NEW!

Model NV-EC1701

Ethernet over Coax EoC Transceiver with PoE Power

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c UL US LISTED
EU

Features:

- Transmit 10/100 BaseT Full Duplex Ethernet up to 2,500ft (750m)* over RG-59 (or similar)
- Powers PoE cameras (or other PoE devices), up to 45 watts
- One EoC transceiver at the network-end can support up to four remote transceivers/IP cameras using an NVT BNC adaptor/splitter
- Up to four transceivers can be rack mounted on an NV-RMEC16 Rack Mount Tray Kit, connecting up to 16 cameras
- 48VDC is distributed over the coax to all connected equipment
- Easy configuration, no PC required
- Transparently supports all networking protocols (UDP, TCP/IP, HTTP, etc.)
- Advanced 128-bit AES encrypted transmission and power technology with built-in transient protection
- Available in 1-4 Camera System Kits
- Up to four EoC transceivers can be rackmounted on an NV-RMEC16 Rack Mouning Tray Kit, connecting up to 16 cameras
- Limited lifetime warranty

The NVT Model NV-EC1701 Ethernet over Coax EoC Transceiver is a compact media converter that allows 10/100 BaseT Ethernet and PoE power to be transmitted using coax cable. These EoC devices are typically used in legacy installations where existing coax is re-deployed as part of an upgrade to IP cameras. 48 VDC class 2 power is delivered to one transceiver, which distributes it to up to four remote transceivers, and their PoE 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 is backed by NVT's award winning customer support and limited lifetime warranty.

* Distance and number of devices supported will often be lower due to power delivery voltage-drop on the wire. See Wire Distance Chart.

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Model NV-EC1701
Ethernet over Coax EoC Transceiver

Technical Specifications

RJ45 ETHERNET INTERFACE

Connectivity:	RJ45, auto-crossover
Wire type:	4-pair Cat5 or better
Distance:	up to 328 ft (100 m)
Speed:	10/100 Base T, half/full duplex, auto-negotiation auto MDI/MDIX cross-over
Latency:	3mS
Data throughput:	80 Mbps ±10% useable bandwidth per network Example: Four megapixel cameras, all sharing one coax network, each sending 20Mbps video stream(s).
Power output:	This Power Sourcing Equipment (PSE) supports Powered Devices (PDs) that are compatible with IEEE 802.3af, or PDs that draw up to 45 watts*. "always on" 48VDC outputs appear on pins 4&5 and 7&8, and are current-protected and transient-protected.

COAX BUILDING WIRING INTERFACE

Connectivity:	BNC, RG-59/U or similar One control room EoC transceiver plus up to four remote EoC transceivers are supported
Impedance:	50 to 100Ω
Distance:	up to 2,500 ft (750m)*
Transmission technology:	OFDM, 128-bit AES encryption

*** IMPORTANT NOTE:**

Distance will often be shorter due to power delivery voltage-drop on the wire. See Maximum Per-Camera Wire Distance Chart on page 4. Power supplies may be used simultaneously at more than one EoC Transceiver.

LED STATUS INDICATORS

Power:	Blue "Power On"
BNC Interface:	Green "Link"
RJ45 Interface:	Green "Link"

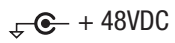
POWER CONSUMPTION

Consumption per transceiver: 2.0 W @ 48VDC

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

POWER SUPPLY

Power 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 a Class 2 (SELV) 48VDC regulated output. Use only the power cord provided with the unit or equivalent UL approved type SPT-2, SVT, or SJT, 18/3 AWG 100~240VAC, 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 country.



MECHANICAL

Body:	4 in (100mm) long 1.3 in (33mm) high 1.5 in (38mm) wide
Transceiver weight:	4.2oz (120g)
Power supply weight:	10.6oz (300g)
Power cord weight:	5.5oz (160g)
Total weight:	20.3oz (575g)

ENVIRONMENTAL

Operating temperature:	14°F to 122°F (-10°C to +50°C)
Storage temperature::	-22°F to 158°F (-30°C to +70°C)
Humidity:	20 to 85% non-condensing

REGULATORY

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

Specifications subject to change without notice.

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NV-EC1701 Ethernet over Coax
EoC TRANSCEIVER

NV-EC1701	Single transceiver only, no power supply

ACCESSORIES

NV-PS48-60W	48V DC power supply, 60 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) Grey

NV-PC2PR	RJ45 Patch Cord, 2-pair 3’ (1m) Red

NV-DSPC4	Detachable Power Supply Cord Splitter 1:4 2ft

NV-RMEC16	Rack mounting chassis, 19” x 1U holds up to 4 NV-EC1701 transceivers plus power supplies Includes NV-DCPC4 Power Cord Splitter

NV-EC1701 Ethernet over Coax
EoC TRANSCEIVER KITS

Single Camera EoC Transmission System

NV-EC1701-KIT1
- 2 NV-EC1701 Transceivers
- 1 NV-PS48-60W Power Supply with IEC line cord
- 1 NV-PC4PR
- 1 NV-PC2PR

Dual Camera EoC Transmission System

NV-EC1701-KIT2
- 3 NV-EC1701 Transceivers
- 1 NV-PS48-60W Power Supply with IEC line cord
- 1 NV-BNCT
- 2 NV-PC4PR
- 1 NV-PC2PR

