

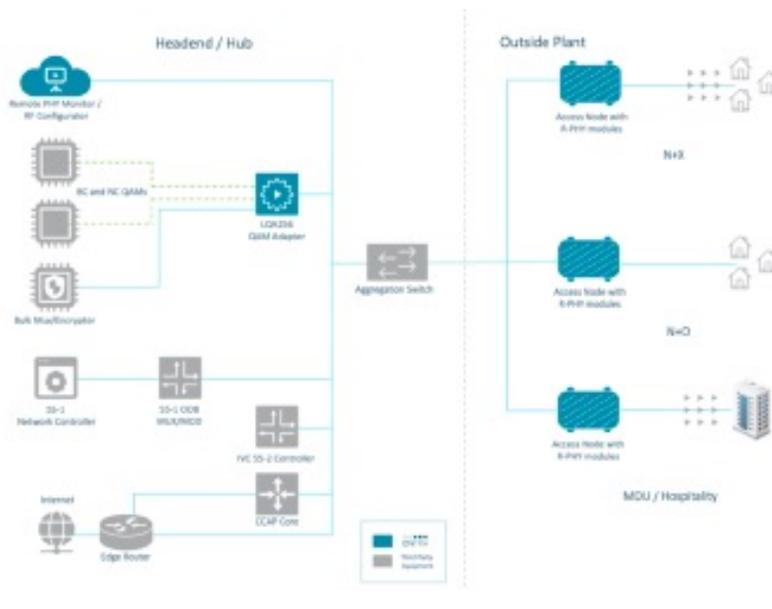
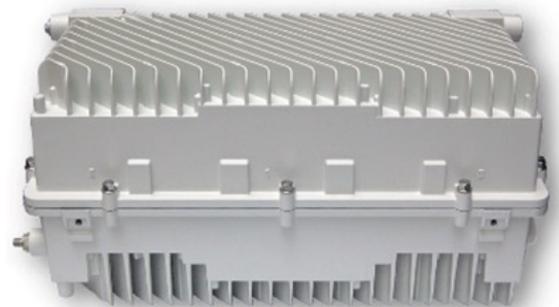


ENTRA®

EN8100, EN8400
DOCSIS® 3.1 and DOCSIS® 4.0
DAA Access Nodes

The Entra® EN8100 and EN8400 are Vecima's realization of the next generation of hybrid fiber-coax (HFC) nodes that are purpose-built to support Remote PHY deployments.

A future-proof "Forever Node," it is designed to support DOCSIS 3.1 Remote PHY today and evolve to DOCSIS 4.0, Remote PON OLT, and Carrier Ethernet in the future.



Highlights

- Avoids "bookend" solution lock-in with interoperable solutions
- Benefits from Vecima's DAA leadership as a key contributor to CableLabs' specifications
- A truly intelligent, remote monitored and managed RF device (tilt, level, per-channel attenuation, U.S. wink, etc.)
- Core-neutral RPD implementation integrates with any standards-compliant CCAP or vCCAP core
- Evolve CCAP core without any concerns of future distributed access node compatibility
- Supports DOCSIS® and video services
- Legacy digital video support, including all OOB (QAM and native 55-1 and 55-2)
- Support for future PON and D4.0 access modules



- (A) Fiber Entry Ports (2)
- (B) Fiber Management Tray (1)
- (C) Lid Distribution Module (1)
- (D) 10 GbE SFP+ Ports (2)
- (E) Access Modules (1 or 2)
- (F) Dual Port RF Amplifier Modules (2)
- (G) Port Entry Module – RF Enabled (4)
- (H) Port Entry Module – AC Power Only (2)
- (I) Power Supplies (1 or 2)
- (J) Forward Injection Module (0 or 1)
- (K) Power Distribution Module (1)

Specifications

Lid Distribution Module

SFP + Ports	2 x 10 GE
Timing Support	IEEE 1588v2 PTP ordinary clock slave
Multicast Support	IGMP v2/v3 and MLD v1/v2
Fiber Redundancy	Hot and cold standby support
Node Daisy Chaining	Supported on secondary port
Authentication	802.11x port-based EAP-TLS

Access Module

DOCSIS 3.0 DS Channels	48 annex B
Video QAM DS Channels	128 annex B
DOCSIS 3.1 OFDM DS Channels	1 or 2 service groups x 12 ATDMA each
DOCSIS Operation Mode	Remote PHY
OOB DS	1 x SCTE 55-1, 1 x SCTE 55-2 (native) Narrow and wide NDF
OOB US	3 x SCTE 55-1, 1 x SCTE 55-2 (native) NDR
AGC, Alignment, and Leakage Detection Tones	4x Dedicated CW (54 MHz to 1218 MHz) 158 x S.C.-QAM as CW (54 MHz to 1002 MHz)
Video QAM Input Support	MPTS over L2TPv3 (R-DEPI) 10ms dejitter, PCR restamping NULL insertion/deletion

Control & Management

Primary Interface	Connected CCAP Core(s)
Troubleshooting Interface	SSH

RF Features

Diplexer Options (field-replaceable)	5-85, 102-1218 MHz 5-42, 54-1218 MHz 5-65, 85-1218MHz 5-204, 258-1218 MHz
Upstream Ingress Switch (SW-controlled)	< -40 dBc, settable per node RF port
Downstream Mute (SW-controlled)	>10W power reduction per node

Chassis / Power / Environmental

Dimensions (H x W x L) (Lenth excludes port plugs; height measured from the bottom of the strand)	11.3 in x 11.0 in x 23.9 in (28.8 cm x 28.1 cm x 60.7 cm)
Weight	<50 lb (22.7 kg)
External RF/Power Ports	4 x SCTE-91 (two per side)
External Power-Only Ports	2 x SCTE-91 (two per side)
External Fiber Ports	2 x SCTE-91 (two per side)
Input Voltage	45-90 VAC, 50/60 Hz
AC Current Passing	15A max
Temperature (operational)	-40 to 60 °C (-40 to 140 °F)
Humidity (operational)	5 to 95%, noncondensing
Mounting Options	Strand, pedestal, wall