Distributor/Retailer

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Made in Taiwan

VDS VIDEO MODEM SYSTEM
The Best Solution on Coaxial Cable

VDS2730
Installation Manual

Content

Introduction

The VDS2730 is a transmission system for transmitting video, RS-485 data and 12VDC power through one coaxial cable. The system can transmit signals and DC power to 600 meters. If a camera is powered at the remote end, without DC power supplying from Viewer unit, the transmission distance of the VDS2730 can reach 1,000 meters.

Features

- One cable transmits all signals and DC power.
- Universal Voltage Input (85V~265V).
- Supports PTZ (pan, tile, zoom) Camera.
- Up to 600 meters range with DC power; up to 1,000 meters range if camera consumes separate power source.
- Supports RS-485 standard from DC (0bps) to 38.4 Kbps
- Half-duplex channel for RS-485 port
- Real time analog video signals for color and B/W (50 fps /60 fps), 480 TV lines resolution.
- Built-in electrical transient voltage suppressor(TVS) and gas tube arrester protection on LINK IN and LINK OUT ends.
- Inter-carrier technology eliminates signal interference and common mode noise.

Packing Checklist

Carefully unpack the VDS2730 and check that the following items are included:

- VDS2730-R Sender (Remote Unit)
- VDS2730-L Viewer (Local Unit)
- Power supply (AC to DC power adapter) and power cord
- Four mounting brackets and four screws
- Two 120 ohms terminators for RS485 chaining. One for Remote unit and the other for RS485 Network in Local side.
- Installation Manual

Contact your dealer immediately if any of the above items appears damaged or the unit does not work.

Certificate

This equipment has been tested and found to comply with the Part 15 rules of the US FCC Regulation, and gets CE approved.

Patents

Patents covering the design, operation, techniques, and unique features of the Single-cable transmission device of a surveillance system include: U.S. Patent #US 6,369,699 B1 April 9, 2002; Taiwan Patent #201389 September 3 2004; Europe Patent #EP 1134909 A1 September 19, 2001. Other Patents are

Limited Warranty

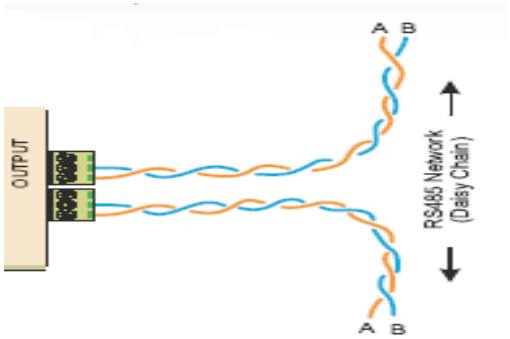
Foresight grants a warranty for this product for 18 months. Please offer the purchase date and the serial Number of Bar-Code on the back of the product to your distributor or retailer as proof for this purpose. During the warranty period, in case of defected in material or workmanship, the defective unit will be repaired or replaced according to the assessment of Foresight.However,this warranty does not cover damages caused by improper use or from unauthorized modifications by third parties.

OUTPUT Connection

Connect VIDEO OUT with a video device, e.g. a monitor.

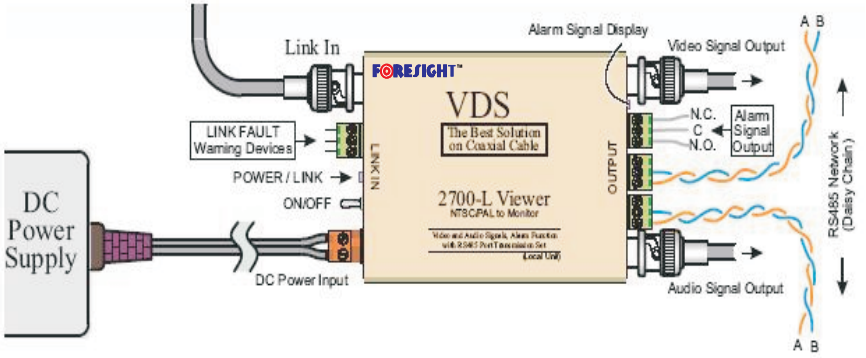
RS-485 port

Users can connect at least 32 RS-485 devices by using Viewer units in daisy chain. Connect with two RS485 devices with two PTB connectors separately via twist pair cables and ground wires. And adding one terminator at the end of every RS485 daisy chaining is required. Adding a 120 ohms terminator between A and B wires at either one of the following indicated locations. It depends which port is the end of the daisy chaining or not.



