

VDDCOAX-H-4TPW-M / -H-4TPOE-S VDD2-HT-4TPW-M / -HT-4TPOE-S



Features

- **VDDCOAX-H-4TPW-M**
CO local modem Ethernet bridge with POL power feeding source of the line
- **VDDCOAX-H-4TPOE-S**
CPE remote modem 4 POE Ethernet bridge power-feeding by the line
- **VDD2-HT-4TPW-M & VDD2-HT-4TPOE-S**
CO and CPE version for twisted pair only for Railway station EN50121-4
- VDSL2 Transmission 30a and 17a, G.993.2 standard
- Ethernet transport EFM and PTM/VDSL with DMT modulation
- Dual alternative line : Terminal block for twisted pair 0.5 to 1mm Ø and BNC for coaxial cable

Maximum rate :

- 100/100Mbps at 300m
- 45/45Mbps at 600km

Maxi distance:

- 1,2km with twisted pair,
- ,8km with coaxial cable.

Power: feeding

- CO in 48v with optional AC/DC converter
- CPE by the line in POL from the CO
- Or CPE locally in 48v

Ethernet :

- CO: 4 ports 10/100BaseT
- CPE: 4 ports POE PSE 802.3af/at with
 - If DC power use with AC/DC converter 4 x 30W
 - CPE is POL by the line 30W to share on the 4 ports Power available is reduced because of the distance

ETHERNET POE EXTENSION VDSL2 OVER COPPER AT 100Mbps

The **VDD2-H-4TPxx** is a VDSL2 modem/Ethernet bridge solution to connect and power-feed up to 4 Ethernet POE PD terminals like CATV camera, Hot-Spot, IP Phone.... over a single twisted copper pair. The link including Ethernet and power-feeding can reach over 1,7km.

The local equipment supplies on the VDSL line the power-feeding energy (POL) for the distant device. This remote device supports 4 Ethernet POE source port 802.3af/at to power-feed PD terminals. This solution simplifies the installation of video survey, Wifi and 3G Femto AP. The version twisted pair only is compliant to EN50121-4 to be use in Railway Stations.

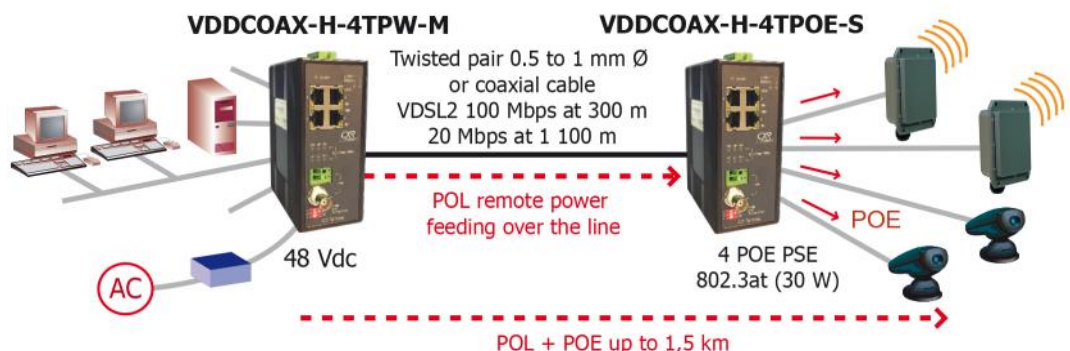


The **VDDCOAX-H-4TPW-M** and **VDDCOAX-H-4TPOE-S** are a pair of hardened VDSL2 modems that is carrying in bridge mode an Ethernet flow at 100/100Mbps rate up to 300m and up to 16/8Mbps at 1.2km over twisted pair Ø 0,5mm. Distance/speed can be increased with a diameter of 0,8 or 1mm of copper pair or by using an coaxial cable with the BNC. The VDSL can be set in 30a or 17a VDSL2 mode and symmetrical or asymmetrical rates.

The VDSL line to power feed the remote device CPE from the local CO device in **POL** mode. The local **VDDCOAX-H-4TPW-M** transmit to the remote modem **VDDCOAX-H-4TPOE-S** the power (POL) with 96Vdc and maximum 0,9A according to the Safety EN60950-1 and K21 regulations of power-feeding the DSL line.

