# Extension BOX Interface

**General I/O Terminal**

| | |
|---|---|
| 1 | POWER |
| 2 | DO |
| 3 | DI |
| 4 | GND |

POWER LED

RJ45

Audio Out
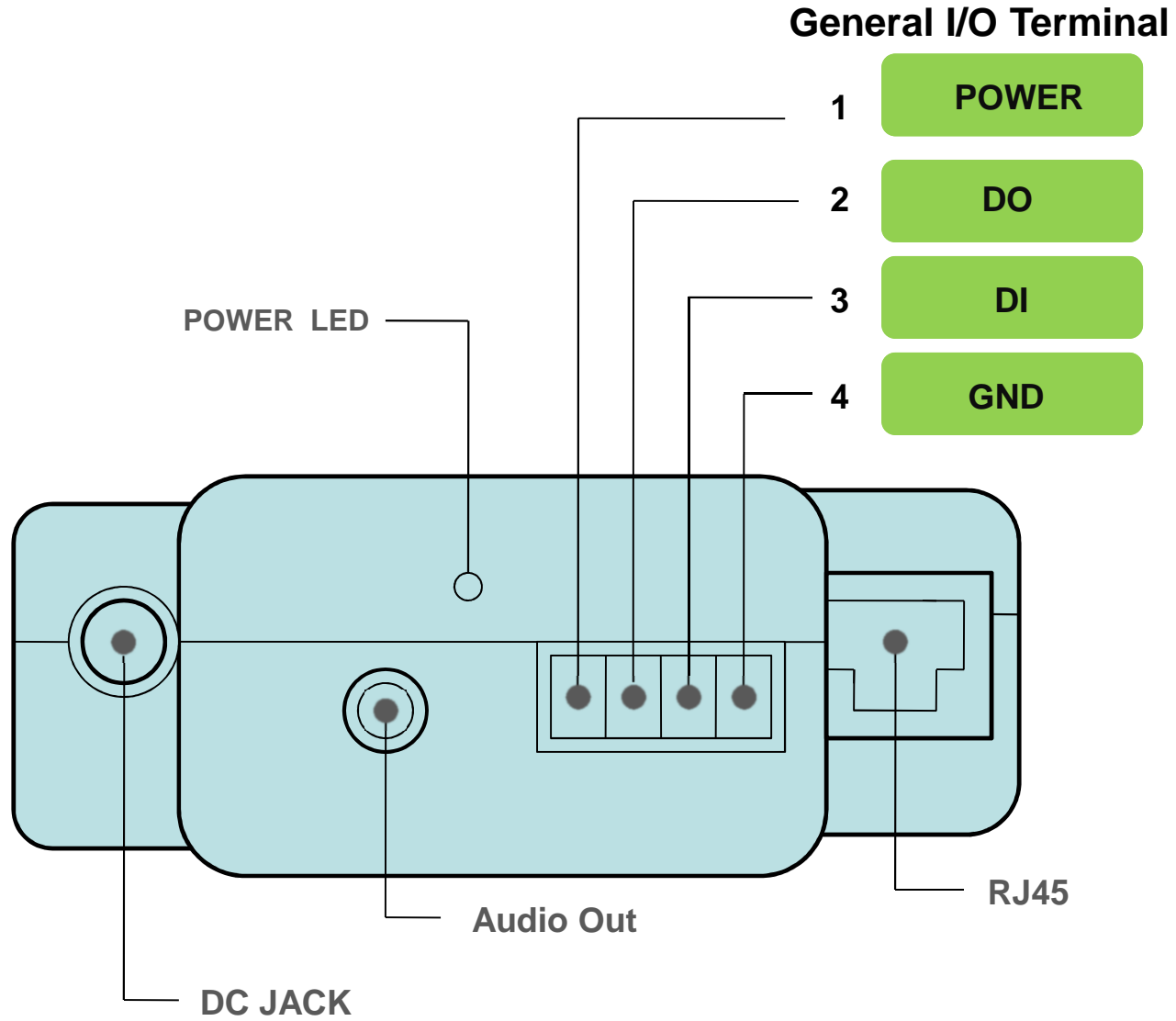
DC JACK

# General I/O Terminal

This Network Camera provides a general I/O terminal which is used to connect external   wired alarm devices like PIR sensor, Gas Detector, Infra-red pool alarm  and etc. The terminal definitions are described below :

| Pin | Name | Specification |
|---|---|---|
| 1 | POWER | 12VDC $\pm$ 5%, max. 0.5A (For external device) |
| 2 | DO | Digital output , Max. 40VDC, max. 400mA |
| 3 | DI | Digital input, input OPEN/Short-to-GND |
| 4 | GND | Ground |

1    **POWER**

This terminal can provide DC power to a wired alarm devices. The max power for external device  is 12VDC $\pm$ 5%, 0.5A .

