Design Guide: TIDA-050026-23881

24-Port (4 Pair) Power Sourcing Equipment Reference Design for Multiport Applications

Description

This reference design features an evaluation module for the 24-port PSE system which contains a hardware kit, a system firmware image, and a system firmware GUI. The hardware kit consists of a motherboard (PSEMTHR24EVM-081), MSP430 daughtercard (PSEMCUDAUEVM-082) or MSPM0 daughtercard (PSEM0DAUEVM-018), and a PSE daughtercard (TPS23881EVM-083). To evaluate the system (both hardware and software), USB2ANY and MSP-FET adapters are also needed. This guide has been revised to reflect hardware design using the new MSPM0G1107 MCU for multiport PoE systems.

Resources

TIDA-050026-23881	Design Folder
TPS23881EVM-083, PSEMTHR24EVM-081	Tool Folder
PSEMCUDAUEVM-082, PSEM0DAUEVM-018	Tool Folder
TPS23881, MSP430F5234	Product Folder
MSPM0G1107, CSD19538Q3A	Product Folder

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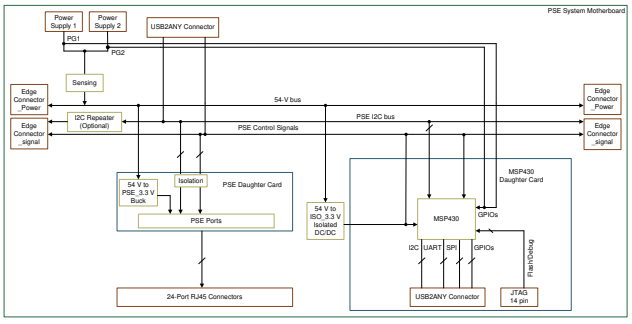


Features

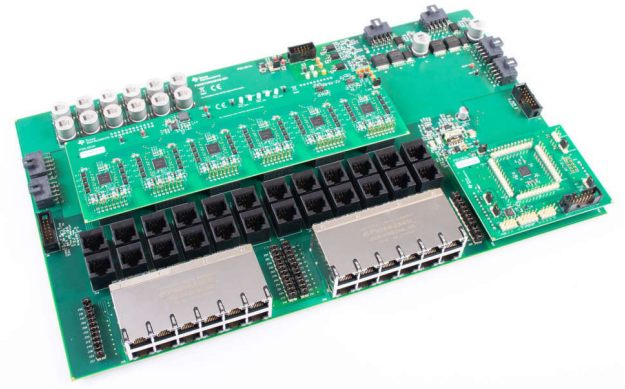
- Onboard power monitoring
- 24 4-pair port system, and expandable to 48 port system
- Highly flexible system with configurable GUI and selectable host interface (I2C or UART)
- Multiport power management
- Multiple power supplies
- Supports legacy powered devices (PDs)

Note

The MSP430F5234 on PSEMCUDAUEVM-082 and the MSPM0G1107 on PSEM0DAUEVM-018 are programmed with pre-production firmware for EVM testing purposes. Follow the instructions in this user's guide to flash the latest firmware from TI.com before evaluation.

Applications

- Campus and branch switches
- Edge router
- Video recorder



1 Revision History

Changes from Revision A (October 2019) to Revision B (December 2025) **Page**

- Updated the numbering format for tables, figures, and cross-references throughout the document..... 1
- Added comprehensive MSPM0G1107 part family description throughout the document..... 1
- Added MSPM0 and MSP430 MCUs in appropriate statements throughout the document..... 1

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