



COE S-class

Two way video/audio/data FM based single fibre transmission system for surveillance and video transmission applications.

COE S-class incorporates the latest electronic coding and transmission technology to provide a powerful combination of transmission features and diagnostic tools. The ability to transmit video, audio and data signals in both directions on one singlemode fibre over distances of up to 40km makes S-class one of the most versatile singlemode products on the market.

Features and Benefits

- Single fibre utilisation - singlemode 9/125 – Reduced installation time/fibre/termination costs
- Bi-directional FM video channel – Video conferencing, distance learning and Genlock supported
- Bi-directional stereo audio channel – Intercom/PA links - with extended bandwidth for music applications
- Bi-directional data channel – Telemetry links to 156kbs⁻¹ with all common formats supported
- Full optical AGC – Simple installation with no adjustments required over the optical range
- Optical budget up to 20dB, FC/PC connectors – Operation up to 40km using industry standard connectors
- Full environmental specification to International Standards – Suitable for transportation, security and industrial applications
- Loop back testing from either end – Allows video and data links to be tested from one end at installation
- On-board diagnostics via LEDs and network – Local and remote fault diagnostics reduces whole life costs
- Available in 3U, 1U 19" rack and wall enclosure with separate PSU – All typical field applications can be met with easy installation

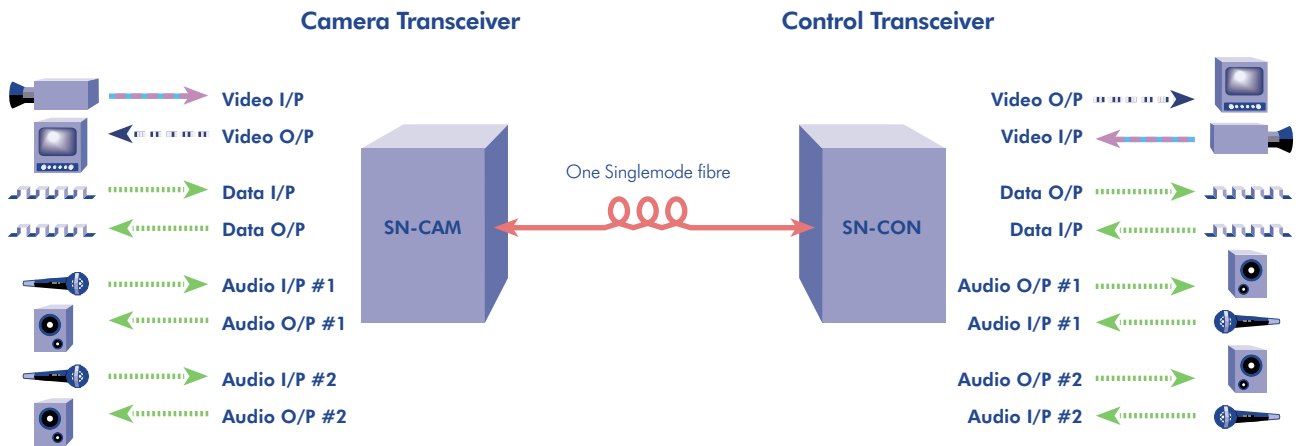
System Overview

The Product: The transceiver cards are configured as 3U x 220mm Eurocards (5¼" by 8⅛"). All connections are provided at the rear, including the optical port. All indicators and set-up switches are provided at the front.

Enclosures: Three enclosures are available for the transceivers: rugged box, 1U card frame and 3U card frame. The rugged box allows the cards to be mounted adjacent to the camera. The 1U card frame allows for street cabinet or standard cabinet mounting where space may be a premium and the 3U card frame will hold up to 8 individual cards for high density installations such as Command and Control Rooms.

