EN

NPA-PoE Set: Quick Install

The HiRes Video Company MOBOTIX

The Multifunctional, Ultra-Compact PoE Injector From MOBOTIX

- Direct PC connection without a switch thanks to the crossover function!
- Suitable for use with power sources from 12 V to 42 V!
- Connects to electrical power using a power supply unit!
- Suitable for all PoE-supplied (MOBOTIX) network cameras and Mx2wire!
- Suitable for all standard PoE devices conforming to IEEE 802.3af (e.g., VoiP phone, netbooks, routers etc.)!
- Suitable for international use thanks to interchangeable power supply adapters!
- Can be connected to the end device using an Ethernet cable up to 100 m in length!

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11/2009

HiRes Video Innovations

The German company MOBOTIX AG is known as the leading pioneer in network camera technology and its decentralized concept has made high-resolution video systems cost efficient.

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NPA-PoE Set

A Quality MOBOTIX Product Made In Germany

The MOBOTIX Network Power Adapter Set (NPA-PoE set) is a high-quality, robust, ultra-compact and multifunctional PoE injector with three connectors (network, camera/PoE device, PC) and a universal power supply unit with interchangeable adapter plugs.

The Network Power Adapter Set remotely supplies all PoE devices with power in accordance with the IEEE 802.3af standard. This makes it possible to use the network cable to both connect the camera and remotely supply power (up to 100 m). As a result, a network camera can be supplied with PoE power via the adapter and connected directly to your PC (integrated crossover function).

A further advantage of this product is its versatility. The blue adapter can be connected to different electrical power supply networks around the world (90 V to 230 V) using the power supply unit. The device can also be directly connected to network-independent power sources between 12 V and 42 V. This is ideal for battery-operated, standalone operation of a network camera. This device is especially practical because the included power supply unit can be used around the world by changing the adapter plugs as required with a few simple steps.

If you have any technical questions, please email us directly at intl-support@mobotix.com.

You can use the NPA-PoE Set to safely and reliably supply power to all of your MOBOTIX cameras (except for M1/M10) and to the Mx2wire media converter.

The German company MOBOTIX AG is known as the leading pioneer in network camera technology, and its **decentralized concept has made high-resolution video systems cost-efficient**. Whether in embassies, airports, railway stations, ports, gas stations, hotels or on highways - over one hundred thousand MOBOTIX video systems have been in operation on every continent for years. **For more information on current MOBOTIX products, visit www.mobotix.com**.

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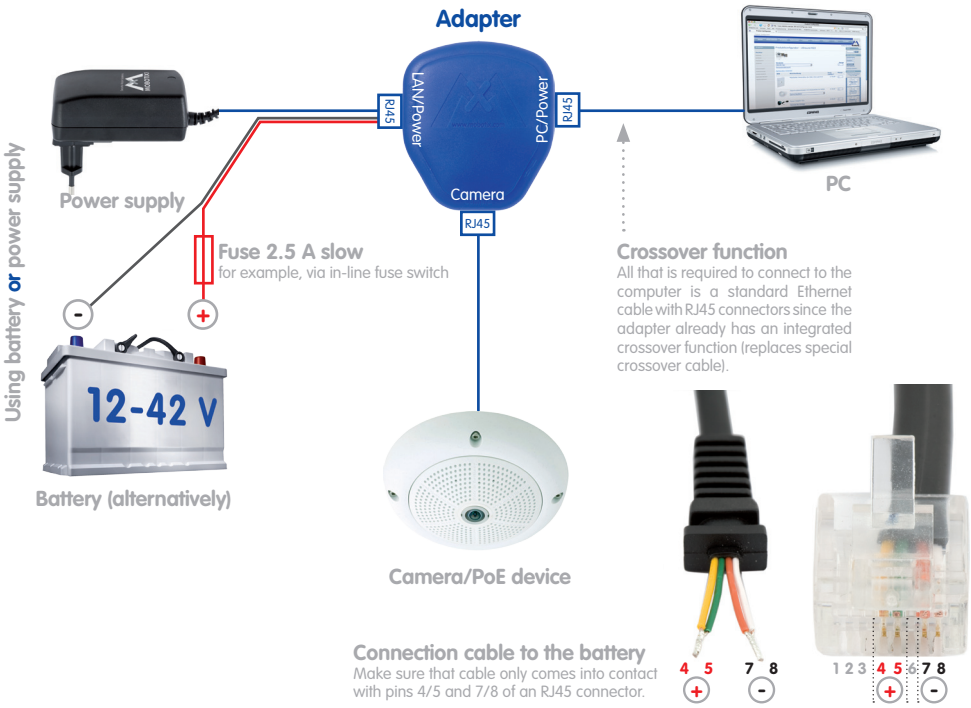
Connection Option 1

Power Supply When Connected Directly To A PC (Integrated And Patented Crossover Function)

1. Connect the camera's Ethernet patch cable, or that of the PoE device that is to be supplied, to the "Camera" connector of the blue adapter.

