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 transmission 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

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input</strong></td>
<td>1 input 3G-SDI/HD-SDI/SD-SDI ( \text{NRZ/NRZ, 0.8 V}\text{p-p}/75 \Omega ) \text{ SMPTE 242M (3G-SDI)/SMPTE 292M (HD-SDI)/SMPTE 259M-C (SD-SDI) Connector: BNC (\text{1}')} ) \text{ Cable: 75-\Omega coaxial cable for high-frequency signals}</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>1 output Digital signal for extension RS-232C, LAN \text{ Connector: 2 LCs}</td>
</tr>
<tr>
<td></td>
<td>1 output for monitoring input signals \text{ When the NJR-T01SDI is powered, SDI input signal is output} \text{ 3G-SDI/HD-SDI/SD-SDI ( \text{NRZ/NRZ, 0.8 V}\text{p-p}/75 \Omega ) \text{ SMPTE 242M (3G-SDI)/SMPTE 292M (HD-SDI)/SMPTE 259M-C (SD-SDI) Connector: BNC \text{ Cable: 75-\Omega coaxial cable for high-frequency signals}}</td>
</tr>
<tr>
<td></td>
<td>1 output for monitoring input signals \text{ When the NJR-T01SDI is powered, SDI input signal is output} \text{ HDMI (\text{2})/DVI 1.0 \text{ TMDS single link Connector: Female HDMI Type A (19-pin) (\text{3})}}</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>Digital audio input \text{ 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}</td>
</tr>
<tr>
<td></td>
<td>Digital audio output \text{ 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}</td>
</tr>
<tr>
<td><strong>Analog audio input</strong></td>
<td>1 input Balanced/Unbalanced Stereo LR Input impedance: 48 k\Omega balanced/24 k\Omega unbalanced Reference level: -10 dBu Max. input level: +10 dBu \text{ Connector: Captive screw (5-pin)}</td>
</tr>
<tr>
<td><strong>Analog audio output</strong></td>
<td>1 output Balanced/Unbalanced Stereo LR Output impedance:100 \Omega balanced/50 \Omega unbalanced Reference level: -10 dBu Max. output level: +10 dBu \text{ Connector: Captive screw (5-pin)}</td>
</tr>
<tr>
<td><strong>Cable for extension</strong></td>
<td>\text{Duplex fiber cable SFP+ optical transceiver}</td>
</tr>
<tr>
<td><strong>Polishing (\text{4})</strong></td>
<td>SFP+ optical transceiver for Multimode \text{ PC polishing (Recommended) SFP+ optical transceiver for Singlemode \text{ UPC polishing(Recommended).SPC *APC is not supported}}</td>
</tr>
<tr>
<td><strong>Transmission distances (\text{5})</strong></td>
<td>Multimode fiber (OM3) ( \text{ Up to 984 ft. (300 m)} ) Singlemode fiber (OS1) ( \text{ Up to 6.21 mi. (10 km)} ) Singlemode fiber (OS1) ( \text{ Up to 24.85 mi. (40 km optional)} )</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>RS-232C \text{ 1 port/captive screw (3-pin), full duplex, up to 115.2 kbps}</td>
</tr>
<tr>
<td><strong>LAN</strong></td>
<td>\text{1 port/ RJ-45 10Base-T/100Base-T (Auto Negotiation), Auto MDI/MDI-X}</td>
</tr>
<tr>
<td><strong>AC adapter</strong></td>
<td>Input : 100 - 240 VAC ± 10%, 50 Hz/60 Hz ± 3 Hz Output : DC 12 V 3 A (A dedicated AC adapter is provided)</td>
</tr>
<tr>
<td><strong>Power consumption</strong></td>
<td>About 15 Watts</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>8.3 (W) \times 1.7 (H) \times 5.5 (D) \text{ (210 (W) \times 44 (H) \times 140 (D) mm) (Half rack wide, 1U high) (Excluding connectors and the like)}</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>2.5 lbs. (1.3 kg)</td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>Operating: 32°F to 104°F ( (0°C to +40°C) ) Storage : -4°F to +176°F ( (-20°C to +80°C) )</td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td>Operating/Storage: 20% to 90% (Non Condensing)</td>
</tr>
</tbody>
</table>

*1 With 1506A (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 x.v.Color, 3D, ARC, HEC, and CEC are not supported.

*3 Use 16.4 ft. (5 m) or shorter HDMI cables.

