Please read this document carefully before installation!

One port/Two ports IPTV Booster

and

IPTV Booster Power Supply

Installation Manual

Version: 1.0

Preface

This manual is bringing to you that how to use this product. To the best use of the product, please read this manual thoroughly before using and keep this manual handy for ease of reference.

- The contents of this document may be updated in the future, without prior notice.
- This booklet was created with thorough attention to the content. If, however, you have any question, spot an error, or find a description lacking, please contact us according to the information in the bottom of the booklet.
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Contents

1.Unpack

Unpack equipment carefully; check for completeness against the purchase order. Notify supplier if items are missing.

Note: Please keep the packing material. All equipment returned must be packed in the original packing material.

Inspect equipment for shipping damage, including bent or loose hardware, and broken connectors.

If equipment was damaged in transit, please contact supplier.

Product list

One Port IPTV Booster over POTS:

- ✓ WH-AE-8001PB, one
- ✓ WH-AE-AECB1P, one
- ✓ Installation manual, one

Two Ports IPTV Booster over POTS:

- ✓ WH-AE-8002PB, one
- ✓ WH-AE-AECB1PH, one
- ✓ Installation manual, one

One Port IPTV Booster over ISDN:

- ✓ WH-AE-8001IB, one
- ✓ WH-AE-AECB1P, one
- ✓ Installation manual, one

2.General introduction

IPTV Booster is good at boosting rate:

----Deploying with ADSL2+ system: the Booster can boost the connection bit rate beyond 15 Mbps at 12Kft, also beyond 9Mbps at 19Kft, without affecting existing POTS/ISDN service.

Function and Features

- Deliver much higher speed and more stable video signal for IPTV service on copper line
- Support all kinds of encoding modes
- Improve down stream, completely satisfy the bandwidth and rate of IPTV, network video and all stream media
- Completely compatible with all ADSL system suppliers equipment (ADSL, ADSL2 / ADSL2+)
- Improving ADSL user quality, enlarging bandwidth
- Support both outside and inside mode, water and surge proof
- Remote power supply can be fixed both CO side and CPE side

3.Technical Features

Table 1 – Technical Specifications of WH-AE-8001/2PB, WH-AE-8001IB

Size	148mm×92 mm×42mm	
Input Voltage	Powered by Power Supply	
Power Consumption	2.3W per line	
Operating Environment	Temperature	-40℃～+60℃
	Relative Humidity	5%～95% (Non-condensing)
Number of supported users	1 or 2 IPTV subscribers	

Table 2 - Technical Specifications of WH-AE-AECB1P

Operating Environment	Temperature	-40℃～+60℃
	Relative Humidity	5%～95% (Non-condensing)
Input Voltage	AC85V～AC265V or DC -48V (-36V～-72V)	
Size	112 mm×52 mm×33mm	
Output Voltage	DC 116V	
Output Current	Less than 50mA	

Table 3 - Technical Specifications of WH-AE-AECB1PH

Operating Environment	Temperature	-40℃～+60℃
	Relative Humidity	5%～95% (Non-condensing)
Input Voltage	AC85V～AC265V or DC -48V (-36V～-72V)	

Size	112 mm×52 mm×33mm
Output Voltage	DC 155V
Output Current	Less than 50mA

4.Installation Environment

1) **the actual lines connecting of equipment**

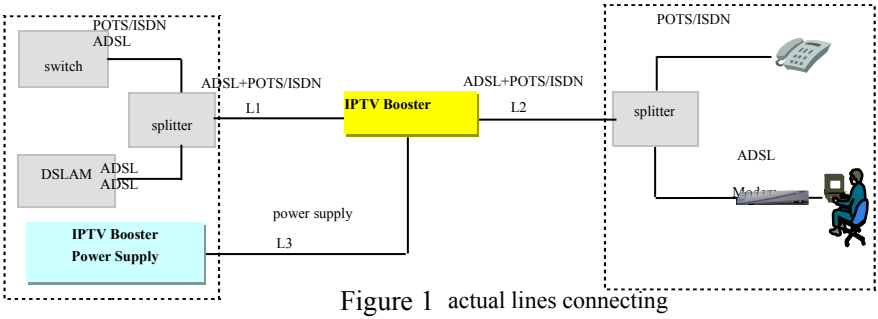


Figure 1 actual lines connecting

L1: The signal twist pair connecting IPTV Booster to DSLAM.

L2: The signal twist pair connecting IPTV Booster to Modem.

L3: The power twist pair connecting IPTV Booster to power supply.

