

**Model FS-4401S**

## Features

### Single Channel Active Video Transmitter

- Full-motion color video signal up to 3900ft(1200m) via UTP cat5e/6
- NTSC, PAL & SECAM video format compatible
- Real-time transmission
- 12V/24V DC/AC power supply
- Adjustable for various video distance
- Female BNC connector
- Pluggable screw terminal block or UTP
- Exceptional interference rejection
- 70 dB crosstalk and noise immunity
- Full ground-loop immunity
- Built in TVS(Transient Voltage Suppressors) for surge protection
- Lightning protection design Grade:V
- Compact size and easy installation
- Silver galvanized housing



## Overview

The FS-4401S video balun is a active (amplified) device that allows the transmission of real-time CCTV video signal via cost-effective Unshielded Twisted Paired(UTP) cable. Baseband (composite) signals of any type are supported.

The FS-4401S is a compact unit. The power requirement is 12/24V DC/AC. The screw terminal blocks of FS-4401S allows easy connection of UTP cable output. It transmit one single channel video signal from camera end to DVR end via one UTP cable at distance up to 3900ft(1200m) when used with active video receiver.

The FS-4401S has a single distance adjustment as well as built-in surge suppression to protect video equipment against damaging voltage spikes. Its Integrated Ground Loop isolation prevents annoying "hum-bars" common with long distance installations and its excellent crosstalk and noise immunity provides quality video up to the maximum distance. The superior interference rejection and low emissions of the FS-4401S allow video signals to co-exist in the same wire bundle as telephone, datacom, or low-voltage power circuits. This allows the use of a shared or existing cable plant.

## Applications

- Security Monitoring System
- Multimedia Network Teaching System
- Medical Monitoring Display System
- Industrial Automation Control System
- Banking, securities, financial information display system
- Remote Network Server Monitoring
- Department Store Security
- Casino Security
- Hospitals, Airports and banks
- School Campuses

## Wire and Cable Recommendations

FS-4401S is recommended to use with Unshielded Twisted Paired (UTP) wiring from 24AWG through 22AWG. Individually shielded pairs should be avoided, as they reduce the operating range of the systems drastically. Multi-pair cable (25-pair or more) with an overall shield are acceptable. Video signals can coexist in the same wire bundle as telephone, datacom, or low-voltages power circuits. While video may be routed through telephone punch-down block terminals, any bridge-taps, also called T-taps and any resistive, capacitive or inductive devices MUST BE removed from the pair.

For more specific information regarding wire types, gauges and proper installation techniques, please contact us for technical assistance.

## Technical Specifications

Product Name		Single Channel Active Video Transmitter ( FS-4401S )
Applied Devices		CCTV cameras, monitors, DVR, switchers, IP encoders, and other CCTV equipment
Video	Video Format	PAL, NTSC, SECAM
	Operating Frequency	Signal Band: 250MHz(-3db)      Balance Band: DC to 6MHz
	Max Distance	UTP Category 5e (24AWG)    Color: 3900ft(1200m)    B&W: 6500ft(2000m)
	Common-mode/Differential-mode rejection	75 dB typ
	Attenuation	1.5 dB Max
	Impedance	Coax, female BNC    75Ω unbalanced      UTP, screw terminal block or RJ45    100Ω balanced
	Video Distance Adjustment	4-position dip switches
LED Indicators		Red: Power-On      Yellow : "Active" signal present
Wire Type	Network Wiring	One Unshielded Twisted Pair (for each video signal)    24-16 AWG (0.5-1.31mm)
	Category Type	2 or better
	Impedance	100 ± 20 ohms
	DC Loop Resistance	52 ohms per 1,000ft (18 ohms per 100m)
	Differential Capacitance	19 pF/ft max (62 pF/m max)
Power	Adaptive Voltage Arrange	AC/DC 9V-24V    12V Power Supply is recommended
	Power consumption	<100mW
Connector	Video Input	Female BNC Connector
	Video Output	pluggable screw terminal block for UTP
Protection	Surge Protection	renewable solid state surge protection
	Ground Isolation	Ground connection available for STP or Ground loop removal
	Video Output	2KV(common mode), 10/700us IEC6100-4-5/1955(GB/T 1726, 5-1999)
	Video Input	2KV(different mode), 4KV(common mode), 10/700us IEC6100-4-5/1955(GB/T 1726, 5-1999)
	Video Input Protection for Over Current	Protection for over 100mA current Max
Mechanical	Housing	Galvanized
	Body Color	Silver
	Dimensions(L*W*H)	85*64*22 mm (BNC connector & mounting bracket excluded)
	Net Weight	150g
Environmental	Operating Temperature	-20° ~ 70° C
	Relative Humidity	0~95% (non-condensing)
	Storage Temperature	-40° ~ 150° C

## Application Diagram

Diagram 1 FS-4401S + FS-4401R



Diagram 2 FS-4401S + FS-4504R



Diagram 3 FS-4401S + FS-4504RL

