



2WIRE MODULE

Description

The 2WIRE-Module is a communication module for transmitting and receiving data over any pair of wires, including power line, bell wire or coax cables.

It holds all functions necessary for the easy creation of an Nessum Wire (IEEE1901) compatible network device. Nessum-Wire (formerly known as HD-PLC) is based on wavelet OFDM (Orthogonal Frequency Division Multiplexing), which allows for efficient use of the available bandwidth, low power consumption, excellent noise rejection capabilities and will pass EMC regulations.

The 2WIRE-Module integrated AES-128 bit encryption, but will also allow for Plug & Play operation without configuration.

On the LAN-side 10/100 Ethernet is provided for simple connection to other device, e.g. via PHY-to-PHY coupling.

The module has been design for fast and easy integration.

Features

- Up to 1000 m range via bell wire
- Nessum Wire encryption with 128-bit AES
- Up to 1024 communication nodes
- Node pairing for enhanced security
- 10/100M Ethernet with Auto-MDIX
- UART, SPI, I2C and GPIO interfaces
- Status LEDs for Ethernet and 2WIRE lines
- Ultra-low power design, max.0.31.3W
- Only 12V power supply is needed
- Provides 3.3V output with up to 0.5A
- Physical dimension: 23.0 mm x 28.0 mm
- Horizontal mounting on a motherboard
- On board 2Wire transformer, can be bypassed by application specific transformer
- Cost-optimized design
- Industrial temperature range: -40° to +85°C

Applications

- Ethernet extension via any wire
- Polarity agnostic 2-wire installation
- Retrofitting using existing wiring
- Security Cameras, AV-Intercoms
- Home Automation

Nessum Wire integration into existing products

via any pair of (voltage-free) wires

