

KIT_PSC3_PFC1

PSOC™ Control low-voltage Interleaved Totem-pole PFC Expansion Board

The KIT_PSC3_PFC1 is part of Infineon's low-voltage power board portfolio intended for evaluation and training in different power conversion topologies with PSOC™ Control MCUs.

This low-voltage totem-pole power board operates in a safe, low-voltage domain, with supported input voltage range between 12V and 26V AC, and nominal output voltage of 40V DC with a built-in hardware protection feature. It works with any CC1 card, functionality is demonstrated with KIT_PSC3M5_CC1 MCU control card kit from the PSOC™ Control family. This PFC expansion board generates 5V to power up the control card (not included). It also features several user and communication interfaces like CAN, UART, I2C, SPI, push button, potentiometer, and LEDs.

The following components are available separately and are required to assemble a minimal system setup:

- [KIT_PSC3M5_CC1](#) for the PSOC™ Control C3 control card
- [USB0010](#) PMBus Dongle to interface with a PC GUI for device control
- DC load and cables for its connection

For increased safety, the board has a built-in protection circuit to prevent typical damage. It also includes 24-pin daisy chain connectors to use a single control card for two topologies, like a PFC board and a DC-DC converter board (either being a dual buck or a resonant LLC converter board).

The [PSOC™ Control Performance line of MCUs](#) is specifically developed for power conversion applications, enabling designers to innovate, solve complex design problems and get their products to market faster than ever before.

PSOC™ Control is supported by [ModusToolbox™](#), a unified ecosystem platform with tools and software solutions. ModusToolbox™ [Power Suite](#) is available for developers of PSOC™ Control focus applications. It provides a seamless graphical user interface that streamlines evaluation and training and provides real-time parameter monitoring for valuable insights into performance, efficiency, and reliability. Specialized application environments enable engineers to quickly identify issues, optimize designs, and enhance overall functionality.

For more Information visit: www.infineon.com/KIT_PSC3_PFC1



Kit Contents

- Interleaved Totem-pole PFC Expansion Board
- AC-AC adapter, Universal AC Transformer to 24VAC, 3Arms
- Quick start guide

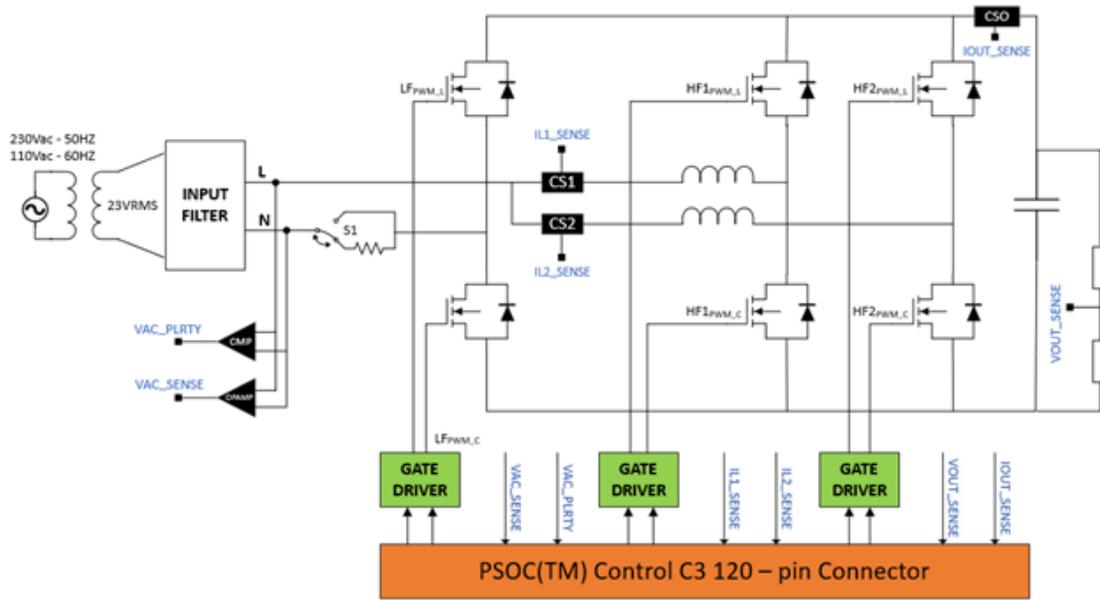
Benefits

- Supports single or two-phase interleaved PFC topology
- Safe operating voltage
- Ideal for early evaluation and training
- Hardware protection to prevent typical board damage
- Several communication and user interfaces
- Easy evaluation using ModusToolbox™ Power Suite including PFC library and code example
- Software configurable for different topologies
- Enables comparison of different PSOC™ Control MCUs



PRODUCT BRIEF

Block diagram



Part Numbers

PN	Kit	Function
KIT_PSC3_PFC1	PSOC™ Control KIT_PSC3_PFC1	Functional system prototype of a Totem Pole PFC stage operating in a safe low voltage environment
KIT_PSC3M5_CC1	PSOC™ Control C3M5 Digital Power Control Card	Digital Power Control Card to learn and test digital power control applications
USB0010	PMBus Dongle Communication interface	Communication interface between Infineon XDP™ Designer GUI and Infineon's controllers and digital POL

Key Applications

Power Supplies	Server and Datacenter PSU, Telecom PSU
Residential	Residential heat pumps, Residential air conditioner
Industrial	eV Charger

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