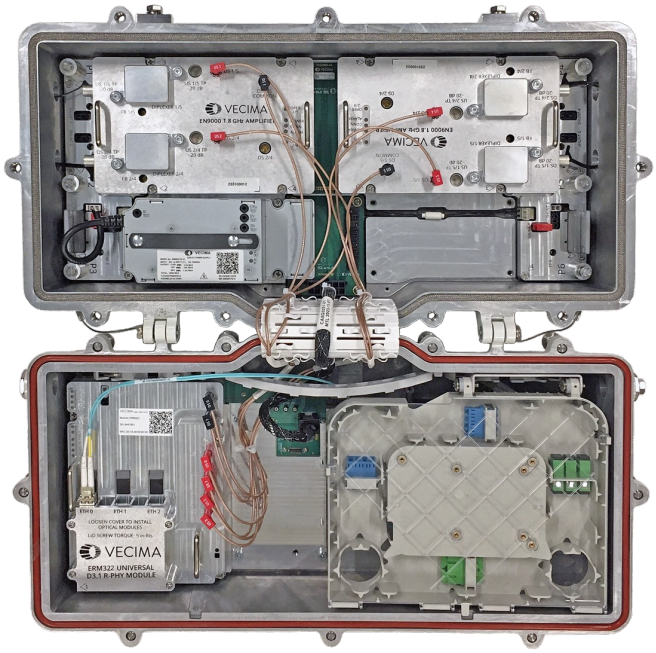
ENTRA

EN9000 Access 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.



Highlights

- SCTE GAP compliant node (ANSI/SCTE 273 2021)
- Investment protection: Enables operators to standardize their networks on a single future-proof node platform with a multivendor ecosystem
- Intelligent RF node: Software-controlled, remotely managed RF amplifiers
- 1.8 GHz: Designed from the ground up to support 1.2 GHz and 1.8 GHz operation with field-upgradeable diplexers
- Hybrid HFC + PON: ERM3 DOCSIS 3.1 Remote PHY + PON module with roadmap to DOCSIS 4.0
- Room for expansion: Full lid available for module installation, three of six lid module slots available with ERM3 RPD module and PHM2000 installed
- Low-power focus: High-efficiency power supplies and an optimized RF design
- Robust thermals: Designed for 180W cooling and up to 180W module powering

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Specifications

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
Power	
Power	180 W max
Current	4.5 A max
AC Current Passing	15 A max
Power Supply Output	25V (7.2A), 12V (15A), 5V (21A)
Thermal Dissipation	Maximum of 180W @ +60°C (Up to 120W base and 120W lid)
RF Specifications	
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	
Total Composite Power	+70 dBmV max
DS Linear Tilt (SW Controlled)	15 to 21 dB over 108 to 1218 MHz
Impedance	75Ω
Channel Power Accuracy	±1.0 dB TCP
Tilt Accuracy	±0.5dB average tilt relative to target tilt
DS Mute (SW Controlled)	>10 W power reduction per RF port
DS/US RF Test Port Response	-20dB ±1 dB
Port-Port Isolation	>60 dB
Hum Modulation	-60 dB
US Nominal Set Point, DOCSIS	+6 to +12 dBmV/6.4 MHz
US Ingress Switch (SW Controlled)	< -50dB, settable per RF port

External Interfaces	
RF / Power Ports	4x SCTE-91 (two per side)
Power-only Ports	2x SCTE-91 (one per side)
DS RF Test Ports	4x SCTE-91 (two per side)
Fiber Ports	2x Sealed Fiber Entry Ports (one per side)
Physical	
Height	11.5 in (292 mm)
Width	22 in (559 mm)
Depth	12 in (305 mm)
Weight	<50 lb (22.7 kg) (Typical Configuration)
Mounting Options	Strand-mounted, Pedestal-mounted Wall, pole, rack mount 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)
Regulatory, Industry, and Standards Compliance	
EMC (Immunity/Emissions)	EN 55032, EN 55035, FCC PART 15 SUBPART B, ICES-003
Safety	ANSI/SCTE 81, ITU-T K.45, IEEE C62.41
Outdoor Use, IP Rating	IEC 60529, NEMA-250, IP68
Surge	ANSI/SCTE 81, ITU-T K.45, IEEE C62.41
Hazardous Substance	IEC/EN 63000: 2018 RoHS Directive 2011/65/EC, amended by 2015/863/EU
WEEE Directive	2012/19/EU
REACH	Regulation (EC) No 1907/2006
Industry Standards	ANSI/SCTE 273 2021 ANSI/SCTE-91 2022 ANSI/SCTE-92 2022

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