# Panasonic

## Coaxial - LAN Converter with PoE function
# BY-HPE11KT
**(Indoor use only)**

*i-PRO* SmartHD

**Camera Adaptor**

**Center Adaptor**

# Easy migration from analog to IP system with existing coaxial cable

The BY-HPE11KT is a coaxial - LAN converter capable of implementing long distance, high speed digital data transmission on existing coaxial cabling with low setup costs. With the built-in PoE function, the BY-HPE11KT is able to supply power to Panasonic network cameras, which eliminates the need for installing power outlets for the cameras.

## Key Features

### PoE (Power over Ethernet) ready
The coaxial - LAN converter is compliant with PoE standards (IEEE 802.3af), and contains a power supplying device. PoE can be used to supply power to Panasonic network cameras, which eliminates the need for installing power outlets for the cameras.

### Use over long distances
The coaxial - LAN converter can be used for distances of up to 500 m (1,640 feet 5 inches)*1 for PoE connections, and 2 km (6,561 feet 8 inches) for non-PoE connections. (When used with RG-6/U coaxial cable.)

### High-speed transmission
The coaxial - LAN converter is capable of transmission speeds of 35 Mbps or over for TCP*2, and 45 Mbps or over for UDP connections. (When used with RG-6/U coaxial cable, and for distances under 2 km [6,561 feet 8 inches].)

### No setup required
Connections can be established by simply connecting the coaxial cable to the coaxial - LAN converter.

## Standard Accessories

- Installation Guide ...........................1 pc.
- CD-ROM*1 .....................................1 pc.

The followings are for installation.
- AC Cord ...................................... 2 pcs.
- Safety Wire ....................................1 pc.

- BNC Connector Cover ............... 2 pcs.
- Screw for the Safety Wire and BNC Connector Covers ..................... 3 pcs.

*1 Contains the documentation including the Operating Instructions.

## Optional Accessory

Rack Mount Connecting Fitting
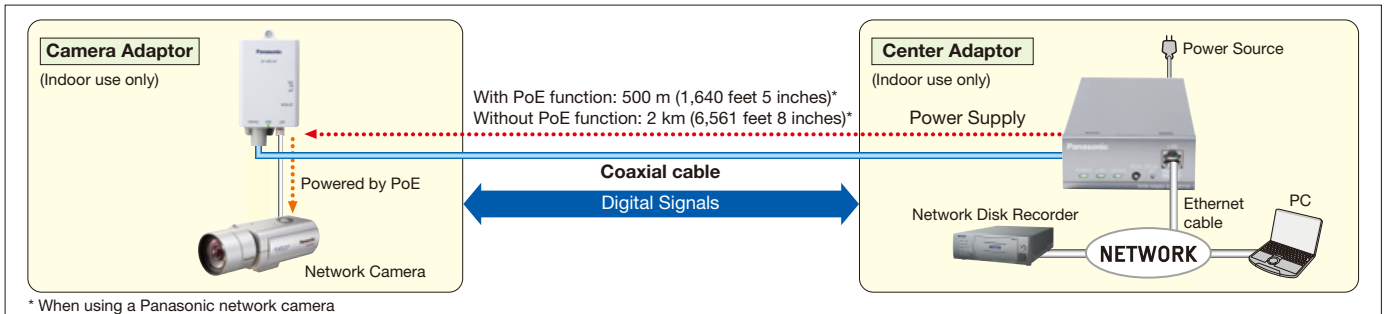**BY-HCA10**
(for mounting three or four Center Adaptor)

- Mounting Bracket ........................ 2 pcs.
- Underside Continuous Connecting Bracket
  ................................................... 2 pcs.
- Screw (Flat-head M3 x 6) .......... 32 pcs.
- Screw (M3 x 6)............................ 6 pcs.

*1 When connected to a Panasonic network camera. For other cameras the connection distance is 300 m (984 feet 3 inches).
*2 Measured using Linux® FTP.

