



## FEATURE HIGHLIGHTS

- Supports Multi-mode 2KM, Single-mode 30KM
- PTP and Ring mode for serial fiber ring communication
- Supports RS-485 120 ohm line terminator
- Supports RS-485 Data signals pull high/low resistor
- Supports input voltage 9 ~ 48VDC
- Wide temperature -40 to 70 degree C

## DESCRIPTION

HNT-1101FM/FS-SC/ST is a series of industrial serial to fiber media converter that can provide industrial conversion between 100BaseFX(SC or ST connector), RS-232, and RS-422/485. The fiber connection options include multi-mode SC/ST connector (2km), and single-mode SC/ST connector (30km). It is designed for harsh industrial environments with operating temperature -40 to 70 degree C, and complies with FCC/CE standards.

## SPECIFICATIONS

### Optical Fiber

Fiber Connector	SC/ST
Cable Requirements	Multi-mode: 50/125um, 62.5/125um / Single-mode: 9/125um
Transmission Distance	Multi-mode: 2km / Single-mode: 30km
Wavelength	HNT-1101FM-SC (multi-mode): 850nm
	HNT-1101FS-SC (single-mode):1310nm
	HNT-1101FM-ST (multi-mode): 1310nm
	HNT-1101FS-ST (single-mode):1310nm
Tx Power	HNT-11-1FM-SC (multi-mode): -4~-9.5 dBm
	HNT-1101FS-SC (single-mode):+3~-4 dBm
	HNT-1101FM-ST (multi-mode): -14~-20 dBm
	HNT-1101FS-ST (single-mode):-8~-15 dBm
Rx Sensitivity	HNT-1101FM-SC (multi-mode): <-24
	HNT-1101FS-SC (single-mode): <-34
	HNT-1101FM-ST (multi-mode): <-32
	HNT-1101FS-ST (single-mode): <-34

### Interface

RS-232 Signals	TxD, Rx D, GND ( DCD, DTR, DSR internal short ; CTS, RTS internal short )
RS-422 Signals	TxD+, TxD-, Rx D+, Rx D-, GND
RS-485-4w Signals	TxD+, TxD-, Rx D+, Rx D-, GND
RS-485-2w Signals	Data+, Data-,GND
Baud rate	300bps to 921.6Kbps(RS-422/485)
Baud rate	300bps to 115.2Kbps(RS-232)

### Power Requirements

Input Voltage	9~48 VDC
Input Current	0.28A max, 9 VDC
Connection	Removable 3-pin Screw Terminal Block
Reverse Polarity Protection	Present

### Physical Characteristics

Housing	Metal, IP30 protection
Dimension	34.4 x 91.2 x 120mm
Weight	700g
Installation	DIN-Rail mounting, wall mounting (optional)

### Environmental limits

Operating Temperature	-40°C ~ 70°C (-40°F ~ 158°F)
Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)
Ambient Relative Humidity	5 to 95%, 55°C (non-condensing)

## SPECIFICATIONS

### Regulatory Approvals

EMC	FCC Part15, CISPR(EN55032) Class A, EN55032, EN55024, EN61000-3-2, EN61000-3-3, FCC Part15B (Class A)
Safety	EN60950-1, EN62368-1
Shock	IEC 60068-2-27
Drop	IEC 60068-2-32
Vibration	IEC 60068-2-6
RoHS	Yes
MTBF	22 years (MIL-HDBK-217F)
Warranty	5 years

### EMI Immunity Type Tests

Test	Description	Test Levels	Levels
FCC part 15	- Subpart B	-	A
EN55032	- 2012/AC:2013	-	A