2. Connect the "PC/Power" connector of the adapter directly to the Ethernet port of the computer. The adapter eliminates the need for the crossover cable thanks to the **integrated crossover function**.

3. Plug the RJ45 connector of the power supply unit/battery into the "LAN/Power" connector of the adapter.



Connection Cable To The Battery (Order Number: MX-CBL-NPA-BAT-2)

The blue adapter works reliably in an input voltage range of 12–42 volts. When connecting the adaptor to a mobile power source (for example, a car battery), the power supply unit is not used. Instead, you will need a correctly prepared connection cable that is, if possible, equipped with a fuse protection concept suitable for your application. The connection cable must have a "+/-" connection to the battery on one side and, on the other side, an RJ45 connector to connect to the adapter. **Pins 4 and 5** on the RJ45 connector must display a **"+", pins 7 and 8 a "-." Caution:** Do not use a patch cable as **pins 1, 2, 3 and 6** may **not** come into contact with the RJ45 connector due to safety reasons. The connection cable (2 m) to the battery can be ordered from MOBOTIX.

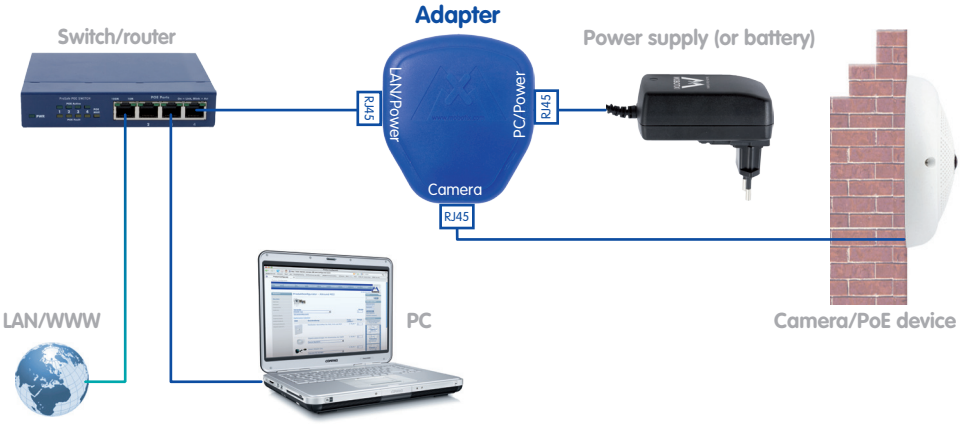
Connection Option 2

Power Supply With Integration Of A Switch/Router

1. Connect the camera's Ethernet patch cable, or that of the PoE device that is to be supplied, to the "Camera" connector of the blue adapter.

2. Connect the "LAN/Power" connector of the adapter to the Ethernet connector of the switch/router or the Ethernet socket.

3. Plug the RJ45 connector of the power supply unit/battery into the "PC/Power" connector of the adapter. Please see the note "Connection Cable To The Battery."



Status LED On The Adapter (Primarily For Battery Operation)
An LED light, which indicates the status of the adapter's power supply based on their color, is located on the upper side of the blue adapter. This is especially important during battery operation. The LED is **green** when the input voltage is 16 volts or higher. This indicates a maximum PoE output rating of 12.95 watts (all PoE classes and devices). If the LED is **orange**, only class 1 and 2 PoE devices can be supplied (a max. of 6.49 watts; for example, a MOBOTIX camera with and without USB devices). A **red** status LED indicates low voltage, for example, the battery is almost empty. The device is permanently disabled for total discharge protection of the battery at less than 10 volts.

