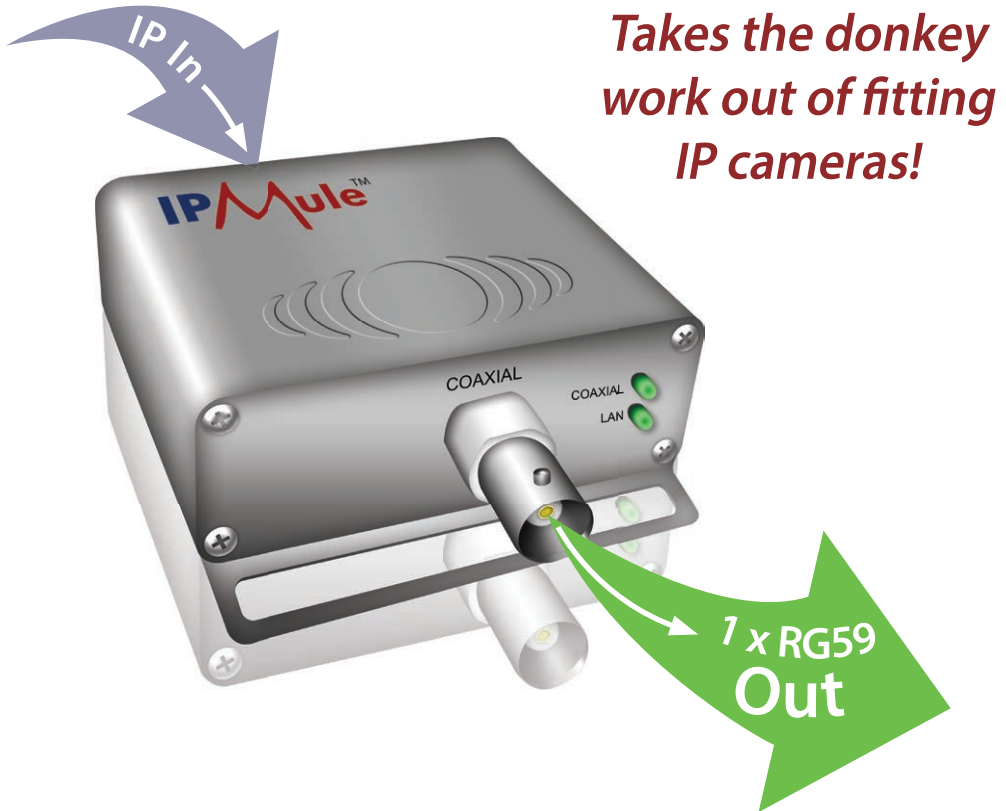


Carries multiple IP signals down one RG59 Cable



- Great upgrade tool - Saves time and money
- Easily add IP cameras onto existing coax
- Plug and play - No IP addressing required
- No need for new or extra cabling
- Add up to 12 video streams using one coax cable
- Compact wall-mount design
- TX/RX in one - Works in pairs



Simply connect an IP Mules to either end of the cable and you get a network created from one end to the other! It can be used for IP cameras or any other network device you want to connect.

You can even send multiple IP cameras down the one cable using multiple IP Mules, the only limiting factor is the cable type you are using limits the bandwidth available (see table overleaf).

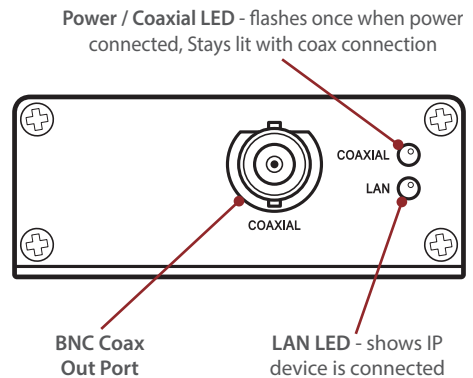
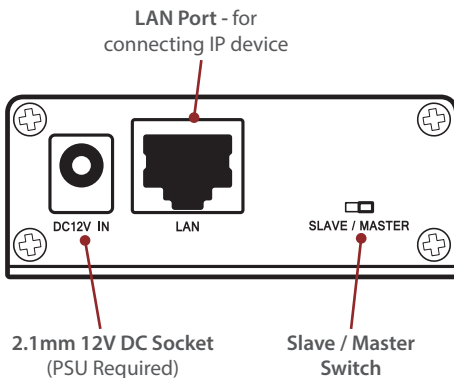
There is no complex set up at all, just set one mule to be the TX and set the other to be an RX.

All the IP Mules are identical, each having a switch on it to make it in to either a TX (transmitter) or an RX (Receiver). You can buy the mules in singles or pairs depending on your requirements.

