Analyser | Pilotgen | saWe | ActivPFC | RIS | ALSC | Optima+ | Wireless | 204 MHz | 1218 MHz | GaN | RPDready

AC nodes

AC9100 NEO
SMART 1.2 GHZ NODE WITH REMOTE PHY SUPPORT

Teleste AC9100 NEO is a DOCSIS® 3.1 capable node with remote PHY support. In addition to being an excellent fibre node it stands out as a future proof choice, in the network evolution process towards distributed access solutions.

The AC9100 NEO offers an exclusive HFC node concept that delivers innovative and proven technologies with wide range of benefits to meet the needs of today's most demanding operators. The 2x4 node is based on a fixed platform but responds to diverse requirements. With smart and automatic features AC9100 NEO eliminates the efforts normally associated with conventional and time consuming network operations. The node stands up to future bandwidth needs with 1.2 GHz downstream frequency band and a unique flexible upstream solution that can be easily upgraded to 204 MHz. With the support of remote PHY device (RPD) modules with RF overlay, the AC9100 NEO provides an economically sensible platform for foresighted operators.

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The AC9100 NEO is a smart node with four high-output level outputs. Based on the latest GaN technology the node ensures optimised power consumption and offers high output level (Umax 114 dBµV, 112 channels). Both helpful when networks take the next step and become DOCSIS 3.1 compliant.

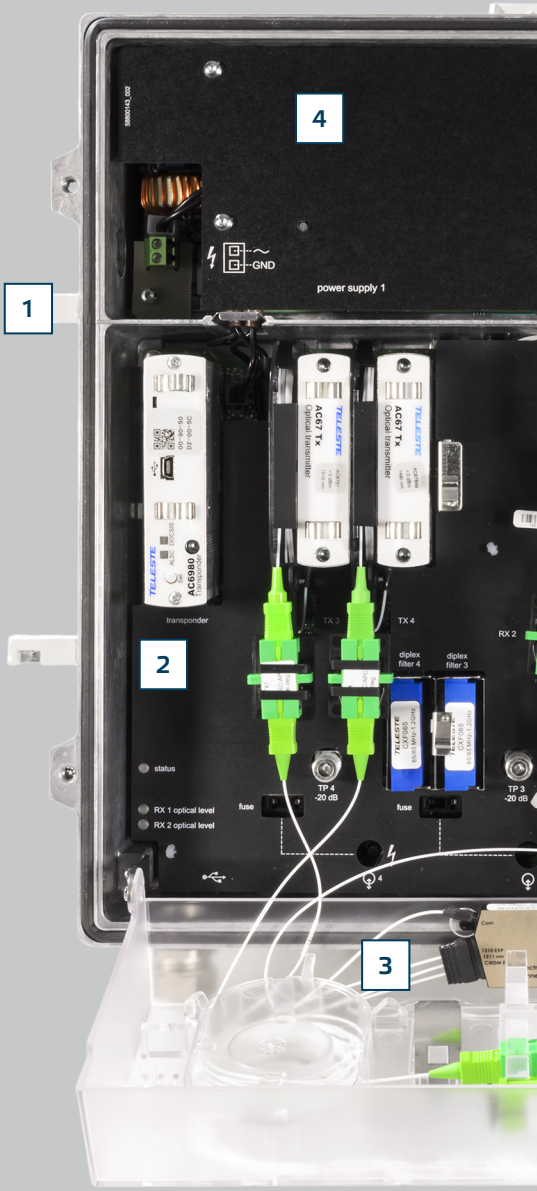
1. Support for remote PHY node upgrade
Single or dual Teleste remote PHY device (RPD) modules can be installed in AC9100 NEO to realize a remote PHY node. Both modules meet CableLabs specifications to allow interoperability with standards based CCAP core implementations.

2. Always in control
Conventional mechanical adjustments and management of the parameters are laborious and time-consuming processes. The days of frequent maintenance tasks are over.

In addition to being automatically aligned, the AC9100 NEO can be monitored and controlled remotely via the optional plug-in transponder unit. The transponder unit offers three different management protocols: CATVisor, HMS and DOCSIS.