Voltage (Input)	PoE Output	LED	
> 16 V	Classes 1 to 3 (up to 12.95 W)	Green	
12 V–16 V	Classes 1 and 2 (up to 6.49 W)	Orange	
10 V–12 V	Lower than class 1 (< 3.84 W)	Red	
< 10 V	No power supply	Off	

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Electrical Power And Battery

Electrical Power: Installing The Power Supply

The power supply of the MX-NPA-PoE Set operates at an input voltage of 100 V to 240 V. The "INT" set includes four interchangeable power supply adapter plugs so that the device can be operated in the different power outlet systems around the world. The individual power supply adapter plugs are packaged in differently colored foil bags designed to protect them from dirt and moisture (suitable for storage between -40°C and +70°C, -40°F and 158°F).

1. Remove the desired adapter from the packaging (see Delivered Parts).
2. Push down the adapter plug part on the power supply unit so that the four guides of the adapter fit securely into the guides on the bottom of the power supply unit.

3. Push the adapter in the direction indicated by the arrows until it audibly clicks into place. You can now use the power supply unit.

4. To exchange the adapter, use your finger to press down the button on the power supply unit. At the same time, use your other hand to pull the adapter up and away from the power supply unit.

Battery Operation Of A MOBOTIX Camera: Operating Time

A modern MOBOTIX network camera (e.g., D24/Q24) has a power consumption of only 3 watts during active operation. Therefore, cameras can be supplied with power using battery sources of 12 V and higher. The operating time is dependent upon the voltage (V) and the ampere hour value (Ah) of the battery. For example, a car battery with 70 Ah can supply a device that requires 70 A for an hour under ideal conditions (e.g., ambient temperature) before it is empty. The lower the power consumption of the supplied device and the higher the capacity of the battery, the longer the operating time.

The following values apply to a MOBOTIX D24/Q24 camera. Note that in practice, these values may change as a result of different environmental conditions:

Battery Voltage/Ah	Avg. Power Consumption Q24/D24	Avg. Operating Time (100% Charge)
12 V/70 Ah	0.25 A	280 h (> 11 days)
24 V/70 Ah	0.12 A	583 h (> 24 days)
42 V/70 Ah	0.07 A	1,000 h (> 41 days)

Hint: For a new battery with 70 Ah, the voltage value corresponds to the operating time measured in days. In practice, you should expect half the operating time indicated here.

Additional Notes

Power over Ethernet (PoE Conforming To IEEE 802.3af)

Power over Ethernet (PoE) is a technology for supplying network-enabled devices with power via an 8-wire Ethernet cable. The main advantage of Power over Ethernet is that no additional power cable is required, making Ethernet devices easy to install in hard-to-reach places or in places that are not equipped to handle numerous cables. This can significantly reduce installation costs, while also increasing the reliability of the connected devices by providing a central uninterruptible power supply (UPS).

Caution
The maximum length of the Ethernet cable for supplying power is **100 m**.

Care And Maintenance

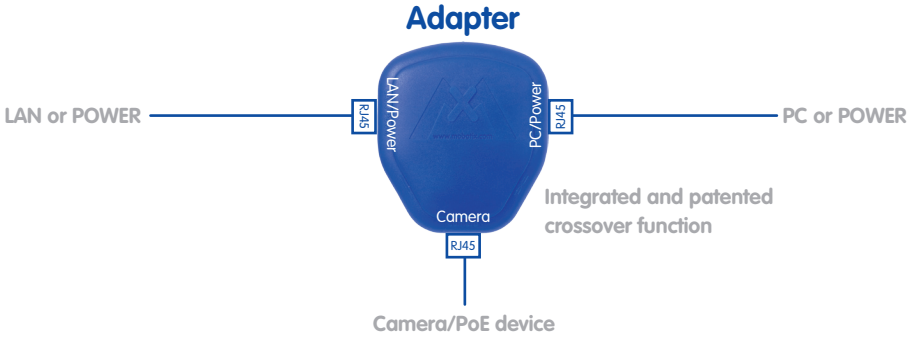
Clean the NPA-PoE Set using a slightly moistened soft cloth, making sure that no liquid is allowed to enter. Never use aggressive cleaning agents or cleaning agents with abrasive particles (scouring agent). Make sure you instruct cleaning personnel on how to clean the set. As the set does not have any mechanical moving parts, regular servicing and maintenance is not required. MOBOTIX recommends, however, that you occasionally check that the device is functioning both reliably and properly.

