# HSYCO Pro Datasheet

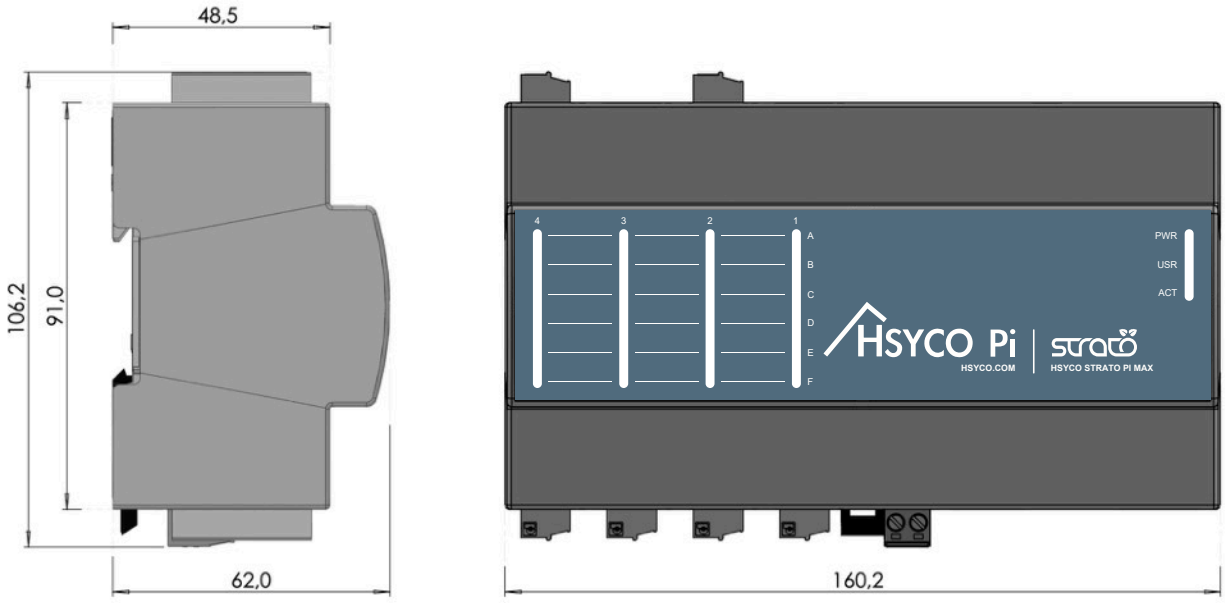
Note: all values typical, at +25 °C and under normal operating conditions.

| | |
|---|---|
| **POWER SUPPLY** | |
| Power supply operating voltage (VS) | ⎓dc 24 V nominal (range 10-50 V), 20 W max<br><br>Reverse polarity and surge protection with 3.3 A resettable fuse |
| USB1 port output current | 500 mA (Max) |
| USB2 port output current | 500 mA (Max) |
| **HARDWARE PLATFORM** | |
| Hardware Platform | Strato Pi Max XL<br>Raspberry Pi Compute Module 4<br>8 GB RAM<br>480 GB SSD<br>32 GB eMMC (recovery partition)<br>X2BS10X43 (X2-Series RS-232 and RS-485 Expansion Board) |
| **EXPANSION SLOTS (OPTIONAL)** | |
| 3 slot, Strato Pi Max XS | Sfera Labs X2 |
| **REAL TIME CLOCK** | |
| Oscillator frequency | 32768 kHz |
| Frequency Tolerance | ±3 ppm |
| Backup battery | Only use CR1220 or BR1220 Lithium / Manganese Dioxide (Li/MnO2) batteries.<br><br>Expected battery life without main power supply: 3 or more years, depending on environmental conditions |
| **ACCELEROMETER** | |
| Range | ±2g/±4g/±8g/±16g full scale |
| Data rates | from 1.6 Hz to 1600 Hz |
| Bandwidth | up to 800 Hz |
| **INTERNAL TEMPERATURE SENSORS** | |
| Temperature accuracy | ±2 °C |
| Resolution | 11 bits (0.125 °C) |

