ESP32S3_PMOD
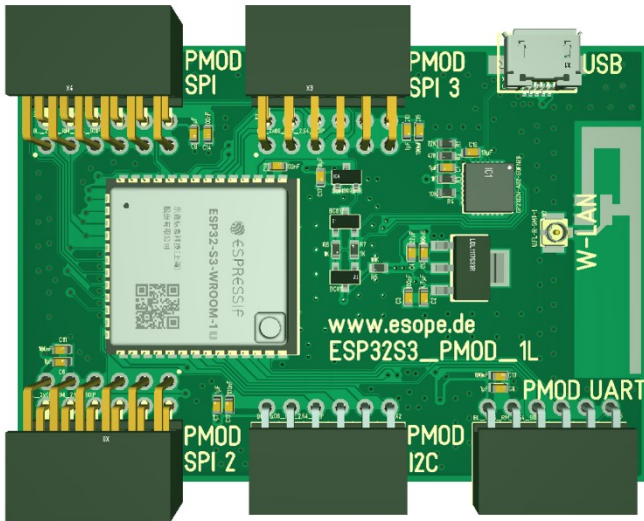
Highlights

- ✓ **SPI-, I²C- and UART-PMOD-Interface**
- ✓ **WLAN / Bluetooth**
- ✓ **Long range WLAN-Antenna**
- ✓ **Powered over USB**
- ✓ **Extensive software-library**
- ✓ **Industrial standard**

Features

The ESP32S3_PMOD module is a stand-alone interface module from the ESope platform series. It serves as the basis for various PMOD boards and has the following interfaces:

- 1 x PMOD I²C
- 3 x PMOD SPI
- 1 x PMOD UART
- WLAN Antenna

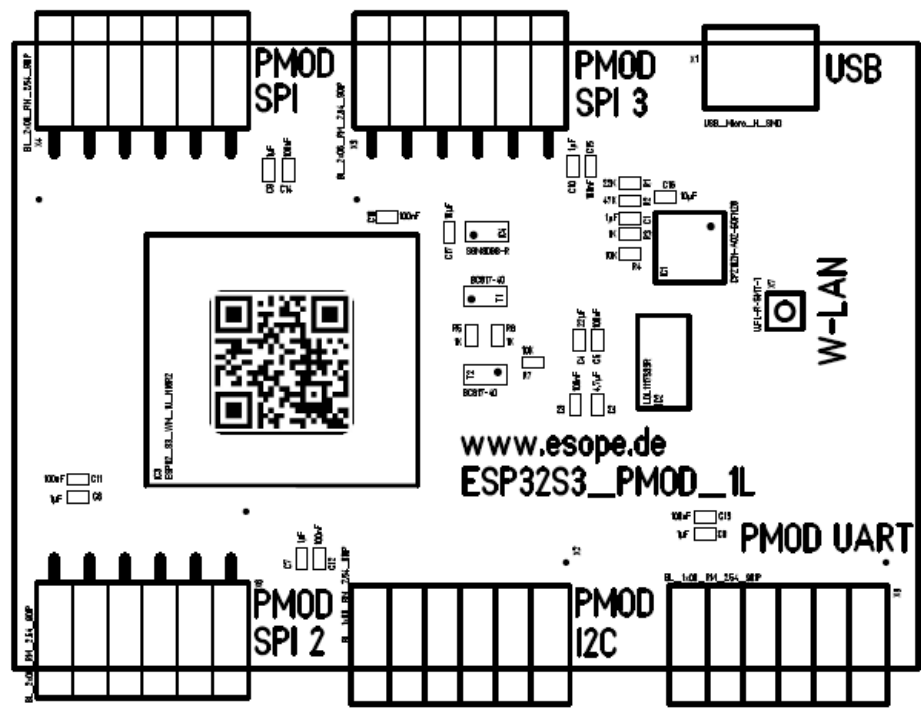The board is programmed and powered via the micro USB socket.