## System Example

**Camera Adaptor**
(Indoor use only)

With PoE function: 500 m (1,640 feet 5 inches)*
Without PoE function: 2 km (6,561 feet 8 inches)*

Powered by PoE

Network Camera

Coaxial cable
Digital Signals

**Center Adaptor**
(Indoor use only)

Power Source

Power Supply

Network Disk Recorder

Ethernet cable

PC

NETWORK

* When using a Panasonic network camera

# Specifications

## Center Adaptor

| Items | Specifications |
|---|---|
| Operating Environment | Temperature: 0 °C (32 °F) to 50 °C (122 °F) |
| | Humidity: 20 %–85 % (no condensation) |
| Interfaces | 10Base-T/100Base-TX x 1 |
| | AUTO MDI/MDI-X AC inlet |
| | BNC connector |
| Dimensions (W x H x D) | About 105 mm x 44 mm x 210 mm |
| | (4 1/8 inches x 1 3/4 inches x 8 1/4 inches) (main body only) |
| Mass (Weight) | About 570 g (1.26 lb) |
| Power Supply | AC 100–240 V 50/60 Hz |
| Power Consumption | Maximum about 28 W (including the power consumption of the camera adaptor) |
| Coaxial Cable Power Supply Capability | Maximum 22 W |

## Camera Adaptor

| Items | Specifications |
|---|---|
| Operating Environment | Temperature: -10 °C (14 °F) to 50 °C (122 °F) |
| | Humidity: 20 %–90 % (no condensation) |
| Interfaces | 10Base-T/100Base-TX x 1 |
| | AUTO MDI/MDI-X (PoE compatible) |
| | BNC connector |
| Dimensions (W x H x D) | About 80 mm x 115 mm x 35 mm |
| | (3 1/8 inches x 4 1/2 inches x 1 3/8 inches) (main unit only) |
| Mass (Weight) | About 165 g (0.36 lb) |
| Power Supply | Original power system (DC 55 V from the center adaptor via the coaxial cable) |
| Power Consumption | Included in the center adaptor's power consumption |
| PoE Power Supply Capability | Maximum 15.4 W |

## Coaxial Interface

| Items | Specifications |
|---|---|
| Standard | Panasonic original system |
| Frequency Range | 2 MHz–28 MHz |
| Data Transfer Mode | Wavelet OFDM |
| Access Method | CSMA/CA |
| Error Correction | Reed-Solomon Code + Convolutional Code (Viterbi decoding) |

## LAN Interface

| Items | Specifications |
|---|---|
| Standard | IEEE802.3/IEEE802.3u (10Base-T/100Base-TX) |
| MDI/MDI-X | Cross/Straight cable automatic recognition |
| Transmission Rate | 10 Mbps/100 Mbps (Auto-Sensing) |
| Number of Ports | 1 (RJ-45 connector) |
| Protocol | TCP/IP/UDP |
| Access Method | CSMA/CD |

## Connection Specifications

| Items | Specifications |
|---|---|
| Number of adaptors that can be communicated with | 1 camera adaptor can be connected via coaxial cable for each center adaptor |
| Connectable Devices | Center adaptor: devices equipped with 10Base-T/100Base-TX interfaces |
| | Camera adaptor: Panasonic network cameras |
| Number of devices that can be connected | A maximum of 256 center adaptors or camera adaptors can be connected in 1 segment |

## Maintenance Screen Specifications

| Items | Specifications |
|---|---|
| Compatible Operating Systems | Microsoft® Windows® 8*, Microsoft® Windows® 7,Microsoft® Windows Vista®, Microsoft® Windows® XP |
| Web Browser | Windows® Internet Explorer® 10.0*, Windows® Internet Explorer® 9.0 , Windows® Internet Explorer® 8.0 , Windows® Internet Explorer® 7.0 , Microsoft® Internet Explorer® 6.0 SP3 |

* Desktop mode only. Metro mode not supported.

## Performance Specifications

| Items | Specifications |
|---|---|
| Transmission Speed[*1] (UDP) | 45 Mbps or higher (when using an RG-6/U coaxial cable at distances under 2 km [6,561 feet 8 inches]) |
| Transmission Speed[*1] (TCP[*2]) | 35 Mbps or higher (when using an RG-6/U coaxial cable at distances under 2 km [6,561 feet 8 inches]) |
| Maximum Transmission Distance | Without PoE function: 2 km (6,561 feet 8 inches) |
| | With PoE function: 500 m (1,640 feet 5 inches) (when using a Panasonic network camera) / 300 m (984 feet 3 inches) (when using a Class0 standard network camera) |

[*1] This value is for transmissions between the center adaptor and camera adaptor.
The transmission speed when using an RG-6/U coaxial cable may vary depending on factors such as the coaxial cable condition and network environment. The values shown here measured in environments not affected by cable or network environment conditions.
[*2] Measured using Linux® FTP.

