardware.

ADVANCED SECURITY & MANAGEMENT

Marlin CXA438Z / CVA438Z are built with end-to-end security mechanisms, utilizing **BPI+ for robust encryption, mutual authentication, secure key management, data integrity protection, and access control**. Integrated web pages offer users direct access to status and settings, including privacy and security information, ensuring convenience and control. Leveraging SNMP remote management, you can maintain high service quality and reliability for your customers.

ULTRA LOW LATENCY, HIGH QoS







Relying on the **IEEE 802.1Q networking standard to classify and prioritize local traffic**, along with QoS-supporting techniques like **queuing to give high-priority to critical services** like VoIP and streaming, **policing to prevent network abuse, and shaping to prevent congestion** by buffering and pacing traffic, the Marlin CXA438Z / CVA438Z deliver reliable, high-quality service even under varying traffic loads and conditions



About DOCSIS® 3.1+

The Ultimate Move In Advance DOCSIS 4.0

DOCSIS 4.0 doubles downstream throughput and boosts upstream capacity to 4.1 Gbps. However, upgrading to this technology demands significant infrastructure investment. **The DOCSIS 3.1+ hybrid configuration already allows operators to drastically expand your offering without significant investment.**

	DOCSIS 3.1	DOCSIS 3.1+	DOCSIS 4.0
 Maximum Performance	↑ 1.7 Gbps ↓ 5 Gbps	↑ 1.7 Gbps ↓ 8 Gbps	↑ 4.1 Gbps ↓ 10 Gbps
 Upstream Channels	Spectrum: 199 MHz 8 SC-QAM narrowband channels 2 OFDMA broadband channels	Spectrum: 199 MHz 8 SC-QAM narrowband channels 2 OFDMA broadband channels	Spectrum: 368 MHz 8 SC-QAM narrowband channels 4 OFDMA broadband channels
 Downstream Channels	Spectrum: 960 MHz 32 SC-QAM narrowband channels 2 OFDM broadband channels	Spectrum: 960MHz 24 SC-QAM narrowband channels 4 OFDM broadband channels	Spectrum: 1.3 GHz 32 SC-QAM narrowband channels 5 OFDM broadband channels
 Need for Upgrade/ New Material	N/A	CMTS equipment	Nodes, Amplifiers, Taps, CMTS equipment
 CPE Implications	N/A	New chipset	New diplexers, chipset, AFE Higher power consumption
 Cost Impact	N/A	CPE.... +30% Network.... + \$	CPE..... +65% Network.... +++ \$

Broadcom SDK



An Operator-Grade Device Software Stack

Marlin CXA438Z & CVA438Z harness the power of Broadcom SDK, so you can achieve significant operational efficiencies, reduce costs, and offer enhanced services to your customers.

ENHANCED PERFORMANCE & RELIABILITY

Broadcom SDK provides low-level access to hardware features, **optimizing performance and reliability for a better user experience**. This platform also supports a wide range of advanced features such as QoS, and VLANs, allowing you to offer premium services and ensure smooth and efficient network operation.

IMPROVED NETWORK MANAGEMENT

Broadcom SDK offers **robust management tools for remote monitoring, configuration, and troubleshooting**, reducing the need for on-site support, lowering operational costs, and improving response times.

COST EFFICIENCY

Utilizing the Broadcom SDK, you **leverage pre-built libraries and code examples to speed up development and reduce costs**. Its support for a wide range of Broadcom hardware ensures efficient scalability, accommodating growing customer bases and increasing bandwidth demands.

ENHANCED CUSTOMER EXPERIENCE

With optimized hardware performance and high-speed DOCSIS 3.1+ support, customers enjoy faster internet speeds and more reliable connections, leading to higher satisfaction and lower churn rates. The SDK also **supports advanced security protocols, protecting customers from various cyber threats**.




Marlin CXA438Z Data Modem


High Level Specifications

LOCAL AREA NETWORK


 1x 10GE Ethernet

DOCSIS 3.1+ WAN

 4x2 ODMA(A) + 32x8 channel bonding


 1.7Gbps upstream
8 Gbps downstream

MANAGEMENT

 **Remote:** TR-069/TR-181/TR-369, TR-104v2, TR-143, TR-157, WebUI, SSH

Local: UPnP, WebUI, SSH, Ping, traceroute, NTP, diagnostics


POWER INPUT

 12V DC (barrel)
15V USB-C/PD (CVA438Z)

MAIN HARDWARE

 Broadcom

 15K DMIPS B53


 Flash: 4GB eMMC
RAM: 2GB LDDR4

 2x FXS voice port (CVA438Z eMTA)

SOFTWARE

 Broadcom Software Development Kit

HOUSING

 190mm x 165mm x 60mm
Booklet



Shown: CVA438Z eMTA with optional 1G LAN port

Sustainability

Shaping the Future of the Industry Responsibly

As a customer premises equipment manufacturer, whose devices are used by billions of people around the world, we have a unique role to play.

We collaborate with two reputable organizations for guidance, support, and evaluation:

ecovadis

EcoVadis placed Vantiva in the top 1% of its industry, awarding us the highest ratings in Environment, Labor & Human Rights, Ethics, and Sustainable Procurement.



Vantiva is dedicated to following the Science Based Targets initiative's (SBTi) Net-Zero Standard and the Business Ambition for 1.5°C, aiming to lower our business emissions.



We drive environmental, social, and governance through our supply chain with a strong focus on CO₂ reduction.

To minimize our environmental footprint, we've adopted eco-friendly practices across seven key areas of our production process:

- Devices
- Packaging
- Sustainable ecosystem
- Transport
- Reverse logistics
- Power savings
- Eco-housing



Vantiva 



Vantiva's Assurance of Quality

DOCSIS® Gateways are our DNA

Choosing Vantiva's Marlin CVA438Z, you are not just purchasing a device.
You are making the best of an industry leader's global organization, network & expertise.

EXPERT ORGANIZATION

With an end-to-end focus on supply resilience, agile demand and supply planning, and rapid crisis management, Vantiva's teams of experts are strategically located near suppliers and factories for maximum efficiency.

RELIABLE PARTNER ECOSYSTEM

Vantiva closely collaborates with suppliers to overcome supply chain risks and establish mutually beneficial long-term agreements. Our joint efforts in supply and production planning ensure we deliver excellence.

RESILIENT SUPPLY CHAIN

Vantiva ensures reliability through flex-manufacturing, diversified sourcing, and advanced supply chain mapping. A comprehensive visibility platform helps us manage events with real-time and predictive insights.

GLOBAL MANUFACTURING

We have intentionally broadened our manufacturing footprint globally to prevent potential production disruptions. Vantiva has the capability to deliver 100k CPE per day thanks to a network of manufacturing partners.

EXTENSIVE ON-SITE SUPPORT

Vantiva supports you throughout the entire deployment cycle from homologation to post-launch and leverages a decade of expertise in interoperability issues' identification & resolution beyond BBF-247 and TR-255 standards.





Connect with us!

To get more information about this product, please contact your sales representative, or visit <https://www.vantiva.com/contact/>

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