MI-P300A Development Platform

Application Brief

Features

- Highly integrated 300 W micro-inverter platform
- Uses Solantro's SA1002 - Analog Power Manager (APM) and SA4011 - Digital Power Processor (IXC) ICs
- Low bill of materials (BOM) component count
- CEC weighted efficiency > 96%
- Peak efficiency 96.7%
- HDLC UART interface to enable programming
- Grid interface functions – e.g. Anti-islanding

Capabilities

- Maximum Power Point Tracking (MPPT)
- Enables gateway monitoring & communications
- Grid synchronization – 50 Hz / 60 Hz operation
- Auto-controlled soft switching
- 2 quadrant operation
- Grid sensing, voltage and current

Applications

- Grid-tied micro-inverter

MI-P300A Development Platform

Description

The Solantro MI-P300A Development Platform facilitates the development of a 300 W Solantro chipset-based micro-inverter solution.

The platform implements a two-stage micro-inverter design to meet the grid-tied Solar PV market's demand for high efficiency and reliability at the lowest cost.

The digitally controlled power train performs MPPT, DC-AC inversion, and grid-side functions.

The MI-P300A Development Platform includes two UART ports for communication between the IXC and Solantro's Helios Test and Control Tool as well at PuTTY. The MI-P300A comes with preinstalled firmware for quick and easy application evaluation.

Product Development Kit

- Solantro development platform license agreement
- MI-P300A Development Platform with installed firmware – auto-start enabled
- MI-P300A Development Platform documentation

Parameter	Specification
Recommended Input Power (STC)	10 to 300 W
Nominal Continuous AC Output Voltage	190 to 264 V RMS
BOM Component Count	< 160
Board Size	125 x 100 x 25mm
CEC Weighted Efficiency	> 96%
Peak Efficiency	96.7%
Absolute Maximum Input Voltage	48 V
Input Voltage Range	24 – 45 V
MPPT Voltage Range	24 – 45 V
Total Harmonic Distortion	1.2% @ 300 W