



Ethernet Power Node EPN124

The 24-port Ethernet Power Node (EPN124) represents an innovative and powerful way of power feeding the IP DSLAMs in the EDA solution.

24-port power supply

EPN124 is a 24-port Power over Ethernet (PoE) node designed for EDA. The main functionality is to supply –48 V power onto spare wires in the standard Ethernet cable. In this way, EPN124 implements an elegant solution for powering the IP DSLAMs of EDA.

The EPN124 Ethernet Power Node operates from the supply voltage in an input range from –40.5 to –60 V DC and provides output voltage accordingly, with a voltage drop of less than 2 V.

EPN124 is capable of delivering up to 25 W per port within an ambient temperature range of 0 to 45°C. A built-in sensing circuit connects power when required on each individual output; and similarly, power will automatically be disconnected when load is removed from the output.

Reliable power source

Besides providing power to IP DSLAMs, EPN124 also performs the necessary protection and filtering in order

to make sure that the IP DSLAMs are fed from a stable and reliable power source with an operating efficiency of 95% or more. EPN124 is designed to cope with wrong polarity connection as well as over-voltage according to regulatory standards for telecommunications equipment.

Installation

EPN124 is rack mountable in 19" mechanics and takes up only 1 HU (Height Unit) of rack space. Data input as well as data/power output are standard RJ45 Ethernet connectors shielded to ground (cabinet).

Installation is Plug & Play and requires no configuration. All 24 input and output ports are accessible on the front, well aligned for easy connection of the cables. A –48 V supply is connected in terminal connectors on the cabinet's rear side.

Technical data

THIS DOCUMENT IS VALID FOR RELEASES

- EDA 2.0 and EDA 2.1

ETHERNET PORTS

- 24 Power over Ethernet (PoE) ports (RJ45), connected according to IEEE P802.3AF/D3.1 clause 33
- 24 Fast Ethernet (FE) input and 24 Fast Ethernet output, 100BaseT (ANSI/IEEE 802.3 clause 25)

POWER-OVER-ETHERNET OUTPUT

- Power limitation at 25 W on each PoE output (0.7 A)
- 4 ms voltage interruption backup on PoE outputs
- Short circuit protection on RJ45 outputs
- PoE feeding on RJ45 pins 4+5 (GND) and 7+8 (-48 V)

VOLTAGE INPUT

- -40.5 to -60 V DC (-48 V DC nominal)
- Requirement on input current: max. 15.2 A

OVP AND SAFETY

- Over Voltage Protected on -48 V input for resistance to surge (500 V 2/12 Ω 1,2/50 μ s (8/20 μ s)) and 2 J surge pulse at the end of a 4 ms voltage interruption (ETR283:1996)
- Compliance to standards for safety (CE), as well as EN 60950/UL 60950 including A1, A2, A3, A4 for safety issues, double insulation, Class I, TNV1

DIMENSIONS

- HxWxD: 44.45 x 445 x 145 mm
(that is width of 19" and height of 1 HU)
- Weight: 2.25 kg

EMI/EMC

- EN 300 386:2001 for Telecommunication Centers Class A and other than Telecommunication Centers Class A.
- FCC Part 15 Title 47 class A

PERFORMANCE AND RELIABILITY

- Max. 2 V DC drop from input voltage
- Operating efficiency >95%
- MTBF: 48 years

ENVIRONMENTAL

- ETS 300 019-1-3 (Operating env.) Class 3.2: Partly temperature controlled locations, that is -5 to 55°C
- ETS 300 019-1-2 Class 2.3: Public Transportation
- ETS 300 019-1-1 (Storage) Class 1.2: Weather protected, non temperature controlled storage stations
- Life-cycle optimized according to ISO 14001