NV120DB / NV220DB / NV420DB / NV820DB

10-bit Digital 1 / 2 / 4 / 8-ch Video with 2-ch bidirectional Data

Features

Video
- NTSC or PAL video standards supported
- Non-compressed 8-bit digitally encoded video
- No video degradation over the maximum operating distance

Data
- Meets EIA RS-232/422/485 specifications
- Full RS-485 Tri-state support
- Half or full-duplex operation
- Transparent to data encoding
- Data rates from 0 to 256kbps

Optical
- One fiber design
- High performance laser-based optics
- Multimode or Singlemode
- Internal SFP optical module
- ST, FC or SC connectors available

Robust Design
- Plug-and-Play design, no in-field adjustments required.
- 2-in-1 modular design for standalone or rack-mount installation
- Hot-swappable design
- Wide operating temperature range of -40ºC to +75ºC
- Designed for use in harsh environments

Local and remote diagnostics
- Service-friendly LED status indicators on both front and rear of the module
- Remote health and status monitoring via Intelligent Rack System Diagnostics and Monitoring (SDM) Module
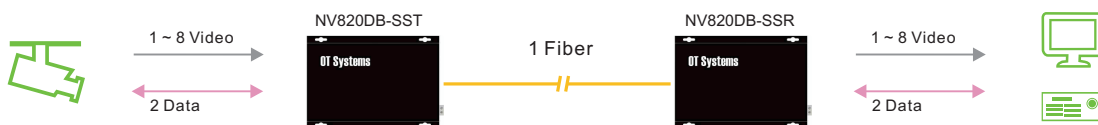
Warranty
- Comprehensive Lifetime Warranty

Description

The NV120DB/NV220DB/NV420DB/NV820DB, NeTrans' 10-Bit Digital Video and Data transmission products, support fiber optical transmission of 10-Bit PCM coded video (up to 8 channels) with two bi-directional data and features high-performance laser-based optics for the clearest, most reliable data transmission in both single and multi-mode with no video degradation over the entire operating distance (up to 20 km).

This plug-and-play product provides instant product compatibility for most major security manufacturers' equipment and reliability in harsh environments, a perfect compliment to any commercial, government or intelligent transportation application. The product features a universal design offering two great features: a variety of optical and connector options for field-configure-readiness; and a modular construction equipped for both rack-mount and stand-alone applications. The NeTrans Intelligent Rack design offers remote network diagnostics to maintain and manage system health and hot-swappability.

Typical Application

Specifications

Video

Number of Channels	1 / 2 / 4 / 8
Format	NTSC/PAL
Input/Output	1 Volt pk-pk (75 ohms)
Bandwidth	6MHz
Differential Gain	<2%
Differential Phase	<1 Degree Typical
SNR-CCIR weighted	>53dB

Data

Number of Channels	2
Data Direction	Bi-directional Duplex
Data Interface	RS232, RS422, RS485 2 or 4-wire Tri-state
Selection Method	DIP switch-selectable
Data Rate	0~256bps
Data Protocol	Protocol transparency
Line Carrier Detection	Rs485 (2/4-wire) Tri-state output

LED

Video Signal Indication (Presence/Absence)	Green/Red LED lit
Data TX / RX Status	Green/Red LED lit
Power	Green/On

Connectors

Video Input / Output	BNC
Optical Input / Output	ST (standard), FC or SC (optional)
Data Input / Output Connectors	7-pin screw terminals
Power (Standalone)	2-pin screw terminals
Power (Rack-Mount)	10-pin smart bus connector

Electrical and Mechanical

NV120DB

Power	12VDC @500mA Max.
Dimensions(WxHxD)	158.4 x 25.4 x 231.8mm(Max)
Weight	0.74kg

NV220DB, NV420DB

Power	12VDC @500mA Max.
Dimensions(WxHxD)	158.4 x 50.8 x 231.8mm(Max)
Weight	1.07kg

NV820DB

Power	12VDC @500mA Max.
Dimensions(WxHxD)	158.4 x 76.2 x 231.8mm(Max)
Weight	1.27kg

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	Optical Power Budget	Max. Distance (Km)	No. of slots
Multi-mode (62.5/125µm)	NV120DB-SMT NV120DB-SMR	1 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310 | 1550nm	12dB	4	1
	NV220DB-SMT NV220DB-SMR	2 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310 | 1550nm	10dB	3	2
	NV420DB-SMT NV420DB-SMR	4 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310 | 1550nm	8dB	2	2
	NV820DB-SMT NV820DB-SMR	8 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310 | 1550nm	8dB	1	3
Single-mode (9/125µm)	NV120DB-SST NV120DB-SSR	1 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310 | 1550nm	14db	20	1
	NV220DB-SST NV220DB-SSR	2 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310 | 1550nm	14db	20	2
	NV420DB-SST NV420DB-SSR	4 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1550 | 1310nm	14db	20	2
	NV820DB-SST NV820DB-SSR	8 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1550 | 1310nm	14db	20	3

Options	▪ ST type connector is standard. For FC type, specify "F" in the suffix. E.g. FMT. For SC type, specify "C" in the suffix. E.g. CMT. ▪ Please feel free to consult factory if longer transmission distance is required.
Power Adaptor	▪ Power adaptor (GS40A12) is to be purchased separately. Please refer to accessories section for the details.
Rack Mount Chassis	▪ Intelligent Rack Mount Chassis (NR-C14) is to be purchased separately. Please refer to accessories section for the details.

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.

ISO 9001:2000 FM 88638

OT Systems

All Digital Fiber Optic Manufacturing Specialist

OT Systems Ltd., June 2012

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