



RE Partner Solution

AVX Super Capacitor



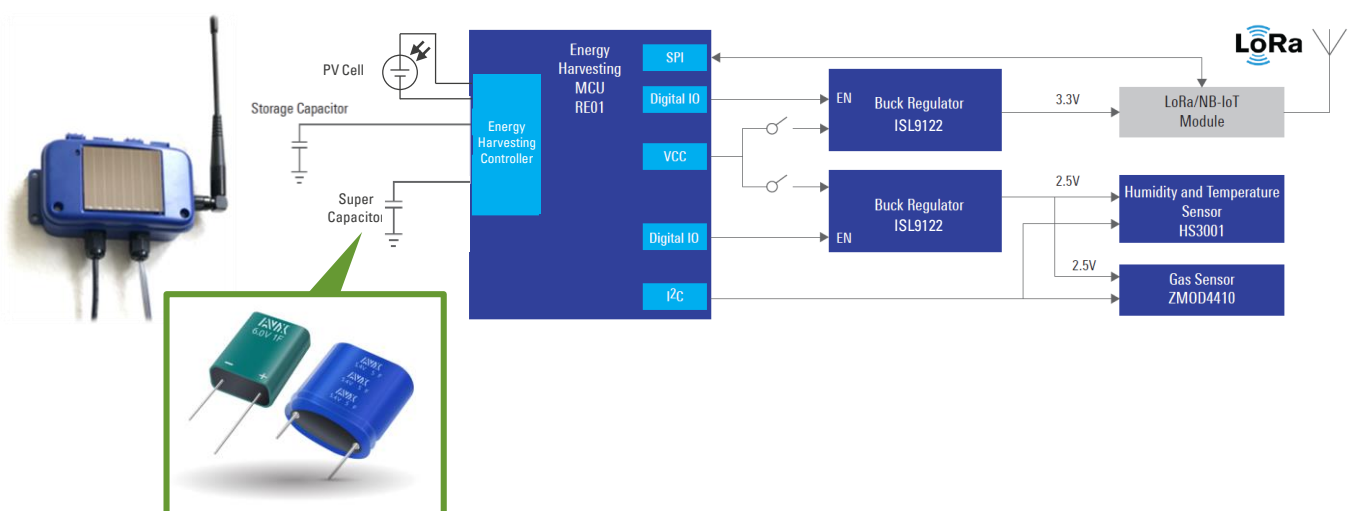
Solution Summary

AVX SCM series of cylindrical electrochemical double-layer capacitors offer excellent pulse power handling characteristics based on the combination of very high capacitance and very low ESR. They are ideal for Energy Harvesting applications such as an LPWA (Low-Power Wide-Area) remote sensing, location tracking or livestock monitoring, etc.. and perfectly fit the [Renesas RE01 MCU](#) to manage the energy charging at μA current and instantaneous power discharge at 800mA (peak current) for radio communication.

Features/Benefits

- High Pulse Power Capability
- Low ESR
- Low Leakage Current
- Plastic, Moisture Resistant Version

Diagrams/Graphics



Target Markets and Applications

- Energy Harvesting
- Smart Metering
- Smart Agriculture
- Smart Faucet
- Electronic Locks
- Asset Trackers

<https://www.avx.com/products/supercapacitors/scm-series/>

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AVX Corporation is a leading worldwide manufacturer and supplier of passive components, antennas and interconnect solutions.

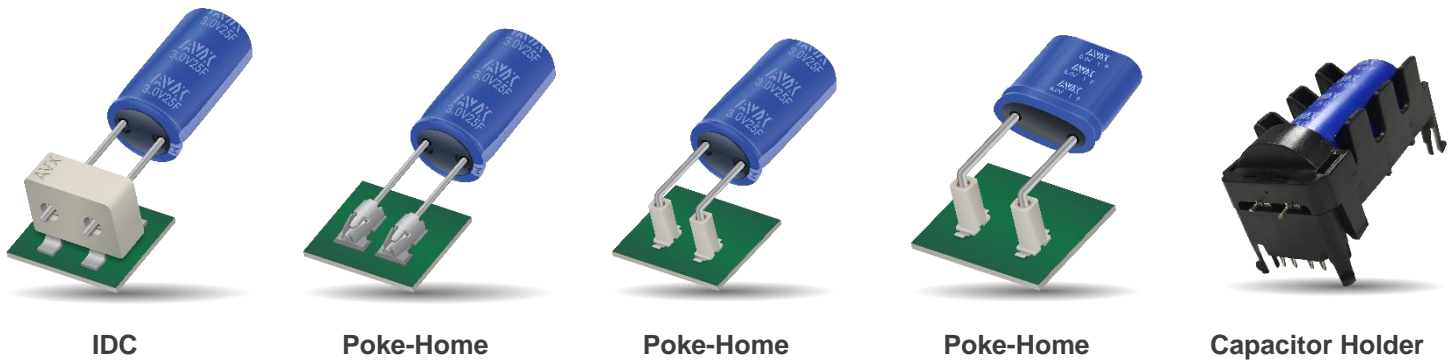
Examples of AVX products include:

SuperCapacitors – Battery Replacement and Energy Harvesting

Tantalum Polymer Capacitors - High Capacitance in Ultra Small Size

Antennas – Embedded, Off-board and External for 433 – 8500 MHz

Poke-Home / IDC / Capacitor Holder Connectors – For Wire to Board Connections and Hand Attachment of SuperCapacitors to PCBs Without Soldering



SuperCapacitor attachment using IDC, poke-home, or capacitor holder.

PARAMETER / CHARACTERISTIC	SUPERCAPACITOR	LI-ION BATTERY
Charge Time	1 To 10 Seconds	10 To 60 Minutes
Charge Cycle Life	1 Million	>500
Cell Voltage	2.1 To 3.3 Volts	3.6 To 4.2 Volts
Specific Energy (Wh/Kg)	5	100 To 200
Specific Power (W/Kg)	~10,000	1,000 To 3,000
Charge Temperature Range	-55°C To +90°C	0°C To +45°C
Discharge Temperature Range	-55°C To +90°C	-20°C To +60°C

SuperCapacitor – Battery Comparison

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