

## 10/100Mbps VDSL2 Ethernet Extender Kit over Single Pair Wire - 1.5km

110VDSLEXT2 / 110VDSLEX2GB / 110VDSLEX2EU



\*actual product may vary from photos

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## FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by StarTech.com could void the user's authority to operate the equipment.

## Industry Canada Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.

CAN ICES-3 (B)/NMB-3(B)

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# Introduction

## Packaging Contents

- 1x Ethernet VDSL2 - Transmitter
- 1x Ethernet VDSL2 - Receiver
- 2x RJ45 Cables
- 8x Rubber Feet
- 2x Power Adapters
- 1x Instruction Manual
- 2x Wall mount screws and anchors

## System Requirements

- 10/100 Mbps Ethernet Network
- Available AC electrical outlets
- RJ11 cable or RJ11 lines in building infrastructure

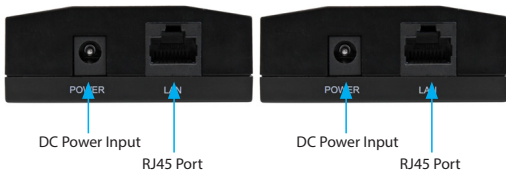
# Product Overview

The Ethernet Extender Kit consists of x2 Ethernet VDSL2 Transmitter/Receiver units. Either unit can be used at either end of your configuration (transmitting end or receiving end), however the DIP switch settings should be modified according to your specific needs based on direction of traffic.

**By default, all DIP Switch settings on each of the two units are set to the downward (OFF) position.**

See the DIP Switch and Mode Settings section for more information.

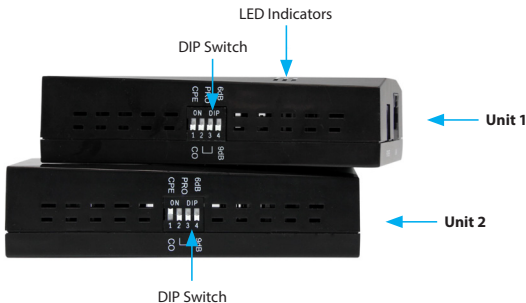
## Front View



## Rear View



## Side View



# LED Indicators

LED (Green)	OFF	ON (Solid)	FLASHING
<b>PWR (Power)</b>	Power Off	Power On	NA
<b>ETH (Ethernet)</b>	No RJ45 Link/Connection	Connected	Activity
<b>DSL (VDSL)</b>	No VDSL Link/Connection	Connected	Slow - Establishing Connection Fast – Sync / Activity

# Installation

## Hardware Installation

One of the Ethernet Extender Kits units should be considered a “Transmitting Unit”, while the other should be considered a “Receiver Unit.”

### Transmitter Unit

1. Place one of the units at the local location, this unit will act as the Transmitter Unit.
2. Connect the provided power adapter from an AC electrical outlet to the DC Power Input on the Transmitter Unit. The “PWR” LED should light up solid.
3. Set all four of the DIP switches to the downward (OFF) position. This places the Transmitter Unit in CO mode (Central Office Mode).
4. Connect an RJ45 Ethernet cable to the RJ45 Port on the Transmitter Unit.
5. Connect the other end of the Ethernet cable into your Ethernet network device (eg: Ethernet switch, modem, etc). The “ETH” LED should light up solid.
6. Connect an RJ11 phone cable into the RJ11 VDSL Port on the Transmitter Unit.
7. Connect the opposite end of the RJ11 cable to the RJ11 VDSL Port on the Receiver Unit (or to your buildings RJ11 phone line infrastructure, depending on your setup).

**Optional:** Configure DIP switches 2 through 4 as necessary (see the “DIP Switch and Mode Settings” section).

### Receiver Unit

1. Place the second unit at the remote location, this unit will act as the Receiver Unit.
2. Connect the provided power adapter from an AC electrical outlet to the DC Power Input on the Receiver Unit. The “PWR” LED should light up solid.
3. Set the DIP switch setting #1 to the upward (ON) position, with the remaining 3 DIP switches set to the downward (OFF) position. This places the Receiver Unit in CPE mode (Customer Premises Equipment Mode).
4. If previously not completed, connect the RJ11 cable that was inserted into the RJ11 VDSL Port on the Transmitter Unit directly to the RJ11 VDSL Port on the Receiver Unit (or from your buildings existing RJ11 analog telephone wiring, depending on the setup from step 7 above.)
5. If the Transmitter and Receiver Units are able to successfully communicate with each other, the “DSL” LED should flash slow, then fast while establishing a connection, and eventually light up solid. The “DSL” LED will continue to flash when there is activity between the Transmitter and Receiver Unit.
6. Connect your Ethernet network device (eg: Ethernet switch, modem, etc) to the RJ45 Port on the Receiver Unit. The “ETH” LED should light up solid.

**Optional:** Configure DIP switches 2 through 4 as necessary (see the “DIP Switch and Mode Settings” section).

# DIP Switch and Mode Settings

The Ethernet Extender Kit units have a 4-position DIP switch for configuration of **CO/CPE, Profile, Band,** and **SNR**.

**By default, all DIP switch settings for both units are set to the downward “OFF” position.**

	DIP1	DIP2	DIP3	DIP4
Function	CO/CPE Mode	Profile Mode	Band Mode	SNR Target
ON	CPE	17a	Symmetric	6dB
OFF	CO	30a	Asymmetric	9dB

For initial setup, DIP switch 1 is usually set to the downward (OFF) position, ensuring the unit is set to CO mode, set the 2nd unit to CPE mode by setting DIP switch 1 to the upward (ON) position.

When using the Ethernet Extender Kit, one end (Transmitter or Receiver) must always be set to “CO” (Central Office), mode, while the opposite end must always be set to “CPE” (Customer Premises Equipment) mode.

**To ensure the Ethernet Extender Kit operates as intended with no problems, errors, or disruptions, DIP switch settings 2 through 4 should be set to the same position on both your Transmitter and Receiver Units.**

## CO or CPE Mode

Setting each unit to CO or CPE mode is usually based on which direction you want the most bandwidth delivered. “Download” bandwidth, data sent from CO to CPE, is generally higher than “Upload” bandwidth from CPE to CO.

If you need higher bandwidth from the Transmitter Unit to the Receiver Unit, set DIP switch 1 to the downward (OFF) position at the transmitting end and the upward (ON) position at the receiving end.

If you need higher bandwidth from the Receiver Unit to the Transmitter Unit, set DIP switch 1 to the upward (ON) position at the receiving end, and the downward (OFF) position at the transmitting end.

## Profile Mode

Profile Mode is the VDSL2 profile, 17a or 30a, with 30a allowing higher bandwidth at longer distances. Set this DIP switch to the upward (ON) position for 17a, or the downward (OFF) position for 30a, depending on your network requirements and preferences.



## **Band Mode**

Band Mode places the unit in either Symmetric or Asymmetric mode. Set this DIP switch to the upward (ON) position for Symmetric mode, with both downstream and upstream transmissions operating on the G.997 band plan, or set to the downward (OFF) position for or Asymmetric mode, with asymmetric short range transmissions operating at the highest available line rate.

## **SNR Target**

SNR Target can be set for the unit to operate with ratios up to 6 or 9 dB. Set this DIP switch to the upward (ON) position for a SNR ratio up to 6dB, or to the downward (OFF) position for a SNR ratio up to 9dB.

# Technical Support

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For the latest drivers/software, please visit [www.startech.com/downloads](http://www.startech.com/downloads)

## Warranty Information

This product is backed by a two year warranty.

In addition, StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

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