

# Powerfly: A Plug-And-Play Solar Array Monitoring Device

*Solar, Embedded Systems, IoT, Cellular, Energy Harvesting*

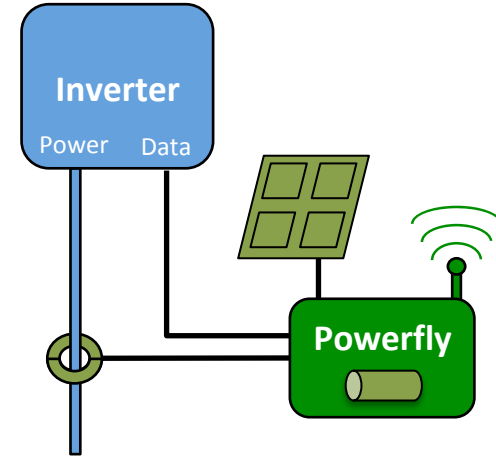
James D'Albora,  
[james@verifyenergy.com](mailto:james@verifyenergy.com)  
Daniel Gerber,  
[daniel.l.gerber@gmail.com](mailto:daniel.l.gerber@gmail.com)

- Goal: support the solar industry by providing reliable and affordable monitoring
- Soft costs and O&M are a large burden on the solar industry
- Monitoring systems today are expensive and difficult to deploy
- We propose the Powerfly, the first truly plug-and-play communications gateway for the solar industry
- Features energy harvesting technology via CT and/or integrated solar, an embedded cellular modem, backup battery, and web interface
- Current partners: LBNL, Spectrum Energy, UC Davis



## Solar Monitoring Today

- Requires dedicated power from breaker panel
- Requires setting up mesh network, lacks security
- Cost: \$1000 per inverter



## Powerfly

- +Energy harvesting via CT and/or integrated solar
- +Backup battery for outages
- +Secure cellular uplink
- +Cost: \$500 per inverter
- +10x faster installation