



Network Video Technologies

IP Transmission Product Series





NVT is the worldwide leader in UTP CCTV video and camera power transmission. Our focus on this technology enables us to supply excellence in product quality and world-class customer support.

Constant product research and evaluation guarantees that NVT's product offering contains technologies and user interfaces that work for the customer. We only supply products that are best in class, easy to use, and well supported. All NVT products are UL and cUL listed and CE, WEEE and RoHS compliant.

Consistent Stock Availability

We expect our customers to be able to place an order with us, large or small, and receive a professional reception and same day shipment. NVT is sold through hundreds of CCTV product distributor and direct dealer locations worldwide.

Fast and Reliable Delivery Capability

Our goal is fast and reliable delivery of customer orders. This commitment is the primary objective of our logistical infrastructure. Items ordered prior to 4:00PM (PST Monday to Friday) will typically ship the same day.

Limited Lifetime Warranty and Advance Replacement

We offer a unique limited lifetime warranty. If an NVT product fails for any reason, any time, it will be replaced. Just call customer service to return the product and arrange for an advanced replacement shipment.

Superior Technical and Application Support

Our technical staff is trained to provide first line support on every product we sell, providing installers with the reassurance of expert technical backup.

Customer/Technical Support

NVT customer support can be reached 8:00AM to 5:30PM PST at (+1) 650.462.8100.



Corporate Office

4005 Bohannon Drive | Menlo Park, CA 94025
+1.650.462.8100 | www.nvt.com/email
www.nvt.com

UK Office

Unit 10, Windmill Business Village | Brooklands Close
Sunbury-on-Thames | Middlesex, TW16 7DY
United Kingdom | +44 (0) 20.8977.6614
www.nvt.com

1700 EoC and Eo2™ Series ETHERNET OVER COAX AND 2-WIRE TRANSMISSION SYSTEM

- Up to 93 Mbps / Network
- Transmit 10/100 BaseT Ethernet up to 8,000ft over RG-59/U, 2,000ft over 2-wire/UTP
- One transceiver can distribute PoE power to remote transceivers and connected devices
- 56VDC is distributed to all connected devices, supplies PoE power up to 50 Watts
- Available in 1-4 Camera/Device Kits
- Up to four IP transceivers can be rack mounted on a rack tray connecting up to 16+ cameras/devices

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1800 TBus® Series ETHERNET OVER COAX/UTP TRANSMISSION SYSTEM

- Up to 150 Mbps / Network
- Transmit 10/100 BaseT Ethernet up to 8,000ft over RG-59/U, 2,000ft over 2-wire/UTP
- 56VDC is distributed to all connected devices, supplies PoE power up to 50 Watts
- Available in 1, 4, 8 and 16 channel hub models for larger enterprise system applications
- TBus Hubs can also use an NVT external 250 Watt NV-PS56-250W auxiliary/redundant power supply

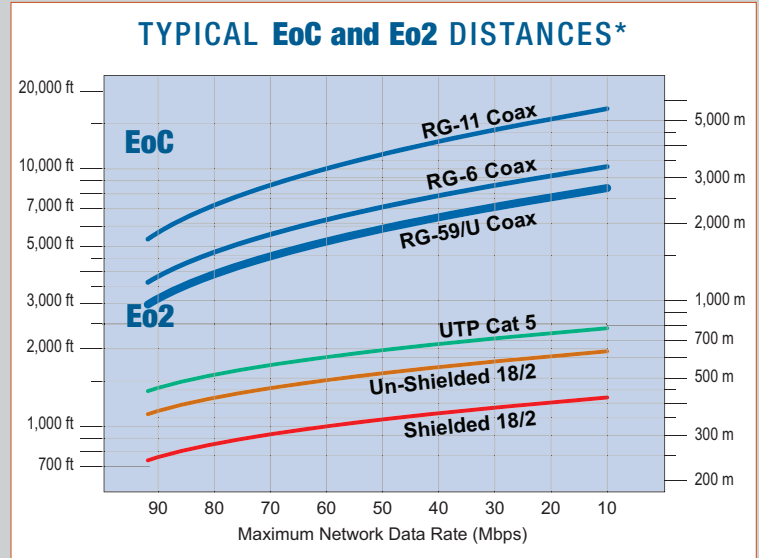
Pages 6-11

Accessories and Kits

- 1700 Series, EoC and Eo2 Product Kits
- Power Supplies and Adaptors

Page 12

NV-EC1701, NV-EC1701U Transceivers



Models NV-EC1701 and NV-EC1701U ETHERNET OVER COAX (EoC) AND ETHERNET OVER 2-WIRE (Eo2)

The NVT Model NV-EC1701 Ethernet over Coax EoC and the Model NV-EC1701U Ethernet over 2-Wire Transceiver are compact media converters that allow 10/100 BaseT Ethernet power to be transmitted using coax or 2-Wire cable. These devices are often used in legacy installations where existing cable is re-deployed as part of an upgrade to IP cameras.

