IP-NINJAR RoHS

AV over IP Encoder for SDI

NJR-T01SDI

The NJR-T01SDI is a 3G/HD/SD-SDI input-compliant AV over IP encoder. It transmits SDI input signals and audio for a long-haul extension over fiber optic cables.

The NJR-T01SDI features local monitor output which enables video recording and preview output using an HDMI monitor. It also offers RS-232C bidirectional communication and 1G network transmission.

Please use this product with a combination of IP-NINJAR products. It cannot be connected to OPF or FDX series products.

■ Specification

Item		Description
Input		1 input 3G-SDI / HD-SDI / SD-SDI NRZI / NRZ, 0.8 V[p-p] / 75 Ω SMPTE 424M (3G-SDI) / SMPTE 292M (HD-SDI) / SMPTE 259M-C (SD-SDI) Connector: BNC (*1) Cable: 75-Ω coaxial cable for high-frequency signals
Output		1 output Digital signal for extension Connector: 2 LCs
		1 output for monitoring input signals * when the NJR-T01SDI is powered, SDI input signal is output 3G-SDI / HD-SDI / SD-SDI NRZI / NRZ, 0.8 V[p-p] / 75 Ω SMPTE 424M (3G-SDI) / SMPTE 292M (HD-SDI) / SMPTE 259M-C (SD-SDI) Connector: BNC Cable: 75-Ω coaxial cable for high-frequency signals
		1 output for monitoring input signals * when the NJR-T01SDI is powered, SDI input signal is output HDMI (*2) / DVI 1.0 TMDS single link Connector: Female HDMI Type A (19-pin) (*3)
Format		480i / 480p / 576i / 576p / 720p (not supporting 23.98 Hz or 24 Hz) / 1080i / 1080p
Digital audio input		Multi-channel LPCM up to 8 channels (Selecting two groups from Audio group1 to 4) Sampling frequency: 48 kHz, Sample size: 16 bit to 24 bit, Reference level: -20 dBFS, Max. input level: 0 dBFS
Digital audio output		Multi-channel LPCM up to 8 channels Sampling frequency: 48 kHz, Sample size: 16 bit to 24 bit, Reference level: -20 dBFS, Max. output level: 0 dBFS
Analog audio input		1 input Stereo LR balanced / unbalanced Input impedance: 48 kΩ balanced / 24 kΩ unbalanced Reference level: -10 dBu Max. input level: +10 dBu Connector: 5-pin terminal block
Analog audio output		1 output Stereo LR balanced / unbalanced Output impedance:100 Ω balanced / 50 Ω unbalanced Reference level: -10 dBu Max. output level: +10 dBu Connector: 5-pin terminal block
Cable for extension	Cable	Duplex fiber cable SFP+ optical transceiver
	Polishing (*4)	SFP+ for Multimode: PC polishing (recommended) SFP+ for Singlemode: UPC polishing (recommended), SPC * APC is not supported
	Transmission distances (*5)	Multimode fiber (OM3) : Up to 984 ft. (300 m) Singlemode fiber (OS1) : Up to 6.21 mi. (10 km) Singlemode fiber (OS1) : Up to 24.85 mi. (40 km, optional)
Control	RS-232C	1 port / 3-pin terminal block, full duplex, up to 115.2 kbps
	LAN	1 port / RJ-45 10Base-T / 100Base-TX / 1000Base-T (Auto Negotiation), Auto MDI / MDI-X
General	AC adapter	Input: 100 - 240 VAC ± 10%, 50 Hz / 60 Hz ± 3 Hz Output: DC 12 V 3 A (A dedicated AC adapter is provided)
	Power consumption	About 15 Watts
	Dimensions	8.3 (W) × 1.7 (H) ×5.5 (D)" (210 (W) × 44 (H) × 140 (D) mm) (EIA 1U high, half rack wide) (Excluding connectors and the like)
	Weight	2.9 lbs. (1.3 kg)
	Temperature	Operating: 32°F to 104°F (0°C to +40°C) Storage: -4°F to +176°F (-20°C to +80°C)
	Humidity	Operating / Storage: 20% to 90% (Non Condensing)

