

MULTICHANNEL UTP VIDEO-POWER-DATA TRANSCEIVER HUB

GEC-4VDPBC, GEC-16VDPBC, GEC-8PVPDTCHUB, GEC-16PVPDTCHUB

SECURITY SYSTEM

28 23 00 VIDEO SURVEILLANCE

PART 2 - PRODUCTS

2.01 GENERAL

- A. All equipment and materials used shall be standard components that are regularly manufactured and used in the manufacturer's system.
- B. All systems and components shall have been thoroughly tested and proven in actual use.

2.02 MULTICHANNEL UTP VIDEO-POWER-DATA TRANSCEIVER HUB

- A. The multichannel UTP Video-Power-Data transceiver hub shall act as a transceiver in that it shall be used to connect Video, Power and Pan/Tilt/Zoom Data signals. It shall connect using an RJ-45 Jack, which will accept an RJ-45 plug wired to CAT2 or better unshielded twisted pair cable. The receptacle shall be wired so that one twisted pair is designated for video transmission to and from the transceiver device, one twisted pair may be used for transmission of RS422/485 control signals and two twisted pairs may be used to provide operational power to the camera.
- B. Transmission of video, power and data signal shall be supported up to 750 feet (229 m) to another passive receiver, so long as all other requirements are met.
- C. The multichannel UTP Video-Power-Data transceiver hub shall support signals are typically known as "Up the Coax" control, used to facilitate Pan/Tilt/Zoom functionality with the appropriate and compatible PTZ hardware.
- D. The multichannel UTP Video-Power-Data transceiver hub shall be equipped with a single RJ-45 jack designated for Data connection for each group of 4 remote cameras via Unshielded Twisted Pair wire.
- E. If used as a Transmitter, the device shall produce a baseband video signal, each from a 75-ohm source.
- F. If used as a Receiver, the device shall accept a baseband video signal capable of driving a 75-ohm load.
- G. Shall be compatible with NTSC, PAL and SECAM color video standards.
- H. Bi-directional signal transmission via the Vertical Interval of the video signal shall be supported up to 750 feet (229 m) when using this transceiver to transmit the signal to another passive receiver, so long as all other requirements are met. These signals are typically known as "Up the Coax" control, used to facilitate Pan/Tilt/Zoom functionality with the appropriate and compatible PTZ hardware.
- I. The multichannel transceiver hub shall have integrated differential transient protection without the need for a ground connection. Additionally, the multichannel transceiver hub shall have integrated common mode transient protection, which to be functional, requires an electrical ground connection via screw terminal to protect video equipment against damaging voltage spikes.
- J. The multichannel transceiver hub shall be equipped with an Rj-45 connector designated for Data connection via Unshielded Twisted Pair wire.

- K. The multichannel transceiver hub shall be equipped with an RJ-45 jacks for connection to UTP wire for each channel.
- L. The multichannel transceiver hub shall be equipped with an integrated female BNC connector for 75-ohm video equipment connection for each channel.
- M. The multichannel transceiver hub shall be compatible with a video-power-data transceiver at each camera end and comply with standard structured cabling pin-outs of RJ-45 per EIA/TIA 568B.
- N. The multichannel UTP Video-Power-Data transceiver hub with no internal power supply shall provide the following:
 - 1. Each RJ-45 connector has a power load LED.
 - 2. External power supply will supply each power input via a pair of screw-less connectors.
 - 3. Each power channel shall have a 1.5 Amp resettable fuse.
- O. The multichannel UTP Video-Power-Data transceiver hub with internal AC power supply shall provide the following:
 - 1. A fully isolated (floating) Class 2 24/28VAC power for each camera.
 - 2. Total ground-loop immunity, pass-through video, and telemetry data connectivity over a single RJ45 4-pair UTP cable per camera.
 - 3. Shall provide up to 1 Amp per channel, 12 Amps aggregate.
 - 4. Each channel shall have independent diagnostic LEDs for fuse status and power load.

2.03 ELECTRICAL SPECIFICATIONS - Combiner Transceiver Hub without internal isolated power supply

- A. Color Video standard: NTSC, PAL and SECAM
- B. Video Output Voltage: 0.6 to 1.6 Vp-p
- C. Common-mode rejection: 70 dB. 15 KHz-5 MHz
- D. Insertion Loss: .5dB
- E. Frequency Response: 0 to 5Mhz depending on configuration
- F. Video Connectors: UTP via RJ-45 and BNC
- G. Data Connectors: RJ-45
- H. Power Connectors: Screw-less terminals
- I. Transmission Wiring: Category 2 or better UTP
- J. Transient Immunity: Per ANSI 587 C62.41