These transceivers are extremely simple to use, with no IP or MAC addressing required. Status LEDs indicate power and link connectivity/activity for RJ45 and BNC ports. The NV-EC1701 and NV-EC1701U are backed by NVT's award winning customer support, limited lifetime warranty and advance replacements.

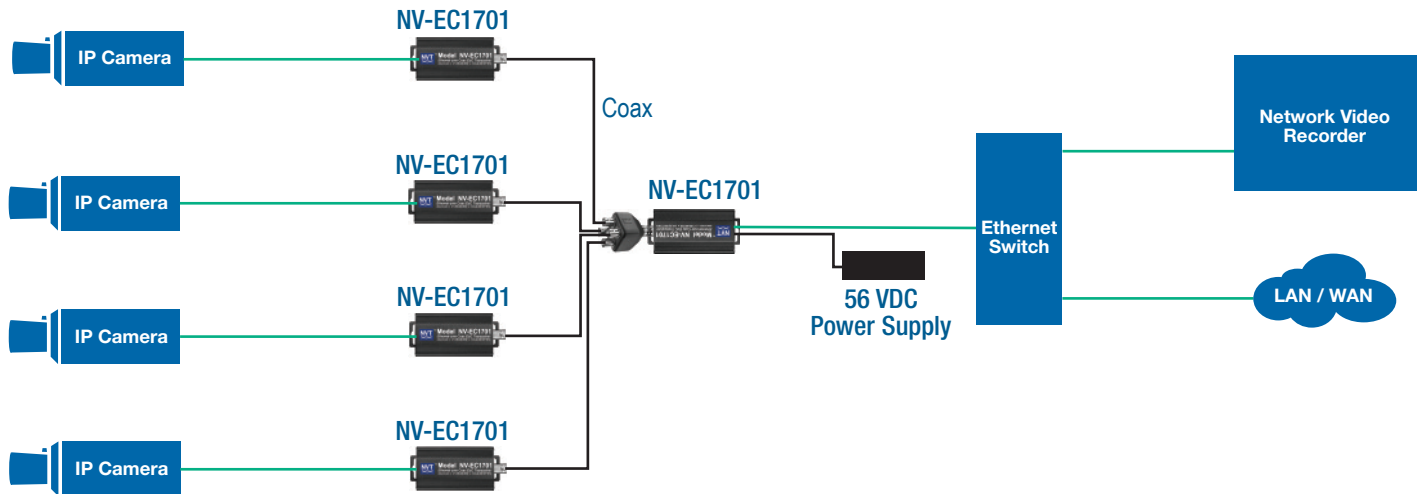
Features and Benefits

- Transmit 10/100 BaseT Full Duplex Ethernet up to 8,000ft (2,5km)* over RG-59U; 2,000ft over 2-Wire/UTP; 1,300ft over Shielded Twisted-Pair*
- 56 VDC is distributed over the coax to all connected equipment; Powers PoE cameras (or other PoE devices) up to 50 Watts*

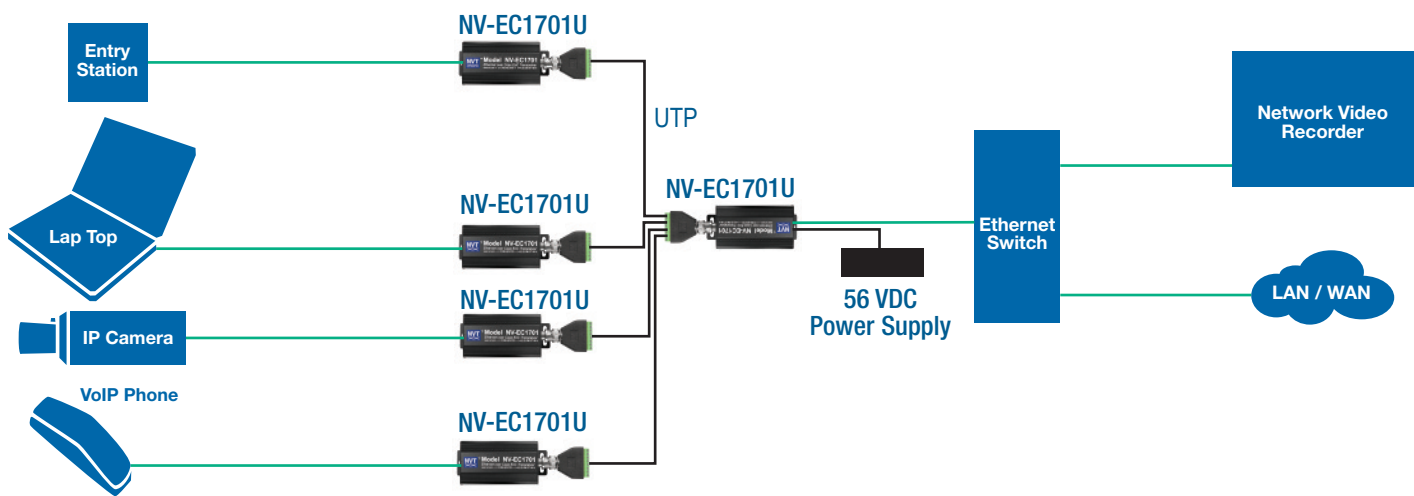
- Transparently supports all networking protocols (UDP, TCP/IP, HTTP, IGMP etc.)
- Advanced 128-bit AES encrypted transmission and PoE+ power technology
- Built-in transient protection; Industrial temperature range
- Available in 1-4 Camera System Kitst
- Supports IP and megapixel cameras or other 10/100 BaseT IP devices
- Simple configuration, no PC required
- One EoC Transceiver at the network-end can support up to eight remote Transceivers/IP cameras
- Up to four transceivers can be rack mounted on a Rack Mount Tray Kit, connecting up to 16+ cameras (see accessories)