The CPE devices owns 4 Ethernet POE source ports compliant to IEEE802.3af/at of 30W. In case the CPE is locally powered each port support 30W. In case the CPE is POL, 30W are available at 300m or 15W at 600m to share on the 4 ports because of loss over the copper line. In case of large copper diameter the loss of POL is reduced. The POL power loss is better over the coaxial cable and at 1.2km the rate is 50/50Mbps and the available POE 8W.

The setting by DIP switches activates symmetrical or asymmetrical mode, impulse noise filtering or SNR 6/9dB and the POL or local power.



The solution is also available with a 8 ports VDSL DSLAM **SWM-8VDPW-2CB** and 8 **VDDCOAX-H-4TPOE-S**. This 500W switch supports 8 ports with POL .



CXR

TECHNICAL SPECIFICATIONS

Cable: AWG24 Ø 0,5mm					
SNR	6dB		6dB		
Profile/SNR	Asymmetric		Symetric		
Distance(m)	US(Mbps)	DS(Mbps)	US(Mbps)	DS(Mbps)	POE output power
300	65	100	100	100	30W
400	45	95	70	70	20W
600	30	65	45	45	15W
800	10	45	27	27	7W
1000	6	35	18	18	5W
1200	1	20	8	16	4W

Cable: AWG22 Ø 0,65mm					
SNR	6dB		6dB		
Profile/SNR	Asymmetric		Symetric		
Distance(m)	US(Mbps)	DS(Mbps)	US(Mbps)	DS(Mbps)	POE output power
100	100	100			60 W
200	100	100			52 W
300	100	100			45 W
400	95	100			36 W
500	86	100			30 W
600	72	100			24 W

Cable: Coaxial					
SNR	6dB		6dB		
Profile/SNR	Asymmetric		Symetric		
Distance(m)	US(Mbps)	DS(Mbps)	US(Mbps)	DS(Mbps)	POE output power
400	100	100	100	100	30W
600	50	100	50	80	20W
800	50	100	50	70	15W
1000	45	90	50	60	10W
1200	40	70	50	50	8W
1400	35	55	40	35	6W
1600	30	40	35	30	5W
1800	10	35	20	20	4W
2000	5	30	15	15	

Transmission:

VDSL2 G.993.2 , profiles 30a et 17a
 Ethernet bridge Transport over VDSL2 use EFM PTM
 Metanoia Chipset

Support:

Over twisted pair 0,5mm to 1mm for:
 - VDDCOAX-H-4TPW-M;/-H-4TPOE-S: or
 - VDD2-HT-4TPW-M;/-HT-4TPOE-S:

Over coaxial cable BNC for only :

- VDDCOAX-H-4TPW-M;/-H-4TPOE-S: **Ethernet interfaces:**

Local CO **VDDCOAX-H-4TPW-M:** 4 x 10/100BaseT ports RJ45

Remote CPE **VDDCOAX-H-4TPOE-S:** 4 x 10/100BaseT POE source ports IEEE802.3at PoE (PSE) up to 30W.

- If POL feeding: 30W are shared on the 4 ports. In this mode LEDs show the available power.

- If local DC45 power 30W are available per port.

Auto-negotiated ports: rates 10/100Mbps, full/half duplex, MDI/MDIX.

Compliant to: IEEE 802.3, 802.3u,802.3x, 802.1p, 802.1Q and for POE source (PSE) IEEE802.3af and IEEE802.3at

Ethernet bridge

Supports Ethernet 2Kbytes frames(MTU), MAC address memory: 2K

Set-up: By DIP-Switches for: High speed profile 30a/Long distance 17a, Impulse noise Bruit filter (on/off), SNR margin filter (6dB or 9dB)

CO VDDCOAX-H-4TPW-M power supply:

Input -38 to -58 VDC, (terminal block)

Consumption 65W with full POL of the DSL line.

Protection of polarity inversion.

POL at 96V and 0.9A with K21 protection against short circuit of line or over-current. Option AC/DC 48v 120W converter.

CPE VDDCOAX-H-4TPOE-S power supply:

- from the line in POL

- locally input -38 à -58 VDC, (term. block) consumption 5W + POE maxi 4 x 30W.

