Distributed access

DAS RPD SHELF
1.2 GHZ MODULAR AND SCALABLE REMOTE PHY SHELF

Teleste's DAS RPD SHELF serves as the capstone to our comprehensive portfolio of Distributed Access Architecture (DAA) Remote PHY products, which spans from compact RPDs to 19" high-capacity powerhouses. The DAS RPD SHELF is a modular Remote PHY device specifically designed for regional headends, hubs, and MDUs, that require a rack-mountable solution.

Designed to meet CableLabs® specifications, the DAS RPD SHELF ensures multivendor interoperability with different Converged Cable Access Platform (CCAP) cores without compromises. The stackable 1U high chassis is space and power-efficient, making it ideal for confined spaces. The SHELF supports full spectrum DOCSIS® 3.1 downstream and upstream, and various configurations from 1x1 up to 4x8 within one SHELF. It is well-suited for multi-dwelling environments, enabling operators to harness digital fiber instantly for acquiring new customers. This future-proof investment allows operators to take advantage of the latest Distributed Access Architecture (DAA) advancements and enhance their networks with cutting-edge capabilities. Contact us today to learn more.
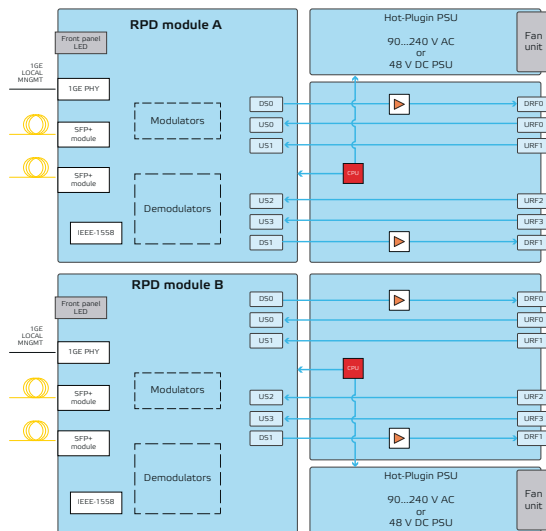
TELESTE

DAS RPD SHELF
INTRODUCING MODULAR AND SCALABLE REMOTE PHY SHELF

Experience the benefits of the DAS RPD SHELF today and take your networks to the next level. By embracing this innovative product, forward-looking operators can take advantage of the latest DAA advancements and enhance their networks.

DAS RPD SHELF block diagram

In-depth

- Out of Band-systems support using NDF/NDR-channels and SCTE 55-1
- Pilot-tone generation
- Alignment carriers
- Flexible support for video QAM channels
- CLI for troubleshooting
- CCAP DRFI compliant RF-level and performance
- Downstream RF-level per port indicator for remote diagnostic.

DOCSIS® 3.1 and DOCSIS® 3.0 compliant

- Meets CableLabs® specifications, ensuring multivendor interoperability
- Supports legacy and out-of-band (OOB) services and applications
- Power save technology allows significant savings
- Compact, scalable and energy efficient

Full spectrum Downstream capacity

- 6 OFDM / 120 SC-QAM downstream channels
- Return path supports 204 MHz bandwidth
- 2 OFDMA channels per segment
- Total of 24 SC-QAM upstream channels
- 2 x 10 GbE SFP+, 2nd for redundancy per RPD
- 230 VAC/48 VDC hot pluggable PSU options

Space and power-efficient solution

The DAS RPD SHELF provides a space and power-efficient solution with its stackable 1U high chassis, making it ideal for use in confined spaces where installation footprint, power, and cooling are all critical factors. While the SHELF can be equipped with two different RPD modules simultaneously, all module variants support full spectrum DOCSIS® 3.1 downstream and upstream.

Configuration changes can be remotely switched on; for example, the 1x2 RPD module can be installed and used initially in the 1x1 mode, and the 1x2 mode can be enabled later when the need for upstream capacity grows. Operators seeking denser alternatives can utilize a pair of 2x2 or 2x4 modules in the same installation, allowing the maximum capacity to reach 4x8 within one SHELF.

An ideal solution for MSOs

The DAS RPD SHELF is an excellent choice for multi-dwelling environments, such as housing associations and campus areas, as it enables operators to harness digital fibre instantly for acquiring new customers. The fibre runs into the basement of an MDU, and coaxial cabling inside the MDU is already available for DOCSIS. Even relatively large MDUs can be served with a single 1x2 module, allowing cable operators to utilize their existing and familiar assets, such as HFC knowledge, DOCSIS back-office capabilities, top-quality cable modems, and service bundles.

