RUTX09 Powering Options

This chapter contains information on **powering options** supported by RUTX09 routers.

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Power socket

The router has a 4 pin power socket and can be powered by a **9-50 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 (15-50 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 50 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.

Passive PoE

The device may also be powered by an Ethernet cable via the **LAN1** port:
(Do not use in other ports!)

- The device is **NOT COMPLIANT** with the IEEE 802.3af-2003 standard: powering the device from an IEEE 802.3af-2003 power supply **will damage the device** as it is not rated for input voltages of the PoE standard.

- The device is **NOT COMPLIANT** with the IEEE 802.3at standard: it cannot power other devices over Ethernet.

RJ45 pinout:

Pin	10/100 mode B, DC on spares		T568A Color	T568B Color	Pins on plug face (socket is reversed)
1		TX+	white/green stripe	white/orange stripe	
2		TX-	green solid	orange solid	
3		RX+	white/orange stripe	white/green stripe	
4	DC+	9-50 VDC	blue solid	blue solid	
5	DC+	9-50 VDC	white/blue stripe	white/blue stripe	
6		RX-	orange solid	green solid	
7	DC-		white/brown stripe	white/brown stripe	
8	DC-		brown solid	brown solid	

Simultaneous powering

The device can be powered from the power socket and over Ethernet simultaneously. **If device batch number is between 1 and 6, both PSUs should have similar output voltages. Meanwhile, devices manufactured from batch number 7 can have different voltage PSUs connected to its power socket and Ethernet port.**

The power socket has higher priority meaning that the device will draw power from the power socket as long as it is available. When the device is switching from one power source to another it loses power for a fraction of a second and may reboot. The device will function correctly after the reboot.