

Rugged Embedded



PB-9250J Series

Standalone Intelligent Supercapacitor-based Uninterruptible Power Backup Module



CE FCC

Key Features

- Universal standalone power backup module compatible with all box-PCs
- Supercapacitor-based, -25 to 65°C wide temperature operation
- 9250 watt-second energy capacity
- Maximum 180W output power for the connected back-end system
- Up to 10 years lifespan, and 500,000 charging/ discharging cycles
- Patented CAP energy management technology*
 - Extends back-up time in the event of an unforeseen power outage
 - Monitors energy and power consumption to extend operation time for safe system shutdown
- Versatile operating mode
 - Normal backup mode
 - Ignition control mode for standard box-PC and in-vehicle controller
 - UltraCAP energy/ lifespan configuration

*R.O.C Patent No. I598820

Introduction

PB-9250J-SA is a standalone power backup module that can protect your box-PC against power outages. Utilizing state-of-the-art supercapacitor technology, it can operate in harsh environments from -25 to 65°C, and have extremely high durability lasting up to 10 years.

PB-9250J-SA is composed of eight 370F/ 3.0V supercapacitors, which offers 3.3 times longer lifespan than its 2.7V counterpart, and stores 9250 watt-second energy to offer extra extended operation time to backup your system. Thanks to Neosys' patented CAP energy management technology, it can reliably supply 180W power to the back-end system and automatically manage boot and shutdown without installing additional drivers/ software. In addition to UPS-like power backup mode, it also offers two advanced ignition control modes for in-vehicle usage. PB-9250J-SA can work with either standard box-PC or in-vehicle controller to provide stable power supply and execute user-configurable power-on/ power-off delay according to IGN signal input.

Featuring various modes, automatic shutdown control and up to 180W output power, PB-9250J-SA can work with most off-the-shelf box-PCs. And with properties such as maintenance-free energy storage and uninterruptible power supply, PB-9250J-SA can prevent data loss for the connected back-end system during power outage in harsh industrial environments!



Specifications

Supercapacitor Configuration

Composition	8x 370F, 3.0V supercapacitors
Capacity	9250 watt-second
Expected lifespan	>10 years @ 25°C with 9250 ws capacity* 76,000 hours @ 35°C with 9250 w-s capacity* 34,000 hours @ 45°C with 9250 w-s capacity* 15,000 hours @ 55°C with 9250 w-s capacity* 7,200 hours @ 65°C with 9250 w-s capacity* 7,200 hours @ 85°C with reduced 6525 w-s capacity* Expected lifespan is 2.2x when configured as 7820 watt-second energy capacity, or 4.8x when configured as 6525 watt-second energy capacity.
Lifecycle	500,000 charging/ discharging cycles*

Power Specification

Input Voltage	12~35 VDC
Input Connector	1x 3-pin pluggable terminal block (V+, GND, IGN_IN)
Output Voltage	Charge mode: DC_IN bypass (DC_OUT = DC_IN) Discharge mode: 12 or 24V software-configurable
Output Power	Maximum 180W output**
Output Connector	1x 3-pin pluggable terminal block (V+, GND, IGN_OUT)

I/O Interface

COM Port	1x DB9 for 3-wire RS-232
Iso. DIO	1x 10-pin pluggable terminal block for - PWR_BTN# output - SYS_STAT input

Mechanical

Dimension	80 mm (W) x 128 mm (D) x 175 mm (H)
Weight	2.2 kg
Mounting	DIN-rail mounting and wall-mounting

Environmental

Operating Temperature	-25°C ~ 65°C -40°C ~ 85°C with reduced energy capacity
Storage Temperature	-40°C ~ 85°C
Vibration	Operating, MIL-STD-810G, Method 514.6, Category 4
Shock	Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6 II
EMC	CE/FCC Class A, according to EN 55032 & EN 55035

* Once the rated lifetime or cycle life has been reached, the capacity of supercapacitor may decrease up to 30% and ESR may increase up to 100% from initial values.

** Backup time for uninterruptible operation may be reduced when sustaining a back-end system with high power consumption.

Ordering Information

Model No.	Product Description
PB-9250J-SA	Standalone intelligent supercapacitor-base power backup module with 9250 W-s energy capacity

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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