

Pi-Connect

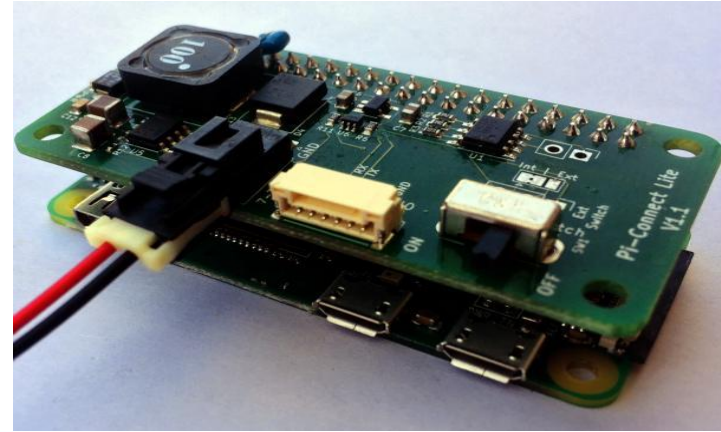
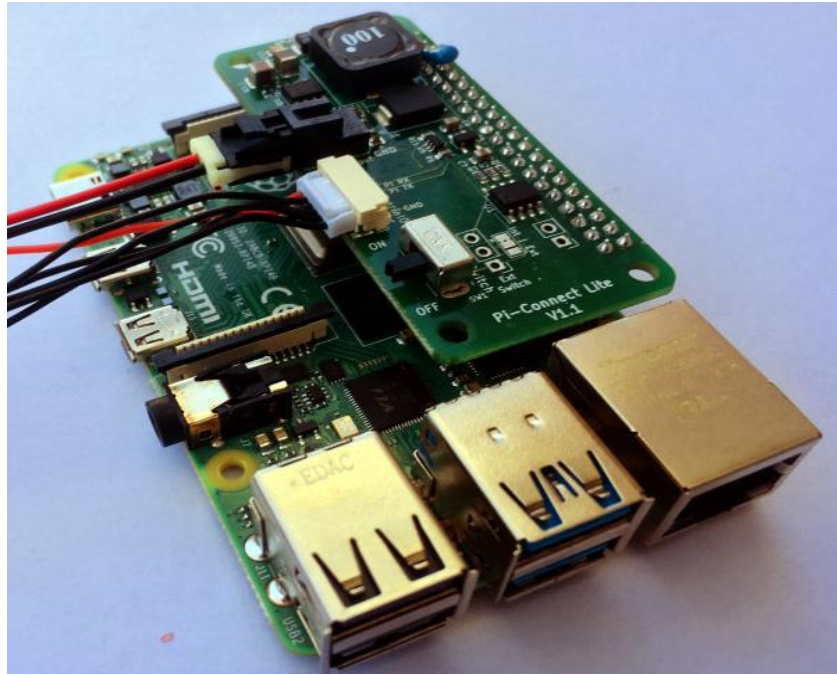
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Rpanion Electronics

What is the Pi-Connect?

- Addon HAT for Raspberry Pi
- Simple and quick to integrate Raspberry Pi with an autonomous vehicle
 - Power system, Flight Controller
- Contains:
 - 5.1V/3.5A power supply for Rpi
 - JST-GH Telemetry port
 - Power switch for safe shutdown

Pi-Connect (Lite)



Detailed Features

- Power Supply
 - Wide input voltage (7 – 30V)
 - Reverse input protection
 - ESD protected
 - Overcurrent protection
 - Short circuit protection
- Compliant to Raspberry Pi HAT Spec
- JST-GH port standard telemetry pinout

Rpanion-Server

- Web-based GUI for managing a companion computer
 - Similar to APSync
 - Uses nodejs / reactjs
 - Can be used on any Linux-based system
 - Released under GPL
- Can manage
 - Network connections
 - Telemetry logs
 - Telemetry routing