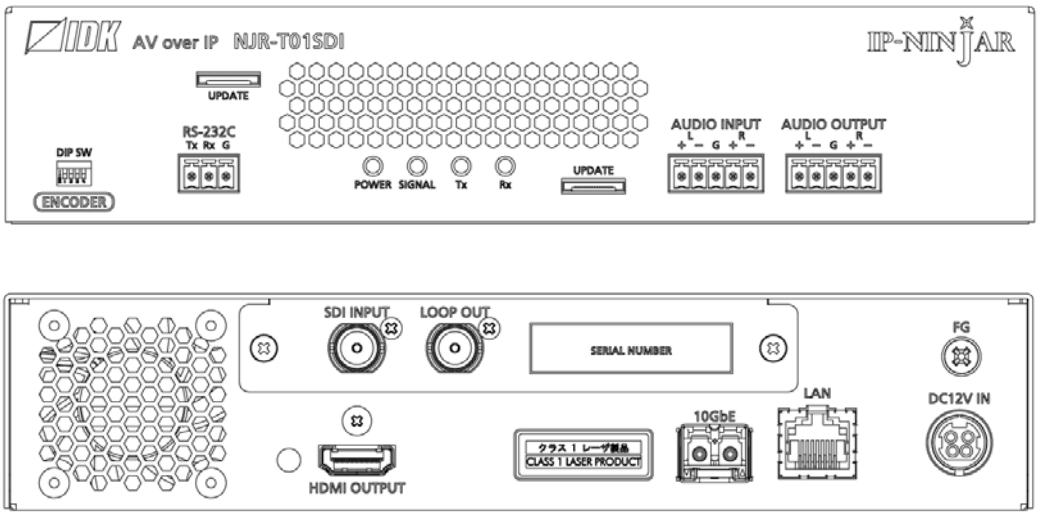
*1 With 1505A (BELDEN RG-59), SD-SDI: 1083 ft. (330 m) / HD-SDI: 656 ft. (200 m) / 3G-SDI: 394 ft. (120 m)
With 1694A (BELDEN RG-6), SD-SDI: 1312 ft. (400 m) / HD-SDI: 787 ft. (240 m) / 3G-SDI: 459 ft. (140 m)
*2 Not supporting x.v.Color, 3D, ARC, HEC, or CEC.
*3 Use 16.4 ft. (5 m) or shorter HDMI cables.
*4 We do not recommend other polishing methods, because it increases the return loss.
*5 The maximum extension distance is measured under the following conditions: Fiber that is polished by a recommended method is used, there is no interconnection, and the allowable bending radius is not exceeded.

■ **SFP+ Specification**

Item	10G-MM-SFP	10G-SM-SFP	10G-SM40-SFP (optional)
Fiber	Multimode fiber	Singlemode fiber	Singlemode fiber
Wave length	850 nm (VCSEL laser (*))	1310 nm (DFB laser (*))	1550 nm (EML laser (*))
Max. extension distance	OM3: 984 ft. (300 m)	OS1: 6.21 mi. (10 km)	OS1: 24.85 mi. (40 km)
Receiver sensitivity (OMA) @10.3Gbps	-11.1 dBm or higher	-12.6 dBm higher	-16 dBm higher
Average Launch Power	-5 dBm to -1 dBm	-8.2 dBm to +0.5 dBm	-1 dBm to +2 dBm
Max. input power	+0.5 dBm	+0.5 dBm	-1 dBm
Connector	LC (Duplex)		

* The lasers in these models meet class1.

