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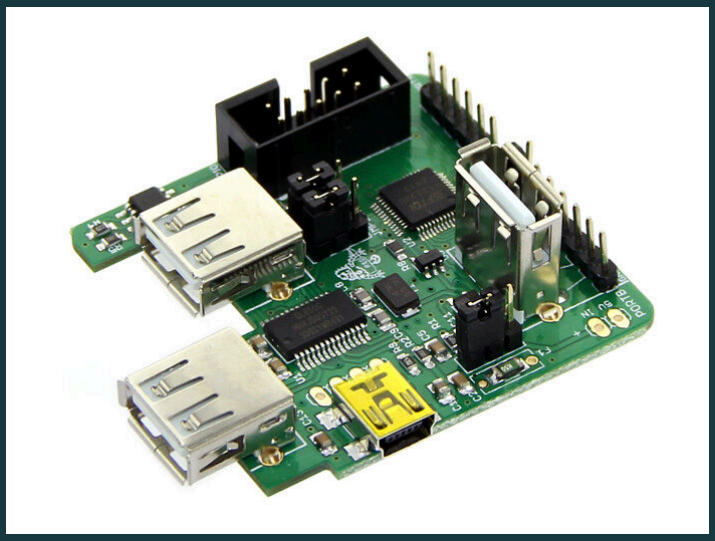
INDUSTRIAL PRODUCT DATASHEET

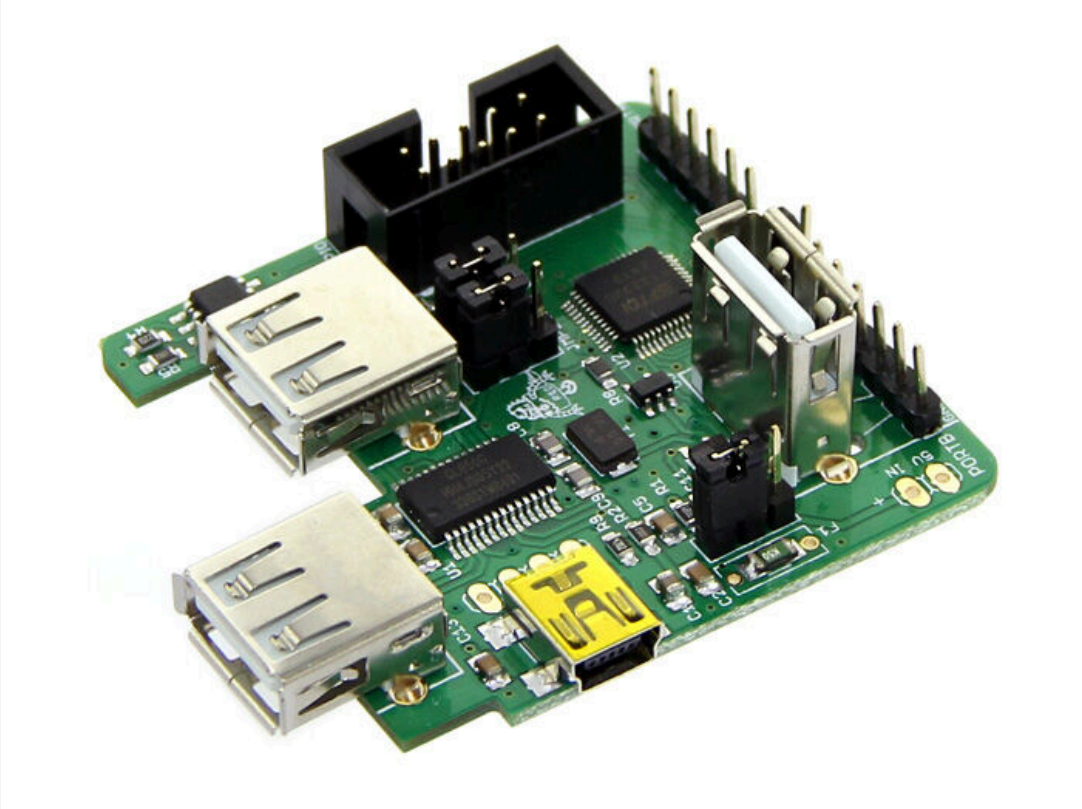
TP-Link WR703N Expander

Compact add-on board for TP-Link WR703N router adding USB hub, dual FTDI serial ports, and GPIO for flexible connectivity.

SKU	UPDATED	PRICE
103990001	2024-08-09 02:07:54	$25.90(Excl. VAT)



Overview



The WR703N Expander is a compact PCB that piggybacks on the TP-Link WR703N Linux router, providing a 4-port USB hub, dual FTDI serial ports, and 8 GPIO. It enables expanded storage and USB devices, serial communication, and GPIO control for projects like robotics, smart LED lighting, and wireless webcam sharing.

Key Features

The WR703N Expander is a compact PCB providing a 4 port USB hub and dual FTDI serial ports, with additional GPIO. It is perfect for use with the small TP-Link WR703N Linux based wireless router, or with almost any computer with USB (e.g. PC, Raspberry Pi, BBB, etc). The USB hub makes it easy to add a USB flash drive to expand the routers internal flash storage, and provide connection of additional USB devices (webcam, keyboard, sound, co-processor, etc), while the serial ports and GPIO allow versatile connectivity to other devices.