Key Features

- Easy to expand existing systems
- Quick and easy installation
- No need for extra cables
- Long distance transmission
- Multiple IP camera transmission
- Coax - CAT5/6 - Alarm and telephone cable supported
- BNC – Terminal adapter supplied

Connections & Controls

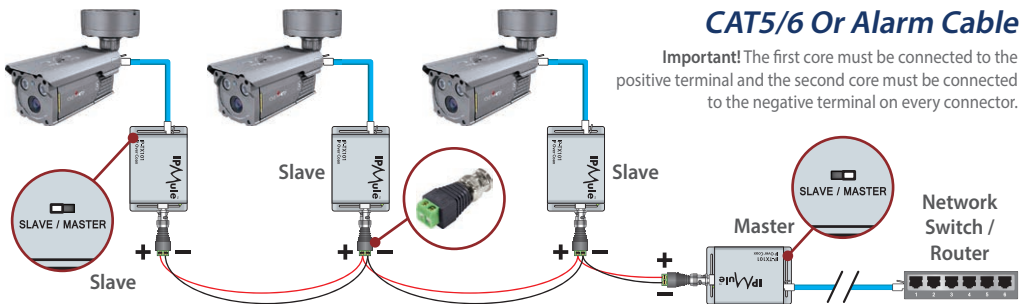
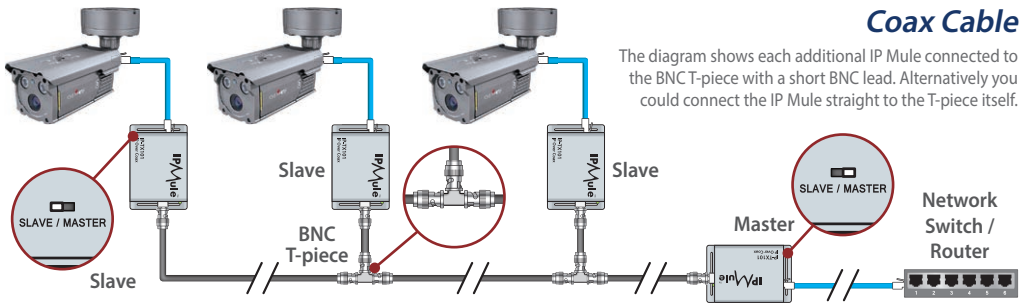


IP Mule Instruction Manual

Installation Steps

- 1 Ensure that all the cameras have matching IP addresses except for the last segment which must be unique. E.g. **192.168.0.1**, **192.168.0.2**, **192.168.0.3**.
- 2 The Master/Slave switch must be set to the correct position according to where the unit is installed.
If connected to a camera the switch needs to be set in the 'Slave' position.
On the unit connected to the network switch or router the switch needs to be set to 'Master'.
- 3 When connecting more than one camera, the way in which they are connected is determined by the type of cable used. (See diagrams below.)
When installed with coax cable a BNC T-piece connector is used in-line to connect extra units to the cable run.
When installed with CAT5 you can simply use one pair of wire. Connect each unit in a daisy chain using the terminal to BNC connector provided.
- 4 Once your DVR has been networked successfully your cameras will be displayed in the DVR's available IP cameras list as usual.

Connection Diagrams



Transmission Distances

	Coax - RG59	CAT5 - CAT6	Telephone Wire	Alarm Cable
300m	100 Mbps	78 Mbps	65 Mbps	60 Mbps
600m	90 Mbps	65 Mbps	55 Mbps	50 Mbps
1200m	78 Mbps	60 Mbps	35 Mbps	35 Mbps
1500m	50 Mbps	40 Mbps	25 Mbps	25 Mbps
2000m	30 Mbps	25 Mbps	25 Mbps	10 Mbps

Specification

Video In Connection	RJ45 Socket
Video In Cable Length	100m Max
Video Out Connection	BNC Socket
Video Out Cable Length	2000m Max
Max Cameras Per Run	12
Power	12V DC (PSU Required)
Power Connection	2.1mm DC Socket
Current	250mA
Working Temperature	-10°C ~ 55°C
Storage Temperature	-40°C ~ 70°C
Build	Aluminium
Dimensions	111 x 64 x 24mm

Fault Finding

As with traditional IP installations the cameras must be configured correctly and the DVR must support the protocol of the camera. If the camera doesn't display in the DVR's IP camera list, you may wish to try the solutions below to ensure the fault doesn't lie with the IP Mule.

Connections	Make sure that all of the connections to and from the IP Mule are tight and secure. If BNC T-pieces have been used you will need to check the connections on these as well.
Power	Each unit requires a minimum of 12V DC 250mA to function properly.
Switch Position	All units connected to cameras must be set to ' Slave '. However units connected to a network switch or router must be set to ' Master '.
T-strip Polarity	The BNC to T-strip connectors supplied are polarity sensitive. Whichever core is connected to the positive terminal of the first connector must be connected to the positive terminal on every connector. Likewise, whichever core is connected to the negative terminal must be connected to the negative terminal of every connector.

All specifications are approximate. We reserve the right to change any product specifications or features without notice. Whilst every effort is made to ensure that these instructions are complete and accurate, We cannot be held responsible in any way for any losses, no matter how they arise, from errors or omissions in these instructions, or the performance or non-performance of the equipment that these instructions refer to.



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This symbol on the products and/or accompanying documents means that used electronic equipment must not be mixed with general household waste. For treatment, recovery and recycling please return this unit to your trade supplier or local designated collection point as defined by your local council.