MERIDIAN
T E C H N O L O G I E S
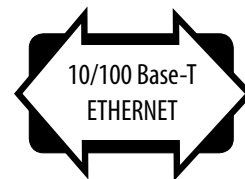
One Channel 10Base-T Ethernet / 100Base-T Fast Ethernet Data Transceiver Compatible with Samsung SNV-8084N Dome Network Camera

10/100 Base-T ETHERNET

FEATURES:

- 10/100 Base-T Ethernet Auto-negotiation
- Full Duplex or Half-duplex Supported
- IEEE 802.3 Compliant
- User Selectable MDI/MDI-X
- Environmentally Hardened for Wide Temperature Applications
- NTCIP Compatible
- Far End Fault Function
- Link Fault Pass-through Function
- Laser Based Systems for Multimode & Singlemode
- Laser Back-Biased Photo Detector Circuitry for Stable Optical Output Over Full Temp. Range
- FC, ST Optical Connectors
- Distances Up To 50km
- Wide Optical Dynamic Range
- Supports Single Fiber Communications
- 12VDC & 24VAC Operation

DESCRIPTION:

The AXB-1R-x is an Ethernet transceiver designed for bi-directional transmission of 10Base-T Ethernet / 100Base-T Fast Ethernet data over one multimode or singlemode fiber. Since the data rate is auto-negotiated, no internal adjustments or setting are necessary.

Distances of 50km can be obtained using singlemode fiber.

Designed to mount directly inside the housing of the Samsung SNV-8084N IP camera, the AXB-1R-x is environmentally hardened and will operate over the standard NEMA TS-2 temperature range.

Board, module and card mounted LEDs indicate power, link speed, activity, laser current and optical signal. Standard shielded RJ-45 connectors are provided for Cat. 5 compliance. Optical connector options include ST and FC.

RECEIVER COMPATIBILIY:

This transmitter is compatible with the following receivers:

SXA -1R-x	1-ch. 10/100Base-T Fast Ethernet Card
MXA -1R-x	1-ch. 10/100Base-T Fast Ethernet Module

MARKETS:
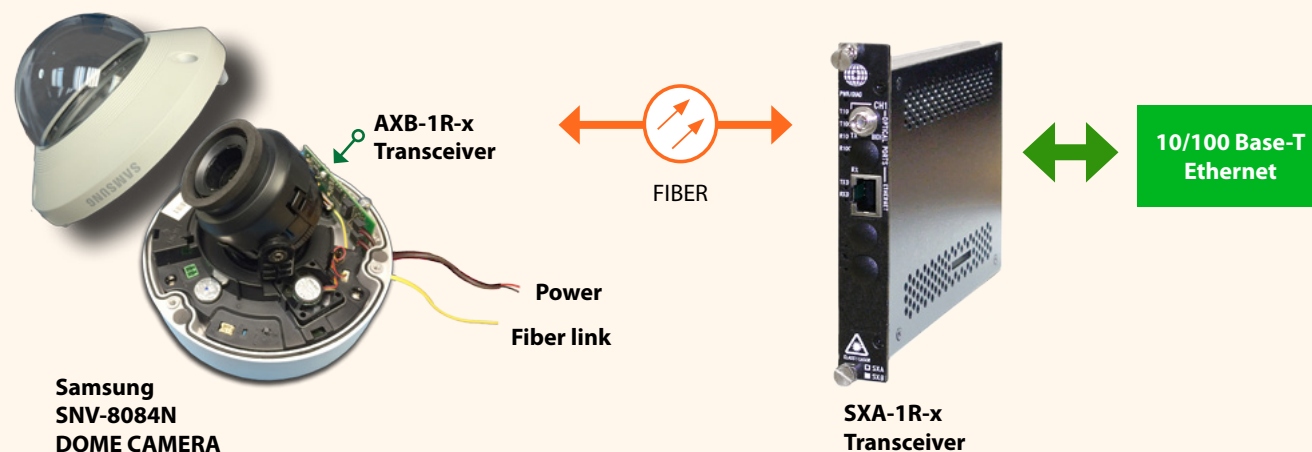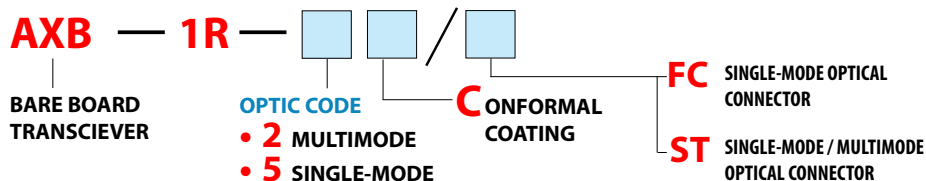
√ Intelligent transportation systems (ITS)
√ Datacom
√ Security and surveillance
√ Access control

SPECIFICATIONS:

Data	
Formats	IEEE 802.3 CSMA/CD IEEE 802.3i 10Base-T IEEE 802.3u 100Base-T
Voltage/Impedance	10/100 Mb/s
Bandwidth	Better than 10^{-9}

Optical	
Fiber Data Rate	125 Mb/s

Indicators		
1	Rx Optic	Normal - OFF Optical Signal Absent - ON (Red)
1	Tx Error	Normal - OFF Laser Driver Error - ON (Red)
1	Rx Data	Data Activity Output (Green)
1	Tx Data	Data Activity Input (Green)
1	Rx 100	100Base-T Data Output (Green)
1	Rx 10	10Base-T Data Output (Green)
1	Tx 100	100Base-T Data Input (Green)
1	Tx 10	10Base-T Data Input (Green)

Connectors	
Ethernet	RJ45 (shielded)
Optical	ST - Multimode, FC - Single-mode
Power	2-pin Screw Blocks

Power	
Input Power	12VDC / 24VAC
Power Consumption	1.5 W

Physical	
Dimensions	83(W) x 37 (H) x 20 (D) mm (3.27 x 1.46 x 0.8 inch)
Weight	35 gms (0.48 lb)

Environmental	
Operating Temperature	-40ºC to +74ºC
Storage Temperature	-55ºC to +85ºC
Relative Humidity	0 to 95% Non-condensing

Quality	
MTBF	>125,000 hours @ Ground Fix 35ºC per MIL217F

PART NUMBER DIAGRAM

AXB — 1R — ☐ ☐ / ☐

- AXB: BARE BOARD TRANSCIEVER
- 1R: OPTIC CODE
  - 2 MULTIMODE
  - 5 SINGLE-MODE
- C ONFORMAL COATING
- FC SINGLE-MODE OPTICAL CONNECTOR
- ST SINGLE-MODE / MULTIMODE OPTICAL CONNECTOR

ST MULTIMODE CONNECTOR
FC / ST SINGLEMODE CONNECTOR

AXB-1R-x Transceiver

Power
Fiber link

Samsung SNV-8084N DOME CAMERA

FIBER

SXA-1R-x Transceiver

10/100 Base-T Ethernet

OPTICAL:

Meridian Optical Code	Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)	Max Distance (Km)
2	Multimode (Laser) 62.5 / 125	-5	-25	20	1300 / 850	ST	24	0.8
5	Singlemode (FP Laser) 9 / 125	-5	-25	20	1310 / 1550	FC, ST	24	50

ver. 07/2015 C