*Distance and number of devices supported may be lower due to limited power supply capacity and wire voltage-drop, or data-rate limiting due to the selected wire's high-frequency signal attenuation. See manual or IP Distance Calculator at nvt.com. Specifications are subject to change without notice.

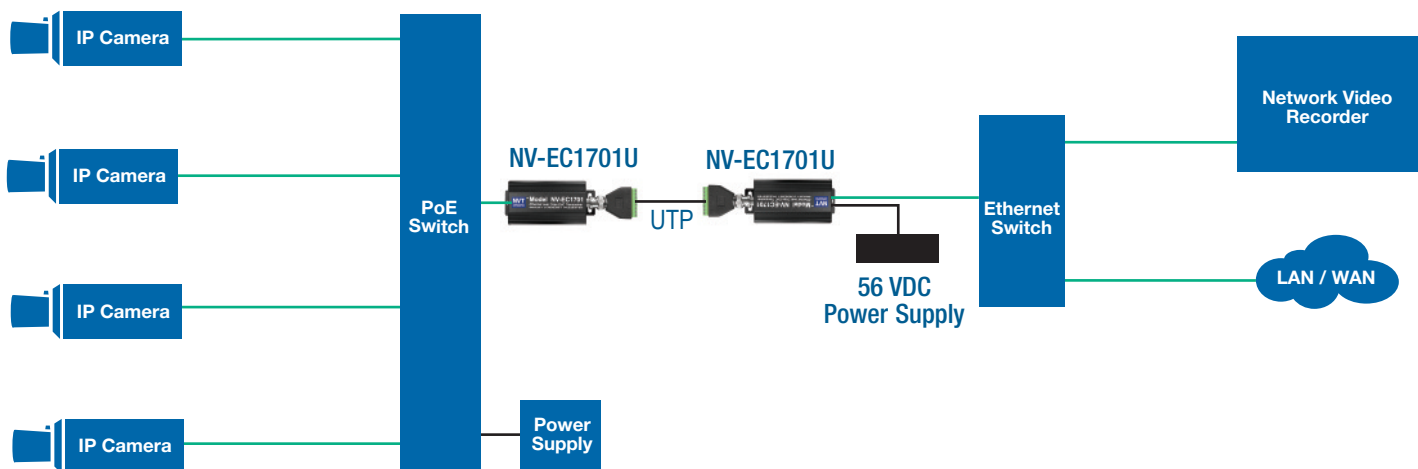
Four PoE Cameras using EoC



Four PoE Cameras/Devices using Eo2

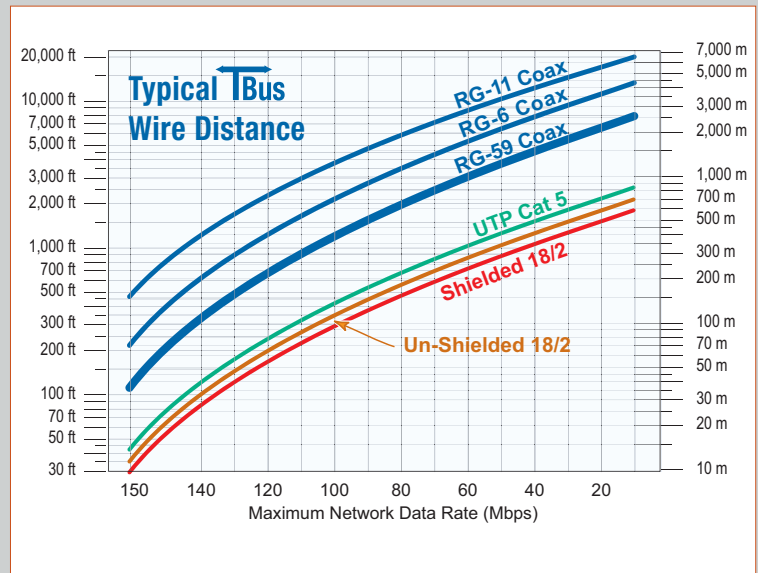


Remote Switch using Eo2



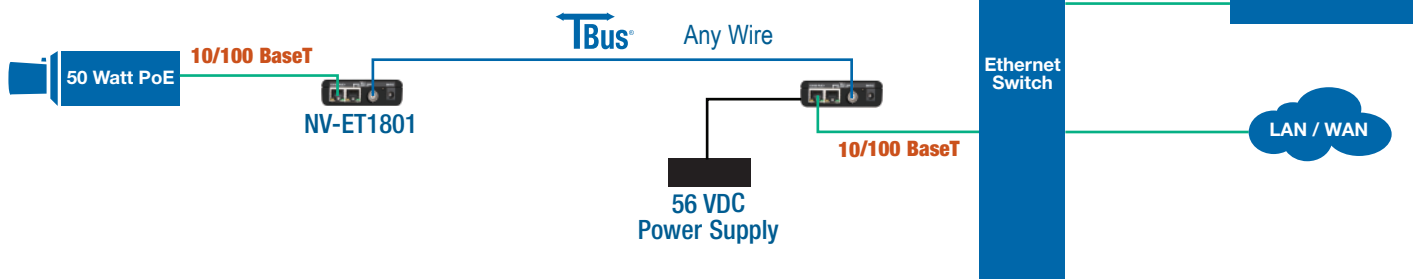
Model NV-ET1801 TBus® 1-PORT POE+ TRANSMITTER FOR COAX, UTP OR STP

1-PORT PoE+ Transmitter



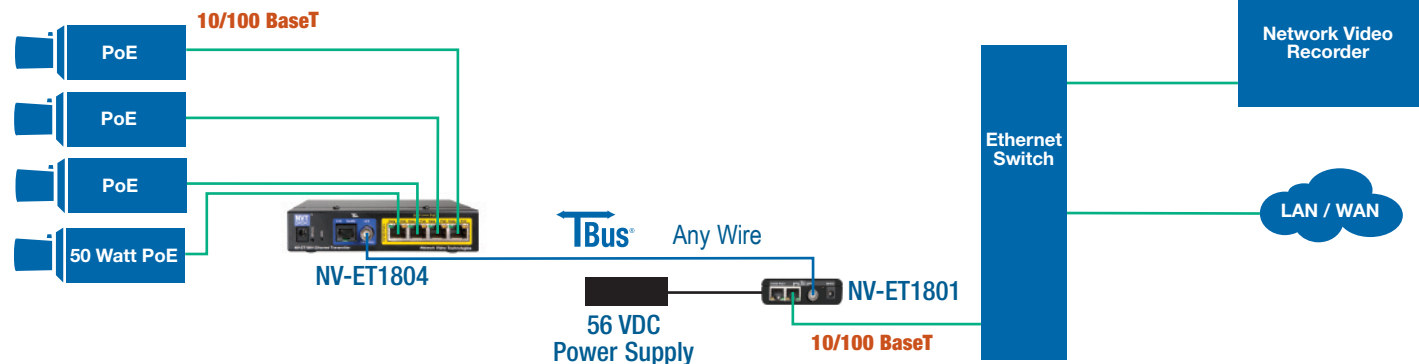
NV-ET1801 TYPICAL APPLICATION

STAND-ALONE SINGLE CAMERA



NV-ET1804 TYPICAL APPLICATION

FOUR CAMERAS



4-PORT POE+ Transmitter



Models NV-ET1801 and NV-ET1804 1-Port AND 4-Port TBus PoE+ TRANSMITTERS

The NVT Models NV-ET1801 and NV-ET1804 TBus PoE+ Transmitters are compact bus-architected media converters that deliver a single port 10/100 BaseT Ethernet and PoE+ power via coax, UTP or 2-Wire or Shielded Twisted Pair cable.

The NV-ET1804 TBus Ethernet Transmitter is backed by NVT's award winning customer support, Limited Lifetime Warranty and advance replacement.

Features and Benefits

- Transmit 10/100/PoE+ BaseT, over Coax 8,000ft* over RG-59U; 2,000ft over 2-Wire/UTP; 1,300ft over Shielded Twisted-Pair*
- Use with either the NV-ER1804 (4-Port), the NV-ER1808i (8-Port) or the NV-ER1816i (16-Port) Ethernet Receivers

- Powers PoE, PoE+, or High Power PoE cameras (or other PoE devices), up to 50 Watts
- Easy configuration, no PC required
- Transparently supports all networking protocols (UDP, TCP/IP, HTTP, Multicast with IGMP, etc.)
- Advanced 128-bit AES encrypted transmission and PoE+ power technology
- Built-in transient protection; industrial temperature range

*Distance and number of devices supported may be lower due to limited power supply capacity and wire voltage-drop, or data-rate limiting due to the selected wire's high-frequency signal attenuation. See manual or IP Distance Calculator at nvt.com. Specifications are subject to change without notice.