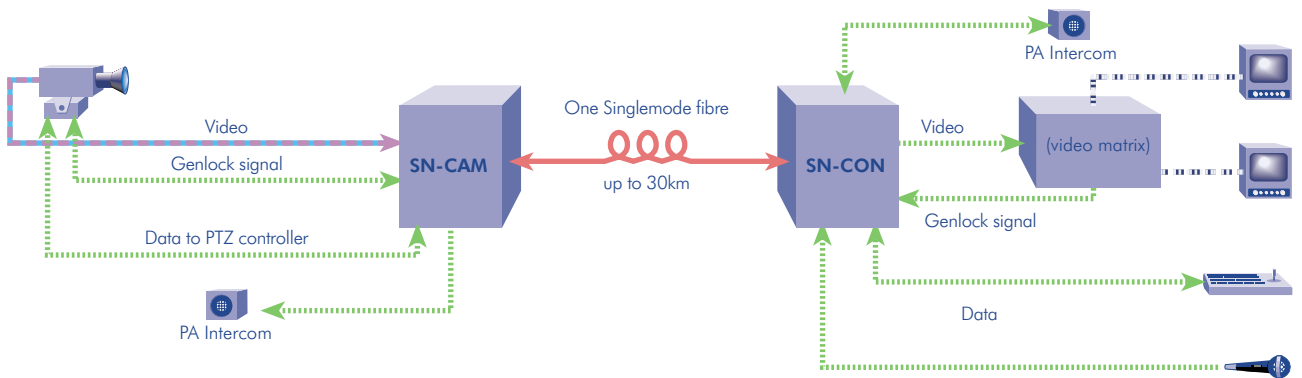


Schematic outline of S-class

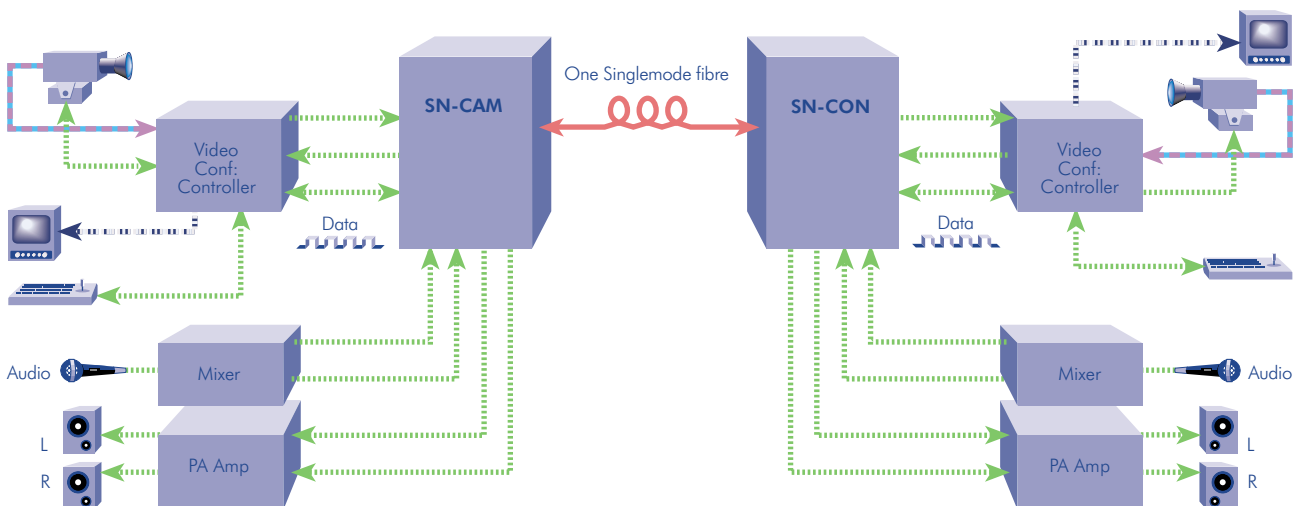


Typical market applications

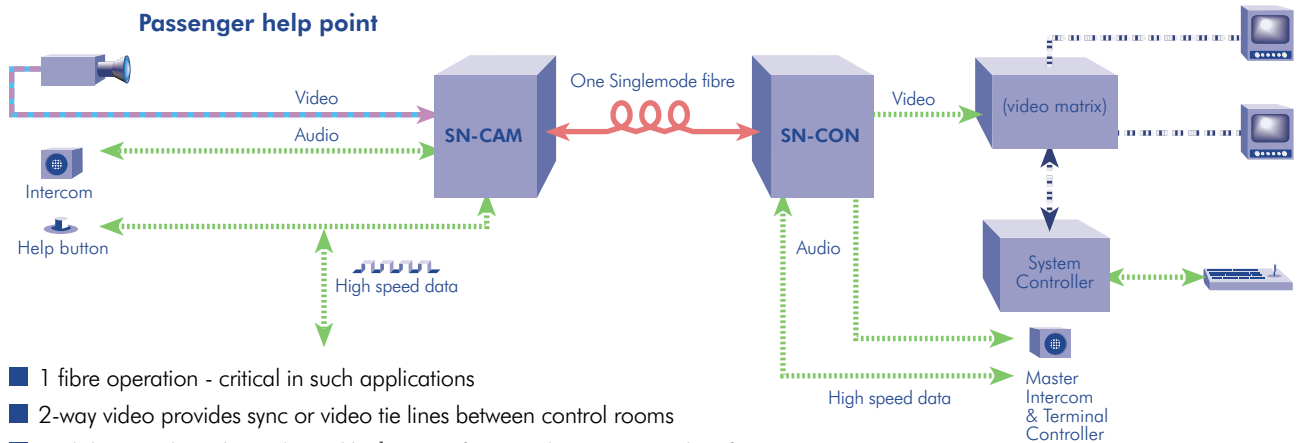
Security systems: The ultimate solution for single camera in-feeds to control rooms for cameras requiring telemetry control for PTZ functions, a return video path for Genlock type signals and a PA channel for announcements/music/security warnings.