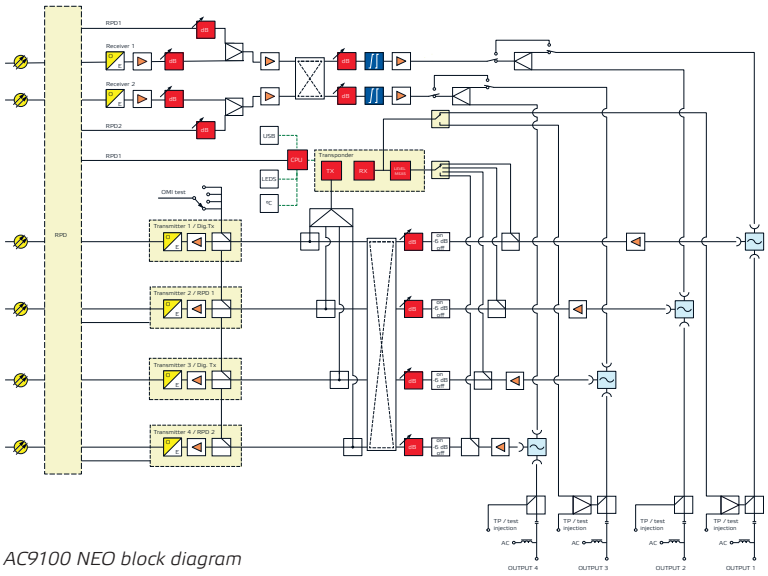
3. Easy management even on the site
The node can be accessed locally via an external USB port. The USB port also enables wireless local management via Bluetooth® and Teleste Commander application for Android smartphones and tablets.

4. High reliability
AC9100 NEO supports dual redundant power supplies with comprehensive monitoring possibilities including AC and DC voltage levels.

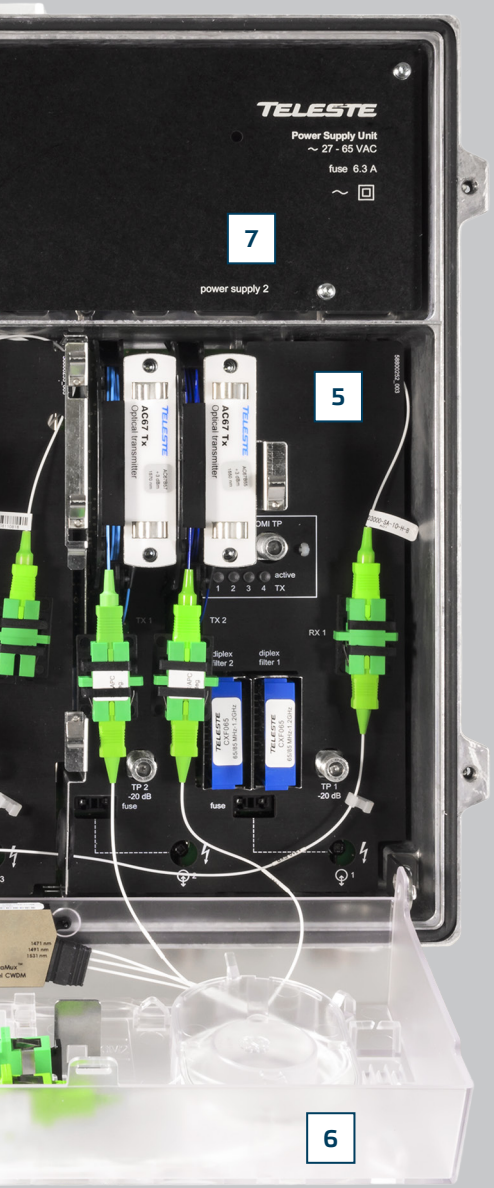


AC9100 NEO features

- Supports optional RPD modules
- Supports up to 1.2 GHz DS and 204 MHz US
- Redundant power supplies
- Fully user configurable automatic level control (ALC)
- GaN HEMT performance
- Remote ingress switch control
- Electrically controlled forward and return path signal routings



AC9100 NEO block diagram



5. European style node

Environmental values and business benefits need not conflict. An efficient mechanical design optimising the use of manufacturing materials greatly affect both capital and operational expenditures. All of this favours both the environment and the operator.

