



ENTRA®

SC-2D4 ACCESS NODE

The Entra® SC-2D4 Access Node is a key component of the Entra unified cable access solution, a Distributed Access Architecture (DAA) that delivers significant performance gains, substantial savings on capital and operating expenses (CAPEX/OPEX), and enables an easy migration to an all-IP, all-fiber network



Turn-key R-MACPHY Solution

A complete R-MACPHY solution that enables DAA deployments including nodes, Entra Access Controller and DAA video solutions.



Full Spectrum DOCSIS 3.1

Delivers maximum DOCSIS 3.1 throughput with full spectrum support up to 1.2GHz downstream and 204 MHz upstream



R-MACPHY Advantages

Moving the MAC to the network edge minimizes headend power and space requirements as well as network latency and jitter.



Resilient Design

Environmentally hardened 4-port node form factor. Field-replaceable components include amplifier modules, power supplies, Optical Receiver and main processor module.



Future-Proof Design

Designed to evolve as technologies evolve with support for 1.8 GHz and a modular architecture.



Optical Receiver

Analog RF Video Overlay

Specifications

General	
SFP+ Ports	2 ports of 10 GE
SFP+ Optical Module Support	ER, LR, ZR, bidirectional, CWDM, DWDM
Service Groups	Up to 2 downstream x 2 upstream
Downstream Channels	Up to 158 QAM J.83 annex A/B/C; up to 6 OFDM per service group
Channel Bandwidths	Up to 192 MHz OFDM
Out of Band Capabilities	Up to 4 channels of OOB, SCTE 55-1, SCTE 55-2, SCTE 25-1 HMS Up to 160 CW pilot tones Up to 2 leakage detection tags per service group Viavi Path Trak support
Wideband Digital Forward	Up to 43-6 MHz/32-8 MHz channels of broadcast band transport over IP per Service Group. Typical broadcast modulations 8VSB, PAL, FM, NTSC
Upstream Channels	Up to 12 QAM, up to 2 OFDMA per service group
Physical	
Height, Width, Depth	10.4" (265 mm), 20.8" (529 mm), 11.02" (280 mm)
Weight	43 lb (19.5 kg)
Mounting Options	Aerial, pedestal, wall, pole, rack mount with accessory bracket Horizontal or vertical mounting
Environment	
Temperature (operating)	-40 to 60 °C (-40 to 140 °F)
Temperature (storage)	-40 to 70 °C (-40 to 158 °F)
Relative Humidity (operating / storage)	5 to 95% noncondensing
Altitude (operating / storage)	-196 to 13,123 feet (-60 to 4,000 meters)
Power	
Input Frequency	50 Hz/60 Hz
Input Voltage	38 V to 90 VAC coax line (quasi square wave)
Power Consumption	123 W nominal with 2 coax ports active
	148 W nominal with 4 coax ports active 157 W maximum

RF Specifications	
RF Ports	Up to 4 RF Ports, 75 Ω Operational bandwidth: 5 MHz to 1,218 MHz
Diplexer Options	5 - 42 MHz/54 - 1218 MHz
	5 - 65 MHz / 85 - 1218 MHz
	5 - 85 MHz/102 - 1218 MHz 5-204 MHz/258 - 1218 MHz
Output Composite Power	Up to 71 dBmV
RF Output Level	61 dBmV @ (virtual)
Pluggable Tilt	Up to 24 dB (s/w readable ID)
Upstream Nominal Setpoint, DOCSIS	+7 to +27 dBmV/6.4 MHz
Diagnostics	Test ports: -20dB
	Low RF level alarm per port
	RF amplifier on/off controls per port
	RF input on/off controls per port Voltage and temperature monitoring
Optical Receiver	
Optical Input	1260 - 1560nm
	2 to -6 dBm ACG dynamic range SC-APC
RF Output	50 to 800 MHz
Regulatory, Industry, and Standards Compliance	
ACMA Supplier Number	E304 (CAN/ARBN 84156023504), C-Tick mark
EMC (Immunity/Emissions)	EN 55032, EN 55024, EN 61000-3-2, EN 61000-3-3, FCC PART 15 SUBPART B, ICES-003, (AS/NZS/VCCI) CISPR 32
Safety	ANSI/UL 60950-1, IEC/EN 62368-1 CAN/CSA C22.2 No. 60950-1-07
Outdoor Use, IP Rating	IEC 60950-22, CSA C22.2 No. 94.1, CSA C22.2 No. 94.2, ANSI/UL 60950-22, ANSI/UL 50, 50E, IEC 60529, IP68
Hazardous Substance	IEC/EN 63000 RoHS Directive 2011/65/EC, amended by 2015/863/EU
WEEE Directive	2012/95/EC
REACH	Regulation (EC) No 1907/2006
Corrosion Resistance	GR-2873-CORE, ASTM B117

Ordering Information

SC-2D-3000-FL	SC-2D3 Access Node. Includes DOCSIS 3.1 RMD with support for 2 SGs DS, 2 SGs US, 2 SFP+ 10 Gbps Ports (Optics Not Included), Up to 4 Coax Ports, Up to 2 Amplifier Modules (not included), and Redundant Power Supplies.
SC-2D-3000-HS-KIT-FL	SC-2D3 Access Node. Includes DOCSIS 3.1 RMD with support for 2 SGs DS, 2 SGs US, 2 SFP+ 10 Gbps Ports (Optics Not Included), Up to 4 Coax Ports, and Redundant Power Supplies. Includes Qty. 2 RF-SC-2D-3D-HS RF Amplifier Modules, US 5-204 MHz, DS 258-1218 MHz, 17 dB Tilt.