2) resistance and distance demand

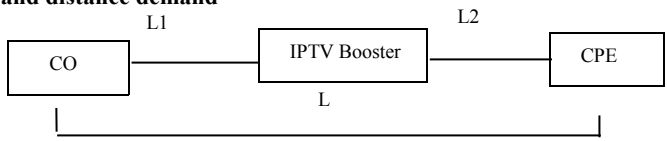


Figure 2 lines connecting sketch map

The recommended installation conditions are as follows.

① 26 AWG twist pair

The demand about resistance and distance is as follows:

Route	Loop resistance demand Ohms (Min.-Max.)	distance demand (Min.-Max.)	
		kfeet	km
L1 (CO-Booster)	450-1260	4.8-13.0	1.4-4.0
L2 (Booster-CPE)	200-900	1.0-9.5	0.3-3.0
L (CO-Booster-CPE)	650-2160	5.0-23.0	1.8-7.0

② 24 AWG twist pair

The demand about resistance and distance is as follows:

Route	Loop resistance demand Ohms (Min.-Max.)	distance demand (Min.-Max.)	
		kfeet	km
L1 (CO-Booster)	310-1000	6.0-19.0	1.8-5.8
L2 (Booster-CPE)	52-520	1.0-9.8	0.4-3.0
L (CO-Booster-CPE)	362-1520	11.5-27.9	2.1-8.8

If the loop resistance between Booster and Modem is lower than the demand value, the WH-AE-LA800 which you could choose and buy from our company can be added to increase loop resistance. The option WH-AE-LA800 is to be installed between splitter and Modem when used on a line with analog voice. Here is the application of WH-AE-LA800 below:

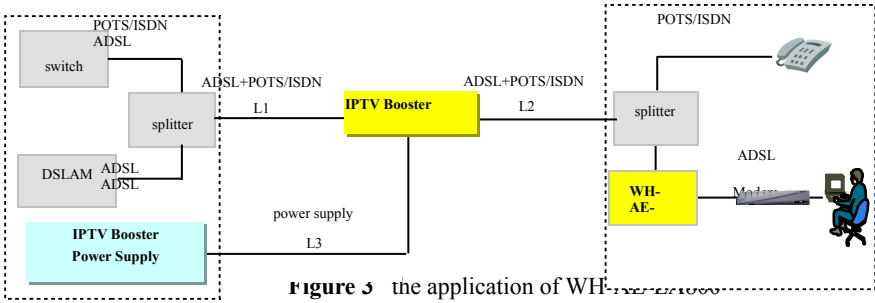


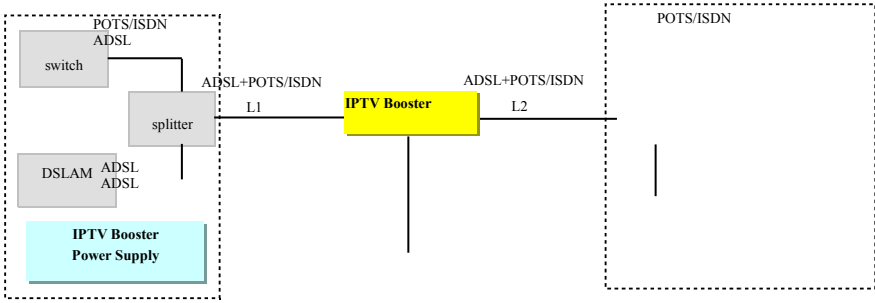
Figure 3 the application of WH-AE-LA800

5.Installation Steps

The WH-AE-8002PB is deployed with WH-AE-AECB1PH and WH-AE-8001PB or WH-AE-8001IB is deployed with WH-AE-AECB1P. Commonly, the IPTV Booster is installed in the junction cabinet, or on the pole at the middle locality. The Power Supply is installed at CO with remote supply. The details about IPTV Booster and Power Supply installation are as follows:

5.1 Install the Power Supply (AEC) for IPTV Booster

1) **the actual lines connecting of equipment**



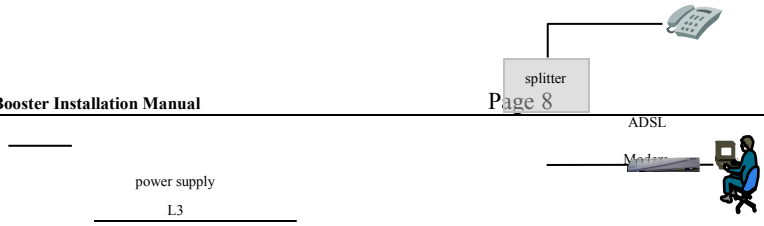


Figure 3 the actual lines connecting with power supply

Generally, the Power Supply is installed at CO with remote supply, just as the follow Fig3. AC220V , AC110V or DC48V can be selected, and one spare copper pair are needed for delivering the output voltage to IPTV Booster.

