expansionboard
pycom

expansionboard

Expansion Board 5.1/5.1-DBG
Data Sheet
Draft 1.1

Release July 2022

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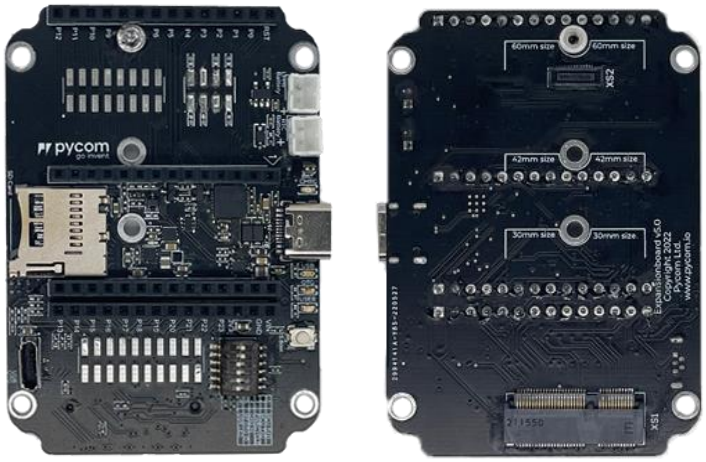

Expansion Board 5.1 DBG Top view and Bottom View

1 Overview

Introducing the Expansion Board 5.1 and Expansion Board 5.1-DBG, compatible with all Pycom's products including the new generation of F01 modules. Create and connect your things everywhere. Fast.

2 Features

Our most advanced Expansion board includes the following features:

- M.2 connector for new generation modules such as the F01 series
- USB on-the-go for USB controller embedded on F01 H7, enabling USB peripheral development.
- The DBG edition additionally features STLINK in-circuit debugger and programmer for STM32 H7 MCU and STM32 L0 MCU embedded in the MuRata 1SJ LoRaWAN module
- Pin Headers for older generation modules
- DIP switches to connect external USB UART and the onboard LED
- SD card holder
- USB-C power and data connector
- User switch and LED
- Seamless integration into MuRata Device Cloud online IDE

3 Compatibility

This expansion board is compatible with all Pycom's products including the new generation of F01 modules

New Portfolio	Legacy Portfolio
F01 H7 (DBG edition recommended)	FiPy
F01 S3	LoPy4
	WiPy

4 Connectors

- Female Pin Headers for legacy Pycom development boards
- USB-C connector for power and serial port
- USB on-the-go (USB Micro connector) for developing USB peripherals
- Battery connectors for LiPo and RTC. Batteries

5 Visual Overview

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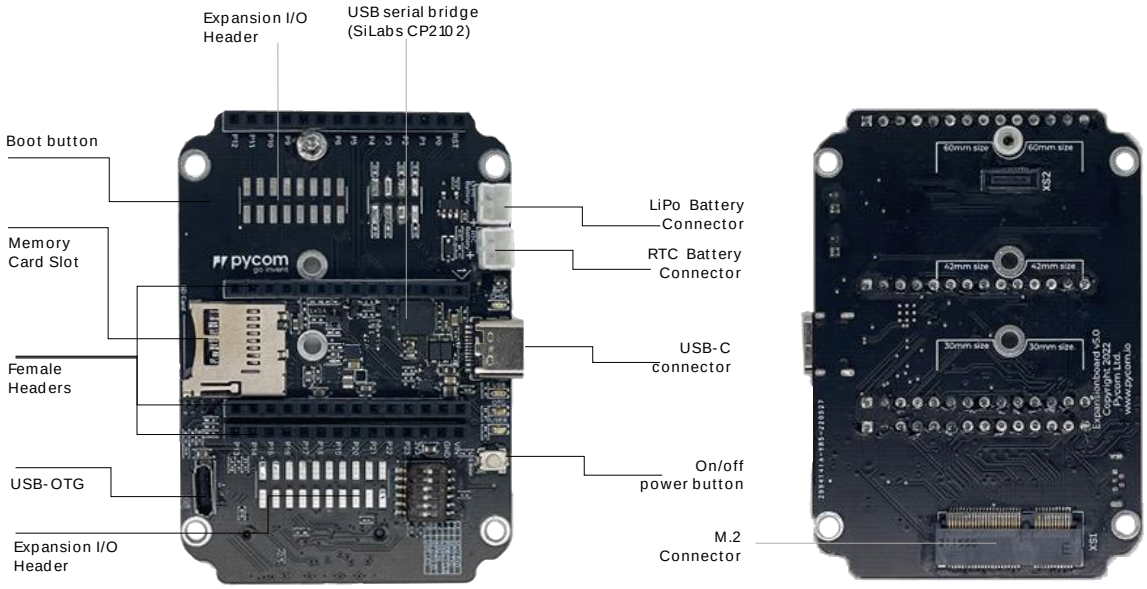

Annotated Expansion Board 5.1 Top view and Bottom View

6.1 Pin out diagram

Coming soon!

7 Use the online IDE

Get developing quickly and easily using MicroPython or C++ and our extensive collection of templates and libraries, making developing a new IoT a solution easier and faster. This can all be done via the Murata Device Cloud here: https://murata.pycom.io
From this Device Cloud you can connect, configure and manage your EVK. It features an integrated IDE which helps you program in MicroPython or C++. You'll be able to program, update firmware and configure your F01 H7 devices for a multitude of IoT Applications as well as see and manage your sensor data. This is a fast and easy way to have continuity from Proof of Concept to Scaling without re-doing development through the process saving you and your IoT Project time and money.

8 Quick Verification

For easy and fast debugging use the interactive shell that is accessible through telnet or one of the serial ports. This allows access to the REPL console to test, debug and develop your application.

9 Easy Upload

Upload your scripts and any other files you want to your development board either via USB or over the WiFi from the Murata Device Cloud, or through Pycom's VSCode or Atom plugins.

10 ST Link Debugger

The Expansion board 5-DBG additionally features an integrated ST-Link programmer/debugger.

It is an in-circuit debugger and programmer for the STM32 microcontroller, featuring a single wire interface module (SWIM) and JTAG/serial wire debugging (SWD) interface to program the STM32 H7 MCU, and STM32 L0 MCU embedded in the MuRata 1SJ LoRaWAN module. (This is not used in the F01 S3 or legacy boards)

11 Revision History

Version	Release date	Notes
Version 1	July 2022	First Release