In summary

Teleste's DAS RPD SHELF is a modular Remote PHY device designed for regional headends, hubs, and multi-dwelling units (MDUs), offering a rack-mountable solution. Meeting CableLabs® specifications, it ensures multivendor interoperability with different Converged Cable Access Platform (CCAP) cores. We are committed to collaboration, and our rigorous testing and successful field deployments unequivocally validate the interoperability of our distributed access solutions with major CCAP core vendors.

The stackable 1U high chassis is space and power-efficient, making it ideal for confined spaces. The SHELF supports full spectrum DOCSIS® 3.1 downstream and upstream, and various configurations from 1x1 up to 4x8 within one SHELF. It is well-suited for multi-dwelling environments, enabling operators to harness digital fiber instantly for acquiring new customers. This future-proof investment allows operators to take advantage of the latest Distributed Access Architecture (DAA) advancements and enhance their networks with cutting-edge capabilities.

Cutting-edge capabilities

Experience the benefits of the DAS RPD SHELF today and take your networks to the next level. By embracing this innovative product, forward-looking operators can take advantage of the latest DAA advancements and enhance their networks with cutting-edge capabilities.

DAS RPD SHELF / 1.2 GHZ MODULAR AND SCALABLE REMOTE PHY SHELF

10 GIGABIT ETHERNET INTERFACES PER MODULE		SECURITY	
No. of ports	2	Authentication	802.1x
Connectors	2 x SFP+ module slot	Device Certificate	as specified in CM-SP-R-PHY
Standard	IEEE 802.3-2008, Section 4 10GBASE-SR, 10GBASE-LR, 10GBASE-ZR	Secure SW download	as specified in CM-SP-R-PHY
		IPSec	for GCP and L2TPv3 Control plane

LOCAL MGMT INTERFACE (GIGABIT ETHERNET) PER MODULE		MANAGEMENT AND MONITORING	
Connector	RJ45	CLI (telnet ssh) monitoring. SNMP monitoring	RPD, Rack PSU´s and FAN status

DOWNSTREAM RF INTERFACE PER MODULE		DOWNSTREAM RF INTERFACE PER MODULE	
No. of interfaces (RPD111, RPD112)	1	No. of interfaces (RPD111)	1
No. of interfaces (RPD222, RPD224)	2	No. of interfaces (RPD112, RPD222)	2
Power level	DRFI compliant levels / 6 MHz	No. of interfaces (RPD224)	4
Standard	CM-SP-DRFI Annex D CM-SP-PHYv3.1	Standard	CM-SP-PHYv3.1 CM-SP-R-PHY Annex E
No. of SC-QAM channels	160	No. of SC-QAM channels	24 total
Frequency range	54…1002 MHz	Frequency range	5…85 MHz
No. of OFDM channels	6	No. of OFDM channels	2 per RF interface
Frequency range	108…1218 MHz	Frequency range	5…204 MHz

OOB SUPPORT		REMOTY PHY STANDARDS
Downstream frequency range	50…1000 MHz and 85…1218 MHz	**RPD112 and RPD224 are designed to meet the relevant CableLabs remote PHY specifications**
NDF channel width range	Mode 0…7	CM-SP-R-PHY, CM-SP-R-DEPI, CM-SP-R-UEPI, CM-SP-R-OOB, CM-SP-R-OSSI, CM-SP-GCP, CM-SP-R-DTI
NDR channel width range	Mode 0…6	

GENERAL CHARACTERISTICS			
Power consumption (2 x RPD112)	90 W (2xPSU/RPD config.)	Cooling	hot swappable fans
Power consumption (2 x RPD224)	100 W (2xPSU/RPD config.)	Dimensions (h x w x d)	1U x 19” x 20” mm (500 mm)
Operating temperature	-10…+55 ºC ambient	Weight	7.7 kg
Safety	EN 60728-11, EN 62368-1	Electromagnetic compatibility	EN 50083-2, EN 61000-6-1, EN 61000-6-3

DA POWER SUPPLY UNITS (DPW-A, DPW-B)			
Input voltages	90 - 240 VAC, (DPW-A) -48 VDC (-40…-70VDC), (DPW-B)	Fans	2 (attached to module)

DAS FAN TRAY (DPW-C) , Installed to setups with one power supply	
Fans	2 (attached to module)

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