# HSYCO Pro Datasheet (cont)

| | |
|---|---|
| **EMI IMMUNITY STANDARDS** | |
| Electromagnetic immunity compliance | EN 61000-4-2: 2009 (ESD)<br>EN 61000-4-3: 2020 (Radiated RF Field)<br>EN 61000-4-4: 2012 (Burst/fast transient)<br>EN 61000-4-5: 2014 / A1: 2017 (Surge)<br>EN 61000-4-6: 2014 / AC: 2015 (Conducted)<br>EN 61000-4-8: 2010 (Power freq. magnetic field) |
| **ENVIRONMENTAL** | |
| Operating temperature | -20…+60 °C |
| Storage temperature | -30…+80 °C |
| Altitude | Up to 2000 m |
| Humidity | 5% to 95% RH noncondensing |
| Protection degree | IP20 |
| **MECHANICAL** | |
| 5.08 mm pitch terminal block characteristics (power supply) | Maximum conductor cross section: 3.3 mm2 (12AWG)<br>Recommended stripping length: 7 mm<br>Screw thread: M3<br>Maximum screws tightening torque: 0.5 Nm |
| Dimensions, Strato Pi Max XL | 9 module Din Rail enclosure<br>width: 160.2 mm<br>height: 91.0 mm<br>depth: 62.0 mm |
| Weight, Strato Pi Max XL | 285 g |

# Dimensions




**STRATO PI MAX XL DIMENSIONS (mm)**

# Disposal

Waste Electrical & Electronic Equipment

(Applicable in the European Union and other European countries with separate collection systems). This marking on the product, accessories or literature indicates that the product should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Strato Pi Max contains a small non rechargeable manganese dioxide lithium coin battery.

In the Strato Pi Max, the battery is not accessible from the outside. You should first remove the case body to gain access to the Strato Pi Max circuit boards. Always remove the battery before disposing of this product.

# Installation and use restrictions

## Standards and regulations

The design and the setting up of electrical systems must be performed according to the relevant standards, guidelines, specifications and regulations of the relevant country. The installation, configuration and programming of the devices must be carried out by trained personnel.

The installation and wiring of connected devices must be performed according to the recommendations of the manufacturers (reported on the specific data sheet of the product) and according to the applicable standards.

All the relevant safety regulations, e.g. accident prevention regulations, law on technical work equipment, must also be observed.

## Safety instructions

Carefully read the safety information section at the beginning of this document.

## Set-up

For the first installation of the device proceed according to the following procedure:

- ✓ make sure all power supplies are disconnected
- ✓ install and wire the device according to the schematic diagrams on the specific product user guide

✓ after completing the previous steps, switch on the power supply and other related circuits.

# Conformity Information

## EU

This device complies with the following applicable European Community harmonised standards:

✓ 2014/30/EU - Electromagnetic Compatibility Directive (EMC)

✓ 2011/65/EU and 2015/863/EU - Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS 3)

The following harmonised standards have been used to demonstrate conformity to these directives:

✓ EN61000-6-2:2019 - EMC Immunity standard for industrial environments

✓ EN61000-6-3:2021 - EMC Emission standard for residential, commercial and light-industrial environments

The declaration of conformity is available at: https://www.sferalabs.cc

## USA

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

Shielded cables must be used with this equipment to maintain compliance with FCC regulations.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## CANADA

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

## RCM AUSTRALIA / NEW ZEALAND

This product meets the requirements of the standard EN 61000-6-3: 2021 - Emission for residential, commercial and light-industrial environments.

# Compliance information for Raspberry Pi CM4

Strato Pi Max contain a standard Raspberry Pi Compute Module 4 single board computer. These boards have a WiFi and Bluetooth radio module. They are user accessible and replaceable.

## EU

The Raspberry Pi Compute Module 4 is in conformity with the essential requirements and other relevant requirements of the Radio Equipment Directive 2014/53/EU.

## USA

Raspberry Pi Compute Module 4 FCC IDENTIFIER: **2ABCB-RPICM4**

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be colocated or operating in conjunction with any other antenna or transmitter, except in accordance with FCC multitransmitter product guidelines. This (WiFi  DTS) device has 20 MHz bandwidth mode.

## CANADA

Raspberry Pi Compute Module 4 IC CERTIFICATION No.: **20953-RPICM4**

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.