Connect tails

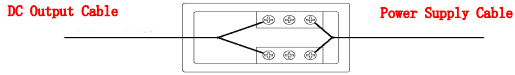


Figure 4 WH-AE-AECB1P(H) Connector Wiring Diagram

- Three-core power cord without plug: used for DC48V power input, no polarity.
- Three-core power cord with plug: used for AC110-240V power input.
- Power output: DC116V/155V power output cable which is already connected to the terminal in wiring box by factory.
- Protection ground: Black protection ground wire should be connected to the protection ground terminals in CO.

Connect the power supply tail(L3)

An additional copper pair is needed for powering the IPTV Booster. Now, the supply voltage from wiring box will go through the additional copper pair and into the IPTV Booster directly. The detail way is as follows:

The Power Supply is installed in the cabinet in CO, connect the output cable of power supply with a spare copper twist pair. Then at the side of IPTV Booster, connect the blue/white lines with the copper pair which connected with the output cable of power supply.

For one thing, the cable pair must be free of DC type faults. All shorts, grounds, cross, battery-crosses, and open cable pairs must be identified and repaired.

② Ground

Connect the Power Supply's ground to CO's grounding terminal directly.

③ Connect power cord

The supplied accessories include power cable for AC 110V、 AC220V or DC 48V. Connect it to the right power source with good connection. To easy the installation, DC power source connection is no polarized.

After power on, the power indicator should be solid on. Flashing indicator indicates short circuits or over-current alarm condition.

Attention: IPTV Booster's Power Supply should NOT be turned on until the IPTV Booster installation is finished.

4.2 Fix the IPTV Booster

① **IPTV Booster** can be placed in the junction cabinet or on the pole at the middle locality.

Attention: Copper-core wire with no less than 1.5mm² section area is required as ground wire. One end of the wire should connect to IPTV Booster's ground terminals, the other end of the wire should connect to a good grounding point.

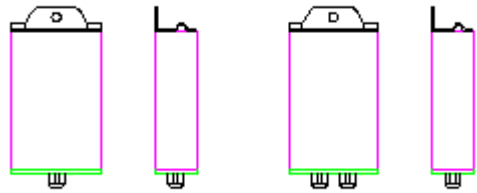


Figure 5 IPTV Booster installing Outdoors

② Connect the cable

Table 3 - Twist-wires Connection Description of WH-AE-8001PB/1IB

Cable I	
Color	**Connection**
Blue/White	Remote PWR
Orange/White	to DSLAM.
Green/White	to Modem.
Brown/White	unused

Table 4 - Twist-wires Connection Description of WH-AE-8002PB

Cable II		Cable I	
Color	**Connection**	**Color**	**Connection**
Blue/White	unused	Blue/White	Remote PWR
Orange/White	to DSLAM.	Orange/White	to DSLAM.
Green/White	to Modem.	Green/White	to Modem.
Brown/White	unused	Brown/White	unused

CAUTION: IPTV Booster(AER) MUST BE GROUNDED RELIABLY.

After power on, the "STATUS" LED should be lightened in a few seconds and remain on during normal system operation.

③ Power up

After confirming that all the twist pair cables are connected correctly and enclosure is securely installed, power up the system. The IPTV Booster will work in 20 seconds after power is supplied stead.

Attention:

a) "A" and "B" represent A and B wire of the twist pair. No polarity.

b) Before power up the system, please make sure all the connections are correct.

c) When the power supply wire is active, do not operate the A and B wire of the supply pair simultaneously. The A wire and B wire should be isolated.

6.Troubleshooting

If the IPTV Booster can't work well, please follow the Table4 and Table5 to find out the problems.

Table 4 - WH-AE-AECB1PH Troubleshooting

Problem Description	Possible Reason	Suggested Resolution
Equipment does not work after power-up. Status LED is off.	Power cord is not correctly connected.	Check power cord connection.
Power indicator flashes.	Power output pairs fails.	Check whether the connection is shorted.
Output is OK but IPTV Booster does not work.	Power output pairs connection is error or short	Correct the power output connection or check cable.

Table 5 – WH-AE-8002PB Troubleshooting

Problem Description		Possible Reason	Suggested Resolution
Equipment does not work after power-up. Status LED is OFF.		Power supply cable is not connected properly.	Check power supply and power cable.
No connection	Status LED is always on.	Cables at DSLAM side or Modem side are not connected properly.	Correct the cable connection
	Status LED flashes.	Cables linked IPTV Booster not connected properly.	