This  is a optional, you can  use the alarm device with a external power  supply.

**Caution**

The maximum rating voltage of alarm device **can not** less than 12VDC, or you will damage the alarm device.

# General I/O Terminal

**2**  **DO**

With a maximum load of 400mA and a maximum voltage of 40V DC, This terminal has an open-collector NPN Darlington transistor with the emitter connected to the **GND** terminal.

If used with an external relay, a diode must be connected parallel with the load, for protecting against voltage transients.

**Please refer to the following diagram for the connection method.**
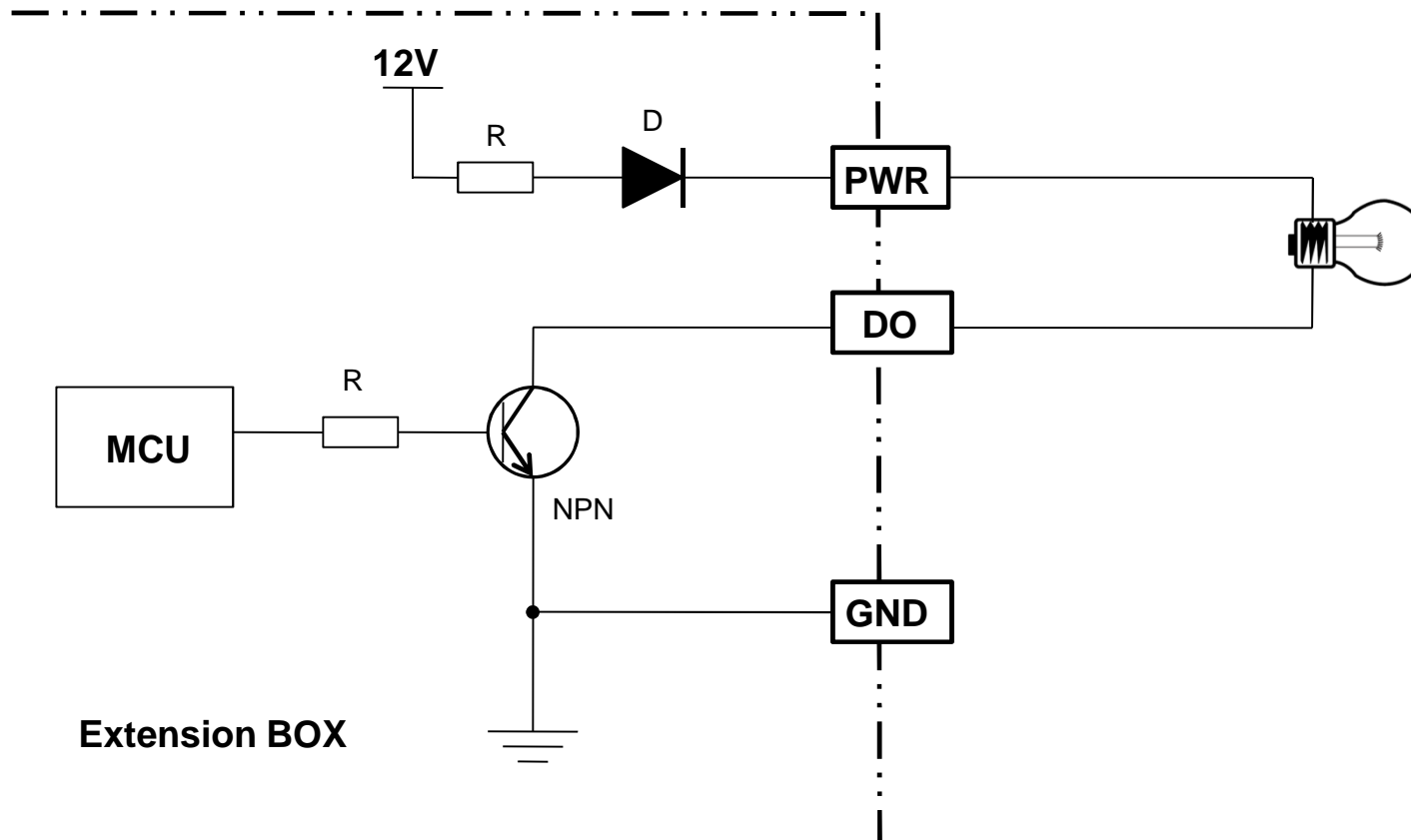
Be careful about choosing **Open** or **Grounded** when connecting to a alarm or other device, you need to make the relevant settings to the camera as the picture below：