Environment:

Working temperature: -40 to +75 °C

Storage temperature: -40 to +85 °C

Humidity 5 to 95% RH (non-condensed)

Compliance

EN60950-1, EN55022, CE, UL508, VCCI, FCC part 15 Class B, RoHS and WEEE

EMC : CE, FCC-Part15 class A

EN-61000-6-2, 61000-6-4

EN50121-4 for Railway substation for the version **VDD2-HT-4TPW-M** and **VDD2-HT-4TPOE-S** with twisted pair only.

Mechanical

Aluminum case IP30, Fanless

DIN-Rail and panel fixing supply

Dimensions

135 (H) x 106,5(D) x 62 (L) mm , Weight 700g

MTBF : VDD-4TPW : 28 years; VDD-4TPOE = 26 years

MODELS

VDDCOAX-H-4TPW-M	VDSL2 PTM modem CO, 2 wire and coax BNC, Ethernet bridge 100/100Mbps at 300m,65Mbps at 600m, 4 10/100BT port, VLAN transparent. Give the Power over the line (in POL) to the distant modem bridge VDDCOAX-H-4TPW-S. Power supply 48Vdc or with optional AC/DC converter.
VDDCOAX-H-4TPOE-S	VDSL2 PTM modem CPE, 2 wire and coax BNC, Ethernet bridge 100/100Mbps at 300m,65Mbps at 600m, 4 10/100BT port POE PsE 802.3at (30W for 4 ports), VLAN transparent. Power by CO/ Master VDDCOAX-H-4TPW-M or SWM-8VDPW-2CB switch. Or local 48Vdc port.
VDD2-HT-4TPW-M	VDSL2 PTM modem CO, 2 wire twisted pair, Ethernet bridge 100/100Mbps at 300m,65Mbps at 600m, 4 10/100BT port, VLAN transparent. Give the Power over the line (in POL) to the distant modem bridge VDDCOAX-H-4TPW-S. Power supply 48Vdc . Compliant to EN50121-4.
VDD2-HT-4TPOE-S	VDSL2 PTM modem CPE, 2 wire twisted pair, Ethernet bridge 100/100Mbps at 300m,65Mbps at 600m, 4 10/100BT port POE PsE 802.3at (30W for 4 ports), VLAN transparent. Power by CO/ Master VDDCOAX-H-4TPW-M or SWM-8VDPW/SWM-8COAX switch. Or local 48Vdc port. Compliant to EN50121-4.
VDD2-I-TPOE-S	VDSL2 PTM modem CPE, 2 wire twisted pair, Ethernet bridge 100/100Mbps at 300m,1*10/100BT port POE PsE 802.3at (30W) .VLAN transparent. Power by CO/Master VDDCOAX-H-4TPW-M or SWM-8VDPW/SWM-8COAX switch. Or local 48Vdc port. Compliant to EN50121-4.
ACDC-48V-75W-DM	AC to 24v 1,5A Adaptor for switch, working temperature -20 to +60°C block terminal, plastic box with DIN rail fixing
ACDC-H-48V-60W-DP	AC/DC converter 88-264Vac at 48V , hardened -20 to +70°C, 5.0A 60W at 50°C,36W at 70°C, terminal block, DIN-rail plastic case, LxDxH 40x90x100mm
SWM-8VDPW-2CB	8 ports VDSL2 PTM Layer2 switch, 2 wire, master/CO, POL of 8 distant devices VDDCOAX-H-4TPOE-S, 2 Combo 10/100/1000BaseT & SFP, 8 x RJ45 to modems. 1U 19", AC power, 500W.
CA-RJ11-BNC	RJ11 to BNC with impedance adaptation, 5cm of coaxial cable.
PAN-8BNC-8RJ11-03	1U 19" pan , 8 BNC-F on front, back 30cm cable with 8 RJ11 termination.

CXR Anderson Jacobson reserves the right to modify the specifications without notice. This document is not a contractual document.



CXR Anderson Jacobson
 Rue de l'Omette
 28410 Abondant - France

T +33 (0) 237 62 87 90
 F +33 (0) 237 62 88 01
 email: contact@cxr.com