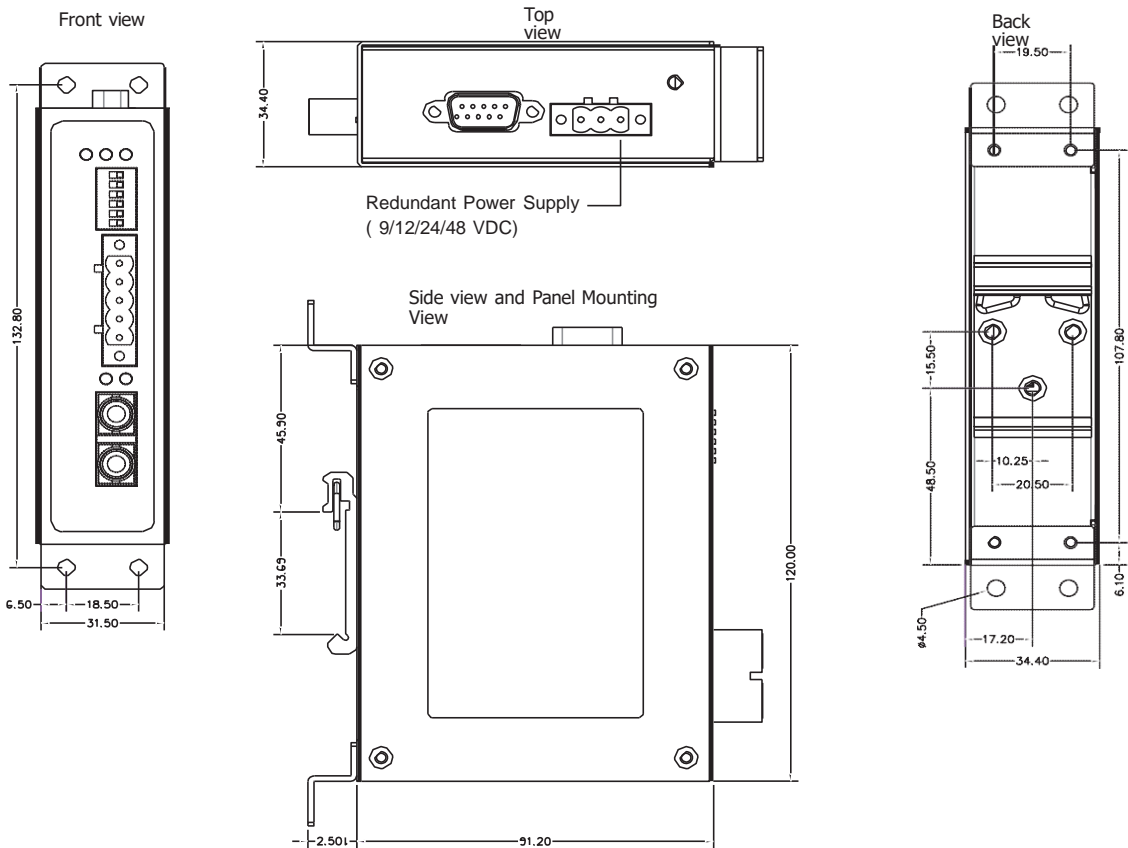
### EMS Tests

Test	Description	Test Levels	Levels
IEC61000-4-2	ESD	Contact discharge $\pm 8KV$	4
		Air discharge $\pm 15KV$	4
IEC61000-4-3	RS	Enclosure ports 10V/m(un-modulated, r.m.s) 80% AM 1KHz, Criterion A	3
IEC61000-4-4	EFT	Power Port $\pm 2.0KV$	3
		Signal Port $\pm 2.0KV$	4
IEC61000-4-5	Surge	Power Port $\pm 2.0KV$ (Line to Line)	4
		Power Port $\pm 2.0KV$ (Line to Ground)	3
		Signal Port $\pm 2.0KV$	3
IEC61000-4-6	CS	Power Port 10 V (0.15 - 80 MHz), Criterion A	3
		Signal Port 10 V (0.15 - 80 MHz), Criterion A	3
IEC 61000-4-8	PFMF	Enclosure 10 V/m, Criteria A	3
IEC61000-4-11	DIP	AC Power Port	-

## SPECIFICATIONS

Environmental Type Test				
Test	Description		Test Levels	Levels
MIL-STD-810F	Shock	Impact acceleration & pulse duration	40g@11ms	-
MIL-STD-810F	Freefall	8 corners, 12 edges, 6 faces	122cm	-
MIL-STD-810F	Vibration	Packaged Random waveform	x:2.4 Grms y:1.28 Grms z:3.851.04Grms	-
		Operating Random waveform	x:0.740 Grms y:0.204 Grms z:1.04 Grms	-

## DIMENSIONS



## ORDERING INFORMATION

Model name	Description
HNT-1101FM-SC-T-X1	Industrial RS-232/422/485 to Multi-mode fiber converter, SC connector, 2KM
HNT-1101FS-SC-T-X1	Industrial RS-232/422/485 to Single-mode fiber converter, SC connector, 30KM
HNT-1101FM-ST-T-X1	Industrial RS-232/422/485 to Multi-mode fiber converter, ST connector, 2 KM
HNT-1101FS-ST-T-X1	Industrial RS-232/422/485 to Single-mode fiber converter, ST connector, 30 KM