ALWAYS CONNECTED

Universe CATV

Optical CATV receiver

The Hybrid product family marks the embodiment of a new vision of FTTH. It separates the service layer from the network layer, resulting in a modular, cost-effective and flexible home gateway solution matching all types of FTTH networks.

The Universe-CATV optical CATV receiver offers a fully hot-pluggable CATV solution for your Hybrid configuration. It has been developed to enable service providers the ability to offer conventional analogue and digital video/radio broadcasting services in FTTH applications without requiring the end-user to replace their home equipment.

Features

- Hot-pluggable with Universe FTU
- Fully end-customer installable
- Remote enabling/disabling via Hybrid Live! residential gateway
- Remote monitoring of the optical input signal
- World's most sensitive receiver, significantly lowering head-end cost
- Multi-dwelling unit available

Receiver module

The Universe-CATV is designed for receiving optical RF signals and converting them to user-ready coaxial signals without loss of quality. The Universe-CATV supports conventional analogue TV/radio signals, as well as Digital Video Broadcasting (DVB) signals.

Industry standard F-connector

Since CATV signals are broadcast signals, the end-user's in-house coaxial network can be connected directly to the F-connector output of the Universe-CATV module. It's available for both single-dwelling and multi-dwelling purposes.

Product features & specifications

Universe CATV

General specifications

- Dimensions (H x W x D)
  - Universe-CATV 50x117x17 mm
  - Incl. drawer 52x136x20 mm
  - Full Hybrid solution 241x104x75mm
- Weight
  - Universe-CATV 80 g
- Power (provided by Hybrid Element) 12 Vdc ± 10%
- Power dissipation 1.2 W typ.
- Operating temperature 0 - 35 °C
- Storage temperature 0 - 70 °C

User interfaces

1x Optical interface SC/APC

1x Electrical interface coaxial F-connector

Optical interface

- Single mode fiber (ITU-T G.652 / G.657a)
- SC/APC connector
- Receiver wavelength 1270 – 1610 nm
- Maximum optical input 0 dBm
- Minimum optical input -10 dBm
- Recommended input range -10 – -5 dBm
- Target optical input -7 dBm
- Threshold for valid input signal (for LED indicator and remote monitoring) -12 dBm
- Optical return loss > 45 dB

Electrical Interfaces

- Coaxial connector F-female (IEC 169-24)
- RF impedance coaxial connector 75 Ω
- RF frequency range 47 – 862 MHz
- Flatness and tilt ± 1 dB
- Return loss output ≥ 18 dB (40 MHz / -1.5 dB/oct)
- C/N 46 dB @ -10 dBm input, OMI 5%/ch
- CSO -60 dBc typical for f > 100 MHz (-4 dBm optical input)
- CTB -60 dBc typical (-4 dBm optical input)

For Universe-CATV-c

- RF output level 66 – 86 dBµV typical (-10 dBm to 0 dBm, OMI 5%/ch)
  - 66 dBµV typical @ -10 dBm input
  - 72 dBµV typical @ -7 dBm input
  - 76 dBµV typical @ -5 dBm input

For Universe-CATV-a

- RF output level 80 – 100 dBµV typical (-10 dBm to 0 dBm, OMI 5%/ch)
  - 80 dBµV typical @ -10 dBm input
  - 86 dBµV typical @ -7 dBm input
  - 90 dBµV typical @ -5 dBm input

Powering, control and monitoring

- Powered by Hybrid Element
- Local monitoring if input signal is valid (LED indicator)
- Remote enabling/disabling (only in combination with a managed Live! or Element)
- Remote monitoring if input signal is valid (only in combination with a managed Live! or Element)

Powering, control and monitoring

- CE approved
- Safety: IEC EN 60950
- Laser safety:
  - IEC EN 60825-1: Class 1 laser product
  - IEC EN 60825-2: Hazard level 1
- Emission: EN 55022, Class B
- Immunity: EN 55024