Connecting Viewer unit

The following illustration shows the connections for the Viewer unit:



LINK IN Connection

Connect Link In of Viewer with one end of the coaxial cable, which is connected on the other end with Link Out of Sender.

LINK FAULT

There are four ways of using the LINK FAULT.

1. The Viewer unit will sound by itself while cable link between Sender unit and Viewer unit is disconnected.
2. Connect +12V and OUT of the PTB connector with wire to a buzzer or an indicator in anyplace you like.
3. If users do not want the internal warning siren, they can just bridge +12V and Override by a wire to turn the sound off.

Plug the power cord on and connect the AC power adapter to the DC POWER IN connector in the LINK IN side.

Specification of VDS2730-R Sender

To ensure smooth operation of VDS2730, the following minimum system and setup requirements should be met.

Electrical:

Video Input Signal: 1.0Vpp, 75 ohms
Bandwidth of Video Signal: 5.5MHz typ
Power Output: DC12V, 1.0 A, max.
RS-485 Data Rate: DC(0bps) to 38.4Kbps

Connection: (PTB= Plugable Terminal Block)

Video Input: BNC Socket
DC: 4 Pin PTB, 3.5mm Pitch
RS-485 Port: 3 Pin PTB, 3.5mm Pitch
Link Out: BNC Socket

Specification of VDS2730-L Viewer

To ensure smooth operation of VDS2730, the following minimum system and setup requirements should be met.

Electrical:

Video Output Signal: 1.0Vpp, 75 ohms
Bandwidth of Video Signal: 5.5MHz typ
S/N ratio of Video Signal: 50dB typ
DC Power Input: 40V
Max. DC power Output: 38V, 1.4A, min.
Link Fault Output for external indicators: 0.15A, min.
RS-485 Data Rate: DC(0bps) to 38.4Kbps

Connection: (PTB= Plugable Terminal Block)

Link In: BNC Socket
Link Fault: 3 Pin PTB, 3.5mm Pitch
DC Power Input: 2 Pin PTB, 5.0mm Pitch
Video Output: BNC Socket
RS-485 Port: 3 Pin PTB, 3.5mm Pitch(2 Set)

Functions of Remote Unit

VDS2730-R Sender

INPUT side

VIDEO IN:
to receive a video signal from video source, eg. PTZ cameras.

DC OUT:
to send 12VDC power to a camera.

RS485:
to receive and to send RS485 data to RS485 devices.

LinkOut Side

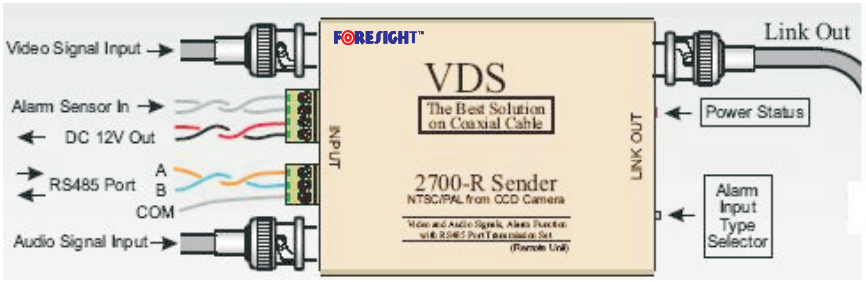
LINK OUT with DC IN:
to send out video and RS485 data to the Viewer unit and to receive DC power and RS485 data in from the Viewer unit.

POWER STATUS LED:
to indicate the power supply condition. When the LED is red, it implies the power supply to camera is stand-by or not been used. When the LED is green, it means the power is loaded well to the camera. When the LED is Yellow, it means the DC power is low. Please check if the cable used is over length limitation or the camera consumption more than 1.0A (note1). When the LED is flashing, it implies the power supply might be failed due to the power is too low to offer any function.

