Distributed access

DAN300
COMPACT REMOTE PHY DEVICE WITH RF OVERLAY

Teleste DAN300 is a compact DOCSIS® 3.1 capable RPD. It is designed to provide operators with a smooth way to deploy distributed architecture in their networks. A true alternative for operators eager to take a quantum leap and build networks having substantially higher capacity.

The DAN300 is designed and optimized for distributed access networks and meets CableLabs® specifications ensuring interoperability with different CCAP cores. It converts a 10 gigabit IP connection into 1.2 GHz full spectrum, high-quality coax-based data transmission and makes it possible for operators to address consumers' increasing demands for faster broadband connectivity. The device underpins the forward path with an optional RF overlay functionality supporting legacy solutions. The DAN300 utilises full DOCSIS 3.1 spectrum downstream and upstream directions allowing maximum of 6 OFDM- and 2 OFDMA-channels. This makes DAN300 a future-proof investment for operators who are looking for a reliable solution for network transformations.

TELESTE

DAN300
COMPACT REMOTE PHY DEVICE WITH RF OVERLAY

The DAN300 represents the latest addition to our portfolio, in which high capacity, extensive interoperatibility with CCAP cores and flexibility towards future needs have been taken into account from scratch.

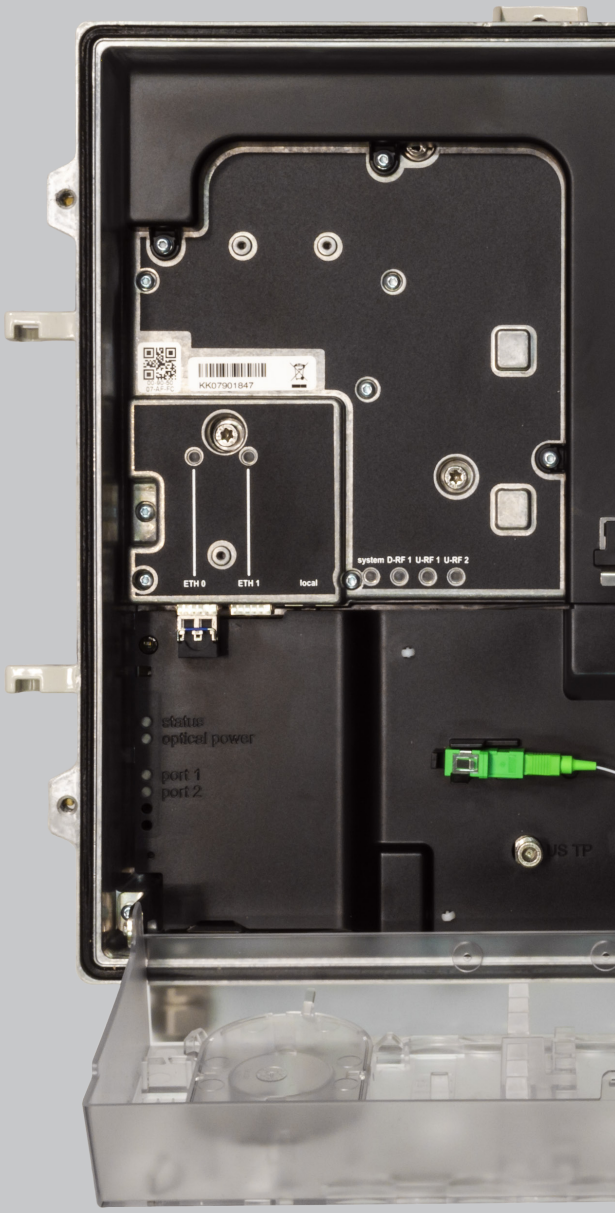
Housing can host an RF overlay module
This feature allows operators to start with traditional centralized video distribution and move to all IP architectures when required.

High reliability
An efficient mechanical design favours both the environment and the operator. Excellent and fully passive cooling design lowers power consumption which increases reliability.

Security
Management traffic between CCAP service card and DAN300 is secured by IPSec. All traffic is received via two SFP modules supporting 10 GbE protocols.

- Authentication 802.1x
- Device Certificate as in CM-SP-R-PHY
- Secure SW download as in CM-SP-R-PHY
- MACSec Product option

Integrated fiber compartment
The integrated fiber management provides secure storing location for fiber-optic cables and fiber splices.

