

Driving the DAA evolution from traditional HFC to all-digital Ethernet, the **Entra** Distributed Access Platform, is Vecima's realisation of the next generation of DOCSIS 3.1 product solutions, for headends and outside plant networks.

Vecima ensures your DOCSIS 3.1 transition success, empowering operators with a complete family of solutions which include multiple DAA R-PHY node types, monitoring, 10GB switching and global legacy video support.

The **EN2112** is a high density Compact 2 Port implementation of our field-proven DOCSIS 3.1 Standard North American Node designed specifically for European and Global markets.



## Features and Benefits:

- Standards compliant, CCAP Core agnostic architecture and implementation from an independent vendor; no vendor "lock-in"
  - Fully interoperable with any CableLabs standards compliant CCAP Core
- Part of Vecima's Entra family series
  - Supported by a complete line of complementary DOCSIS 3.1 DAA products
- Very Compact implementation of a 2 Port Node
  - Vecima allows you to fit in all cabinets as part of your DOCSIS 3.1 transition
- Fully compatible with global certification and standards requirements
  - A single product benefits from economies of scale and inventory management
- A truly intelligent, remote RF managed (tilt, attenuation, level, US wink, etc.) device.
  - Accelerates and automates installation configuration and service quality

# R-PHY Compact 2 Port Node Specifications

RPD Module		RF Specifications	
<b>SFP+ Ports</b>	Primary 1 x 10GE (ETH 0) Secondary 1 x 10GE (ETH 1)	<b>Return Loss</b>	18 dB typical, 14 dB Minimum
<b>Timing Support</b>	IEEE 1588v2 PTP Ordinary Clock Slave	<b>Maximum Output Power</b>	2 x + 52 dBmV
<b>Multicast Support</b>	IGMP v2/v3 and MLD v1/v2	<b>MER (equalized)</b>	45 dB typical
<b>Authentication</b>	802.1X port-based EAP-TLS	<b>Downstream Linear Tilt (Software Controlled)</b>	2-22 dB over 57-1218 MHz
<b>DOCSIS 3.0 DS Channels</b>	48 Annex A/B	<b>Diplexer Options (Field-Replaceable)</b>	5-85, 102-1218 MHz 5-42, 54-1006 MHz 5-65, 85-1218 MHz 5-204, 258-1218 MHz
<b>Video QAM DS Channels</b>	96 Annex A, 128 Annex B/C	<b>Upstream Nominal Set Point, DOCSIS</b>	-3 to +18 dBmV / 6.4 MHz
<b>DOCSIS 3.1 OFDM DS Channels</b>	6 x 192 MHz	<b>Upstream Ingress Switch (SW Controlled)</b>	0, -6dB, -40dB per Node RF Port
<b>DOCSIS 3.0 US Channels</b>	1 or 2 service groups x 12 ATDMA each	<b>Downstream Service Groups</b>	1
<b>DOCSIS 3.1 OFDMA US Channels</b>	1 or 2 service groups x 2 OFDMA (96 MHz)	<b>Upstream Service Groups</b>	2
<b>DOCSIS Operation Mode</b>	Remote PHY	<b>Service Group Configuration</b>	1x1 or 1x2
<b>OOB DS</b>	SCTE 55-1 & 55-2, 3 x Narrow & Wide NDF	<b>Local RF Injection</b>	54-1006 MHz
<b>OOB US</b>	SCTE 55-1 & 55-2, 3 x NDR	<b>Analog RF Optical Overlay</b>	Optional, 54-750 MHz
<b>AGC, Alignment and Leakage Detection Tones</b>	4 x Dedicated CW (54 MHz to 1218MHz) 158 x SC-QAM as CW (54 MHz to 1002 MHz)	<b>3rd RF Port</b>	Local RF In / 3rd RF Out
<b>Video QAM Input Support</b>	MPTS over L2TPv3, R-DEPI 10ms de-jitter, PCR restamping, NULL insertion/deletion, Synchronous and Asynchronous mode support	<b>Chassis / Power / Environmental</b>	
<b>Control &amp; Management</b>		<b>Dimensions (H x W x L)</b>	245 x 204 x 160 mm (Excludes mounting hardware and port connections)
<b>Primary Interface</b>	Connected CCAP Core(s)	<b>Weight</b>	<7 kg (15lbs)
<b>Troubleshooting Interface</b>	Secure Shell (SSH) Text-Based User Interface (TUI)	<b>External RF/Power Ports</b>	75 ohms, 2 X PG 11 / SCTE 91 (5/8")
		<b>External Fiber Ports</b>	SC / APC
		<b>Input Voltage Options</b>	30 - 65 VAC (QSW) 40 - 90 VAC (QSW) 90 - 264 VAC (sine)
		<b>AC Current Passing</b>	10A max
		<b>Temperature (Operational)</b>	-40 to 60°C (-40 to 140°F)
		<b>Humidity (Operational)</b>	5 to 95%
		<b>Mounting</b>	Wall, Pedestal or Cabinet