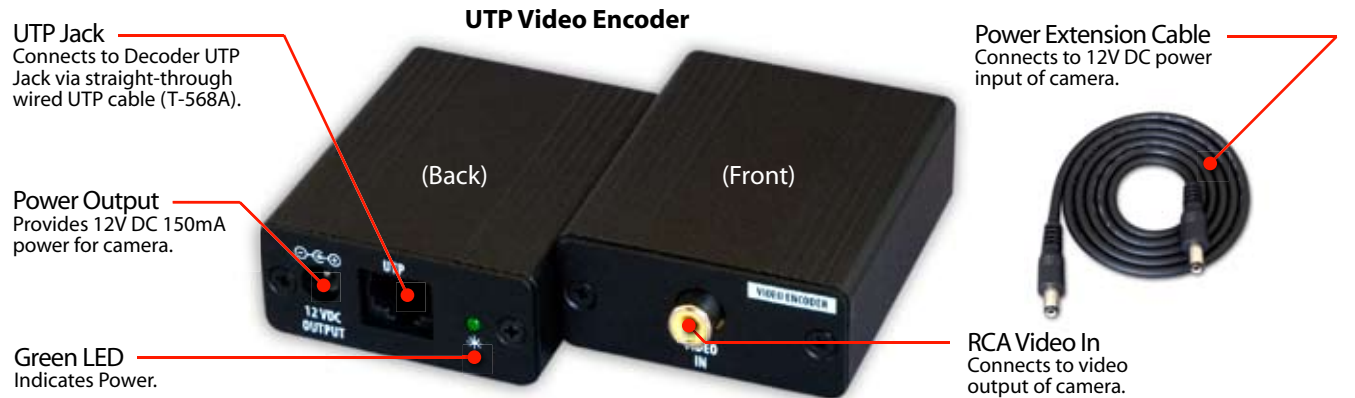# NM-UTPSET

UTP Encoder/Decoder Set
Video and Power Transmission Device

The NetMedia UTP Video Encoder and Decoder modules allow popular 12V DC cameras to use Unshielded Twisted Pair (UTP) cable, such as CAT5, for both power and video. There is no need to run multiple cables to the camera location! The modules support cable distances up to 1000 feet. To view the video, use a security monitor or the composite RCA Video Input jack of a television.

Product Includes:
1. NetMedia UTP Video Encoder module.
2. NetMedia UTP Video Decoder module.
3. 24V DC 200mA Power Transformer.
3. Power Extension Cable and two RCA Video Cables.

UTP Video Encoder

UTP Jack
Connects to Decoder UTP Jack via straight-through wired UTP cable (T-568A).

Power Output
Provides 12V DC 150mA power for camera.

(Back) (Front)

Green LED
Indicates Power.

Power Extension Cable
Connects to 12V DC power input of camera.

RCA Video In
Connects to video output of camera.

UTP Video Decoder

UTP Jack
Connects to Encoder UTP Jack via straight-through wired UTP cable (T-568A).

Power Input
Uses 24V DC from included Power Transformer.

(Back) (Front)

Red LED
Indicates Power.

Power Transformer
Connects to 24V DC Power Input of Decoder and AC outlet.

RCA Video Out
Connects to viewing device such as monitor, DVR, TV, or modulator.

FEATURES

One Wire Video™ Installation

Supports popular color and B/W cameras

Provides remote 12V DC 150mA power

Uses one inexpensive UTP cable

Uses pre-existing CAT5 or better cable

Supports up to 1000 ft with color and B/W

Supports industry standard wiring schemes

Supports standard RJ-45 plugs

Sturdy aluminum boxes

Includes power supply

1 year limited warranty

SPECIFICATIONS

Input/Output Video Connector:	Female RCA
Input/Output Video Signal:	Composite
Encoder/Decoder Video Connector:	Female RJ-45 jack
Encoder/Decoder Video Signal:	Proprietary
Encoder/Decoder Cable Type:	UTP: CAT5 or better
Encoder/Decoder Cable Distance Range:	Up to 1000'
UTP Encoder Size:	3.2" long, 2.2" wide, 0.9" thick
UTP Encoder Weight:	3 oz.
UTP Encoder Power Output:	12V DC, 150mA
UTP Encoder Power Connector:	5.5mm OD, 2.1mm ID, center positive
UTP Decoder Size:	3.2" long, 2.2" wide, 0.9" thick
UTP Decoder Weight:	3 oz.
UTP Decoder Power Input:	24V DC, 200mA
UTP Decoder Power Connector:	5.5mm OD, 2.1mm ID, center positive