## Maximum Transmission Distance / PoE Power Supply (when using RG-6/U coaxial cable) Specifications

| Maximum Transmission Distance | 300 m (984 feet 3 inches) | 500 m (1,640 feet 5 inches) | 1,000 m (3,280 feet 10 inches) | 1,500 m (4,921 feet 3 inches) | 2,000 m (6,561 feet 8 inches) |
|---|---|---|---|---|---|
| Power Supplied by PoE | 15.4 W[*1] | 12.0 W[*2] | Cannot supply power with PoE[*3] | | |

[*1] When connecting an IEEE802.3af (Alternative B, class0) network camera to the camera adaptor.
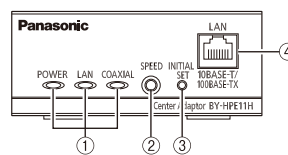[*2] When connecting a Panasonic network camera to the camera adaptor.
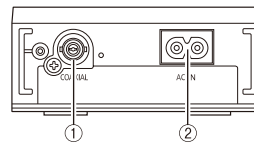[*3] Turn the PoE switch [OFF] in this situation.

# Part Names and Functions

## Center Adaptor

### Front View



① Indicators
② SPEED Button
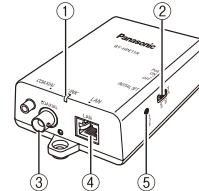③ INITIAL SET Button
④ Network Connector

### Rear View



① BNC Connector
② AC IN

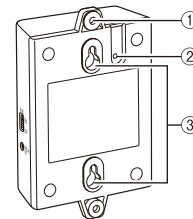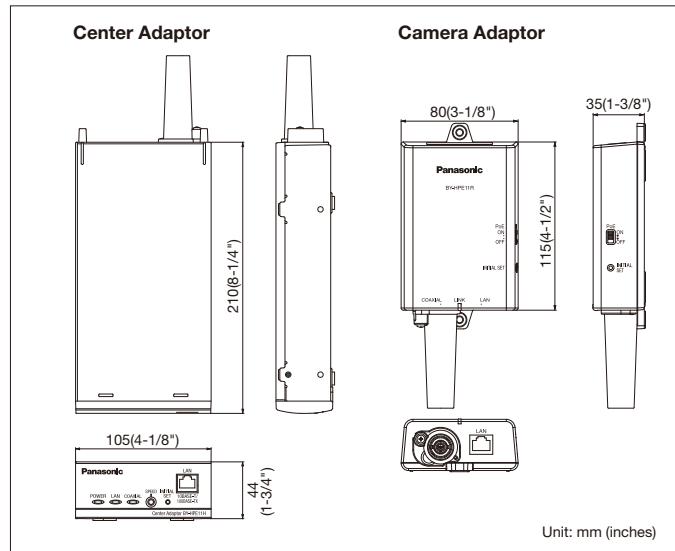## Camera Adaptor

### Front View



① Indicator
② PoE Switch
③ BNC Connector
④ Network Connector
⑤ INITIAL SET Button

### Rear View



① Used when attaching the camera adaptor to a ceiling or wall with screws
② Used when attaching the safety wire
③ Used when attaching the camera adaptor to screws inserted into a ceiling or wall

# Appearance

| Center Adaptor | Camera Adaptor |
|---|---|



Unit: mm (inches)

## Trademarks and registered trademarks

– Microsoft, Windows, Windows Vista, and Internet Explorer are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
– Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.
– "i-PRO SmartHD" logo is trademarks or registered trademarks of Panasonic Corporation.

## Important

– Safety Precaution: Carefully read the operating instructions and installation manual before using this product.
– Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the network.

• All TV pictures are simulated.
• Masses and dimensions are approximate.
• Specifications are subject to change without notice.

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