
TECHNICAL SPECIFICATIONS
SECURITY SYSTEM
DIVISION 16 - ELECTRICAL
SECTION 16770 - CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM

PART 2 – PRODUCTS

2.01 GENERAL

- A. All equipment and materials used shall be standard components that are regularly manufactured and utilized in the manufacturer's system.
- B. All systems and components shall have been thoroughly tested and proven in actual use.
- C. All systems and components shall be provided with the availability of a (U.S. and Canada) technical support number from the manufacturer. The number shall provide technical assistance at no charge for the life of the product.

2.02 NV-ER1804 TBus 4-Port PoE+ Receiver for Coax, UTP or STP

- A. The TBus Receiver shall have an Ethernet port capable of communicating with 10/100/1000 BaseT Ethernet devices, per IEEE 802.3.
- B. For RG-11 cable, TBus aggregate data speeds up to 150 Mbps shall be supported at distances up to 300 feet (100 m); 135 Mbps for 1,000 feet (304 m); 140 Mbps for 2,500 feet (762 m); 75 Mbps for 5,000 feet (1,500 m); and 60 Mbps for 8,000 feet (2,500 m).
- C. For RG-59/U cable, TBus aggregate data speeds up to 130 Mbps shall be supported at distances up to 300 feet (100 m); 100 Mbps for 1,000 feet (304 m); 75 Mbps for 2,500 feet (762 m); 20 Mbps for 5,000 feet (1,500 m); and 10 Mbps for 8,000 feet (2,500 m).
- D. For Cat5 cable, TBus aggregate data speeds up to 105 Mbps shall be supported at distances up to 300 feet (100 m); 55 Mbps for 1,000 feet (304 m); and 15 Mbps for 2,500 feet (762 m).
- E. The TBus Receiver shall be used with either of following model devices: NV-ET1801, NV-ET1804.
- F. The TBus Receiver shall have four TBus ports, each capable of supporting multiple TBus Transmitters at the device end.
- G. The TBus Receiver shall have a Blue "Power-On" LED that flashes when "Joining".
- H. The TBus Receiver shall have a green "Link" LED that is active when connected to, and communicating with one or more TBus Transmitters.
- I. The TBus Receiver shall have a green LED for each TBus port that reports when a TBus Transmitter is consuming power, and is therefore connected.
- J. The TBus Receiver's Ethernet interface shall be RJ45 10/100/1000 Base T, supporting auto-negotiation and auto MDI/MDIX cross-over.
- K. The TBus end-to-end latency shall be $\leq 3\text{mS}$.

- L. The TBus building wiring (Link) shall be; Coax, UTP, 18/2 or STP. Wire impedance shall be 25 to 100 Ohms.
- M. TBus data shall be protected using 128 bit AES encryption.
- N. TBus Link transmission technology shall be IEEE 1091.
- O. The TBus Receiver shall have built-in transient protection for 5x20µS 3,000A 6,000V; and ESD protection for 200pF 20KV.
- P. The TBus Receiver shall provide 56VDC Class 2 (SELV) power to each TBus Transmitter when powered by the model NV-PS56-60W or NV-PS56-90W power supply.
- Q. The TBus Receiver shall have a power consumption of ≤ 3 watts.
- R. The TBus Receiver shall have an operating and storage temperature of -40°F to 185°F (-40°C to +70°C), and humidity of 20 to 85%, non-condensing.
- S. The TBus Receiver shall have a weight of 1.64 lbs (0.74Kg).
- T. The TBus Receiver shall have dimensions, excluding connectors, of 8.43 in (214mm) wide x 1.39 in (35mm) high x 4.4 in (112mm) deep.
- U. The TBus Receiver shall be UL and cUL listed, CE and FCC compliant.
- V. The TBus Receiver shall be RoHS compliant.
- W. The TBus Receiver shall be provided with a limited lifetime warranty.
- X. The TBus Receiver shall be the NVT NV-ER1804 4-Port PoE+ Receiver.