(subject to change without notice)

MAN-UTPSET   REV0703A

NM-UTPSET

Installation Procedures:

1. Connect a UTP cable (CAT5 or better) to the UTP jacks of the Video Encoder and Decoder. Each Encoder/Decoder pair needs a dedicated point-to-point wiring circuit. If attaching your own plugs, wire them for straight-through connections: pin1 to pin1, pin2 to pin2; pin3 to pin3, etc. For standardization, you should also follow the T-568A color specification but it will not affect the modules' function. **Do not connect the UTP cable to computer networks or other UTP video systems! Doing so could damage this product and/or the other attached devices!**
2. Connect a video cable from the camera to the Encoder's RCA Video In jack. Simple adapters, such as RCA to BNC, may be used where appropriate.
3. Connect the Power Extension Cable from the Encoder's Power Output Connector to the camera's 12V DC power input. If the camera requires more than 150mA or if it does not use 12V DC then it cannot use the Encoder's power output.
4. Connect a video cable from the viewing device (monitor, Quad, DVR, modulator, etc.) to the Decoder's RCA Video Out jack using appropriate adapters where necessary.
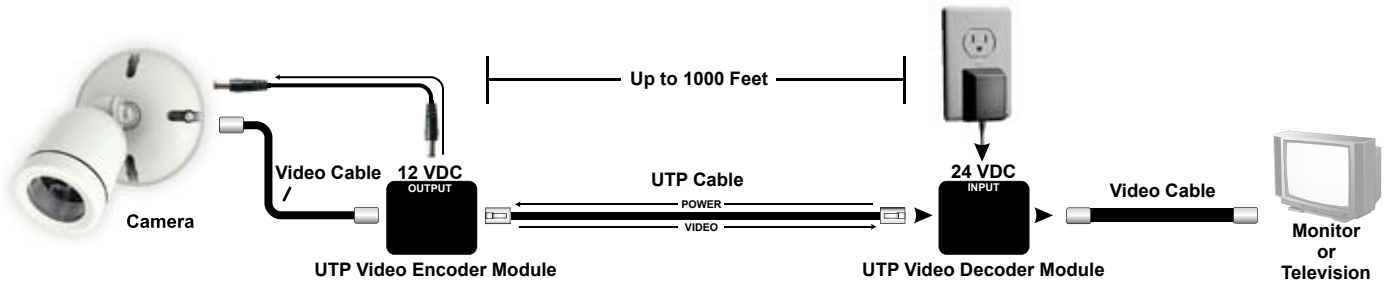5. Connect the 24V DC 200mA Power Transformer from an AC outlet to the Decoder's Power Input Connector.

Figure 1 - Connecting the modules to a security monitor or standard television. Use the TV's composite RCA Video In jack and view through its video or line input. The picture will not be available on a channel.
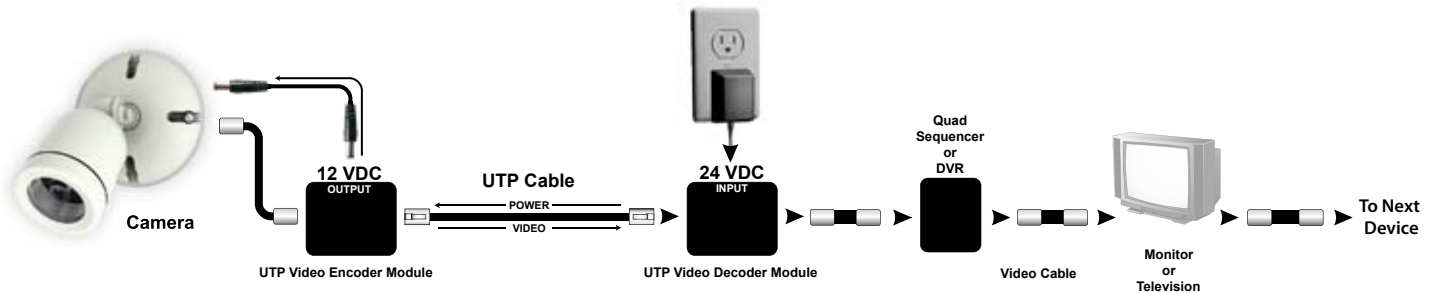