2.04 ELECTRICAL SPECIFICATIONS – Combiner Transceiver Hub with internal isolated power supply

- A. Input Voltage: 110 VAC or 220 VAC, externally switch selectable
- B. Input Current: 4.8 A (110 VAC) / 2.4 A (220 VAC)
- C. Camera Power Voltage: Isolated class II, switch selectable 24 VAC, off, or 28 VAC
- D. Camera Current: 1 A max per camera, 12 A max aggregated
- E. Total power: 340 VA
- F. Fault Protection: 2 A glass fuse (front access) per camera
- G. Color Video standard: NTSC, PAL and SECAM

- H. Video Output Voltage: 0.6 to 1.6 Vp-p
- I. Common-mode rejection: 70 dB. 15 KHz-5 MHz
- J. Insertion Loss: .5dB
- K. Frequency Response: 0 to 5Mhz depending on configuration
- L. Video Connectors: UTP via RJ-45 and BNC
- M. Data Connectors: RJ-45
- N. Power Connectors: Screw-less terminals
- O. Transmission Wiring: Category 2 or better UTP
- P. Transient Immunity: Per ANSI 587 C62.41

2.05 ENVIRONMENTAL SPECIFICATIONS

- A. Storage Temperature: -22° to 158°F (-30° to 70°C)
- B. Operating Temperature: 16° to 122°F (-10° to 50°C)
- C. Operating Humidity Range: 0 to 95%, non-condensing

2.06 MECHANICAL SPECIFICATIONS- 4 Channel Combiner Transceiver Hub without internal isolated power supply

- A. Height 1.74 in. (4.2 cm)
- B. Width 4.97 in (12.6 cm), 6.77 in (17.2 cm) include integrated rackmounts**
- C. Depth 1.77 in (4.5 cm)**
- D. Weight .54 lb (246 g)**
- E. Material Extruded Aluminum

2.07 MECHANICAL SPECIFICATIONS - 16 Channel Combiner Transceiver Hub without internal isolated power supply

- A. Height 1.74 in. (4.2 cm)
- B. Width 18 in (45.7cm), 19.8 in (50.3 cm) include integrated rackmounts**
- C. Depth 1.77 in. (4.5 cm)**
- D. Weight 1.75 lb (795 g)**
- E. Material Extruded aluminum

2.08 MECHANICAL SPECIFICATIONS - 8 and 16 Channel Combiner Transceiver Hub with internal isolated power supply

- A. Height 1.7 in. (4.3 cm)
- B. Width 17 in. (43 cm)
- C. Depth 12 in. (30.5 cm)
- D. Weight 8 ch – 14.7 lb (6.65 kg), 16 ch – 22 lb (9.98 kg)
- E. Material Aluminum sheet metal

2.09 INCLUDED ACCESSORIES - 16 Channel Combiner Transceiver Hub without internal isolated power supply

- A. Mounting brackets for front, rear or wall installations
- B. A 2-ft. (60 cm) coax jumper cable for each channel
- C. Rubber feet to support desktop mount

- 2.10 INCLUDED ACCESSORIES - 8 and 16 Channel Combiner Transceiver Hub with internal isolated power supply
- A. Mounting brackets for front, rear or wall installations (8 and 16 channel)
 - B. Molded IEC 7-ft. (200 cm) power cord
 - C. A 2-ft. (60 cm) coax jumper cable for each channel (8 and 16 channel)
 - D. Rubber feet to support desktop mount
- 2.11 OPTIONAL ACCESSORIES - 4 Channel Combiner Transceiver Hub without internal isolated power supply
- A. 19-inch Rack panel kit to support up to two 4-channel hubs.
- 2.12 CERTIFICATIONS
- A. CE - EN 55022:2006, Class A minimum, EN 61000-3-2:2006, EN 61000-3-3+A2:2005, EN 50130-4+A2:2003, IEC/EN 60950-1
 - B. UL/cUL - FCC Part 15, Class A minimum, cUL 60950-1
 - C. RoHS
 - D. WEEE
- 2.13 WARRANTY
- A. Limited lifetime
- 2.14 ACCEPTED MANUFACTURER
- A. GE Security, Inc. 8985 Town Center Parkway, Bradenton, FL 34202-5129
 - B. Phone 1-888-437-3287
 - C. Email: gesecurity.customerservice@ge.com
 - D. Substitutions: Not Permitted
 - E. The unshielded twisted-pair active multi-channel video receiver shall be GE Models GEC-4VDPBC, GEC-16VBC, GEC-8PVPDTCHUB, GEC-16PVPDTCHUB

END OF SECTION

GE is a registered trademark in the United States and other countries.