

# capUPS

supercapacitor backup power source for embedded systems



## features

- 500,000 recharge cycles
- 250 & 500 Farad total capacitance
- Input Voltage: 5V to 32V DC Input
- Input Current: up to 12A
- Output Voltage:  
5V to 24V DC (programmable)
- Output current:  
12A (Buck), 5A (Boost)
- Rugged, enclosed system
- Operating Temperature:  
-40°C to +65°C

## benefits

- No batteries = No maintenance
- Programmable output voltages
- Very quick charging (minutes not hours to full capacity)
- Passively cooled - No Fans

## information

The capUPS are a series of no-battery UPS systems that use super capacitors rather than conventional batteries. The advantage is that they charge very quickly and that they are able to be recharged 500,000 times. This is beneficial for applications that have either a large number of battery discharge cycles or where a "maintenance free" solution is required such as remote terminals or mobile data collectors.

The capUPS products come in capacities of 250 and 500 Farads and can supply back-up power to a twenty Watt load for 22.23 minutes through 44.47 minutes respectively. The input power range is 5V to 32VDC at up to 12A. The output voltage is programmable from 5V to 24VDC. The output current is 12A when output is working in "buck" mode and 5A when working in "boost" mode. Switch-over from buck to boost is automatic when the capacitor terminal voltage is above or below the set output voltage. The output voltage and low capacity levels are non-volatile and field programmable via an onboard serial port and LAN. Status lights on the front panel indicate operational status. The capUPS systems have an operating temperature of -40° to +65°C and are passively cooled and housed in a rugged .125" extruded aluminum enclosure that provides a dual system of both shock and vibration isolation.

# capUPS

## Specifications

### POWER

	capUPS-250	capUPS-500
Input Power Range	5V to 32V DC	5V to 32V DC
Input Current	12A	12A
Output voltage (programmable)	5V to 24V DC	5V to 24V DC
Output Current	12A	12A
Buck Boost	5A	5A
Number of cells in series (Farads)	6	6
Capacitance each cell	1500	3000
Total Capacitance (Farads)	250	500
Maximum voltage/capacitor	2.7	2.7
Maximum voltage/module	16.2	16.2
Maximum Energy Storage in joules (cutoff voltage 7.0V)	26680	53360
Maximum holdup time in minutes	5 Watt 88.93 10 Watt 44.47 20 Watt 22.23 40 Watt 11.12 60 Watt 7.41	177.87 88.93 44.47 22.23 14.82

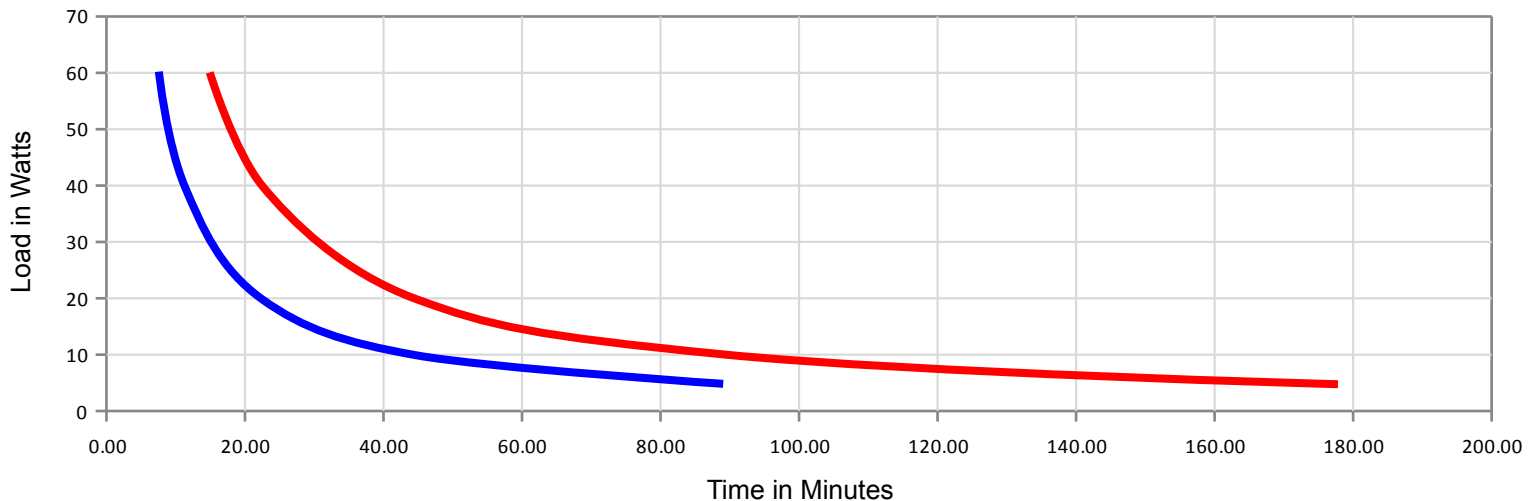
### FEATURES

	capUPS-250	capUPS-500
power fail signal (PF)	yes	yes
low capacity signal (LC)	yes	yes
RUN signal	On/Off	On/Off
Communication	RS/232 LAN	RS/232 LAN

### MECHANICAL/ENVIRONMENTAL

	capUPS-250	capUPS-500
Size (WxDxH)	4.5" x 4.8" x 7.5"	6.6" x 2.54" x 14.98"
Weight	8.0 lbs	11.0 lbs
Enclosure	Extruded aluminum	Extruded aluminum
Mounting	Bulkhead	Bulkhead
Operating Temperature	-40°C to +65°C	-40°C to +65°C
Storage Temperature	1500	3000

Hold Up Time for capUPS-250 and capUPS-500



### ORDERING INFORMATION

Part Number	
capUPS-250	250 Farads Capacitive Uninterruptible Power Source (UPS)
capUPS-500	500 Farads Capacitive Uninterruptible Power Source (UPS)