Digital I/O Setup

Digital input:                        ◉ Enable ○ Disable
Digital input's active state is:       ○ Open ◉ Grounded

Digital output:                       ◉ Enable ○ Disable
Digital output's active state is:      ○ Open ◉ Grounded

[Apply]

The **Grounded** means that **DO** short to **GND** inside the camera.

The **Open** means that **DO** is floating inside the camera.

# General I/O Terminal

**3**   **DI**

This terminal which is used to connect the relay output of wired alarm device like PIR sensor, Gas Detector, Infra-red pool alarm and etc.

Be careful about choosing **Open** or **Grounded** when connecting to the terminal of alarm output, you need to make the relevant settings to the camera，do it like this: setting--> Task--> Digital I/O Setup--> you can do it as the picture below：
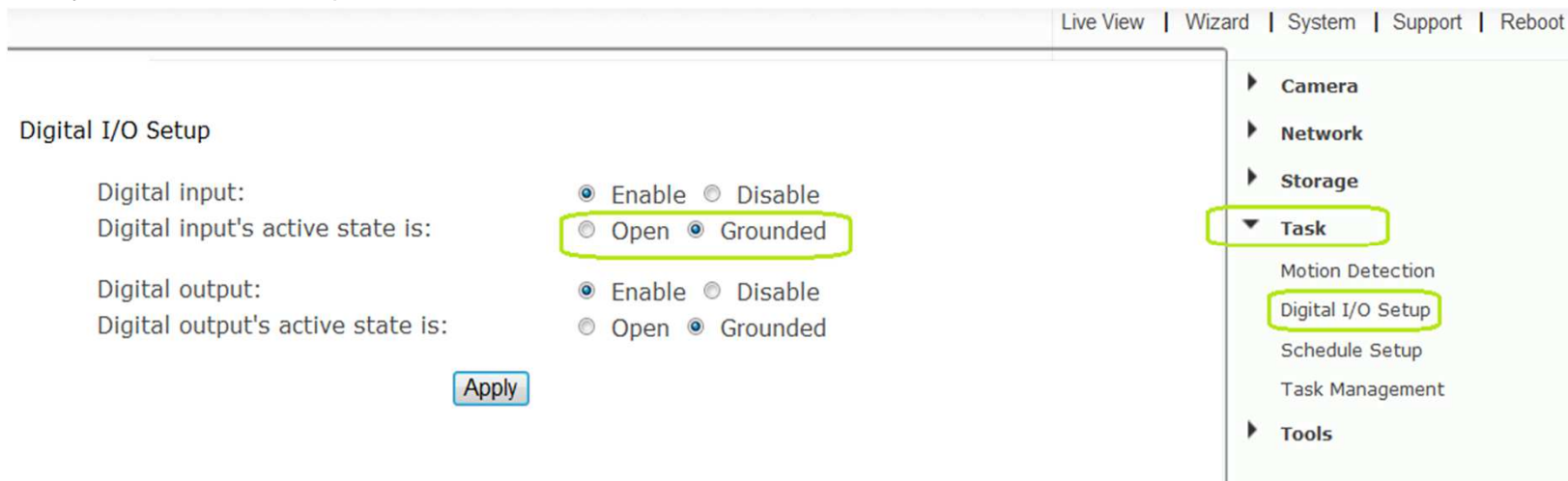


The **Grounded** means that **DI** is shorted to **GND**. In this way, **DI** should be connected to **N.O**(*Normal* Open) terminal.

The **Open** means that **DI** is floating from **GND**. In this way, **DI** should be connected to **N.C** (*Normal Close*) terminal.

