

# SB2512i-HV | SB2512iX-HV

## 25A/20A, @12V, MPPT

Marine | RV | Off-Grid | PV Street Lighting | Solar Traffic Signal

Meet the SB2512i-HV, our most affordable MPPT controller option available for offgrid electrification or use with offgrid inverters (for AC load). The SB2512iX-HV's additional features, such as an auxiliary output for charging a second battery, make it suitable for many applications, including RVs and Marine. The SB2512iX-HV can manage a 25A load output for small offgrid electrification applications. When programmed with an IPN ProRemote or UCM, it will provide dusk-to-dawn load control for PV street lighting. It is compatible with FLA, AGM, and Gel batteries, as well as Lithium batteries when programmed by an IPN ProRemote or UCM. Its IPN Network interface can communicate with other Blue Sky Energy charge controllers as a single charging system, allowing increased flexibility and optimization in system design.



96% peak efficiency •

Fast MPP Tracking •

Excellent performance •

IPN Network compatible •

Great for Boats and RV's •



## Product Features

- Patented MPPT technology charges batteries faster
  - Longer battery life with advanced multistage charging (FLA,AGM,GEL)
- Additional features for SB2512iX-HV:**
- Equalize batteries automatically or manually
  - Charge a second battery or control a DC load output
  - Program for Dusk-to-Dawn Lighting Control with the IPN ProRemote or UCM
  - Lighting Control with the IPN ProRemote or UCM
  - Battery Temperature Compensation (with external battery temp. sensor)
  - Protects battery from deep discharge (via load output)
  - Automatically reconnects load when power is available
  - Networks with other Blue Sky controllers for higher power

## Display

- LED for charge status (LED for Load status only SB2512iX-HV)
- Remote Display optional (IPN ProRemote, IPN Remote)

## Protection

- PV array overload
- PV array reverse polarity
- Battery reverse polarity


## Accessories

- IPN Remote - remote display for monitoring one or more controllers
- IPN ProRemote - remote display w/ programming and battery monitoring
- UCM - monitor and program controllers online
- External battery temperature sensor (only SB2512iX-HV)

# Specifications:

## SB2512i-HV @12V

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Maximum PV Power:	340W with 36-cell PV panel <sup>(*)</sup> 270W with 60/72-cell PV panel <sup>(*)</sup>	
Rated Battery (Output) Current:	25A with 36-cell PV panel <sup>(*)</sup> 20A with 60/72-cell PV panel <sup>(*)</sup>	
Conversion Efficiency:	96% (typical @14V / 20A output)	
Power Consumption:	0.30W (typical standby)	
Recommended Max Panel Voc at STC:	40V (Max Panel Input 50V)	
Charge Profile:	Multi-Stage charging	
Absorption Voltage:	14.4V <sup>(1)</sup>	
Float Voltage:	13.2V <sup>(1)</sup>	
Equalization Voltage (if enabled):	--	15.2V <sup>(1)</sup> Automatic or Manual Equalization
Auxiliary Output (option A, B, or C):	--	A) Auxiliary Battery Charge 2A
	--	B) Load Control
	--	C) Dusk-to-Dawn (IPN ProRemote)
Load (LVD) Disconnect/Reconnect Voltage:	--	11.5V/12.6V <sup>(1)</sup>
Maximum Auxiliary Output current (option B or C):	--	25A
Display LCD:	optional IPN ProRemote or IPN Remote	
Temperature Compensation (by optional Battery Temperature Sensor):	-5.00mV/°C/cell correct factor (Range 0.00 to -8.00mV/°C/cell) <sup>(1)</sup>	
Operating Temperature:	-40°C - 45°C	
Maximum Full Power Ambient:	45°C	
Environmental Protection:	IP20	
Connection:	Battery and PV terminals #20-10 AWG (tightened 9 in-lb, 1 nm)	
	Auxiliary Output terminals #20-10 AWG (tightened 9 in-lb, 1 nm)	
	IPN Network terminals #24-14 AWG wire (tightened 2.1 in-lb, 0.24 nm)	
Weight:	0.87 lb. (395 g)	
Dimensions:	5.3 x 5.3 x 2.5" (13.5 x 13.5 x 6.35 cm)	
Warranty:	5 years (Tech. Bulletin #100218)	
Certifications:		

<sup>(\*)</sup> 36-cell panels are typically referred to as "12V panels" providing Vmp/Voc of -18V/22V at STC, 60-cell panels refers to "20V panels" (Vmp/Voc -30V/37V), 72-cell panels refers to "24V panels" (Vmp/Voc -36V/44V). (1) Factory default voltages unless programmed with an IPN ProRemote display or UCM.