■ **Front & Rear Panels**



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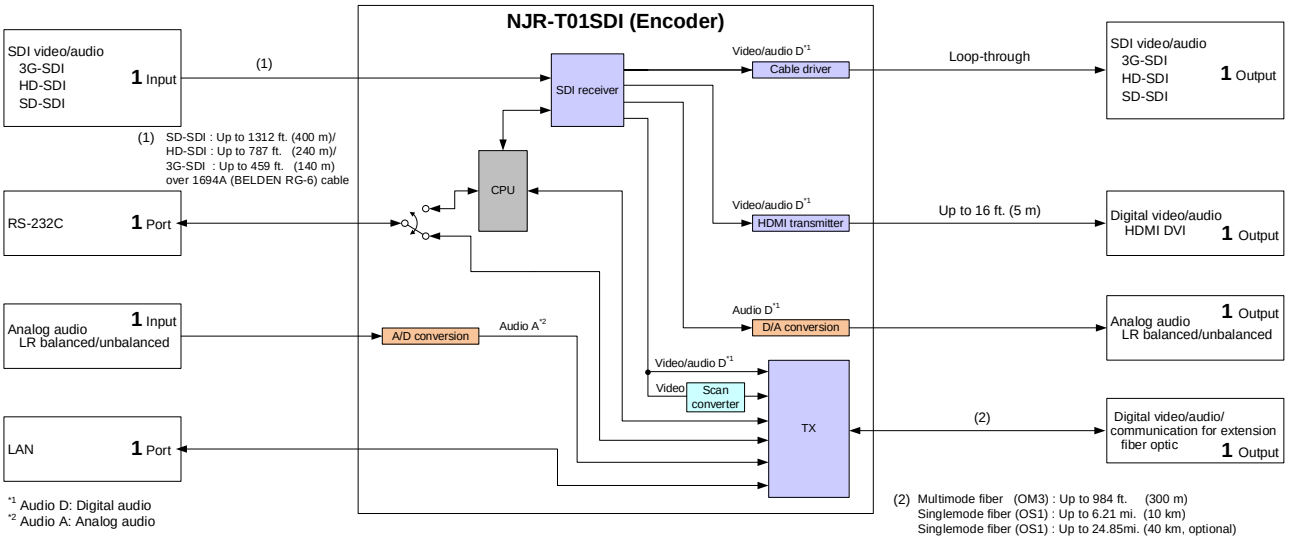
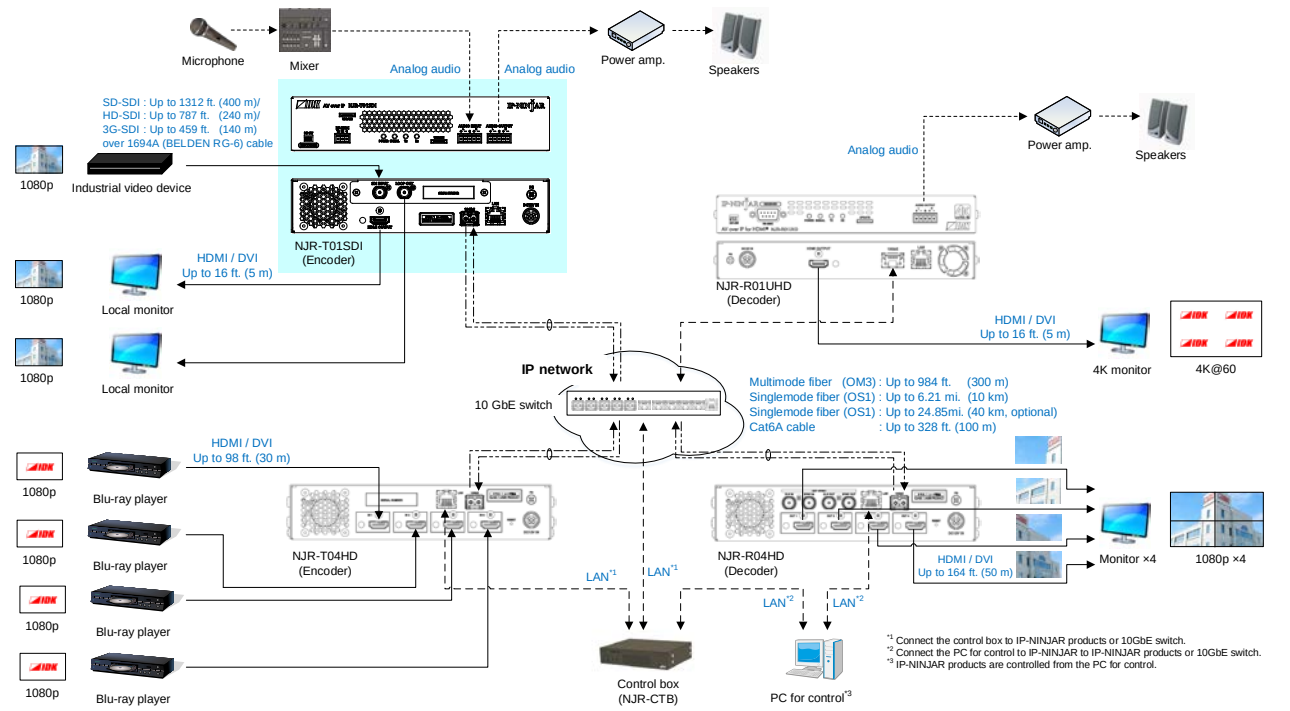
NJR-T01SDI Diagram and Features