Rpanion-Server

The screenshot shows a web browser window titled "Flight Controller - Mozilla Firefox" with the address bar displaying "10.0.2.100:3000/controller". The interface is divided into a left sidebar and a main content area. The sidebar contains navigation links: "Rpanion Web UI", "Home", "Flight Logs", "Flight Controller", "Network Config", "Video Streaming", and "About". The main content area is titled "Flight Controller" and "Serial Input". It features three dropdown menus for "Serial Device" (set to "/dev/serial0"), "Baud Rate" (set to "921600"), and "MAVLink Version" (set to "2.0"). Below these is a "Stop Telemetry" button. The "UDP Outputs" section contains a table with one entry: "10.0.2.75:14550" with a "Delete" button. Below the table is an "Add new output" form with a text input containing "10.0.2.75:14550" and an "Add" button. The "Status" section displays: "Packets Received: 202", "Connection Status: Connected", "Vehicle Type: Ground Rover", and "Vehicle Firmware: APM". At the bottom, there is a "Console Output" area and a "Reboot Flight Controller" button.

Flight Controller

Serial Input

Serial Device: /dev/serial0

Baud Rate: 921600

MAVLink Version: 2.0

Stop Telemetry

UDP Outputs

Destination IP:Port	Action
10.0.2.75:14550	Delete

Add new output: 10.0.2.75:14550 Add

Status

Packets Received: 202

Connection Status: Connected

Vehicle Type: Ground Rover

Vehicle Firmware: APM

Console Output: Reboot Flight Controller

Rpanion-Server

The screenshot shows a web browser window titled "Network Configuration - Mozilla Firefox" with the address bar displaying "10.0.2.100:3000/network". The page content is as follows:

- Left Sidebar:** A vertical menu with the following items: "Rpanion Web UI", "Home", "Flight Logs", "Flight Controller", "Network Config" (highlighted), "Video Streaming", and "About".
- Main Content Area:**
 - ## Network Configuration
 - Adapters:** A dropdown menu showing "wlan0 (wifi)".
 - Connections:** A dropdown menu showing "WiFiAP (Active)". Below it are buttons for "Delete", "Add new", "Activate", and "Deactivate".
 - Attach to Specific Adapter:** A dropdown menu showing "wlan0" followed by the text "Attach to Specific Adapter".
 - ## Wifi Access Point
 - SSID Name:** A text input field containing "rpanion".
 - Band:** A dropdown menu showing "2.4 GHz".
 - Security:** A dropdown menu showing "WPA (PSK)".
 - Password:** A text input field containing "rpanion123".
 - Starting IP address:** A text input field containing "10.0.2.100".
 - At the bottom are two buttons: "Save Changes" and "Discard Changes".

Rpanion-Server

The screenshot shows a web browser window titled "Video Streaming - Mozilla Firefox" with the address bar displaying "10.0.2.100:3000/video". The page content is as follows:

- Video Streaming** (Main Title)
- Device:** Logitech, Inc. Webcam C270
- Resolution:** 1280x960
- Rotation:** 0°
- Average Bitrate:** 1000 kbps
- Stop Streaming** (Button)
- Connection strings for video stream**
 - + RTSP Streaming Addresses (for VLC, etc)
 - + GStreamer Connection Strings
 - + Mission Planner Connection Strings

A left-hand navigation menu is visible with the following items: Rpanion Web UI, Home, Flight Logs, Flight Controller, Network Config, Video Streaming (highlighted), and About.

Rpanion-Server

The screenshot shows a web browser window titled "Flight Log Browser - Mozilla Firefox". The address bar displays "10.0.2.100:3000/flightlogs". The page content includes a sidebar menu on the left with items: "Rpanion Web UI", "Home", "Flight Logs", "Flight Controller", "Network Config", "Video Streaming", and "About". The main content area is titled "Flight Log Browser" and "Telemetry Logs". It shows a "Logging Status: Logging to 20200223-075147.tlog" and three buttons: "Clear inactive logs", "Start new logfile", and "Enable Logging" (which is checked). Below this is a table with three columns: "Log File", "Size", and "Modified".

Log File	Size	Modified
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Pi-Connect

- Pi-Connect Lite and Rpanion-server are available ay my website:
www.rpanion.com
- Custom development available!