

# NHD110DRMicro

Microtype 1-ch HD-SDI Video with 1-ch Reverse Data



## Description

The advanced NHD110DRMicro series supports optical transmission of non-compressed HD-SDI or SD-SDI signal format and Reverse Data modules through one multimode or singlemode optical fiber. Capable of transmitting signal up to 20km on singlemode fiber and 500m on multimode fiber, it retains excellent video quality, as well as RS-422/485 serial data ports. This compact yet ruggedized unit is ideal for installation in most camera housings. Plug-and-Play design ensures ease of installation requiring no electrical or optical adjustments.

## Features

### Video

- ▶ Non-compressed HD-SDI or SD-SDI signal transmission
- ▶ Support SMPTE 259M and 292M standards
- ▶ Support data rate up to 1.485Gbps
- ▶ Support resolution 720p50/60, 1080i50/60, 1080p25/30
- ▶ No video degradation over the maximum operating distance

### Data

- ▶ Meets EIA RS-422/485 specifications
- ▶ Simplex operation
- ▶ Transparent to data encoding
- ▶ Data rates 115,200bps maximum

### Optical

- ▶ One fiber design
- ▶ High performance laser-based optics
- ▶ Multimode or Singlemode
- ▶ ST or FC connectors available

### Robust Design

- ▶ Plug-and-Play design, no in-field adjustments required
- ▶ Designed for use in harsh environments
- ▶ Microtype fits within most camera housings
- ▶ Wide operating temperature range of -40°C to +75°C

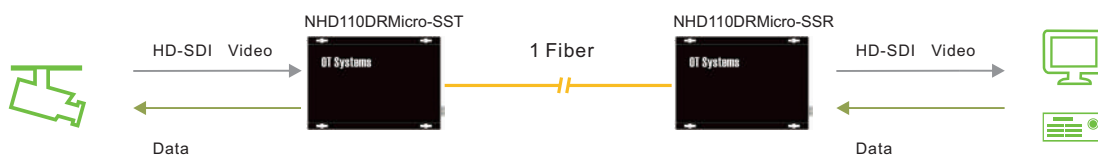
### Local and remote diagnostics

- ▶ Service-friendly LED status indicators on front of the module

### Warranty

- ▶ Comprehensive Lifetime Warranty

## Typical Application



## Specifications

### Video

Number of Channels	1
Format	SD-SDI, HD-SDI
Data Rate	1.485Gbps (maximum)
Standard	SMPTE 259M, 292M
Max Resolution	720p50/60, 1080i50/60, 1080p25/30
I/O Impedance	75 Ohm
Video Input/Output Level	800mVp-p±10%
Transmission Distance	100m (Belden 1694A)
Jitter	Around 0.2 UI

### Data

Number of Channels	1
Data Direction	Reverse only (from RX to TX)
Data Interface	RS422 and RS485 (4-wire)
Selection Method	DIP switch-selectable
Line Termination	DIP switch-selectable
Data Rate	0~115,200bps
Data Protocol	Protocol transparency

### LED

SDI Signal Indication (Presence)	Green/lit
Data TX / RX Status	Green/lit
Power	Green / On

### Connectors

SDI Input / Output	BNC
Optical Input / Output	ST (standard), FC (optional)
Data Input / Output	7-pin screw terminal
Power	2-pin screw terminal

### Electrical and Mechanical

Power	12VDC @250mA
Dimensions(WxHxD)	36.2x 35 x 101mm(Max)
Shipping Weight	~0.2kg

### Environmental

Operating Temp	-40°C to +75°C
Storage Temp	-40°C to +85°C
Relative Humidity	0 to 95% non-condensing
MTBF	> 100,000 hours

## Ordering Information

Fiber Type	Part Number	Description	Wavelengths (nm)	Optical Power Budget (dB)	Max. Distance (Km)
Multi-mode (62.5/125µm)	<b>NHD110DRMicro-SMT</b>	Microtype 1 - ch HD-SDI Transmitter with 1-ch Data Receiver	1310   1550	6	0.5
	<b>NHD110DRMicro-SMR</b>	Microtype 1 - ch HD-SDI Receiver with 1-ch Data Transmitter			
Single-mode (9/125µm)	<b>NHD110DRMicro-SST</b>	Microtype 1 - ch HD-SDI Transmitter with 1-ch Data Receiver	1310   1550	12	20
	<b>NHD110DRMicro-SSR</b>	Microtype 1 - ch HD-SDI Receiver with 1-ch Data Transmitter			

Options	<ul style="list-style-type: none"> <li>ST type connector is standard. For FC type, specify "F" in the suffix. E.g. FMT.</li> <li>Please feel free to consult factory if longer transmission distance is required.</li> </ul>
Power Adaptor	<ul style="list-style-type: none"> <li>Power adaptor is included.</li> </ul>

- Notes:
- Transmission distance will suffer if additional losses are introduced by the optical connectors, fusions, splices and the fibers within the network.
  - Operating distance of multimode is limited by the characteristics of the fiber bandwidth.
  - Power adaptor is manufactured by third party and is supplied with fitted screw - terminal output cables.
  - Please feel free to consult factory for any special requirement and customization.



OT Systems Ltd., November 2013

Due to continuous improvement, all product specifications are subject to change without further notice.