Note 1. The 1.0A is based on the condition of 600M distances and 5C-2V coaxial cable used.

Connecting Sender unit

The following illustration shows the connections for the Sender unit:



INPUT Connection

Connect video signal from the video source, e.g. a PTZ camera, to VIDEO IN in the INPUT side.

Connect the power cord (DC 12V) from the DC OUT in the INPUT side to the video source, e.g. a PTZ camera.

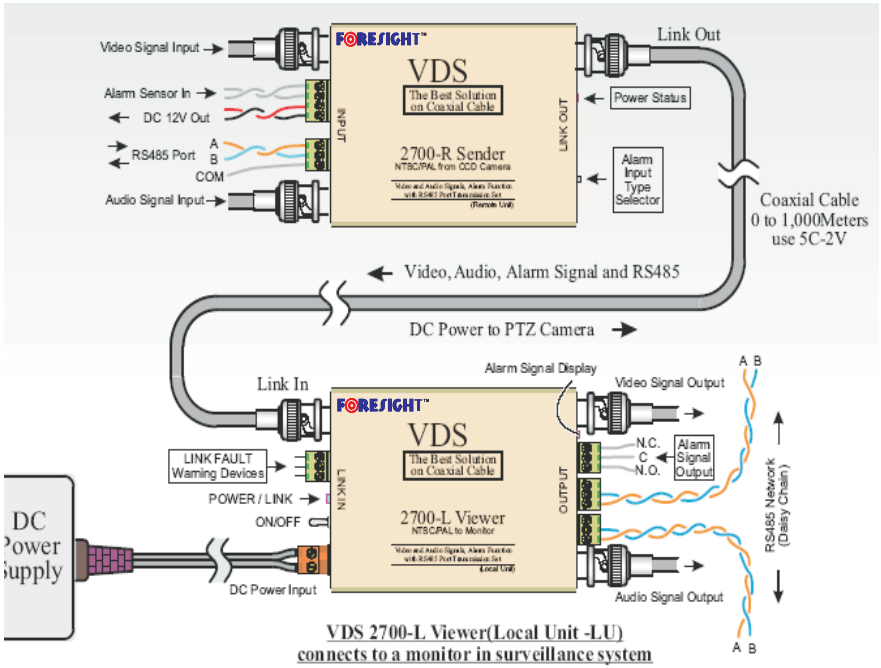
Connect a twist pair cord with RS-485 data from a RS485 device to the RS485 Port. Adding the 120 ohms terminator between A and B wires at the location shown on the following picture.

LINK OUT Connection

Connect the LINK OUT of Sender with one end of a coaxial cable.

Making Connection

The following illustration gives an overview of the Sender unit and the Viewer unit connections. Please note always use a coaxial cable to connect to the LINK OUT side of the Sender unit.



VDS 2700-L Viewer(Local Unit -LU)
connects to a monitor in surveillance system

Installation Notice

When setting up the VDS2730 Sender unit and Viewer unit, be sure to note the following points:

Both units should be fixed securely to a permanent object such as a wall or a pillar.

Avoid locations with extreme vibrations or dust.

Avoid locations with dampness or extreme heat.

Adding one terminator at one end of RS485 Network with daisy chain is strongly recommended.

Functions of Local Unit

VDS2730-L Viewer

LINKIN side

LINK IN with DC OUT:
to receive in the video and RS485 data from the Sender unit and to send DC power and RS485 data out to the Sender unit.

LINK FAULT:
This function tells users whether cable link is connected. There are four ways how the warning message works for selection. 1. The Viewer unit sounds itself while cable disconnected. Users can switch off and switch on the power to turn off the siren, but LED still flash yellow until cable connected. 2. If users do not want Viewer to sound itself, they can bridge +12V and Override by a steel wire to stop the siren. But LED will still flash yellow. 3. Also warning message can be sent out of the Viewer for further application. LINK FAULT message can be sent out to extra devices or indicators like a bulb, a buzzer, a relay or a meter by connecting both +12V and OUT with copper wire or twisted pair cable anyplace.

SYSTEM STATUS LED (POWER / LINK):
When users turn off the system, the LED will be red. When users turn on the system, the LED will be yellow at the first 5 seconds for initial, and then become green. The LED will keep green when the system is on. When the system is under LINK FAULT situation as described above, the LED will be yellow flash. The yellow flash can be stopped only after the disconnected situation is solved.