NV-ER1804 TBus® 4-PORT ETHERNET OVER COAX/UTP RECEIVER

4-PORT Receiver



Model NV-ER1804 4-Port TBus ETHERNET RECEIVER

The NVT Model NV-ER1804 TBus Ethernet over Coax/UTP Receiver is a compact bus-architected receiver hub that has four TBus ports, each capable of supporting multiple TBus transmitters and their subsequent 10/100 BaseT Ethernet and PoE+ powered devices.

The TBus transmission medium can be coax, 2-Wire/UTP, or Shielded twisted-Pair. Data rates up to 150 Mbps are achievable, making these devices the ideal choice in new or legacy installations where existing cable is re-deployed as part of an upgrade to IP cameras. 56 VDC is provided by a local power supply.

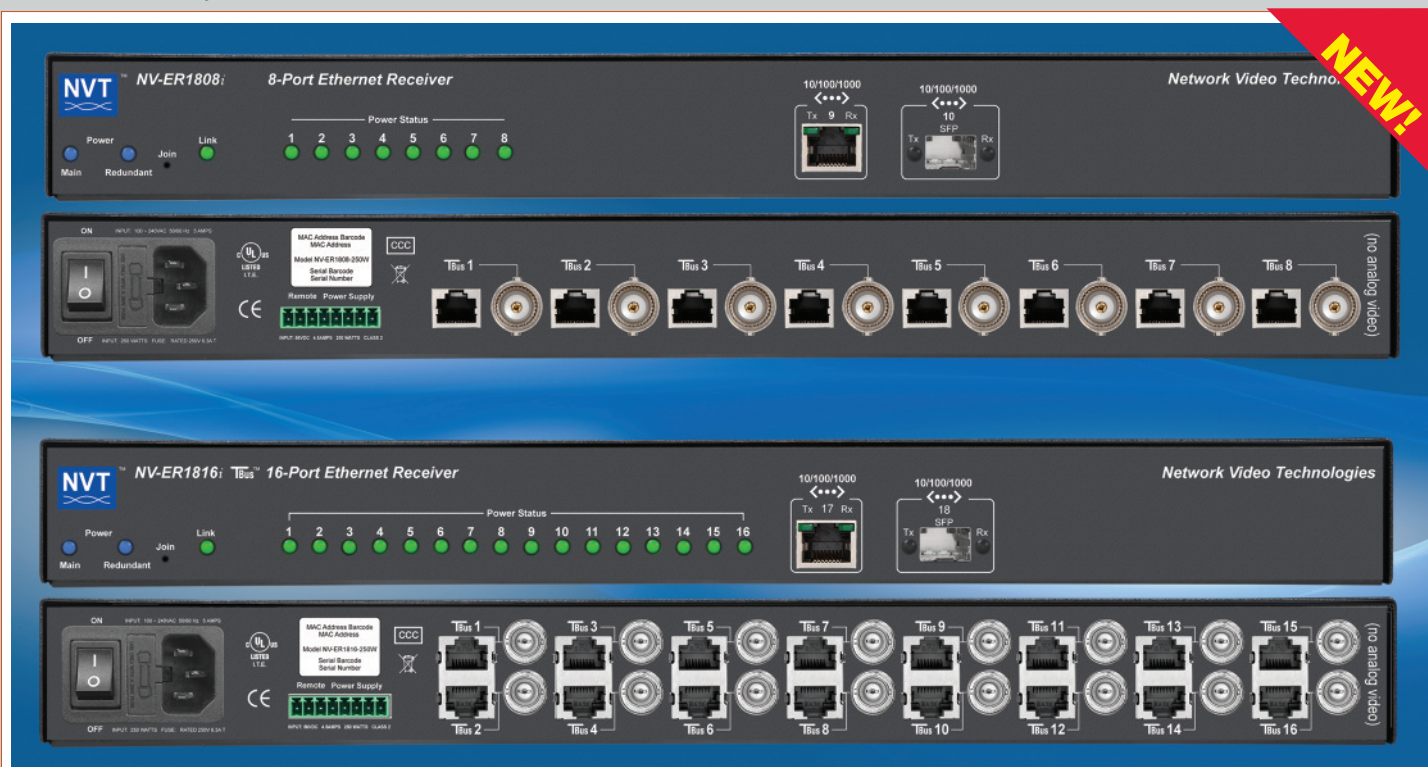
The NV-ER1804 is backed by NVT's award winning customer support, limited lifetime warranty, and advance replacement.