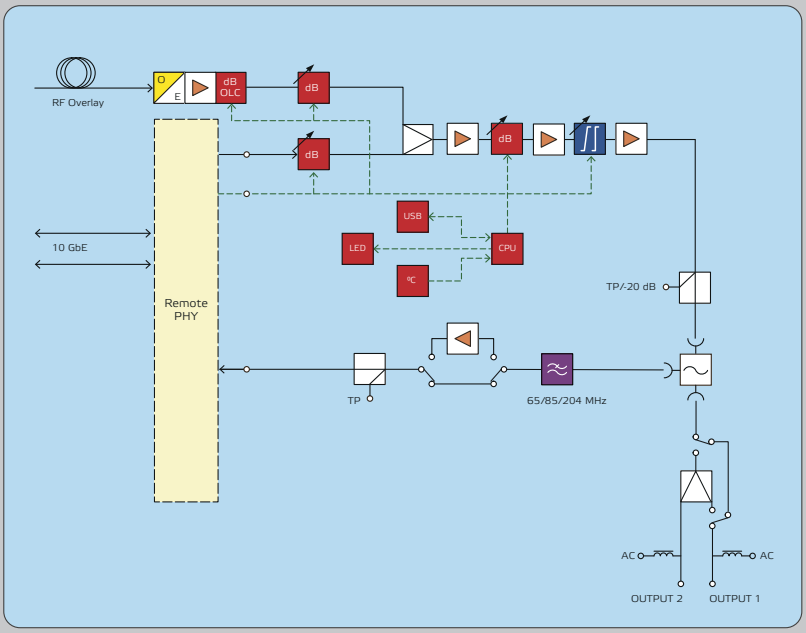


Highlights

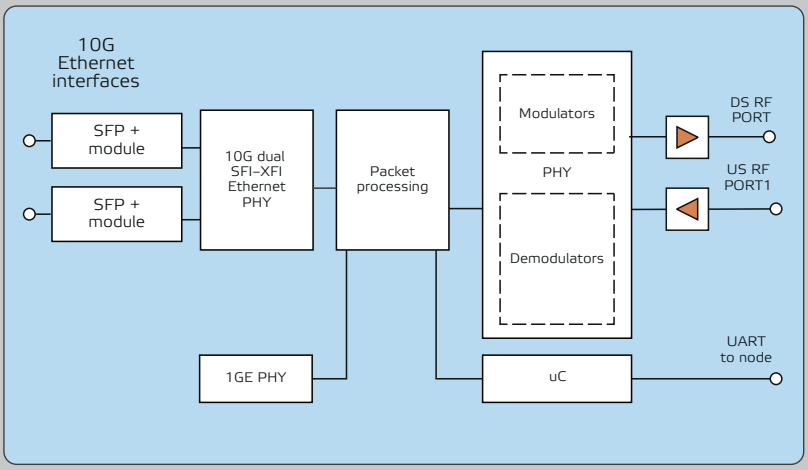
- Meets CableLabs specifications, ensuring multivendor interoperability
- Support for both DOCSIS 3.1 and DOCSIS 3.0 modems
- Supports legacy and out-of-band services and applications
- Power save technology allows cutting down power consumption by 30%
- Compact and energy efficient

Features

- Full spectrum Downstream capacity up to 1.2 GHz
- Return path supports 204 MHz bandwidth
- Support DOCSIS 3.1 and DOCSIS 3.0 channels
- 2 x 10 Gbe SFP+, 2nd for redundancy or daisy chain
- Up to 10 Gbps Downstream throughput
- Up to 2 Gbps Upstream throughput
- Out of Band-systems support using NDF/NDR-channels
- Pilot-tone generation
- 3nd generation GaN amplifier
- Electrical level and slope controls
- Efficient surge and ESD protection



DAN300 block diagram



DAN300 1x1 RPD module

DAN300 / COMPACT REMOTE PHY DEVICE WITH RF OVERLAY

DOWNSTREAM SIGNAL PATH		UPSTREAM SIGNAL PATH	
Light wavelength	1290…1610 nm	**Frequency range**	5…up to 204 MHz
Rx input power range	-7…0 dBm	**Input level**	62…91 dBµV (2…31 dBmV)
Frequency range (RDP)	85…1218 MHz	**Return loss**	18 dB
Frequency range (RF overlay)	85…870 MHz	**Feed through gain**	-6/+10 dB
Maximum output level	118 dBµV (58 dBmV, 188 QAM chs)	**Test point**	-20 dB
Level control	-25…0 dB	**10 GBIT ETHERNET INTERFACES**	
RF overlay offset control	-10…+6 dB	**Number of ports**	2 x SFP+ module slot
Slope control	10…23 dB	**Standard**	IEEE 802.3-2008, Section 4 10GBASE-SR, 10GBASE-LR, 10GBASE-ZR
Umax (138 QAM chs, @ 1.2 GHz)	116.0 dbµV	**Timing**	IEEE-1588
RPD DOWNSTREAM		**RPD DOWNSTREAM OFDM**	
Standard	CM-SP-DFRI Annex D CM-SP-PHYv3.1	**Standard**	CM-SP-DFRI Annex D CM-SP-PHYv3.1
Number of SC-QAM chs	120 pieces of 8 MHz channels	**Number of OFDM chs**	6 x 192 MHz
Frequency range	108…1006 MHz	**Frequency range**	108…1218 MHz
Modulation order	Up to 1024 QAM	**Modulation order**	Up to 16k QAM
All SC-QAM channels can be used flexibly for video or DOCSIS			
RPD UPSTREAM		**RPD UPSTREAM OFDM**	
Standard	CM-SP-PHYv3.1	**Number of OFDM chs**	2 x 96 MHz
Number of SC-QAM chs	12 x 256 QAM ATDMA	**Frequency range**	5…204 MHz
Frequency range	5…85 MHz	**Modulation order**	Up to 4k QAM
OOB SUPPORT		**LOCAL MANGEMENT INTERFACE**	
Downstream frequency range	50…1000 MHz and 85…1218 MHz	**Connector**	RJ45
Number of NDF channels	3, Mode 0…7	**Standard**	1000BASE-T
Number of NDR channels	3 per segment, Mode 0…6		
Standard	CM-SP-R-OOB		
GENERAL CHARACTERISTICS			
Power consumption	63 W (55 W in the power save mode)	**Dimensions (h x w x d)**	360 mm x 350 mm x 140 mm (14”x14”x5.5”)
Supply voltage	28…65 V AC / 100…253 V AC	**Weight**	10 kg
Max current feed trough	12 A / port	**Operating temperature**	-40…+60 ºC (-40…+140 ºF)
Hum modulation	70 dB	**Class of enclosure**	IP67 (IP54 if ventilation hole not closed)
Optical connectors	SC/APC, E-2000	**EMC compatibility**	EN 50083-2
Output ports	PG11	**ESD, Surge**	4 kV, 6 kV (EN 60728-3)

TELESTE CORPORATION
www.teleste.com

P4P_DAN300_0919