ON/OFF:
to turn on or turn off the system

DC POWER IN:
to input the power from the power supply.

OUTPUT side

VIDEO OUT:
to send the video signal out to a device, e.g. A monitor or DVR

RS485 (In/Out):
to be used to link to the previous RS485 device or the next RS485 device in a daisy chaining. To receive RS485 data from the server (ex a control keyboard), to send RS485 data to a PTZ camera, and to pass RS485 data between RS485 devices.

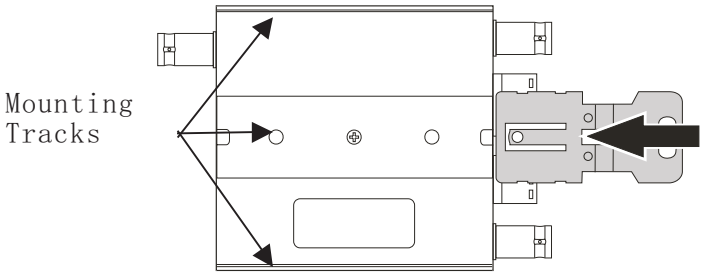
Installation of Remote and Local Units

The VDS2730 units can both be fixed to a wall or desktop with the supplied mounting brackets. The mounting brackets can be fixed onto the rear, top, or bottom of either unit.

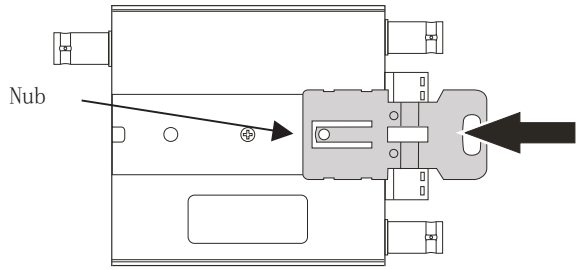
Attaching the Mounting Brackets

Attach the mounting brackets to either the Sender unit or the viewer unit as shown below:

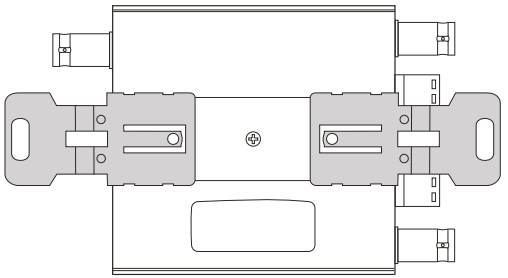
1. Align the mounting bracket with the mounting track on the rear of the unit as shown here:



2. Slide the bracket in the direction of the arrow until the white nub clicks into place as shown below:



3. Repeat the above steps on another side of the unit to attach the second bracket.

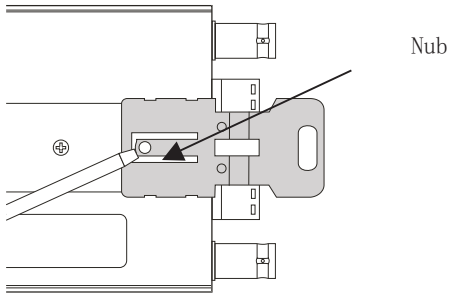


4. Fix the unit in the desired location with two screws.

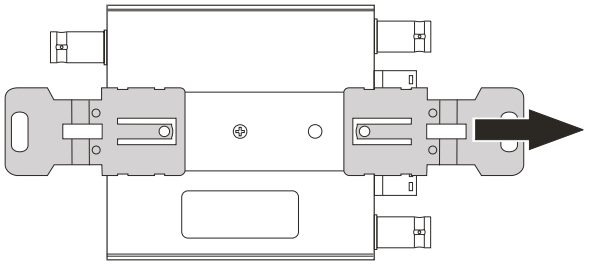
Removing the Mounting Brackets

Remove the mounting as shown below:

1. Use a flat-tipped screwdriver to lift the white nub as shown below:



2. While lifting the nub, slide the bracket out in the direction of the arrow as shown below:



3. Repeat the above steps to remove the second bracket.