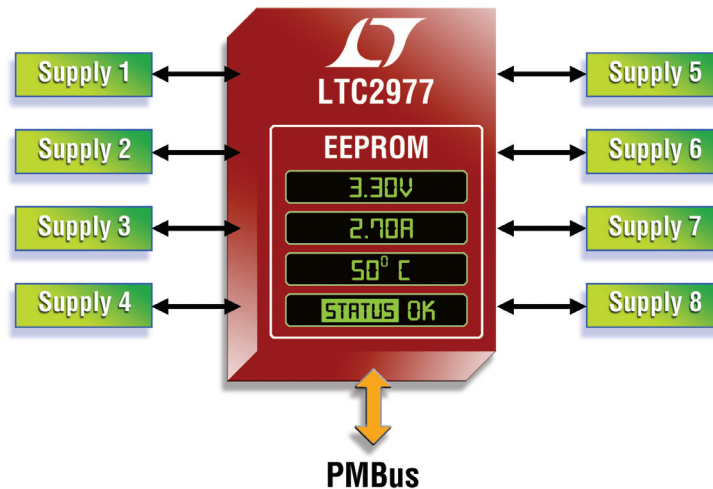


8-Channel Power System Manager

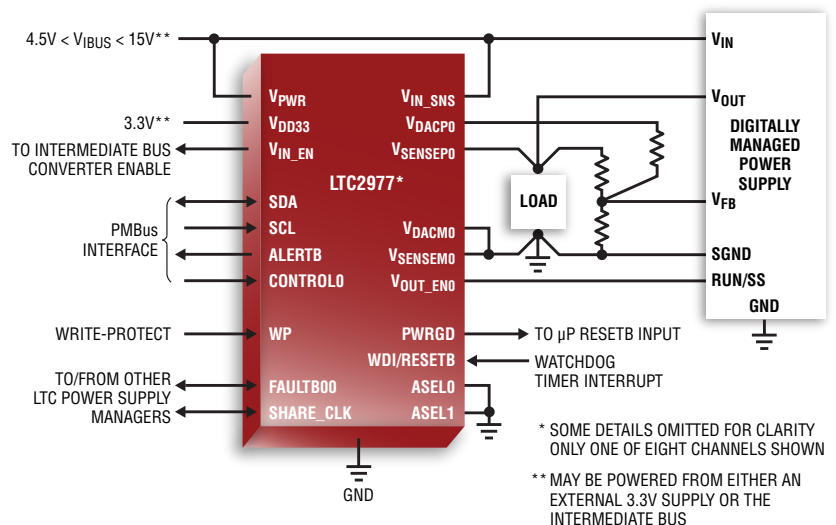


Unrivaled $\pm 0.25\%$ Measurement Accuracy Increases System Efficiency

The LTC[®]2977 PMBus Power System Manager with EEPROM provides complete digital power management of power supply systems with eight or more rails. The LTC2977 utilizes an I²C interface and PMBus command set to monitor, supervise, sequence, margin, fault manage and fault log positive or negative supplies. This provides rapid troubleshooting and debug capabilities during power system design, development, production and failure analysis. Power supply channels can be sequenced on or off using programmable time delays, while dedicated voltage supervisors on each channel provide precise thresholds and fast response times to protect loads from electrical overstress. All of the LTC2977's functions perform with uncompromised accuracy, including better than $\pm 0.25\%$ total unadjusted error on ADC telemetry, and 0.25% margining and trimming accuracy on each supply. Users can harness the powerful LTpowerPlay™ GUI to configure and interrogate the LTC2977's registers, user settings and fault log. Once configured, the LTC2977 provides the essential system management functions without host intervention and does not require writing a single line of code.

Features

- Trim/Margin Eight Supplies to 0.25% Accuracy
- EEPROM for Configuration and Black Box Fault Logging
- I²C/SMBus Interface, PMBus Command Set
- Supported by LTpowerPlay GUI
- Supply Sequencer, Time Based or Tracking
- Monitor (16-Bit ADC) and Supervise (12 μ s Fast):
 - Input and Eight Supply Voltages
 - Optional Current Monitor on Odd Channels
 - Die Temperature
- Coordinate Sequencing and Fault Management Across Managers
- Watchdog Timer
- Operates Autonomously without Additional Software
- -40°C to 105°C Operation
- 100% Pin-Compatible Upgrade to the LTC2978/LTC2978A
- 64-Pin 9mm x 9mm QFN Package



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Complete Development Platform with LTpowerPlay GUI

No Code Required!



DC1613
USB to PMBus
Controller

DC2028
LTC2977
Demo Board

Demonstration
Board

Customer Board
with
LTC2977

In-Circuit Serial
Programming

or

The screenshot displays the LTpowerPlay v1.0.291.0 GUI interface. It features several key sections:

- SYSTEM TREE:** A hierarchical view of the system components, including U0:0 through U0:7.
- CONFIGURATION SETTINGS:** A detailed view of the configuration for U0:0 (LTC2977), showing various registers and parameters such as Output Voltage, Fault Responses, and Miscellaneous settings.
- TELEMETRY DATA:** A real-time display of system parameters including Input Voltage, Output Voltage, Temperature, and Status Summary.
- CONTEXT SENSITIVE DISPLAY OF SELECTED PARAMETERS:** A dashboard showing a schematic diagram of the device with various parameters highlighted, such as VOUTs and VOENs.
- DEVICE DASHBOARD:** A summary of the device's current state, including VOUT commands and status information.

OSCILLOSCOPE
LIKE TELEMETRY
DISPLAY

IDEALIZED
POWER SUPPLY
WAVEFORMS

FAULT SHARING
CONFIGURATION