

EKI-1751-AE

VDSL2 Ethernet Extender

Overview

The EKI-1751-AE is a Long Reach Ethernet Extender to utilize existing copper cabling infrastructure (twisted pair), extending Ethernet to up to 1200 meters over VDSL2. Applications such as IP-based Internet connections, video surveillance and voice services can benefit from the EKI-1751-AE. The devices support VDSL2 Profiles 17a and 30a.

EKI-1751-AE is designed to work in pairs, over twisted pair; as an unmanaged product, it is easy to install and each Extender can be set to a Master (CO) or Remote (CPE) via a DIP Switch. Offering one model that can be set to a Master or Remote and operate as a pair reduces the cost of investment and minimizes inventory as well.

The Extenders support SNR Margin, VDSL2 Profile 30a(High Bandwidth Mode) or VDSL2 Profile 17a (Long Reach Mode), and Symmetric/Asymmetric data throughput, all DIP Switch-selectable. The selection of symmetrical or asymmetrical for 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 802.3 Ethernet standards, as well as transparently supporting VLANs, 802.1q.

Packing List

Before installation, please make sure that you have received the following:

- 1 x EKI-1751-AE VDSL Ethernet Extender
- 1 x Power Adapter
- 1 x DIN-rail Mounting Bracket and Screws
- 1 x EKI-1751-AE Startup Manual

If anything is missing or damaged, contact your distributor or sales representative immediately.

User Manual

For more detailed information, please refer to the full manual which can be found on the Advantech's website.

Specifications

General

- **I/O Port:** 1 x 10/100Base-T(X) RJ-45
1 x VDSL2 Extender RJ-45
- **Power Connector:** 2.1mm 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 (6dB or 9dB)
- **LED Indicators:**
 - System LED :** PWR
 - Port LED :** Link / Speed / Activity
- **Power Input :** 12V_{DC}, 1A, External Power Adapter
- **Power Consumption:** 4.2 Watts
- **Dimensions (W x H x D):** 72.5 x 23 x 94.5 mm (2.85" x 0.91" x 3.72")
- **Enclosure:** IP30
- **Operating Temperature:** 0 ~ 45°C (32 ~ 113°F)
- **Storage Temperature:** -40 ~ 70°C (-40°F ~ 158°F)
- **Operating Humidity:** 0 ~ 95% (non-condensing)
- **Storage Humidity:** 0 ~ 95% (non-condensing)
- **Safety:** UL60950
- **EMC:** CE, FCC
- **Warranty:** 5 years

Notes

For more information on this and other Advantech products, please visit our websites at:

<http://www.advantech.com/products/>

For technical support and service:

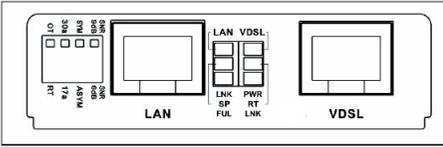
<http://www.advantech.com/support/>

This startup manual is for EKI-1751-AE

1st Edition

Mar 2018

Overview



LED Indicators

LEDs for VDSL2

LED	Blink	ON	OFF
PWR (Green)		Device Power ON	Device Power OFF
LNK (Green)	Slow: Idle Fast: Training / Data Transmitting	Link Up	Link Down
RT (Green)		CPE	CO

LEDs for LAN

LED	Blink	ON	OFF
LNK (Green)	Activity	Link Up	Link Down
FUL (Green)		Full Duplex	Half Duplex
SP (Green)		100Mbps	10Mbps

** Power supply:

12 Vdc in over 2.1mm DC Jack. (External Power Adaptor included)

DIP Switch

DIP Switches



	DIP 1	DIP 2	DIP 3	DIP 4
Side		VDSL2 Profile	Rate Limit	SNR
OFF	OT	30a	Symmetric	9dB
ON	RT	17a	Asymmetric	6dB

Description :

DIP 1 :

OT : LAN Extender acts as Central Office (CO) side.

RT : LAN Extender acts as Customer Premise Equipment (CPE) side.

DIP 2 :

30a : VDSL2 High Speed Mode.

17a : VDSL2 Long Reach Mode.

DIP 3 :

Symmetric : Support the band plan G.997 and provide the symmetric transmission on both downstream and upstream.

Asymmetric : Provides highest line rate in short range in asymmetric mode.

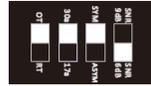
DIP 4 :

9dB : Better channel noise protection with SNR up to 9 dB.

6dB : Original channel noise protection with 6 dB SNR.

DIP Switch Setting Mode

Setting as CO side



Setting as CPE side



<Quick Installation>

STEP 1 :

Set the LAN extender to CO mode or CPE mode from the DIP switch at the front panel. For Point to Point applications, one unit must be Master (CO mode) and the other one is Slave (CPE mode).

STEP 2 :

Connect the LAN extender (CPE) with a regular Cat. 5 cable to the LAN port from a PC or another device on LAN.

STEP 3 :

Power on LAN extender (CPE) by connecting the power adapter.

STEP 4 :

Connect the CPE and CO via a regular Cat. 5 cable or a telephone wire from each VDSL2 port.

STEP 5 :

Connect the LAN extender (CO) with a regular Cat. 5 cable to the LAN port and then connect the other end of the RJ45 cable to the service equipment.

STEP 6 :

Power on LAN extender (CO) by connecting the power adapter and then observe the status of VDSL2 link LED.