Features and Benefits

- Transmit 10/100 BaseT Ethernet up to 8,000ft over RG-59/U, 2,000ft over 2-Wire/UTP, or 1,300ft over Shielded Twisted Pair*
- The TBus architecture allows multipoint operation in any star or daisy-chained topology, with any combination of wire types.
- Transparently supports all networking protocols (UDP, TCP/IP, HTTP, Multicast with IGMP, etc.) using advanced 128-bit AES encryption
- 10/100/1000 uplink Ethernet connectivity
- Easy configuration, no PC required
- 56 VDC is distributed over the TBus to all connected equipment, PoE, PoE+, or High Power up to 50 Watts
- Built-in transient protection; Industrial temperature range

*Distance and number of devices supported may be lower due to limited power supply capacity and wire voltage-drop, or data-rate limiting due to the selected wire's high-frequency signal attenuation. See manual or IP Distance Calculator at nvt.com. Specifications are subject to change without notice.

NV-ER1808i, NV-ER1816i Receivers



Models NV-ER1808i (8-Port) and NV-ER1816i (16-Port) TBus ETHERNET RECEIVER

The NVT Model NV-ER1808i and NV-ER1816i TBus Ethernet over Coax/UTP Receiver Hubs are 19" rack mountable bus-architected media switches that have 8 or 16 TBus ports, together capable of supporting more than 16 TBus transmitters and their subsequent 10/100 BaseT Ethernet and PoE+ powered devices.

The TBus transmission medium can be coax, 2-wire/UTP, or Shielded Twisted-Pair. Data rates up to 150 Mbps are achievable, making these devices the ideal choice in new or legacy installations where existing cable is re-deployed as part of an upgrade to IP cameras. These hubs feature an internal 250 Watt power supply. TBus Hubs can also use an NVT external 250 Watt NV-PS56-250W auxiliary/redundant power supply for high power applications.

The NV-ER1808i and NV-ER1816i are backed by NVT's award winning customer support, limited lifetime warranty, and advance replacement.

No IP or MAC addressing configuration is required, yet is available for browser-based monitoring and control. This provides exceptional yet simple configuration and diagnostics for the installer or remote monitoring facility.

Status LEDs indicate power, auxiliary power, and link connectivity/activity.


Features and Benefits

- Transmit 10/100 BaseT Ethernet up to 8,000ft over RG-59/U, 2,000ft over 2-wire/UTP or 1,300ft over Shielded Twisted Pair*
- The TBus architecture allows multipoint operation in any star or daisy-chained topology, with any combination of wire types.
- Transparently supports all networking protocols (UDP, TCP/IP, HTTP, Multicast with IGMP, etc.) using advanced 128-bit AES encryption
- 10/100/1000 uplink ethernet connectivity
- Easy configuration, no PC required
- 56 VDC is distributed over the TBus to all connected equipment. PoE, PoE+, or High Power PoE cameras (or other PoE devices), up to 50 Watts* are supported.

*Distance and number of devices supported may be lower due to limited power supply capacity and wire voltage-drop, or data-rate limiting due to the selected wire's high-frequency signal attenuation. See manual or IP Distance Calculator at nvt.com. Specifications are subject to change without notice.

NEW!

BROWSER BASED JOINING


Network Video Technologies
Security Industry Leader

TBus™ Sixteen Port Ethernet Receiver
Model NV-ER1816i HW Rev A FW rev 1.2 IP Address 192.168.254.1

Joining Power Monitor Settings Logout

Enter Join Mode
TBus devices must be joined to communicate.
Click the Join button to place the NV-ER1816i into Join mode.
Within one minute, press the Join button on a remote NV-ET180x device to make it part of this Network.
Joined units will be added to the list below.


Join

TBus Status

Link Quality	Signal Level	Signal/Noise	Bit Error Rate
	Good	Fair	Poor

Joined TBus Transceivers	Description	Edit
74-B0-0C-01-01-33	Rear Parking Lot Camera 5	
74-B0-0C-01-01-42	Front Door (25 char max)	
74-B0-0C-01-01-61	Shipping Department Doors	
74-B0-0C-01-01-7D	Employee Entrance Cam 4	
74-B0-0C-01-01-93	Back Gate Camera 10	
74-B0-0C-01-01-AE	Front Parking Lot Cam 17	
74-B0-0C-01-01-B8	Server Room Camera 12	
74-B0-0C-01-01-C0	Side Door Camera 12	
74-B0-0C-01-01-CE	Wireless Access Point	
74-B0-0C-01-01-E4	Main Entr Door Station	

LINK POWER STATUS


Network Video Technologies
Security Industry Leader


TBus™ Sixteen Port Ethernet Receiver
Model NV-ER1816i HW Rev A FW rev 1.2 IP Address 192.168.254.0

Joining Power Monitor Settings Logout

Power Consumption Main 56.00V Aux 55.90V

Channel	Watts	0	5	10	15	20	25	30	35	40	45	50	
1	0												Reset 1
2	3												Reset 2
3	0												Reset 3
4	6												Reset 4
5	0												Reset 5
6	8												Reset 6
7	0												Reset 7
8	11												Reset 8
9	0												Reset 9
10	0												Reset 10
11	15												Reset 11
12	0												Reset 12
13	24												Reset 13
14	35												Reset 14
15	0												Reset 15
16	49												Reset 16
Total	151												Reset All