Electromagnetic Compatibility (EMC)

Electromagnetic compatibility encompasses all unintentional or intentional malfunctions of electrical or electronic equipment generated by electrical, magnetic or electromagnetic fields and processes, for example. This includes interference from currents and voltages. The proof and verification of immunity to interference and a sufficiently low level of electromagnetic interference are regulated by EMC directives and EMC standards.

The European EMC Directive defines electromagnetic compatibility as "the ability of a device, equipment or a system to function satisfactorily in its electromagnetic environment without introducing intolerable electromagnetic disturbances to anything in that environment."

The MOBOTIX MX-NPA-PoE Set complies with all relevant EMC and safety regulations (see Declaration of Conformity).



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Declaration Of Conformity

Declaration of Conformity
Déclaration de conformité

Hersteller: **Manufacturer:** **Fabricant :**	MOBOTIX AG
Produkt: Product: Produit :	PoE-Injektor PoE injector Injecteur PoE
Typ: Type: Type :	NPA-PoE

Bei bestimmungsgemäßer Verwendung erfüllt das bezeichnete Produkt die Bestimmungen der im Folgenden aufgeführten Richtlinien:
The product identified above complies with the essential requirements of the relevant standard, when used for its intended purpose:
Le produit désigné ci-dessus est conforme aux exigences fondamentales des normes s'y rapportant :

Niederspannungsrichtlinie **Low-voltage directive** **Directive basse-tension**	2006/95/EG
Angewendete harmonisierte Normen: Harmonised standards applied: Normes harmonisées :	EN 60950:2005
EMV-Richtlinie **EMC directive** **Directive CEM**	2004/108/EG
Angewendete harmonisierte Normen: Harmonised standards applied: Normes harmonisées :	EN 55022:2006 EN 55024:1998+A1:2001+A2:2003 EN 61000-6-1:2007 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-6
Weitere angewendete Normen: **Other harmonised standards applied:** **Autres normes harmonisées :**	CFR 47, FCC Part 15B C-Tick AS/NZS 3548 CISPR 22:2005 (mod.)

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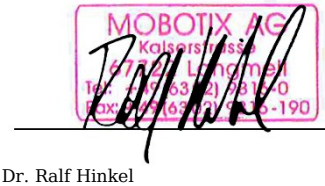

Langmeil, 04.09.2009

Ort, Datum
Place & date of issue
Lieu et date

Dr. Ralf Hinkel
Vorstand/CEO, MOBOTIX AG

Name und Unterschrift
Name and signature
Nom et signature

Delivered Parts/Tech. Specifications

Delivered Parts And Components

Item 1

Item 3

EU adapter plug (item 2)	UK adapter plug (item 2)	US adapter plug (item 2)	AUS adapter plug (item 2)
			

Item	Quantity	Part Name
1	1	Power supply unit with RJ45 connection cable
2-EU	1	European adapter plug for power supply unit
2-INT	4	Interchangeable adapter plugs for power supply unit (EU, UK, US, AUS)
3	1	Adapter with 3x RJ45 connectors, status LED and integrated crossover function

Technical Specifications: Power Supply Unit

Connections	1x RJ45 (for adapter), 1x network (up to 4x interchangeable adapter)
Nominal data input	100 V to 240 V, 50 to 60 Hz/400 mA
Nominal data output	DC 24 V/750 mA
Ambient temp.	0 to +40°C
Dimensions	LxWxH: 8.5 x 5.2 x 3.9 cm (without adapter plug)
Weight	approx. 165 g (incl. 1 adapter plug)
Special features	Suitable for international use thanks to broad input voltage range and interchangeable power supply adapter plugs (no tools required)

Technical Specifications: Adapters

Connections	3x RJ45 (LAN/Power, PC/Power, camera)
Nominal data input	12 V to 42 V
Nominal data output	DC 48 V; PoE acc. to IEEE 802.3af: PoE classes 1 to 3 (max. 12.95 W) min. 16 V input voltage, PoE class 1 and 2 (max. 6.49 W) 12 V to 16 V input voltage
Disabling	Less than 10 V input voltage
Ambient temp.	-30 to +60°C, -22 to + 140°F
Dimensions	LxWxH: 6 x 5.5 x 2.7 cm
Weight	Approx. 40 g
Special features	Integrated crossover function for direct connection to PC; connection to power supply or battery 12 V or higher; status LED with 4 states (green/orange/red/off)

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