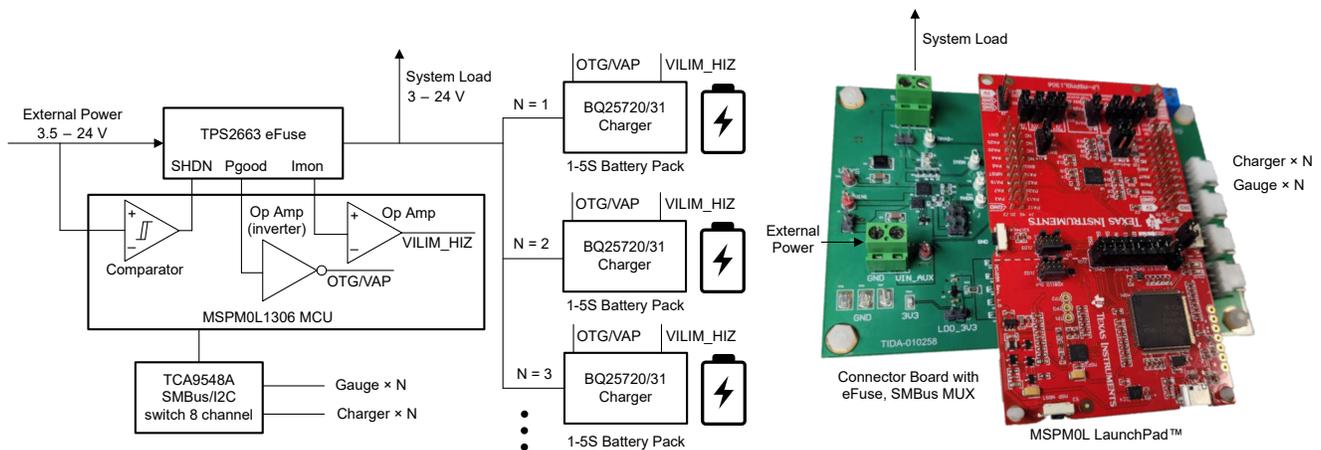


Scalable Battery Backup Subsystem With Adjustable Output

Description

Some medical devices need redundant and flexible battery configurations. While battery capacity is often limited to 100 Wh for air transport, many medical devices need to have larger capacities to provide operation throughout a customer's flight and during hospital use. To allow for increased battery capacity, multiple separate battery packs can be used. This scalable battery backup subsystem is designed to meet these needs.



Block Diagram and Board Image

Features

- Capable of scalable output power (> 1 kW) using up to 32 battery chargers and gauges
- Adjustable system output (3 V – 24 V), load sharing, and simultaneous battery charging using BQ25720 or BQ25731
- Automatic switchover between external adapter and battery power (resistor programmable)
- Automatic charge current modulation based on load
- Integrated analog with MSPM0 MCU

Applications

- [Ultrasound scanner](#)
- [Multiparameter patient monitor](#)
- Portable medical equipment

Resources

- Texas Instruments, [Scalable multi-pack smart battery charger reference design](#)
- Texas Instruments, [BQ25720 Product Folder](#)
- Texas Instruments, [BQ25731 Product Folder](#)
- Texas Instruments, [MSPM0L1306 Product Folder](#)
- Texas Instruments, [TCA9548A Product Folder](#)
- Texas Instruments, [TPS2663 Product Folder](#)

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