

# RUT301 Powering Options

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This chapter contains information on **powering options** supported by RUT301 routers.

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## Power socket

The router has a 4 pin power socket and can be powered by a **9-30 VDC** power supply unit (PSU). Refer to the image below for the power socket's pinout information:

### Power socket pinout

No.	Description	Wire color
1	Power	Red 
2	Ground	Black
3	Input	Green
4	Output	White

If you decide not to use the standard 9 VDC wall adapter and want to power the device from a higher voltage (15-30 VDC), please make sure that you choose a power supply of high quality. Some power supplies can produce voltage peaks significantly higher than the declared output voltage, especially during connection and disconnection.

While the device is designed to accept input voltage of up to 30 VDC peaks, high voltage power supplies can harm the device. If you want to use high voltage power supplies it is recommended to also use additional safety equipment to suppress voltage peaks from the power supply.

## Ground loops

Do not connect the power supply negative terminal of our device to the chassis or earth exclusively.

This connection could cause ground loops. For example, if the antenna shield and power supply negative terminal are connected to the chassis or earth, it forms a ground loop, therefore unwanted current could flow through a device PCB ground and may cause damage.