Video conferencing/distance learning: Where ultra-high quality, real time video is required along with data control signals and stereo voice for communications and camera positioning.



Transportation applications



- 1 fibre operation - critical in such applications
- 2-way video provides sync or video tie lines between control rooms
- High bit rate data channel (156kbs⁻¹) caters for Manchester/HDLC data formats

Transport systems: The high path loss capabilities offer transmission up to 40km for metro, road and rail applications. High performance video maximises the camera-monitor signal link quality. The data and stereo audio channels allow the COE S-class to be used in passenger help points providing an integrated, single fibre solution.

Performance overview

Two way video:



Meets RS250C specification and BT requirements, PAL and NTSC compatible

Signal type:	1 V _{p-p} , 75 Ohms, RS170
Bandwidth:	5Hz to 10MHz (-3dB)
S/Noise ratio:	60dB (unified weighted)
Diagnostic indicators:	Video input/output status
K rating:	1%
Differential gain:	3%
Differential phase:	2°
Diagnostic indicators:	GREEN LED (sync detection system)
Connection:	75R BNC

Two way data:



Formats include:	RS232, RS422, RS485, (2 wire & 4 wire versions), TTL, 20mA & *LonWorks™ (FT-10)
Performance:	DC to 156kbs ⁻¹ (interface dependent), 10 ⁹ BER over optical budget
Diagnostic indicators:	GREEN LEDs for input/output status and loop back testing
Connection:	15 way D type

Two way audio:



Type:	Balanced line, 600 Ohms, 50Hz to 10kHz, >55dB S/N Ratio
Diagnostic indicators:	Tricolour LEDs for input/output status and level conditions
Connection:	15 way D type Female on rack backplane

Environmental:

Operating temperature:	0 to +55°C
Storage:	-10 to +70°C
Humidity:	5% - 95%
Vibration:	5g

Optical specifications:

Full operation from 0dB to 20dB optical budget

Power requirements:

Card (cam or con):	+9V @ 300mA, +5V @ 100mA, -5V @ 100mA
3U Rack:	110/230V AC @ 75W max
1U Rack:	110/230V AC @ 10W max
Box & PSU:	110/230V AC @ 10W max

Note: All performance figures given are guaranteed over the optical budget range of 0→20dB.

* LonWorks is a trademark of Echelon Corporation registered in the United States and other countries

Ordering information

S-class is available in two variants:

Basic

Provides the user with the Video/Data & Audio Channels.
Data format is set at the point of order.
LED indicators are provided for optical power loss.

Regular

Provides the user with the BASIC features but also allows for Data format selection in the field and includes the loop back test feature and enhanced diagnostic indicators for video loss, optical budget, loop back mode, audio level and presence.

S-class cards

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CAM
CON

B=Basic
R=Regular

BX=for box & PSU

Data Format (only required for BASIC version)

2 = RS232

4 = RS422

8 = RS485 two wire

W = RS485 four wire

I = Intercom grade audio

F = FSK telemetry system compatible

C = Contact closure

M = Manchester coded data i/f

Examples of S-class sales order codes

SN-CAM-B-8-BX

S-class, camera end, BASIC version with RS485 two wire data interface, housed in free standing box with power supply.

SN-CON-R

S-class, control room end, REGULAR version, card format for mounting into the 3U or 1U 19" rack.

S-class racking

SN-RK-1U-S

1U, 19" Chassis inc: Mains PSU & rear panel connections for both camera & control end cards.

SN-RK-3U-S

3U, 19" Chassis inc: Mains PSU & rear panel connections for both camera & control end cards. Holds up to 8 cards.

Accessories & spares

SN-PSU-BX

Spare free standing mains PSU for boxed units

SN-PSU-3U

Spare power supply for 3U Rack

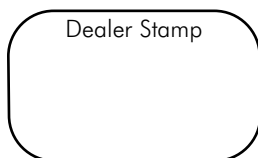
SN-LBK

Loopback kit including jack plug & card removal tool



Issue. 3. 12/00

Dealer Stamp



In line with the company policy of continuous improvement, COE reserves the right to vary descriptions and specifications without notice.

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