It was designed by **Kean Electronics** in conjunction with **Robots & Dinosaurs** for control and automation projects, and has been used in various designs such as robotics, smart LED lighting control, and wireless sharing of quadcopter webcams.

Features

- Compact size - designed to piggy back above WR703N router PCB
- Uplink USB port can be via mini-B, or 4 pin header to connect to WR703N
- 3 available USB ports with alternate connection options (4 pin header or USB A female)
- 2 FTDI virtual COM (serial) ports – using common 6 pin FTDI pinout (with RTS/CTS)
- Selectable 3.3V or 5V I/O voltages for Port A and Port B
- 8 GPIO (part of Port A) – see GPIO pinout below
- EEPROM for use with **FTDI FT_PROG configuration utility**
- Incorporates FTDI MPSSE functions – allows SPI/I2C/JTAG emulation (e.g. see **FTDI App Note AP_135**)
- Can be powered from WR703N, or supply power to WR703N (short R113 on router)
- Works with most operating systems (FTDI driver required)
- Open source hardware design
- Info on OpenWRT and the WR703N available at **http://wiki.openwrt.org/toh/tp-link/tl-wr703n** and **http://www.madox.net/blog/projects/tp-link-tl-wr703n/**
- 3D printable enclosure available at **http://www.thingiverse.com/thing:25389**

Important

Note this unit does not include the TP-Link WR703N router

Specification

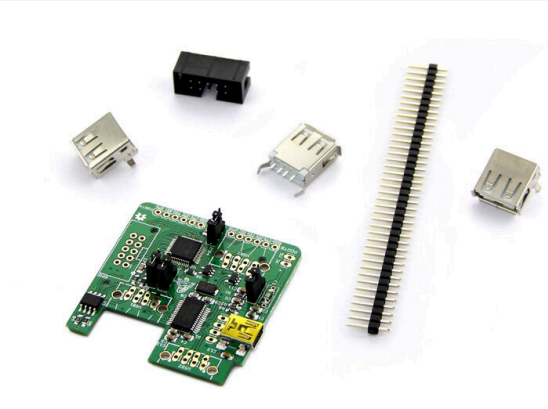
- Uses Genesys Logic GL850G USB hub IC, and FT2232L dual serial IC
- Connectors for USB and I/O come separately to allow end user customisation
- Weight: approx 7g-20g (depending on connectors installed)
- Size: 48x50x3mm (without connectors)
- PDF **Schematic**
- Eagle design files **SCH** & **BRD**

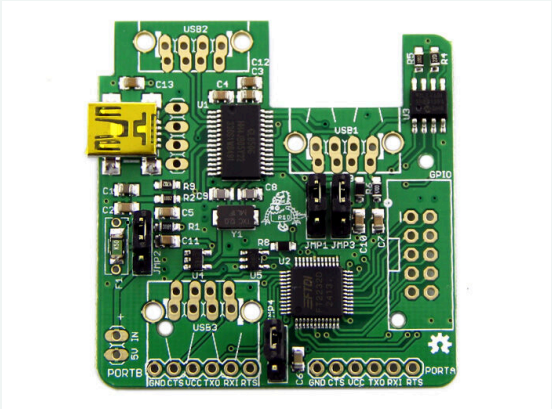
GPIO pinout (OC = Open Collector)

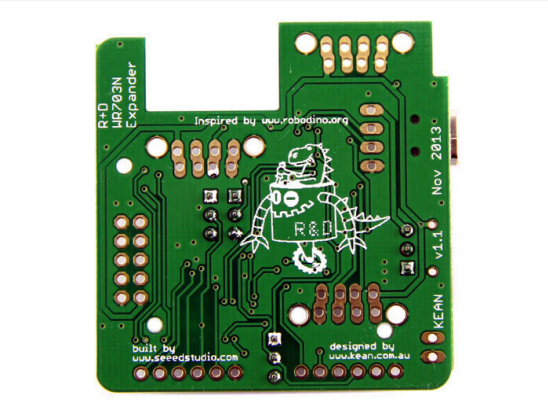
J1 pin	FT2232 name	VCP function (Port A)
1	ADBUS4 / GPIOL0	DTR# (out)
2	ADBUS5 / GPIOL1	DSR# (in)

3 ADBUS6 / GPIOL2 DCD# (in)
4 ADBUS7 / GPIOL3 RI# (in)
5 ACBUS0 / GPIOH0 TXDEN (out)
6 ACBUS1 / GPIOH1 SLEEP# (out)
7 ACBUS2 / GPIOH2 RXLED# (OC out)
8 ACBUS3 / GPIOH3 TXLED# (OC out)
9 5V - note above pins use logic voltage set by JMP3 (VCCA)
10 GND

Product Gallery







Compliance & Logistics

HSCODE

Resource Links

- https://www.seeedstudio.com/TP-Link-WR703N-Expander-p-1683.html

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