Figure 2 - Connecting the modules to multiple pieces of video equipment. Every piece except the last must have a loopback or video output jack.
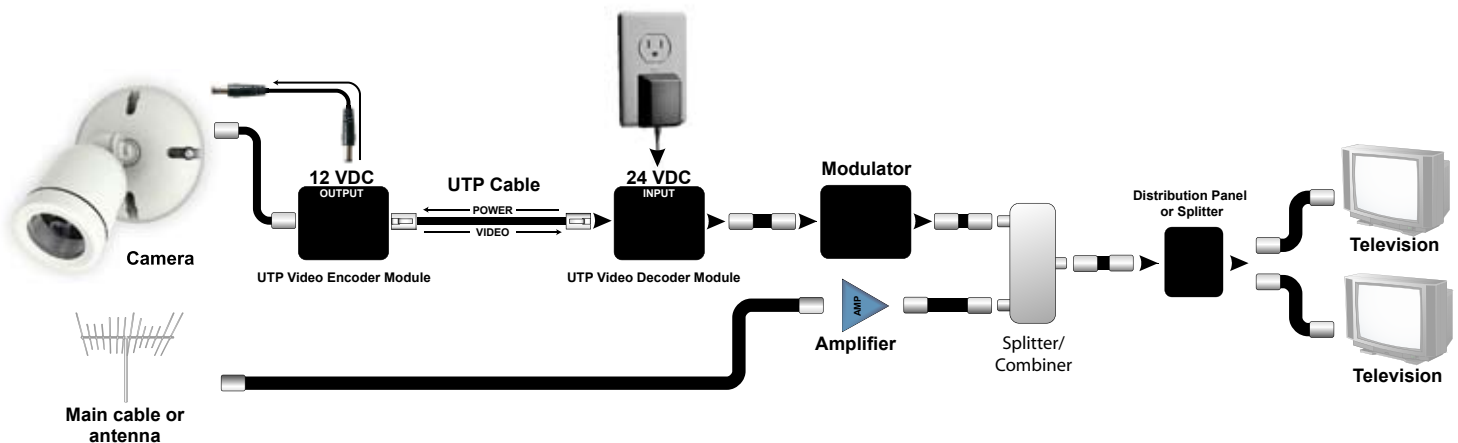

Figure 3 - Connecting the modules to a modulator for whole house distribution and standard television viewing on the modulated channel. The modulator can also be the last piece of equipment in Figure 2.

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UTP Encoder/Decoder Set
Video and Power Transmission Device

UTP Wiring Information:

The UTP cable should be wired for a straight-through connection according to the T-568A specification as shown in Figure 4.

FCC Information (U.S.A.):

Important: This product, when installed as specified below, meets FCC requirements. Modifications not expressly approved by NetMedia may void your authority, granted by the FCC, to use the product. Failure to follow all installation instructions could void your FCC authorization to use the product in the USA.

UTP Encoder/Decoder Set:
FCC compliance requires that the Video Encoder and Decoder module end plates be fastened whenever the units are in operation.

Compliance Information Statement
(Declaration of Conformity Procedure)

We,
NetMedia, Inc.
10940 N. Stallard Pl.
Tucson, AZ 85737
(520-544-4567)
declare under our sole responsibility that the following products,

Type of Equipment: UTP Video Encoder and Decoder Set

Model: NM-UTPSET

to which this declaration relates are in conformity with the Title 47 of the US Code of Federal Regulations, Part 15 covering Class B digital devices.

Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.
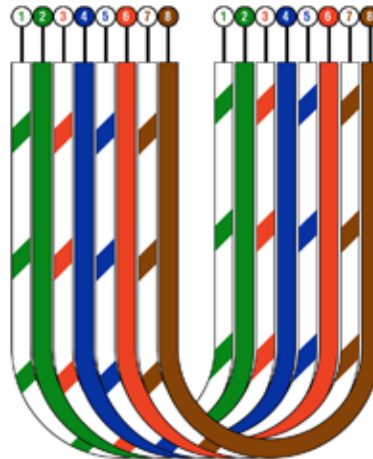

Figure 4 - T-568A standard straight-through wiring diagram. Connect pin1 of each plug together with the same wire. Repeat for all the corresponding pins.

Pin#	Description	Wire Color
Pin 1	Common Negative	White/Green
Pin 2	Common Negative	Green
Pin 3	Video Signal -	White/Orange
Pin 4	Not Used	Blue
Pin 5	Not Used	White/Blue
Pin 6	Video Signal +	Orange
Pin 7	Power Positive	White/Brown
Pin 8	Power Positive	Brown

NOTE: This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
* Reorient or relocate the receiving antenna.
* Increase the separation between the equipment and receiver.
* Connect the equipment to a different outlet on a circuit other than the one the receiver is connected to.
* Consult the dealer or an experienced radio/TV technician for help.

One Year Limited Warranty

NetMedia, Inc. warrants this product to be free from defects in materials and workmanship under normal use and service for One Year from the date of purchase or NetMedia will repair or, at its option, replace the defective product. Please keep your purchase receipt. In the unlikely event that you need warranty service, call NetMedia at 1-520-544-4567 for a Return Material Authorization (RMA) number. Then, return the product, with the RMA number clearly marked on the package, by a traceable method with freight pre-paid and accompanied by a copy of the purchase receipt to:

Attn: Customer Service, NetMedia, Inc. 10940 N. Stallard Place, Tucson, AZ 85737-9527

Frequently Asked Questions

Q- Can I connect the modules to any computer network equipment?

A- **NO! Do not connect the UTP cable of the Video Encoder or Decoder to a computer network! Doing so could damage the attached devices!** The Decoder ouputs DC voltage on pins 7 and 8 of its UTP connector that some network equipment may not be prepared to handle. Each Encoder/Decoder pair needs a dedicated point-to-point circuit; nothing else can share their wires. Also, they are not IP or Power over Ethernet (PoE) devices so they will not work properly with network hubs, switches, or routers.

Q- Can I connect the modules to other UTP type video systems?

A- **NO! Do not connect the UTP cable of the Video Encoder or Decoder to other video systems! Doing so could damage the attached devices!** As mentioned above, the Decoder output voltage could damage the other devices. Also, the other devices may damage the Encoder or Decoder. Even without the power issues, the modules' video transmission signal is proprietary so the other devices will not be able to recognize or display it properly.

Q- How can I see the video on my TV without using an expensive security monitor?

A- The composite video signal from the UTP Decoder can be plugged directly into one television's RCA Video Input jack and viewed when that TV is switched to the proper input. Another option is to feed the Decoder signal into a modulator. A modulator, such as NetMedia's MM70, changes the video to a UHF or Cable channel and allows the signal to be distributed to all your TV's along with the existing antenna/cable/satellite service.

Q- Will the modules work at distances beyond 1000 feet?

A- Though we do not recommend or support doing so, some people find that the modules function satisfactorily at distances greater than 1000 feet. At that range, the video quality degrades as the cable length increases but until the power gives out over the next few hundred feet, it may still be acceptable for your application.

Q- What do the DIP switches inside the UTP Decoder module do?

A- The switches come preset from the factory in the OFF position. This requires the least amount of intervention for most installations. Some monitoring devices though, are more sensitive to the voltage level of the video signal and will require an adjustment of the switches according to the length of the UTP cable. In those situations, disconnect power from the Decoder and remove one of the end plates. Then locate the switch bank and, starting from #1, set each switch ON until the most satisfactory picture is attained. The longer the cable, the more switches that will need to be ON.

Figure 5 - UTP Decoder DIP Switches. Default of all OFF works for most installations. If necessary, start with #1 and turn more ON as the cable length increases; turn them all ON for the longest distance, 1000 feet.