Technical Specification

Parameter	Value
Power Supply	5V(DC) via USB
Power Consumption	approx. 140mA
Operating Ambient Temperature	-10…+70°C
Dimensions	65mm x 45mm
Weight	30g
Conformity	RoHs

Schematic

Details in document ESP32S3_PMOD_1A_SCH.pdf

Board

Connection Plan

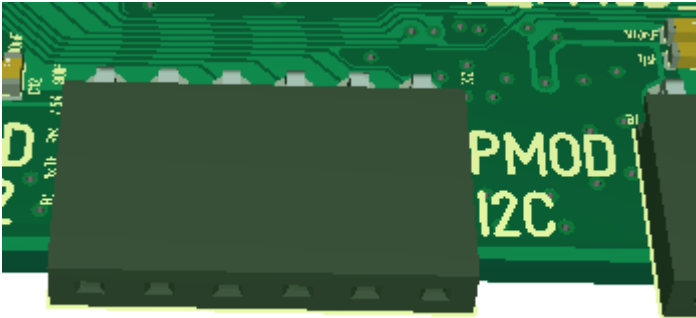## USB-connection for communication and power supply

X1: Micro-USB
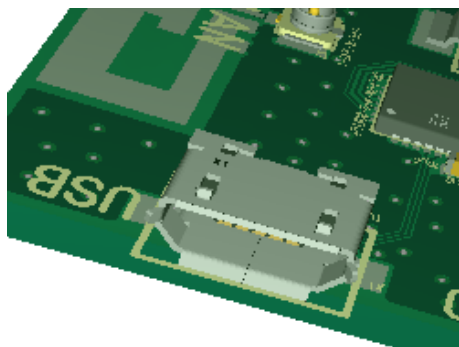
pin	function
1	VCC (+5V)
2	D-
3	D+
4	NC
5	GND

PMOD I²C

X2: Connection socket header, 6-pole, grid 2.54, assignment acc. to PMOD I²C

pin	function
1	PMOD I^{2}C INT
2	PMOD I^{2}C /RESET
3	PMOD I^{2}C SCL
4	PMOD I^{2}C SDA
5	GND
6	+3V3

PMOD SPI 3

X3: Connection socket header, 12-pole, grid 2.54, assignment acc. to PMOD SPI
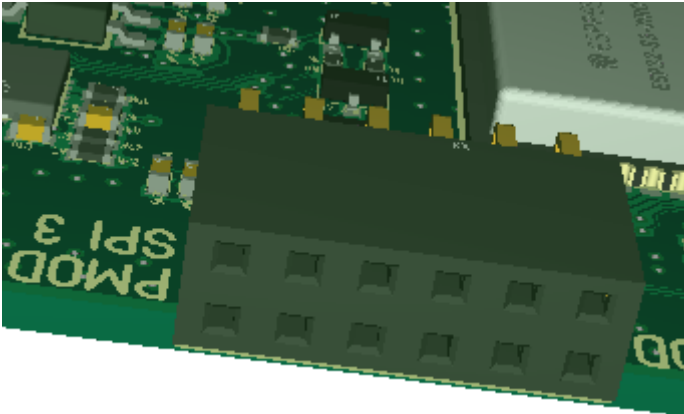
pin	function

1	PMOD SPI3 CS
2	PMOD SPI3 MOSI
3	PMOD SPI3 MISO
4	PMOD SPI3 CLK
5	GND
6	+3V3
7	PMOD SPI3 /INT
8	PMOD SPI3 /RESET
9	PMOD SPI3 CS2
10	PMOD SPI3 CS3
11	GND
12	+3V3

PMOD SPI

X4: Connection socket header, 12-pole, grid 2.54, assignment acc. to PMOD SPI
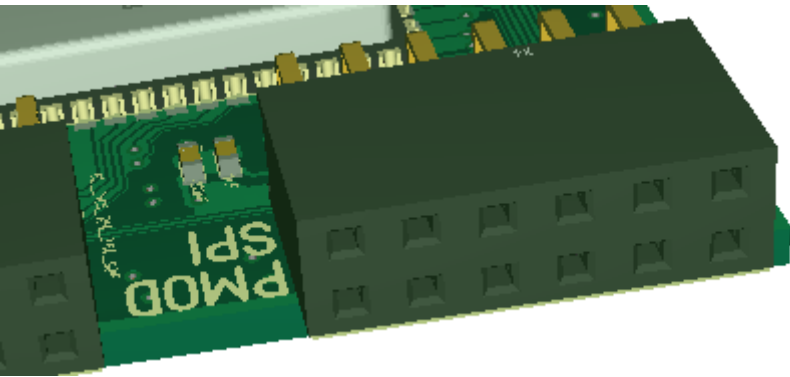
pin	function
1	PMOD SPI CS
2	PMOD SPI MOSI
3	PMOD SPI MISO
4	PMOD SPI CLK
5	GND
6	+3V3
7	PMOD SPI /INT
8	PMOD SPI /RESET
9	PMOD SPI CS2
10	PMOD SPI CS3
11	GND
12	+3V3

