

SOLO EPS

TRL 9

MODULAR CUBESAT POWER UNIT

SOLO is 2NDSPACE's flagship modular EPS, offering more than any other solution on the market in terms of **performance, reliability, number of power outputs, and configuration flexibility**. The product is designed to ensure high robustness and reliability, supporting CubeSats from 1U to 27U and meeting the needs of even the most power-demanding missions.

Modular configuration

Fault tolerant power-continuity architecture

12x to 24x Customizable power outputs

6x independent MPPT driven solar panel inputs

Full battery protections

Modular battery pack Included up to 150WHr

Customizable power delivery units from 3.3V to 24V



PRODUCT **PORTFOLIO**

	SOLO-EPS 4 (PDCU + 4xBMS)	SOLO-EPS 8 (PDCU + 8xBMS)	SOLO-EPS X4 (2xPDCU + 4xBMS)	SOLO-EPS X8 (2xPDCU + 8xBMS)
Dimensions [mm]	97x92x44	97x92x66	97x92x44	97x92x66
Mass [g]	480g	768g	678g	966g
Number of channels [n]	4x	4x	8x	8x
Number of controllable outputs [n] (3x outputs per channel)	12x	12x	24x	24x
Channels Voltage Output [V]	Custom Standard 3.3 / 5 / 12 / 16.8	Custom Standard 3.3 / 5 / 12 / 16.8	Custom Standard 3.3 / 5 / 12 / 16.8	Custom Standard 3.3 / 5 / 12 / 16.8
Peak current output(channel) [A]	3.3(6)A@3.3V 3.3(6)A@5V 3.3(6)A@12V 3.3(6)A@16.8V Custom	3.3(6)A@3.3V 3.3(6)A@5V 3.3(6)A@12V 3.3(10)A@16.8V Custom	3.3(6)A@3.3V 3.3(6)A@5V 3.3(6)A@12V 3.3(6)A@16.8V Custom	3.3(6)A@3.3V 3.3(6)A@5V 3.3(6)A@12V 3.3(10)A@16.8V Custom
Overall Peak Power output [W]	104W	160W	104W	160W
Power Storage [Wh]	50 Wh	100 Wh	50 Wh	100 Wh
Independent MPPT inputs	6	6	6	6
Communication Interfaces	RS485/UART/CAN/I2C			
Features	OV,UV,OC protection; Controllable output; Integrated MCU; Latch-up protected outputs			

QUALIFICATION AND **ACCEPTANCE TEST**

	Functional/AIT	Electrical control	Vibration test	Mechanical Shock	TVAC Test
Qualification Test	✓	✓	NASA GEVS: GSFC-STD-7000A ESA ECSS-E-ST-10-03C	NASA GEVS: GSFC-STD-7000A ESA ECSS-E-ST-10-03C	NASA GEVS: GSFC-STD-7000A ESA ECSS-E-ST-10-03C
Acceptance Test	✓	✓			

2NDSpace

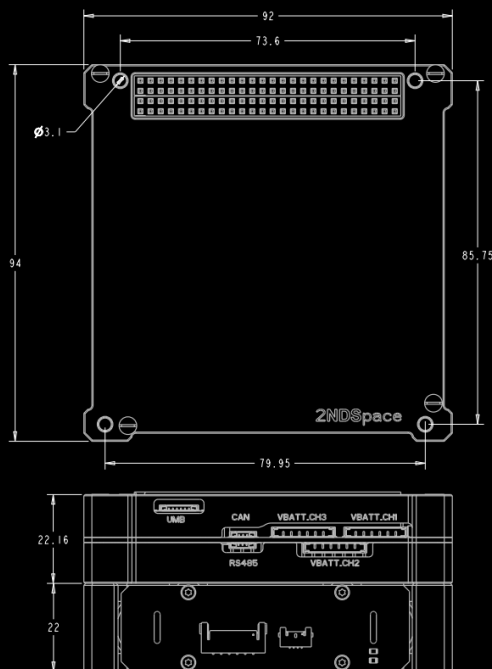
SOLO is designed to meet the needs of CubeSats platforms from 1 to 16U offering high versatility and composed by SOLO-PDCU (single or double) and SOLO-BM4/BM8.



**FLIGHT
HERITAGE**

- **PDM (Power Delivery Module):** configurable power outputs for subsystems ranging from 12x to 24x at configurable voltage levels.
- **SACU (Solar Array Conditioning Unit):** 6 independent MPPT for harvesting power from solar panels
- **BMS (Battery Management System):** battery charging and protection unit capable of handling up to 3x battery pack 4S (in standard version).
- **C&DH (Command & Data Handling Module):** include a dedicated microcontroller for system management and control with multiple data interfaces available
- **PLI (Power and Launch Interface):** external interfaces with platform peripherals for system managing during pre-launch operations (RBF, Inhibits, Umbilical)

SOLO-EPS4



SOLO-EPS8