MONITOR DEVICES


Network Video Technologies
Security Industry Leader

TBus™ Sixteen Port Ethernet Receiver
Model NV-ER1816i HW Rev A FW rev 1.2 IP Address 192.168.254.1

Joining Power Monitor Settings Logout


Uplink Port Status

Port	Speed	Xmit	Recv
RJ45	1000		
SFP	1000		

Device Monitor

TBus Transceivers	Remote Devices (cameras)
74-B0-0C-01-0D-86 Rear Parking Lot Camera 5	00-80-88-43-65-29
74-B0-0C-01-01-95 Front Door (25 char max)	00-1A-07-03-55-57 08-00-23-93-9B-0B
74-B0-0C-01-16-4D Shipping Department Doors	00-1A-07-06-FD-42 00-1A-07-06-FD-43 00-1A-07-06-FD-44 00-1A-07-06-FD-45
74-B0-0C-01-01-7D Employee Entrance Cam 4	00-1A-07-06-FD-52
74-B0-0C-01-01-93 Back Gate Camera 10	00-1A-07-06-FD-77

SETTINGS


Network Video Technologies
Security Industry Leader

TBus™ Sixteen Port Ethernet Receiver
Model NV-ER1816i HW Rev A FW rev 1.2 IP Address 192.168.254.1

Joining Power Monitor Settings Logout

Network Settings

IP Address: 192.168.254.1 GUI MAC: 74BC00110000
Subnet Mask: 255.255.255.0 TBus MAC: 74BC00110001
Generate IGMP Queries: ☒ Submit

Backup

Folder Search Path: Browse...
C:\

Saves all the configuration settings of this NV-ER1816i onto your PC. File is stored as text under the name: NV-ER1816i_192-168-254-1.doc.
This information can be reviewed, edited, or used to restore into new hardware.
Use the Browse... button to locate the folder into which you wish to store this file. After selecting the folder, press Backup.

Restore

Search Path: Browse...
C:\

Loads saved configuration settings from your PC to this NV-ER1816i. Restore

NEW!