As a node of compact size, the AC9100 NEO fits easily into European-scale street cabinets. The high performance means fewer units in the field and this – of course – leads to less frequent maintenance needs. Efficient and fully passive cooling design lowers internal temperature which increases component durability. All this leads to higher service quality and lower operational costs.

6. Integrated fibre compartment

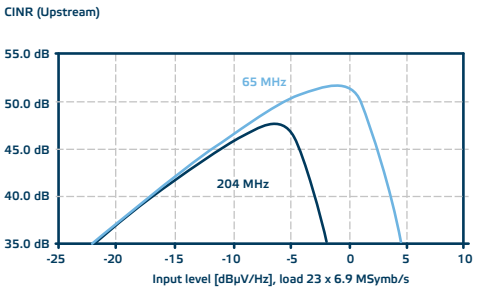
The integrated fibre management facility provides secure storing location for fibre-optic cables and fibre splices.

7. PSU with active power factor correction

The combination of high output level, 1.2 GHz DS frequency, and smart features can be potentially power-consuming. In the AC9100 NEO this challenge is solved by built-in active power factor correction and clever design that guarantee low power consumption.

AC9100 NEO / SMART 1.2 GHZ NODE WITH REMOTE PHY SUPPORT

DOWNSTREAM SIGNAL PATH		UPSTREAM SIGNAL PATH	
Light wavelength	1290…1610 nm	**Frequency range**	5… up to 204 MHz
Optical input power range	-8…0 dBm	**Return loss**	18 dB
Frequency range	85…1218 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**	0…-20 dB
Umax (112 QAM channels, @ 1.0 GHz)	114.0 dBµV	**OMI test point**	-5 dB
Umax (138 QAM channels, @ 1.2 GHz)	111.5 dbµV	**CINR**	See curves
AC67xx RETURN PATH TRANSMITTERS		**REMOTE PHY MODULES**	
Light source	CWDM (10 wavelengths)	**DS SC-QAM channels**	120 chs, 108…1006 MHz
Optical output power	+1 dBm / +3 dBm / +6 dBm	**DS OFDM channels**	6 chs, 108…1218 MHz, Modulation up to 16k QAM
Frequency range	5… up to 204 MHz	**Number of US segments**	1 / 2
Pilot frequency	5.5 MHz / 6.5 MHz / no pilot	**US SC-QAM channels**	12 chs per segment, 5…85 MHz
		US OFDMA channels	2 chs per segment, 5…204 MHz, Modulation up to 4k QAM
		Number of OOB channels	3 per segment
		Uplink interfaces	2x10 GigE interface, SFP+ mod. slot
		Standard	CableLabs Remote PHY specs
AC6992 TRANSPONDER MODULE (CATVisor / HMS)			
Power consumption	1.8 W	**DS measurement range**	50…1218 MHz, 0.25 MHz steps
DS frequency range	80…88 MHz, 108…132 MHz, 160…176 MHz, 216…264 MHz	**US measurement range**	5…204 MHz, 0.25 MHz steps
US frequency range	5…65 MHz	**Measurement bandwidth**	0.35 MHz
DS input level range @ transponder	60…90 dBµV	**DS dynamic range**	80…120 dBµV @ node out
US output level range @ transponder	75…104 dBµV	**US dynamic range**	20…75 dBµV @ node in
GENERAL CHARACTERISTICS			
Power consumption	50…84 W	**Dimensions (h x w x d)**	360 mm x 350 mm x 140 (190) mm
Supply voltage	30…65 V AC	**Weight**	10 kg (16 kg)
Max current feed trough	12 A / port	**Operating temperature**	-40…+55 ºC
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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TELESTE CORPORATION
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