PMOD UART

X5: Connection socket header, 6-pole, grid 2.54, assignment acc. to PMOD I²C
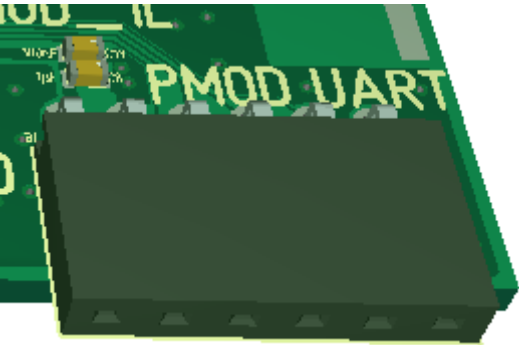
pin	function
1	PMOD UART CTS
2	PMOD UART TXD
3	PMOD UART RXD
4	PMOD UART RTS
5	GND
6	+3V3

PMOD SPI 2

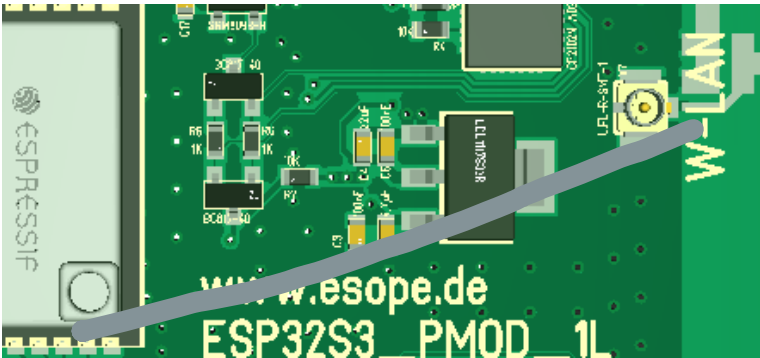X6: Connection socket header, 12-pole, grid 2.54, assignment acc. to PMOD SPI
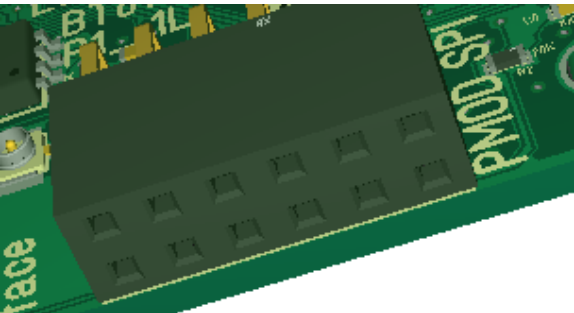
pin	function
1	PMOD SPI2 CS
2	PMOD SPI MOSI
3	PMOD SPI MISO
4	PMOD SPI CLK
5	GND
6	+3V3
7	PMOD SPI2 /INT
8	PMOD SPI2 /RESET
9	PMOD SPI2 CS2

10	NC
11	GND
12	+3V3

Connection Antenna

X7: U.FL-R-SMT-1

pin	function
1	GND
2	HF-Signal

Connection antenna cable:
Connection between ESP32S3_PMOD (antenna) and ESP32S3. The antenna cable enables the Wi-Fi functionality.

Copyrights and Trademarks

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Change History

File: ESP32S3_PMOD_1A_DS_en

Revision	Date	State	Author
1.0	2024-03-25	Initial Release	Stefan Peters

Terms & Conditions of Usage