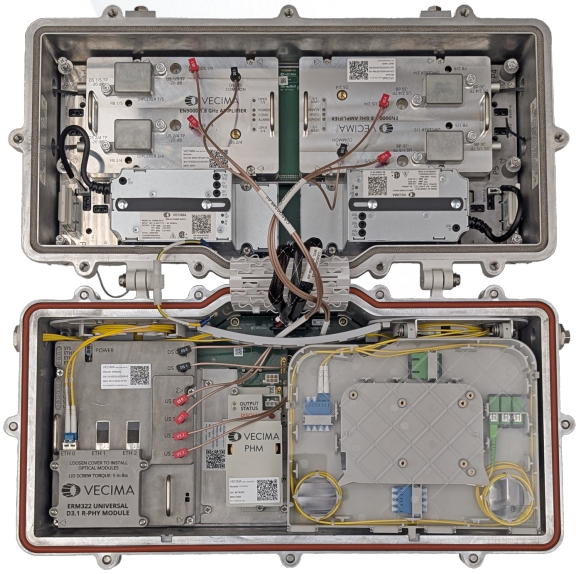
ENTRA®

EN9000 GENERIC ACCESS PLATFORM (GAP) NODE

The Entra® EN9000 is the industry's first Generic Access Platform (GAP) compliant node. The node was designed from the ground up to support 1.8 GHz RF to enable the next generation of hybrid fiber-coax (HFC) access with DOCSIS® 4.0.

The EN9000 provides a multigigabit, multiaccess platform to support ongoing DOCSIS evolution, PON, and wireless technologies with a foundation of interoperability.



ENTRA

GAP Compliant

SCTE GAP-compliant node and modules (ANSI/SCTE 273 2021). Benefits from Vecima's leadership in GAP and commitment to interoperability

Future-Proof "Forever Node"

Designed to support D3.1 R-PHY today and evolve to future technologies , including DOCSIS 4.0, Remote PON OLT, and Carrier Ethernet in the future

Full Spectrum DOCSIS 3.1

Delivers maximum DOCSIS 3.1 throughput with full spectrum support up to 1.2GHz downstream and 204 MHz upstream and is designed to support future D4.0 operation up to 1.8 GHz

Modular Design

4-port Access node with field-replaceable components include amplifier modules, power supplies and RPD module

Turnkey R-PHY Solution

Complete R-PHY solution that enables DAA deployments including Entra vCMTS, Nodes, and RPDs

Investment Protection

Enables operators to standardize their networks on a single future-proof node platform with a multivendor ecosystem

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Specifications

Power	
Input Voltage	45-90 V_{AC}, 50/60 Hz, Quasi-Square Wave
AC Current Passing	15A max
Power Supply Output	25V_{DC} (7.2A), 12V_{DC} (15A), 5V_{DC} (21A) 180W Total
Thermal Dissipation	Maximum of 200W @ +60°C (Up to 120W base and 120W lid)
External Interfaces	
RF / Power Ports	4x SCTE-91 (two per side, base)
Power-only Ports	2x SCTE-91 (one per side, base)
DS RF Test Ports	4x SCTE-91 (two per side, base)
Fiber Ports	2x SCTE-91 (one per side, lid)
Physical	
Height, Width, Depth	11.5” (292 mm), 22” (559 mm), 12” (305 mm)
Weight	<50 lb (22.7 kg) (Typical Configuration)
Mounting Options	Strand-mounted, Pedestal-mounted Wall-mounted with accessory bracket Horizontal or vertical mounting
Operating Environment	
Temperature	-40 to 60 °C (-40 to 140 °F)
Relative Humidity	5% to 95%, noncondensing
Altitude	-196 to 13,123 feet (-60 to 4,000 meters)
Supported Vecima Modules	
ERM322	D3.1 RPD module – 2DS x 2US SG
ERM324	D3.1 RPD module – 2DS x 4US SG
RFAM	1.8GHz RF Amplifier Module
PHM2000	Power Holdover Module
EEM210	10G EPON 2 Port Module

RF Amplifier (RFAM)	
Diplexer Options (Field Replaceable)	
Mid Split	5 – 85 MHz / 102 – 1218 MHz
High Split	5 – 204 MHz / 258 – 1794 MHz
Ultra High Split	5 – 396 MHz / 492 – 1794 MHz
Ultra High Split	5 – 492 MHz / 606 – 1794 MHz
RF Port Performance with ERM3 installed	
Total Composite Power	+70 dBmV max
DS Linear Tilt (SW Controlled)	15 to 21 dB over 108 to 1218 MHz
US Nominal Set Point, DOCSIS	+6 to +12 dBmV/6.4 MHz
Channel Power Accuracy	±1.0 dB TCP
Tilt Accuracy	±0.5dB average tilt relative to target tilt
Port-Port Isolation	>60 dB
Hum Modulation	-60 dB
Regulatory, Industry, and Standards Compliance	
EMC (Immunity/Emissions)	EN 55032, EN 55035, ICES-003, FCC PART 15 SUBPART B, (AS/NZS) CISPR 32
Safety	IEC/EN 62368-1, ANSI/UL 62368-1, CAN/CSA C22.2 No. 62368-1
Outdoor Use, IP Rating	IEC 60529, NEMA-250, IP68
Hazardous Substance	IEC/EN 63000: 2018, RoHS Directive 2015/863/EU
WEEE Directive	2012/19/EU
REACH	Regulation (EC) No 1907/2006
Industry Standards	ANSI/SCTE 81 2018, ANSI/SCTE 91 2022, ANSI/SCTE 92 2022, ANSI/SCTE 273-1 2021, ANSI/SCTE 273-2 2021, ANSI/SCTE 292 2024r1

Ordering Information	
EN-AN-9000-HS-BP-1P	EN9000 R-PHY GAP Access Node. Includes Single PSU, 4 RF Ports, US 5-204 MHz, DS 258-1794 MHz, QTY2 1.8 GHz RF Amplifier Modules, with Lid Backplane. Does not include RPD module.
EN-AN-9000-HS-BP-2P	EN9000 R-PHY GAP Access Node. Includes Dual PSU, 4 RF Ports, US 5-204 MHz, DS 258-1794 MHz, QTY2 1.8 GHz RF Amplifier Modules, with Lid Backplane. Does not include RPD module.
EN-AN-9000-MS-BP-1P	EN9000 R-PHY GAP Access Node. Includes Single PSU, 4 RF Ports, US 5-85 MHz, DS 102-1218 MHz, QTY2 1.8 GHz RF Amplifier Modules. Does not include RPD module.
EN-AN-9000-MS-BP-2P	EN9000 R-PHY GAP Access Node. Includes Dual PSU, 4 RF Ports, US 5-85 MHz, DS 102-1218 MHz, QTY2 1.8 GHz RF Amplifier Modules. Does not include RPD module.
EN-AN-9000-NORF-BP-2P	EN9000 R-PHY GAP Access Node. Includes Dual PSU, 4 RF Ports, with Lid Backplane. Does not include RPD module or RFAM modules.

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