

**NEW!**



## Model NV-ET1801 TBus™ Single Port PoE+ Transmitter with PoE, PoE+, or High Power PoE



### Features:

- 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
- Status LEDs include: Power (Blue), Link Data (Green), Link Quality (Red/Amber/Green), RJ45 PoE (Green)
- Transparently supports all networking protocols (UDP, TCP/IP, HTTP, Multicast etc.)
- Advanced 128-bit AES encrypted transmission and PoE+ power technology
- Built-in transient protection; industrial temperature range

The NVT Model NV-ET1801 TBus PoE+ Transmitter is a compact bus-architected media converter that delivers 10/100 BaseT Ethernet and PoE+ power via coax, UTP or 2-Wire or Shielded Twisted Pair cable. These transmitters are extremely simple to use, with no IP or MAC addressing required. Status LEDs indicate power and link connectivity/quality/activity for RJ45 and Tbus ports.

The NV-ET1801 TBus Ethernet Transmitter is backed by NVT's award winning customer support, Limited Lifetime Warranty and advance replacement.

\*Distance and number of devices supported may 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](http://nvt.com).

### Network Video Technologies

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[nvt.com](http://nvt.com) • [www.nvt.com/email](mailto:www.nvt.com/email)



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## Technical Specifications

### RJ45 ETHERNET INTERFACE

Connectivity: One RJ45 ports, auto-crossover

Wire type: 4-pair Cat5 or better

Distance: up to 328ft (100m)

Speed: 10/100 Base T, half/full duplex, auto-negotiation auto MDI/MDIX cross-over

Latency: 3mS

Data throughput: 200Mbps useable bandwidth per network  
Example: 64 megapixel cameras, all sharing one TBus network, each sending a 3.9Mbps video stream.

Power Output: This Power Sourcing Equipment (PSE) supports Powered Devices (PDs) that are compatible with IEEE 802.3af/at, or PDs that draw up to 50 watts\*. For maximum power/distance, PoE Power appears on all eight RJ45 pins, and are current protected and transient-protected.

### POWER CONSUMPTION:

Connectivity: 3.0 W @ 10 to 56 VDC

Total system consumption: = total consumption of transceivers  
+ total consumption of PDs (IP cameras)  
+ total power dissipated in the wire

### TBUS BUILDING WIRING INTERFACE

Connectivity: BNC or RJ45, Coax, UTP, 18/2 or STP wire  
One control room Receiver may support multiple \* remote TBus Transmitters

Impedance: 25 to 100Ω

Distance: see pages 4 and 5

Transmission technology: OFDM, 128-bit AES encryption

### \*IMPORTANT NOTE:

Data rate, distance and number of devices supported may lower due to power supply capacity, wire voltage-drop or signal attenuation. See Wire Distance Charts on pages 4 and 5. For fault/safety, never use more than two power supplies within one TBus network.

### LED STATUS INDICATORS

Power: Blue "Power On"  
Flashes when joining

BNC/ 2-Wire Interface: Green "Link"  
Green/Amber "Quality"

RJ45 Interface: Green "Link"  
Blinks with Data

### MECHANICAL / ENVIRONMENTAL

Transmitter body dimensions: 4.8 in (122mm) long  
(excluding connectors) .93 in (24mm) high  
3.23 in (82mm) wide


Transmitter weight: 5.1oz (145g)

Operating and storage temperature: -40°F to 185°F (-40°C to +85°C)  
20 to 85% RH non-condensing

Transient Immunity: 5x20μS 3000A, 6000V  
ESD 20KV, 200pF

### POWER SUPPLY

Power is usually supplied from the TBus Receiver. For optional supplemental local power, an additional Class 2 power supply may be purchased. These supplies are external inline, with an IEC380-C14 power inlet and 6ft (1.8m) line-cord. Input voltage is 100 ~240VAC 50-60Hz. A molded P1J 5.5mm barrel connector provides Class 2 (SELV) regulated output with one of these three ratings:

One TBus system may not have more than two power supplies (including those within a Receiver Hub). Use only the power cord  + 56VDC 60W or + 56VDC 90W provided with the unit or equivalent UL

approved type SPT-2, SVT, or SJT, 18/3 AWG 100~240 VAC , 1A 60°C Max . 15ft (4.5m) long. One end with IEC380-C13 appliance coupler and the other end with NEMA 1015P or equivalent for your country.