*4 It is possible to connect without using the recommended polishing method, but that may cause a change of transmission distance ability due to an increase in return loss.

*5 The maximum transmission 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.

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**IDK Corporation**

NJR-T01SDI
## SFP+ Specification

<table>
<thead>
<tr>
<th>Item</th>
<th>10G-MM-SFP</th>
<th>10G-SM-SFP</th>
<th>10G-SM40-SFP (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber</td>
<td>Multimode fiber</td>
<td>Singlemode fiber</td>
<td>Singlemode fiber</td>
</tr>
<tr>
<td>Wave length</td>
<td>850 nm (VCSEL laser (*))</td>
<td>1310 nm (DFB laser (*))</td>
<td>1550 nm (EML laser (*))</td>
</tr>
<tr>
<td>Max. transmission distance</td>
<td>OM3: 984 ft. (300 m)</td>
<td>OS1: 6.21 mi. (10 km)</td>
<td>OS1: 24.85 mi. (40 km)</td>
</tr>
<tr>
<td>Receiver sensitivity (OMA) @ 10.3Gbps</td>
<td>-11.1 dBm or higher</td>
<td>-12.6 dBm higher</td>
<td>-18 dBm higher</td>
</tr>
<tr>
<td>Average Launch Power</td>
<td>-5 dBm to -1 dBm</td>
<td>-6.2 dBm to +0.6 dBm</td>
<td>-1 dBm to +2 dBm</td>
</tr>
<tr>
<td>Max. input power</td>
<td>+0.5 dBm</td>
<td>+0.5 dBm</td>
<td>-1 dBm</td>
</tr>
<tr>
<td>Connector</td>
<td>LC (Duplex)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The lasers in these models meet class1.

## Front & Rear Panels

NJR-T01SDI-MM  
NJR-T01SDI-SM
Diagram

NJR-T01SDI-MM
NJR-T01SDI-SM

SDI video/audio
HD-SDI
SD-SDI
1 Input

RS-232C
1 Port

Analog audio
Balanced/Unbalanced LR
1 Input

LAN
1 Port

Audio A**
Audio D*

Video/audio D*

CPU

Video/audio D*

HDMI transmitter

Cable driver

Scan converter

SDI receiver

TX

Loop-through

SDI video/audio
HD-SDI
SD-SDI
1 Output

HDMI DVI
1 Output

Analog audio
Balanced/Unbalanced LR
1 Output

Digital video/audio
communication for extension fiber optic
1 Output

■ Application example

<Used as network encoder>

Monoprice
Mixer
Analog audio
Analog audio

Industrial video device

HD/SDI
Up to 16 ft. (5 m)

Local monitor

HD/SDI
Up to 16 ft. (5 m)

Bluray player

HDMI/DVI
Up to 164 ft. (50 m)

SD-SDI : Up to 1312 ft. (400 m)/
HD-SDI : Up to 787 ft.   (240 m)/
3G-SDI : Up to 459 ft.   (140 m)
over 1694A (BELDEN RG-6) cable

Industrial video device

HD/SDI
Up to 98 ft. (30 m)

Local monitor

HD/SDI
Up to 16 ft. (5 m)

Microphone Mixer

Analog audio

10 GbE switch

1080p

4K monitor

HDMI/DVI
Up to 164 ft. (50 m)

Monitor ×4

HDMI/DVI
Up to 164 ft. (50 m)

4K monitor

1080p ×4

Hololink K-1000H

LAN*1

LAN*2

*1 Connect the NJR-CTB to IP-NINJAR products or 10GbE switch.
*2 Connect the PC for control to NJR-CTB or IP-NINJAR products.
*3 IP-NINJAR products are controlled from the PC for control.

1080p

1080p

1080p

1080p

1080p

NJR-T01SDI-MM
NJR-T01SDI-SM

IDK Corporation

NJR-T01SDI
[Features]

**Video**
- Up to 1080p
- 3G-SDI/HDMI/SDI input
- Local monitor output
- Transmission 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**
- De-embedding

**Communication**
- Bidirectional RS-232C
- LAN

**Network**
- 10 Gb switch allows: extension, distribution, matrix switching, videowall, and multiview
- Controllable through network using NJR-CTB
- IP-NINJAR encoders and decoders can easily be added and replaced

**Others**
- AC adapter with locking mechanism

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NJR-T01SDI