EKI-1751

10/100BASE-T, Ethernet Over VDSL2

Features

- Media and protocol converter 1 x 10/100BASE-T port to 1 x VDSL2 port
- Operates over existing CAT3 cabling
- Supports VDSL, Band Plans 997 and 998 (symmetrical and asymmetrical) transmission as per the ITU-T G.993.2 standard
- Onboard surge protection
- LED indicators for power, speed, and other status
- Adjustable SNR

Introduction

The EKI-1751-AE is a long reach Ethernet extender that utilizes existing copper cabling infrastructure (twisted pair) to extend Ethernet to up to 1200 m over VDSL2. Applications such as IP-based Internet, video surveillance, and voice services can benefit from the EKI-1751-AE series. The devices support VDSL2 Profiles 17a and 30a.

The EKI-1751-AE is designed to work in pairs over twisted a pair connection; as an unmanaged product, it is easy to install and each extender can be set to a master (CO) or remote (CPE) mode via a dip switch. Offering one model that can be set to master or remote mode and operate as a pair reduces investment costs while minimizing inventory.

The extenders support SNR margin, VDSL2 Profile 30a (high-bandwidth mode) or VDSL2 Profile 17a (long reach mode), and symmetric/asymmetric data throughput, all of which are dip switch-selectable. The selection of symmetrical/asymmetrical throughput of upstream/downstream data rates directly influences the distance covered. LEDs include link activity, VDSL status, and central office or customer premises equipment designation.

The extenders meet IEEE 802.3 Ethernet standards and offer transparent support IEEE 802.1Q for VLAN.

Specifications

Interface

- **I/O Port**: 1 x 10/100BASE-T/TX RJ-45
  1 x VDSL2 extender RJ-45
- **Power Connector**: 2.1-mm DC jack

Dip Switch

- **Pin 1**: Selectable CO or CPE mode
- **Pin 2**: Selectable 30a or 17a (VDSL2 profile)
- **Pin 3**: Selectable band plan (symmetric or asymmetric)
- **Pin 4**: Selectable target SNR margin (6 or 9 dB)

Physical

- **Enclosure**: Metal shell
- **Protection Class**: IP30
- **Installation**: DIN rail or panel rack mountable
- **Dimensions (W x H x D)**: 72.5 x 23 x 94.5 mm (2.85" x 0.91" x 3.72")

LED Display

- **System LED**: PWR
- **Port LED**: Link, speed, activity

Environment

- **Operating Temperature**: 0 ~ 45°C (32 ~ 113°F)
- **Storage Temperature**: -40 ~ 70°C (-40 ~ 158°F)
- **Ambient Relative Humidity**: 0 ~ 95% (non-condensing)
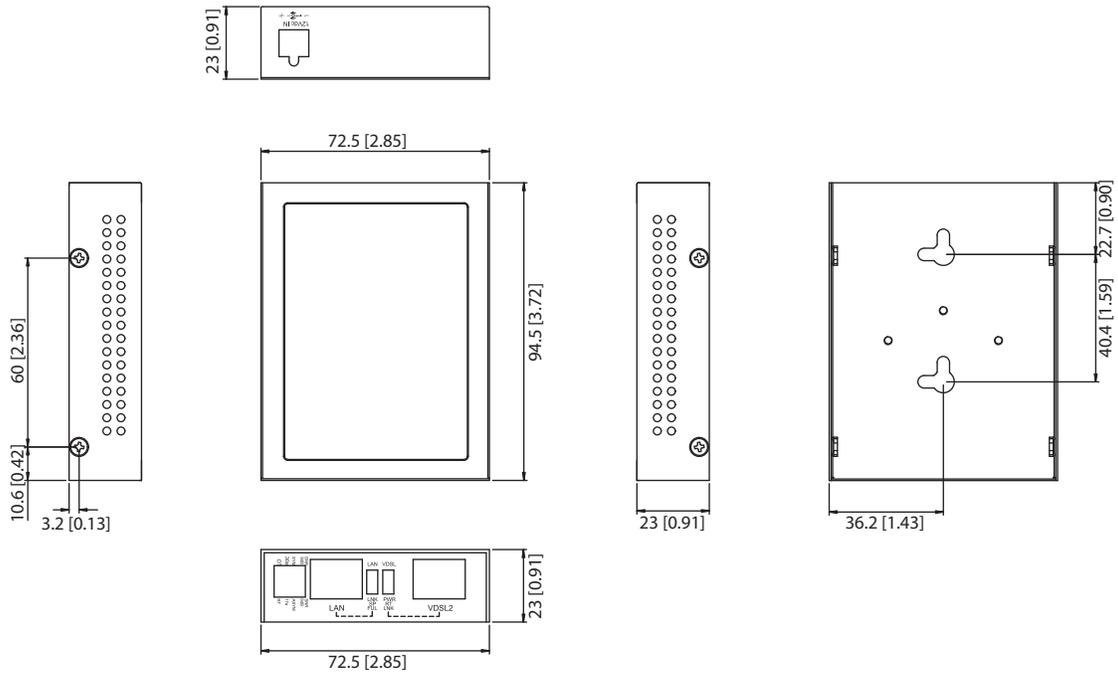- **Humidity**: 0 ~ 95% (non-condensing)

Power

- **Power Input**: 12 V_{DC}/1A, external power adapter
- **Power Consumption**: 4.2 W

Certification

- **EMI**: CE, FCC Class A
- **Safety**: UL60950
- **EMC**: EN 61000-4-2
  EN 61000-4-3
  EN 61000-4-4
  EN 61000-4-5
  EN 61000-4-6
  EN 61000-4-8
  EN 61000-4-11
- **Shock**: IEC 60068-2-27
- **Freefall**: IEC 60068-2-32
- **Vibration**: IEC 60068-2-6
- **Patent**: http://www.advantech.com/legal/patent

Dimensions

Unit: mm [in.]

23 [0.91]

72.5 [2.85]

94.5 [3.72]

60 [2.36]

10.6 [0.42]

3.2 [0.13]

23 [0.91]

22.7 [0.90]

40.4 [1.59]

36.2 [1.43]

23 [0.91]

LAN   VDSL2

72.5 [2.85]

Panel Cutout Dimensions: 72.5 x 23 x 94.5 mm (2.85" x 0.91" x 3.72")

Ordering Information

- **EKI-1751-AE**   VDSL2 Ethernet Extender Compact