60W power supply body dimensions: 4.90 in (125mm) long:  
1.25 in (32mm) high  
2.00 in (50mm) wide

90W power supply body dimensions: 5.70 in (145mm) long  
1.25 in (32mm) High  
2.36 in (60mm) wide  
1 lb (450g)

Power supply operating temperature: -22°F to 122°F (-30°C to +50°C)  
20 to 85% RH non-condensing

Power supply storage temperature: -40°F to 185°F (-40°C to +85°C)  
0 to 95% RH non-condensing

Transient Immunity: 5x20μS 3000A, 6000V  
ESD 20KV, 200pF

Power cord weight: 5.5oz (156g)

### REGULATORY



UL Listed to IEC/UL 60950-1 Complies with FCC part 15B limits

Specifications subject to change without notice.

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## Product and Accessories

NV-ET1801: Single port transceiver only



NV-PS56-60W: 56VDC power supply, 60 watts  
with IEC line cord



NV-PS56-90W: 56VDC power supply, 90 watts  
with IEC line cord



NV-BNCT: BNC "T" adaptor



NV-EC4BNC: 1:4 BNC splitter adaptor



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



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## Wire Type and Power Distance Capacity

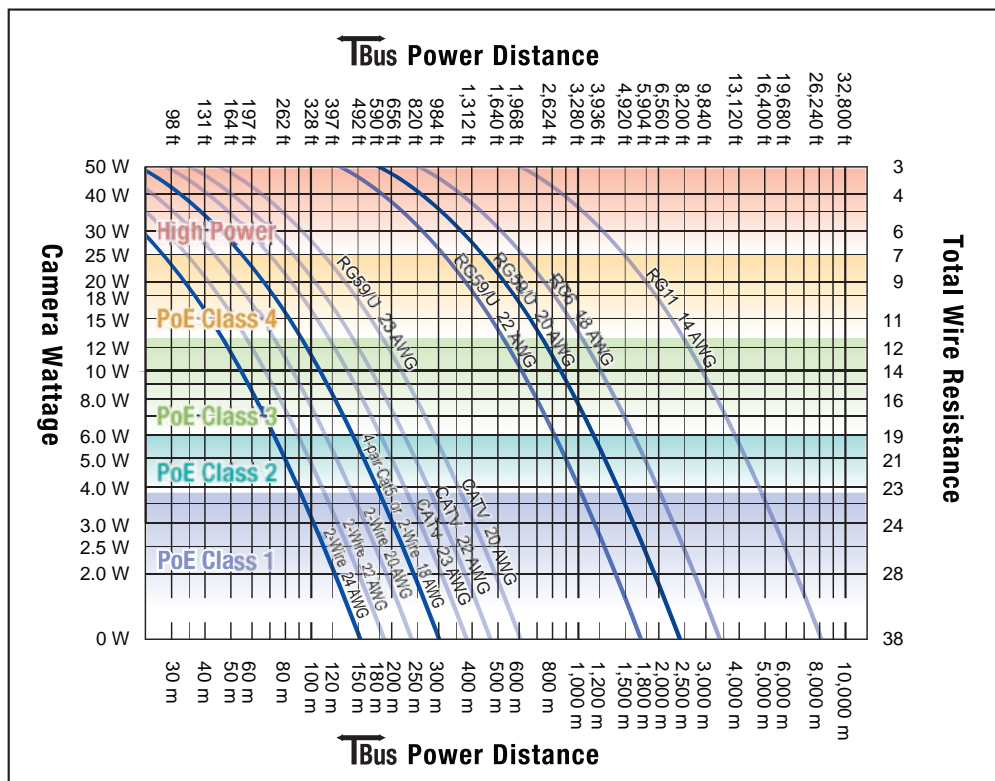
The distance capability of wire is dependant on its ability to deliver DC power, and separately, to deliver high-frequency data signals.

