

AC nodes/DOCSIS

AC9100 NEO RPD SMART 1.2 GHZ NODE WITH REMOTE PHY MODULE

Teleste AC9100 NEO RPD is an excellent 1.2 GHz node equipped with remote PHY module. The node meets CableLabs[®] specifications and allows interoperability with standards-based CCAP core implementations.

Cable industry is going through a rapid change, as operators are searching for solutions to provide consumers with more network capacity and services which enable smooth and reliable online use of versatile video and TV content. The AC9100 NEO RPD offers an exclusive HFC node concept that expands cable network capacities, with the Remote PHY technology specified by CableLabs and allows cable operators to take several migration paths to future broadband services. The AC9100 NEO RPD provides an economically attractive platform for foresighted operators who need RF overlay because of the legacy platforms.



AC9100 NEO RPD SMART 1.2 GHZ NODE WITH REMOTE PHY MODULE

Combining our intelligent HFC technologies with the remote PHY capabilities, this smart node, called the AC9100 NEO RPD, ensures interoperability of devices in future network architectures.

Performance

In addition to being an excellent HFC fibre node, the AC9100 NEO RPD is equipped with remote PHY module. The node supports full DOCSIS® 3.1 downstream spectrum and upstream frequencies, as well as the Remote PHY module supports full spectrum downstream and upstream.

Remote PHY device (RPD) modules

1 x 1 or 1 x 2 Teleste remote PHY device (RPD) modules can be installed in AC9100 NEO to realize a remote PHY node. Both modules meet CableLabs specifications to allow interoperability with standards based CCAP core implementations.

Security

Management and user traffic between CCAP service card and AC9100 NEO RPD is secured by IPSec. All traffic is received via two SFP modules supporting 10 GbE protocols.

802.1x

- Authentication
- Device Certificate
- Secure SW download as in CM-SP-R-PHY
- MACSec
- as in CM-SP-R-PHY as in CM-SP-R-PHY Product option

Local management interface (Gigabit Ethernet)

- Connector
- RJ-45
- Standard
- 1000BASE-T
- High reliability

An efficient mechanical design favours both the environment and the operator. Excellent and fully passive cooling design lowers internal temperature which increases reliability.





AC9100 NEO RPD block diagram



AC9100 NEO RPD / SMART 1.2 GHZ NODE WITH REMOTE PHY MODULE

DOWNSTREAM SIGNAL PATH		UPSTREAM SIGNAL PATH	
Light wavelength	12901610 nm	Frequency range	5 up to 204 MHz
Optical input power range	-80 dBm	Return loss	18 dB
Frequency range	851218 MHz	Ingress switching	0 / -6 / < -45 dB
Flatness	± 0.5 dB	Input level	57.0 dBµV
Gain limited output	4 x115 dBµV / 2 x 119 dBµV	OMI adjustment	020 dB
Umax (112 QAM chs, @ 1.0 GHz)	114.0 dBµV	OMI test point	-5 dB
Umax (138 QAM chs, @ 1.2 GHz)	111.5 dbµV		
10 GBIT ETHERNET INTERFACES		DOWNSTREAM RF INTERFACE	
Number of ports	2 x SFP+ module slot	Number of interfaces	1
Standard	IEEE 802.3-2008, Section 4 10GBASE-SR, 10GBASE-LR, 10GBASE-ZR	Standard	CM-SP-DRFI Annex D, CM-SP-PHYv3.1
Timing	IEEE-1588	Connector	75 Ohm MCX
DOWNSTREAM SC-QAM		DOWNSTREAM OFDM	
Number of SC-QAM chs	120 pieces of 8 MHz channels	Number of OFDM chs	6
Frequency range	1081006 MHz	Frequency range	1081218 MHz
Modulation order	Up to 1024 QAM	Channel width	24192 MHz
		Modulation order	Up to 16k QAM
UPTREAM RF INTERFACE		UPSTREAM SC-QAM	
Number of interfaces	1 or 2	Number of SC-QAM chs	12 per RF interface
Connector	75 Ohm MCX	Frequency range	585 MHz
Standard	CM-SP-PHYv3.1	Modulation order	Up to 256 QAM ATDMA
UPSTREAM OFDMA		OOB SUPPORT	
Number of OFDMA chs	2 per RF interface	Downstream frequency range	501000 MHz and 851218 MHz
Frequency range	5204 MHz	Number of NDF channels	3, Mode 07
Modulation order	Up to 4k QAM	Number of NDR channels	3 per segment, Mode 06
Channel width	Up to 96 MHz (per channel)	Standard	CM-SP-R-OOB
GENERAL CHARACTERISTICS			
Power consumption	79 W (1 × 1) 84 W (1 × 2)	Dimensions (h x w x d)	360 mm x 350 mm x 190 mm
Supply voltage	3065 V AC	Weight	16 kg
Max current feed trough	12 A / port	Operating temperature	-40+60 °C
Hum modulation	70 dB	Class of enclosure	IP54
Optical connectors	SC/APC, E-2000	EMC compatibility	EN50083-2
Output connectors	PG11 (several adaptors available)	ESD, Surge	4 kV, 6 kV (60728-3)



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