

FSS20111S — 1 Channel Video Optical System

### **Description**

The NITEK FSS20111S fiber transmitter and receiver set, is a single channel video and data fiber-optic Universal-Mode™ system which can operate on either single-mode or multi-mode fiber. It transmits digital video and bi-directional data over a single optical fiber. The unique Universal-Mode™ optics mean you no longer have to worry about what kind of fiber you have in place. Digital transmission provides broadcast quality video performance, up to distances of 20Km (single-mode) and 1.2Km (multi-mode).

The transmitter and the receiver units are engineered to provide simple "plug and play" installation. Each unit can be removed from its case aluminum housing and used with the FRS2020, a 16 channel 19" 2U rack-mount chassis. To install, simply connect the included power supplies to each unit. Connect a camera to the transmitter and the receiver to a video monitor. The RS422/RS485 port allows for the use of camera controls if needed. The system begins communicating immediately after power-up. Three LED's on the front of the units indicate the presence of power, video and data for easy troubleshooting.

### FSS20111S Unit Dimensions

### Top View Side View 2.00" Dia. 0.20" (5.08)(0.51)4.00" 0 4.85" (10.12)(12.32)2.00" (5.08) 0 3.63 0.97 (9.22)(2.46)4.00' (10.12)3.39 0.97" 0 (24.6)

### Features

- Compatible with PAL / NTSC / SECAM video systems
- Supports RS422 2-wire and RS485 4-wire data protocols
- Distances up to 20Km in single-mode transmission
- Distances up to 1.2Km in multi-mode transmission
- Easy install, no set up or adjustments required
- Individual modules can be installed in the FRS2020 2U rack-mount chassis
- Real time digitally encoded video
- No degradation for video regeneration
- Wide temperature operating range
- System supports 'hot swapping'
- LED indicators for power, video and data
- Made in the USA















**Bottom View** 

# **TECHNICAL SPECIFICATION**

#### SYSTEM SPECIFICATIONS

Data Connector:

Power Connector:

Video Connector:

Fiber Connector:

LED Indicators:

Operating Temp:

Relative Humidity:

Storage Temp:

Dimensions:

Mounting Hole:

Shipping Dimensions:

Number of Channels: 1 Channel Input / Output Voltage: 1Vpk-pk (typical) Input / Output Impedance: 75 ohms (unbalanced)

Bandwidth: 8MHz Differential Phrase: < 0.7° Differential Gain: < 2% (typical) < 0.5% Tilt: Signal-to-Noise Ratio: ≥ 65dB

PAL/NTSC/SECAM compatible Format:

Data Format: RS-422 (2-wire) / RS-485 (4-wire)

Data Direction: Bi-direction Data Rate: 300Kbps Bit Error Rate (BER): 10<sup>-9</sup> bits

Fiber Type Distances:

(Dual Mode Single-Mode 9/125 to 20Km Communication)

RECEIVER SPECIFICATIONS

Screw Terminal Block

**BNC Coax Connector** 

SC (IEC 61754-4)

Power, Data, Video

127 x 102 x 25mm

0.20" Diameter (5.0mm)

2.5mm (ID) x 5.5mm (OD) Barrel

-35 C to 70 C / -31 F to 158 F

-40 C to 85 C / -40 F to 185 F

5.0" x 4.0" x 1.0" Including Tabs & BNC

12" x 10" x 2" (305 x 254 x 51mm)

Up to 95% non condensation

Multi-Mode 50/125~62.5/125 to 1.2Km

Shipping Weight: 2.0lbs (1.4Kg)

Transmitter Wavelength:

TX: 1310nm RX: 1550nm

Power Requirements: 5Vdc, 290mA / 1.5W

TRANSMITTER SPECIFICATIONS

Receiver Wavelength:

1550nm TX: RX: 1310nm

Power Requirements: 5Vdc, 270mA / 1.4W

# **Common Installation Types**

## Single Camera Installation