The graph below shows maximum power delivery when using a 56V power supply. If you are locally powering your camera (or other remote device), then this graph does not apply. The graph on the next page shows the maximum data delivery rate.

[A Distance Calculator can be found at www.nvt.com.](http://www.nvt.com)

PoE devices require a minimum of 43V to operate. With a 56V supply, we have 13V of allowable voltage drop on the wire. The voltage will dip in proportion to the remote (camera) load. The graph below shows what PoE power distances are supported for various loads and wire types.

- Start with the camera wattage at the left. Sometimes IP cameras are listed as to their PoE Class rather than wattage. If this is the case, use the colored classes instead.
- Now read over to the right until you find your kind of wire. Then look up (feet) or down (meters) to find your maximum wire distance.
- If your wire is not among the examples, simply measure its total resistance and find that value on the right side of the graph. The maximum supported wattage is on the left.



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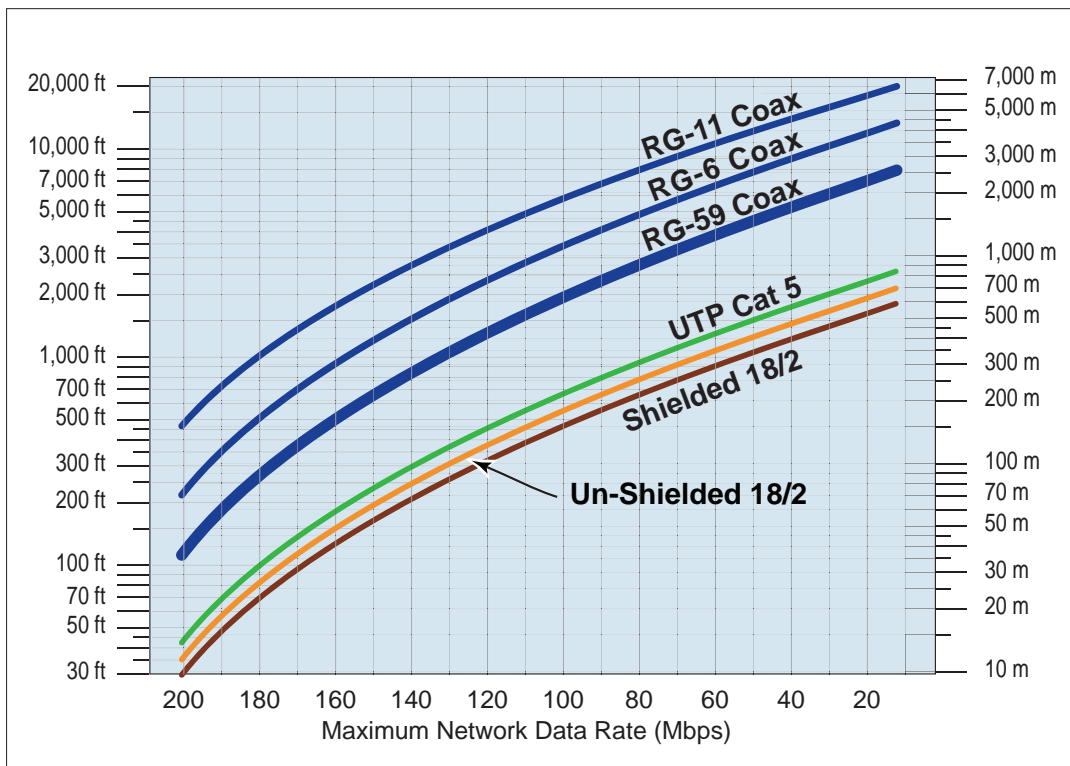


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## Wire Type and Data Distance Capacity

In addition to the power distance limitation, maximum data throughput is limited by wire quality. The graph below will help you determine your data throughput.

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