

## Features

- » Dual Power Input: PV Solar cell and VDC source. Voltage range: 5V to 34V.
- » Dynamic MPPT algorithm for increasing solar panel efficiency to 95% of MPP
- » Automatic sleep mode in low light
- » Can charge a 12V, 24V or other custom voltage battery. Output Voltage up to 34V.
- » Implements charging profiles for Li-Ion, Li-FePO<sub>4</sub>, Li-Ion Polymer, Lead-Acid, and VRLA (AGM or gel) Batteries.
- » 2A output current and can be connected in parallel for higher current.
- » Battery protection over-discharge, over-heating, over-voltage and over-current.
- » Programmable Configuration
- » SPI interface

## Applications

- » Remote sensor, monitor systems
- » Portable hand-held instruments, and small battery backed power tools.
- » Solar battery chargers
- » 12V and 24V Automotive systems
- » Solar Powered LED Street Illumination

## Description

The EH01HV simplifies the process of introducing solar energy to a design. Using a CC-CV profile it charges Lead-Acid or Lithium-Ion batteries from either a PV cell or some other VDC power source. The device comes ready to charge either 12V or 24V batteries or can be adjusted to any other voltage between 5V and 34V. In addition the

EH01HV also monitors the batteries to improve the durability.

Two inputs are provided: one for a solar panel and the other for a stable VDC power source. The PV cell input uses a MPPT algorithm to search for the maximum power operation level every second achieving a 95% tracking efficiency. The other input can be connected to an inexpensive VDC 12V wall adapter, a poorly regulated automotive cigarette lighter sockets (typically vary between 12.5-14.5V), or any other DC sources up to 34V.

The provided SPI interface can be used to reconfigure the EH01HV in factory or to allow an external controller to define a new charging profile.

## Typical Applications

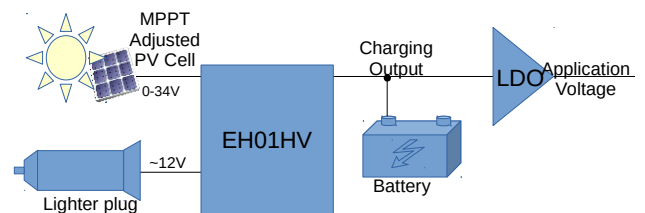


Figure 1: Simple Car Adapter Solar Powered Application

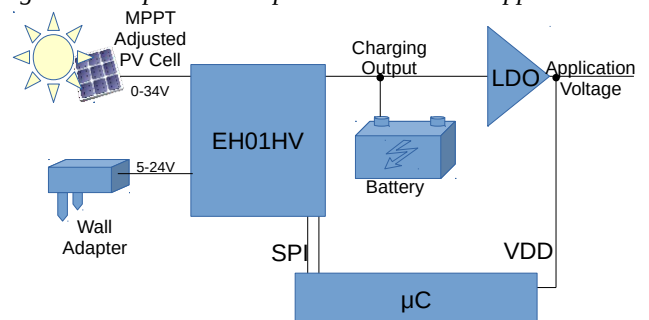


Figure 2: Custom Smart Battery Charger Solution

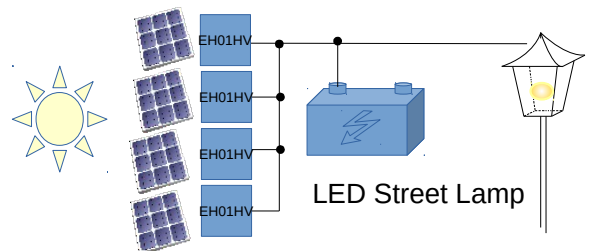


Figure 3: LED Street Lighting Solution

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