**4**  **GND**

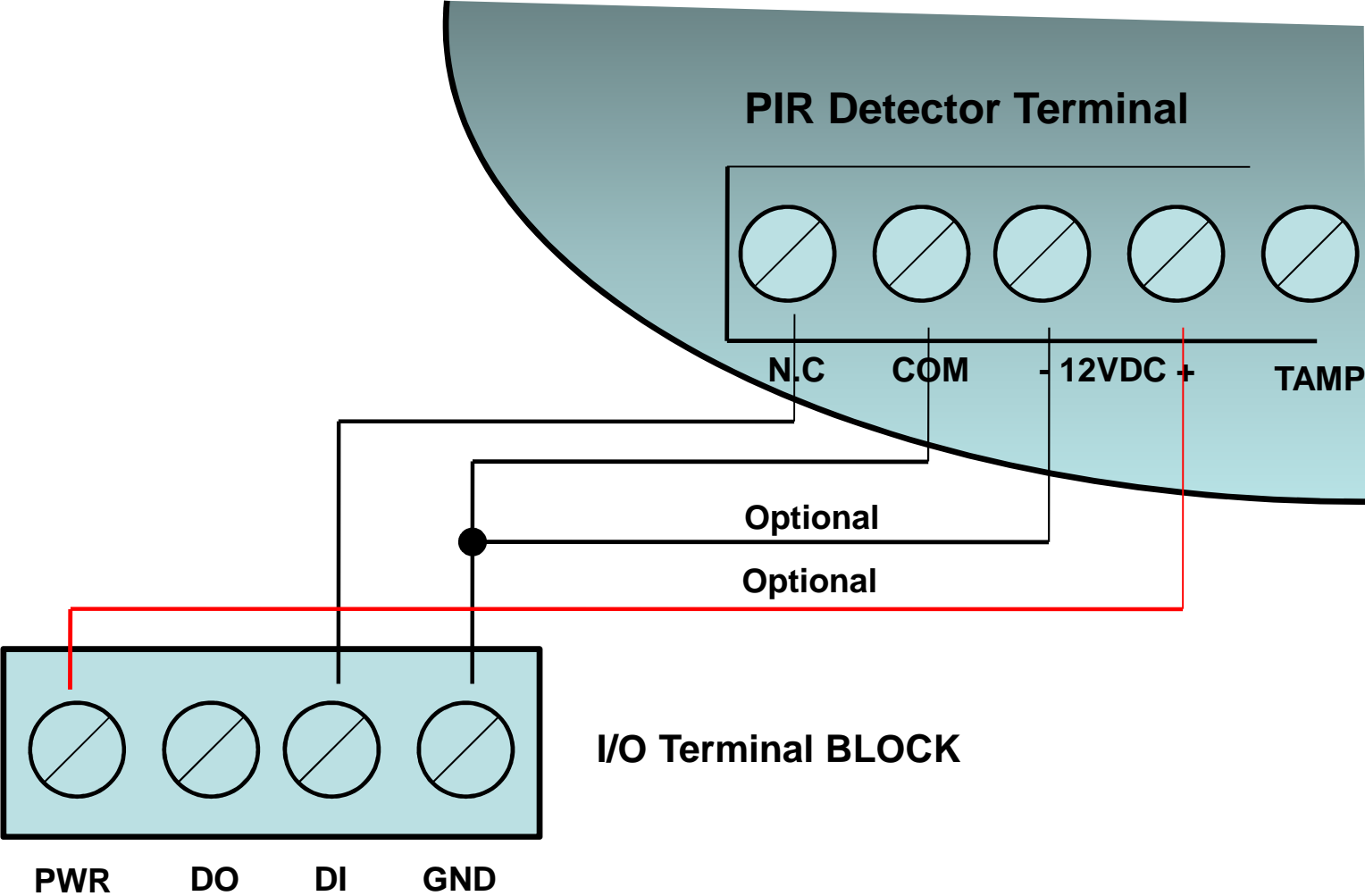This terminal used to **COM** terminal for Relay output of alarm device.

When **Terminal 1** connect **+DC** terminal of alarm device , please connect this terminal to **GND** or **–DC** terminal of the device.