Triple Camera EoC Transmission System

NV-EC1701-KIT3
- 4 NV-EC1701 Transceivers
- 1 NV-PS48-60W Power Supply with IEC line cord
- 1 NV-EC4BNC
- 3 NV-PC4PR
- 1 NV-PC2PR

Quadruple Camera EoC Transmission System

NV-EC1701-KIT4
- 5 NV-EC1701 Transceivers
- 1 NV-PS48-60W Power Supply with IEC line cord
- 1 NV-EC4BNC
- 4 NV-PC4PR
- 1 NV-PC2PR

Model NV-EC1701

Ethernet over Coax EoC Transceiver

Remote Power Delivery		Supported Wire Distance (feet)					
		Low Grade CATV		Typical CCTV Quality		Extended Distance	
Camera Power	Maximum Wire Resistance	RG59/BU 22 AWG Copper Clad Steel	RG59/BU 20 AWG Copper Clad Steel	RG59/U 22 AWG Solid Bare Copper	RG59/U 20 AWG Solid Bare Copper	RG6 18 AWG Solid Bare Copper	RG11 14 AWG Solid Bare Copper
(Watts)	(Ohms)	76.0 Ω per 1000 ft	49.4 Ω per 1000 ft	17.4 Ω per 1000 ft	12.7 Ω per 1000 ft	9.10 Ω per 1000 ft	3.70 Ω per 1000 ft
45 W	4.4 Ω	58 ft	90 ft	255 ft	350 ft	488 ft	1,201 ft
35 W	5.6 Ω	74 ft	113 ft	322 ft	441 ft	615 ft	1,514 ft
30 W	6.4 Ω	85 ft	130 ft	370 ft	507 ft	707 ft	1,740 ft
25 W	7.6 Ω	100 ft	153 ft	435 ft	596 ft	832 ft	2,045 ft
20 W	9.2 Ω	121 ft	186 ft	528 ft	723 ft	1,009 ft	2,481 ft
18 W	10 Ω	132 ft	203 ft	577 ft	790 ft	1,103 ft	2,500 ft
15 W	12 Ω	153 ft	236 ft	670 ft	918 ft	1,281 ft	2,500 ft
12 W	14 Ω	183 ft	282 ft	799 ft	1,095 ft	1,529 ft	2,500 ft
10 W	16 Ω	210 ft	323 ft	917 ft	1,256 ft	1,753 ft	2,500 ft
8 W	19 Ω	246 ft	379 ft	1,075 ft	1,472 ft	2,055 ft	2,500 ft
6 W	23 Ω	297 ft	457 ft	1,297 ft	1,800 ft	2,500 ft	2,500 ft
5 W	25 Ω	331 ft	509 ft	1,446 ft	1,981 ft	2,500 ft	2,500 ft
4.5 W	27 Ω	351 ft	540 ft	1,533 ft	2,101 ft	2,500 ft	2,500 ft
4.0 W	28 Ω	374 ft	575 ft	1,632 ft	2,236 ft	2,500 ft	2,500 ft
3.5 W	30 Ω	399 ft	614 ft	1,744 ft	2,390 ft	2,500 ft	2,500 ft

For multi-camera systems sharing a 60W power supply, the sum of all camera wattages, plus the sum of all transceivers wattages (at 2 watts each) shall not exceed 50 watts.

Remote Power Delivery		Supported Wire Distance (meters)					
		Low Grade CATV		Typical CCTV Quality		Extended Distance	
Camera Power	Maximum Wire Resistance	RG59/BU 22 AWG Copper Clad Steel	RG59/BU 20 AWG Copper Clad Steel	RG59/U 22 AWG Solid Bare Copper	RG59/U 20 AWG Solid Bare Copper	RG6 18 AWG Solid Bare Copper	RG11 14 AWG Solid Bare Copper
(Watts)	(Ohms)	24.9 Ω per 100 m	16.2 Ω per 100 m	5.71 Ω per 100 m	4.17 Ω per 100 m	2.98 Ω per 100 m	1.21 Ω per 100 m
45 W	4.4 Ω	18 m	27 m	78 m	107 m	149 m	366 m
35 W	5.6 Ω	22 m	35 m	98 m	134 m	188 m	461 m
30 W	6.4 Ω	26 m	40 m	113 m	155 m	216 m	530 m
25 W	7.6 Ω	30 m	47 m	133 m	182 m	254 m	624 m
20 W	9.2 Ω	37 m	57 m	161 m	220 m	308 m	750 m
18 W	10 Ω	40 m	62 m	176 m	241 m	336 m	750 m
15 W	12 Ω	47 m	72 m	204 m	280 m	391 m	750 m
12 W	14 Ω	56 m	86 m	244 m	334 m	466 m	750 m
10 W	16 Ω	64 m	98 m	279 m	383 m	534 m	750 m
8 W	19 Ω	75 m	115 m	328 m	449 m	627 m	750 m
6 W	23 Ω	91 m	139 m	395 m	550 m	750 m	750 m
5 W	25 Ω	101 m	155 m	441 m	604 m	750 m	750 m
4.5 W	27 Ω	107 m	165 m	467 m	640 m	750 m	750 m
4.0 W	28 Ω	114 m	175 m	498 m	682 m	750 m	750 m
3.5 W	30 Ω	122 m	187 m	532 m	729 m	750 m	750 m

For multi-camera systems sharing a 60W power supply, the sum of all camera wattages, plus the sum of all transceivers wattages (at 2 watts each) shall not exceed 50 watts.

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