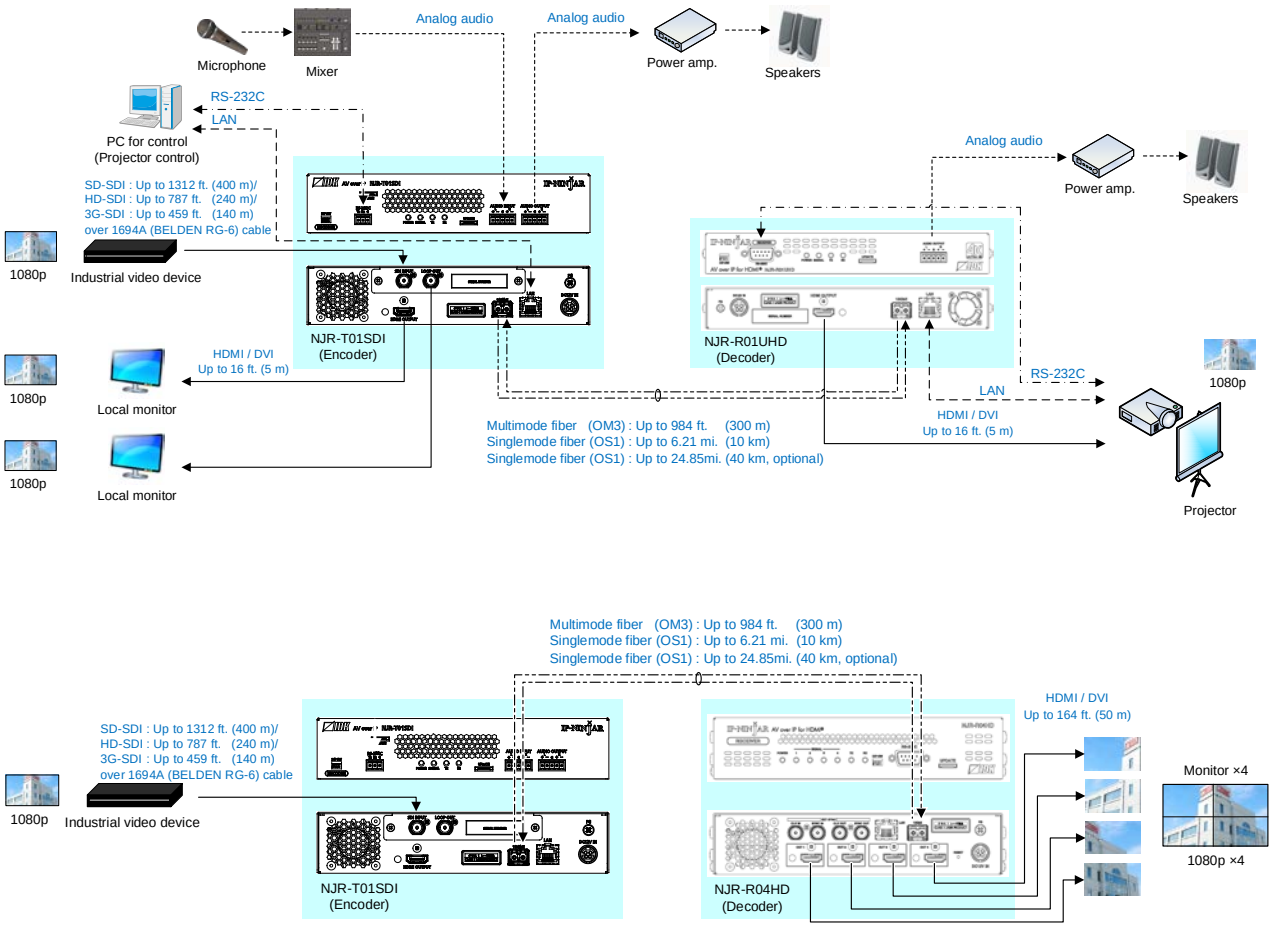
■ Diagram



■ Application example
<Used as network encoder>



<Used as encoder>



■ Models

Multimode fiber	NJR-T01SDI-MM
Singlemode fiber	NJR-T01SDI-SM

[Features]

■ Video

- Up to 1080p
- 3G-SDI / HD-SDI / SD-SDI input
- Local monitor output
- Extension distances
  Multimode fiber (OM3) : Up to 984 ft. (300 m)
  Singlemode fiber (OS1) : Up to 6.21 mi. (10 km) (up to 24.85 mi. (40 km, optional)

■ Audio

- SDI audio de-embedding

■ Communication

- Bidirectional RS-232C communication
- Transmission over LAN

■ Network

- 10 Gb switch allows; extension, distribution, matrix switching, videowall, and multiview
- NJR-CTB (Control box for IP-NINJAR) enables encoder/decoder control and setting management.
- IP-NINJAR encoders and decoders can easily be added and replaced.

■ Others

- AC adapter with locking mechanism