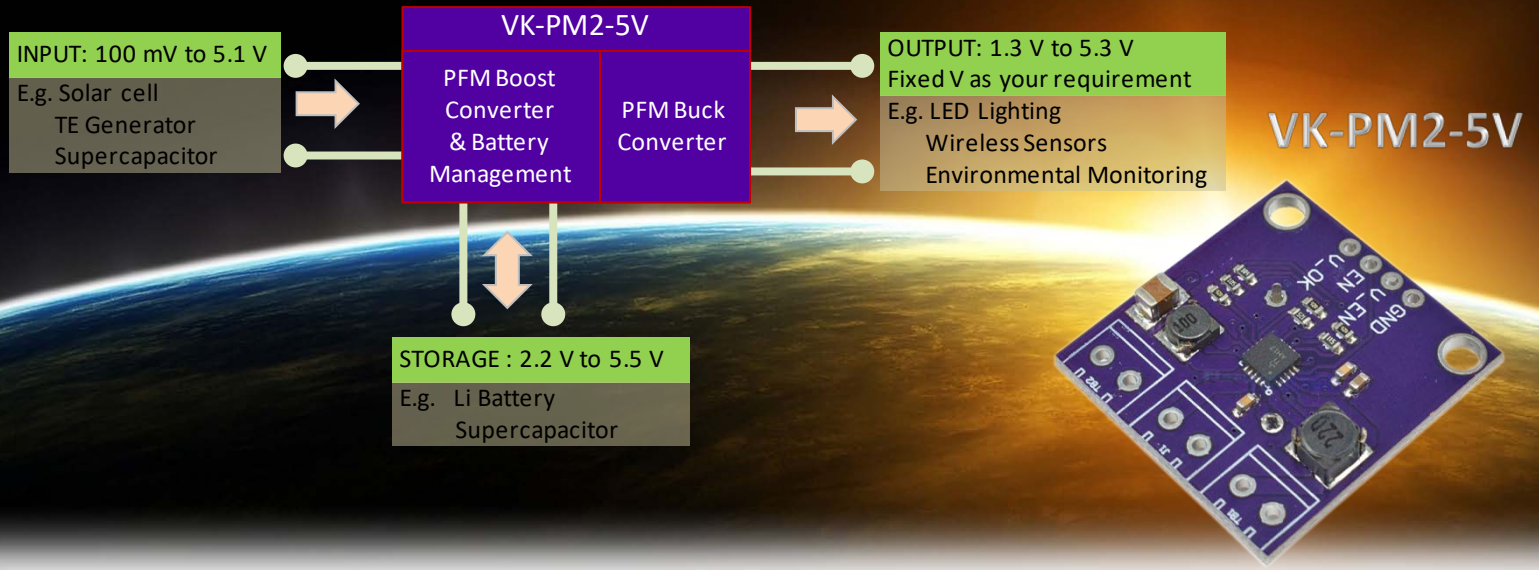




Solar Cell Power Management Board (Type 2)



Specifications

Description	The circuit board is designed to collect and manage microwatt (μW) to milliwatt (mW) power generated from various DC sources such as solar cells or thermoelectric generators. In addition to the highly efficient boosting charger, this board include a highly efficient, nano- power buck converter in the output stage. A Supercapacitor (0.22F 5.5V) is installed onboard as a storage.
Characteristic	<ul style="list-style-type: none"> • Ultra Low Power, High Efficiency DC-DC Boost Converter/Charger • Programmable step down regulated output Buck Converter • Continuous energy harvesting from low voltage input supply: $V_{IN} \geq 100 \text{ mV}$ • Full operating quiescent current: 488 nA (typical) • Cold start voltage: $V_{IN} \geq 600\text{mV}$ (typical) • Programmable Dynamic Maximum Power Point Tracking (MPPT)
Energy source input voltage	0.1V – 5.1V (Cold start voltage is 600 mV) It will continue energy harvesting from V_{IN} as low as 100 mV
Energy storage component and Voltage	0.22 F, 5 V Supercapacitor mounted onboard Energy can be stored to rechargeable li-ion battery, thin-film battery, super-capacitor, or conventional capacitor. Voltage range is 1.3 V - 5.3 V (Can be set to your voltage requirement)
Working environment temperature	-40 ~85 °C
Switching frequency	Boost charger up to 1MHZ, Buck converter up to 500 kHz
Working mode	Cold start mode, boost mode, thermal protection cut-off mode



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