This is a optional, you can use the alarm device with a external power supply.
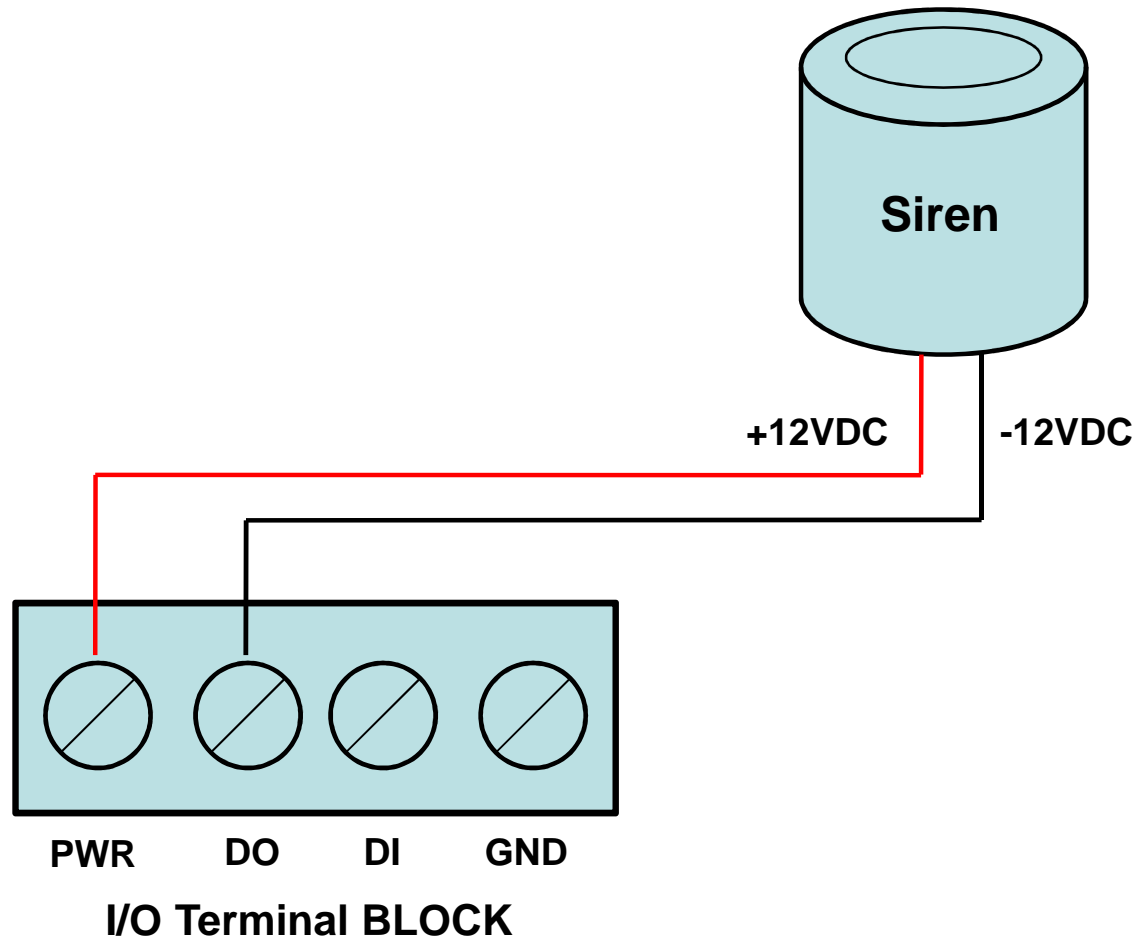
# Example  For  Connecting  a Sensor  Device

This example shows how to wire a  PIR Detector  to **I/O Terminal BLOCK**.

Connecting of  PWR is a optional, you can  use the alarm device with a external power  supply.

**PIR Detector Terminal**

N.C          COM        – 12VDC +          TAMP

**Optional**

**Optional**

**I/O Terminal BLOCK**

PWR        DO        DI        GND

# Example  For Connecting  a  Alarm Device

This example shows how to wire a Siren  to **I/O Terminal  BLOCK**.

# Example For Connecting a Device with Relay

This example shows how to wire a device to **I/O Terminal BLOCK** with a Relay and the device use a external power supply.



Diode

Relay

Mains Power

PWR  DO  DI  GND

**I/O Terminal BLOCK**