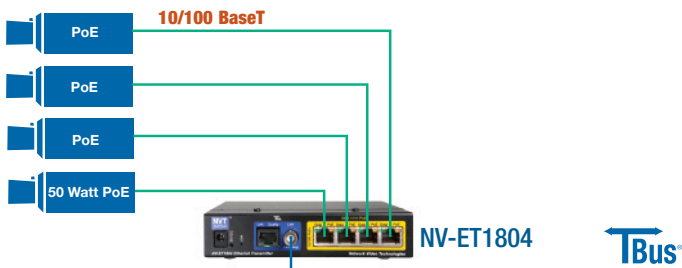
STAND-ALONE SINGLE CAMERA



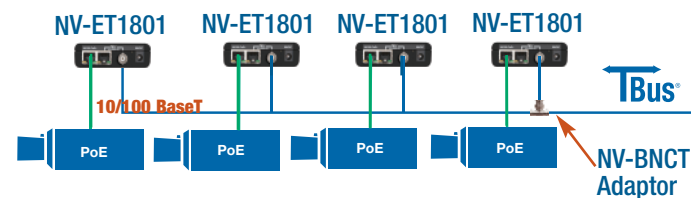
SINGLE CAMERA



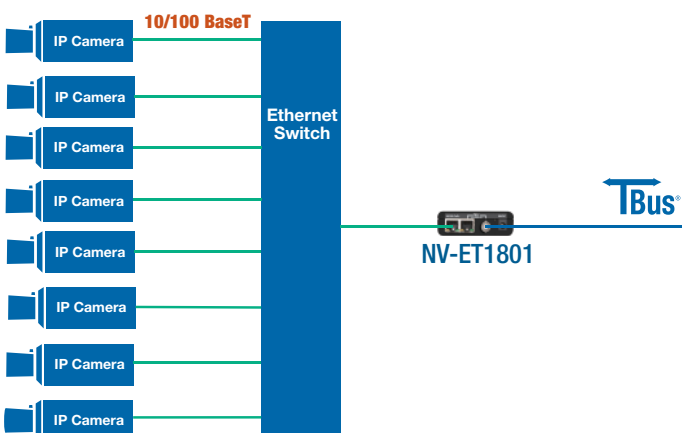
FOUR CAMERAS



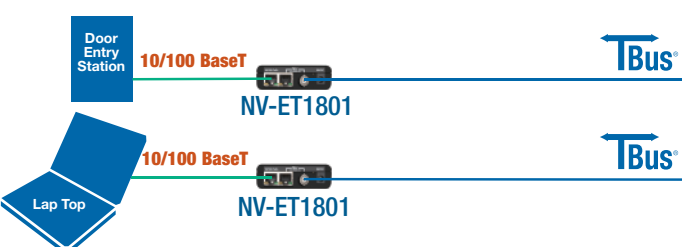
DAISY CHAIN



REMOTE HUB



NON-CAMERA IP CONNECTIVITY

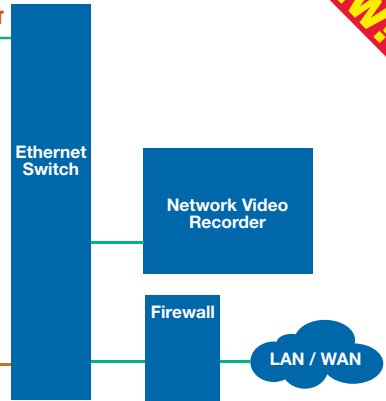


NV-PS56-60W
Power Supply

Receivers
NV-ER1816i or NV-ER1808i or NV-ER1804

10/100/1000
BaseT
SFP Slot
(Copper or Fiber)

10/100/1000
BaseT
SFP Slot
(Copper or Fiber)



High-speed uplink may be used to support:

- Fiber backbone
- Redundant backbone
- Daisy-chaining of hubs
- Local laptop connectivity

TBus®

is short for "Transmission Bus". It is the backbone communications architecture for NVT's range of IP transmission devices.

TBus supports all forms of coax and UTP, as well as 18/2, 2-wire (un-twisted wire), and STP (shielded twisted-pair) in any combination of star-topology, daisy-chaining, or a mixture.

In addition, TBus delivers 56 VDC power for remote transmitters as well as their remote PoE devices (IP cameras, etc.)

Loads of up to 1 amp are possible, supporting high power PoE devices up to 50 Watts.

TBus supports advanced 128-bit AES encrypted network speeds of up to 150Mbps.

Optional Auxiliary Power
NV-PS56-250W

May be added to support:

- High current camera loads
- Redundant power

Alarm contact closure outputs available

Ethernet Product Kits

Ethernet over Coax (EoC)

Model Number	Description	Number of units in Kit	Number of Cameras
NV-EC1701-KIT1	1-Camera Kit 56VDC/60W Power Supply	2	1
NV-EC1701-KIT2	2-Camera Kit 56VDC/60W Power Supply	3	2
NV-EC1701-KIT3	3-Camera Kit 56VDC/60W Power Supply	4	3
NV-EC1701-KIT4	4-Camera Kit 56VDC/60W Power Supply	5	4
NV-EC1701-K1H	1-Camera Kit 56VDC/90W Power Supply	2	1
NV-EC1701-K2H	2-Camera Kit 56VDC/90W Power Supply	3	2
NV-EC1701-K3H	3-Camera Kit 56VDC/90W Power Supply	4	3
NV-EC1701-K4H	4-Camera Kit 56VDC/90W Power Supply	5	4

Ethernet over 2-Wire (Eo2)

Model Number	Description	Number of units in Kit	Number of Cameras
NV-EC1701U-KIT1	1-Camera Kit 56VDC/60W Power Supply	2	1
NV-EC1701U-KIT2	2-Camera Kit 56VDC/60W Power Supply	3	2
NV-EC1701U-KIT3	3-Camera Kit 56VDC/60W Power Supply	4	3
NV-EC1701U-KIT4	4-Camera Kit 56VDC/60W Power Supply	5	4
NV-EC1701U-K1H	1-Camera Kit 56VDC/90W Power Supply	2	1
NV-EC1701U-K2H	2-Camera Kit 56VDC/90W Power Supply	3	2
NV-EC1701U-K3H	3-Camera Kit 56VDC/90W Power Supply	4	3
NV-EC1701U-K4H	4-Camera Kit 56VDC/90W Power Supply	5	4

Accessories



NV-RMEC16
Rack mounting chassis, 19" x 1U holds up to 4 NV-EC1701 Transceivers



NV-RMEC16U
Rack mounting chassis, 19" x 1U holds up to 4 NV-EC1701U Transceivers



NV-PC4PR
RJ45 Patch Cord, 4-pair 3' (1m) grey



NV-EC4BNC
1:4 BNC Splitter Adaptor



NV-DPSC4
Detachable Power Supply cord Splitter 1:4 2ft



NV-RJ45A
RJ45 to Screw Terminal Adaptor



NV-BNCT
BNC "T" Adaptor



NV-PS56-60W, NV-PS56-90W
56 VDC Power Supply, 60 or 90 Watts with IEC line cord



NV-BNCA
1:4 BNC Coax Splitter Adaptor



NV-PS56-250W
NV-PS56-250W, (1 X 250W)
NV-PS56-250W-2 (2 X 250W)
NV-PS56-250W-3 (3 X 250W)
Redundant and/or high power power supply for TBus applications



4005 Bohannon Drive | Menlo Park, CA 94025 | USA | +1.650.462.8100 | www.nvt.com/email

Unit 10, Windmill Business Village | Brooklands Close, Sunbury-on-Thames | Middlesex, TW16 7DY | UK | +44 (0) 20.8977.6614

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