

R21



Overview

Introducing the R21, an advanced industrial general-purpose solution designed to enhance the capabilities of the Raspberry Pi Zero. By seamlessly integrating the Pi Zero and its 40-pin GPIO header onto the carrier board, the R21 provides a robust foundation for expanded functionality.

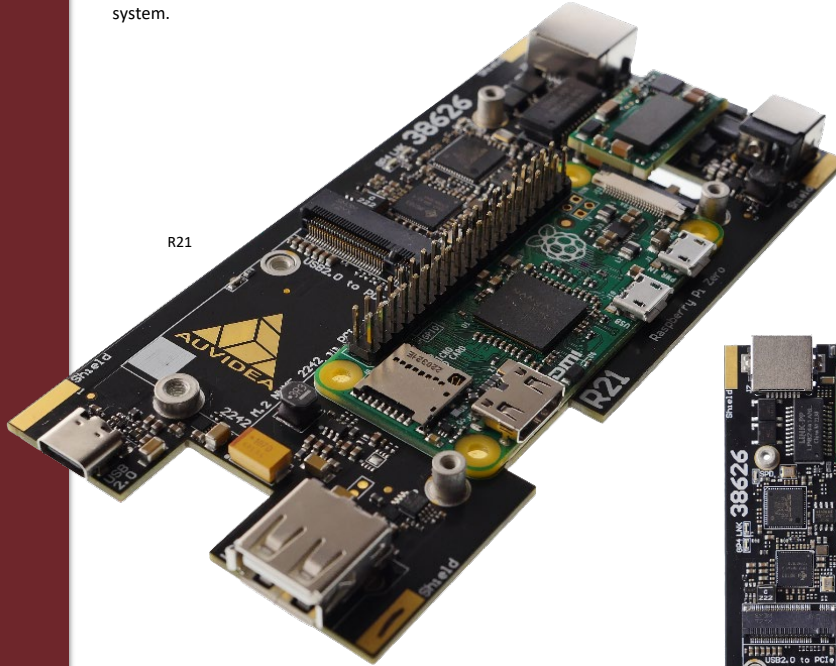
Unlocking new possibilities, the R21 features a PCIe-based M.2 Key M slot, offering reliable and high-speed solid-state storage to elevate the performance of the Pi Zero. Powering the R21 is a breeze, thanks to compatibility with an 8-18V DC power supply equipped with a barrel jack connector, or the optional Power over Ethernet (PoE) PD.

The R21 redirects the Pi Zero's USB ports, which should not be used independently. These ports are linked to the board, serving distinct functions. Additionally, specific pins from the 40-pin header are allocated for proprietary functions. This rerouting is achieved through solder contacts beneath the Pi Zero. In this version the CSI port is not accessible as it is blocked by the PoE module.

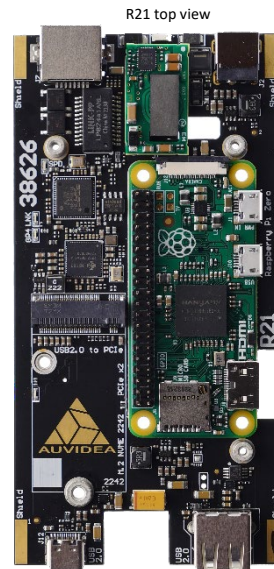
The R21 is also available with an industrial housing or embedded system.

Technical Specifications

Feature	Description
Production location	Germany
Operating voltage	12V nominal (8-18V)
DC socket	5.5/2.5mm barrel jack
PoE PD	yes (class 3, 10 watt)
Compute system	Raspberry Pi Zero v1.3
GPIO header	40 pins
USB 2.0	1x USB C
Ethernet	1x RJ45 (100Mbit)
USB 2.0	1x USB A
	1x USB C
	1x LTE
	1x PCIe
M.2 key M 2242	1x NVME (PCIe x2)
M.2 key B 3042	for LTE/5G (with dual Nano SIM)
Overvoltage protection	yes
Reverse voltage protection	yes
Mini HDMI	1x on Raspberry Pi Zero
Micro SD card	1x on Raspberry Pi Zero
Size	125mm x 62.5mm



R21



R21 top view



R21 bottom view



R21 in passively cooled aluminum enclosure

Components

SKU	Part
70903	R21 Pi Zero Industrial platform
70905	R21 Pi Zero in passively cooled aluminium enclosure (under development)

Resources

Description	Link
3D Model	https://auvidea.eu/step/
Manual	

Specifications subject to change without notice. All trademarks are property of their respective holder.