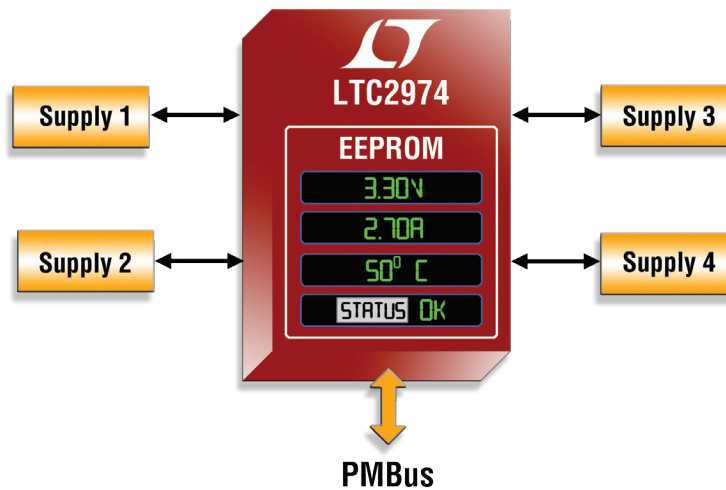


Quad Power System Manager

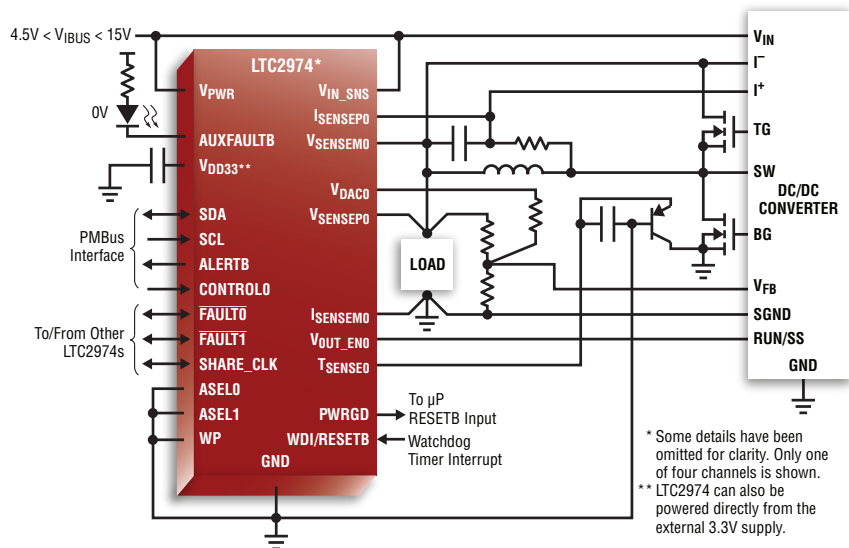


Unrivaled $\pm 0.25\%$ Measurement Accuracy Increases System Efficiency

The LTC[®]2974 PMBus power system manager with EEPROM provides complete digital power management of power supply systems with four or more rails. The LTC2974 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 event or programmable time delays, while dedicated voltage and current supervisors on each channel provide precise thresholds and fast response times to protect loads from electrical overstress. All of the LTC2974's functions perform with uncompromised accuracy, including better than $\pm 0.25\%$ of 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 LTC2974's registers, user settings and fault log. Once configured, the LTC2974 provides the essential system management functions without host intervention and does not require writing a single line of code.

Features

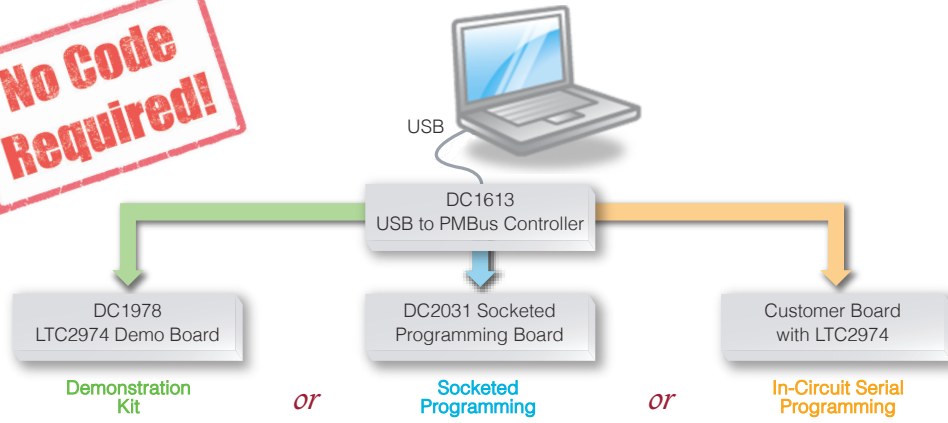
- **Margin/Trim Four Supplies to $\pm 0.25\%$ Accuracy**
- **EEPROM for Configuration, Black Box Fault Logging**
- **I²C/SMBus Interface, PMBus Compliant**
- **Supported by LTpowerPlay GUI**
- Operates Autonomously Without Additional Software
- Four-Supply Sequencer, Time Based or Tracking
- Monitor and Supervise:
 - Input and Four Output Voltages
 - Four Currents
 - Four Temperature Sensors
 - Die Temperature (Monitor Only)
- Watchdog Timer
- Powered from 3.3V, or 4.5V to 15V
- 64-Pin 9mm x 9mm QFN Package



LT, LT, LTC, LTM, Linear Technology and the Linear logo are registered trademarks and LTpowerPlay is a trademark of Linear Technology Corporation. All other trademarks are the property of their respective owners.

Complete Development Platform with LTpowerPlay GUI

No Code Required!



Config: bd2-3.3V (Paged+Global)

| | |
|---------------------|--------------------------|
| VIN_OFF | 4.0000 V |
| Output Voltage | 3.3000 V |
| VOUT_MAX | 3.3000 V |
| VOUT_OV_FAULT_LIMIT | +10.0 % above/below V... |
| VOUT_OV_WARN_LIMIT | +7.5 % above/below VO... |
| VOUT_MARGIN_HIGH | +5.0 % above/below VO... |
| VOUT_COMMAND | 3.3000 V |
| MFR_DAC_LTC2978 | 561 |
| VOUT_MARGIN_LOW | -5.0 % above/below VO... |
| VOUT_UV_WARN_LIMIT | -7.5 % above/below VO... |
| VOUT_UV_FAULT_LIMIT | -10.0 % above/below V... |
| POWER_GOOD_ON | -6.0 % above/below VO... |
| POWER_GOOD_OFF | -7.0 % above/below VO... |

Telemetry: bd2-3.3V (Paged+Global)

| | |
|---------------------------------|------------------------|
| MFR_VIN_PEAK_LTC2978 | 12.1250 V |
| READ_VIN | 12.1094 V |
| MFR_VIN_MIN_LTC2978 | 12.0938 V |
| MFR_VOUT_PEAK_LTC2978 | 3.4768 V |
| READ_VOUT | 0.0000 V |
| MFR_VOUT_MIN_LTC2978 | 3.1343 V |
| MFR_VOUT_PERCENT | +5.36 % above/belo... |
| READ_VOUT_PERCENT | -100.00 % above/bel... |
| MFR_VOUT_MIN_LTC2978_PERCENT | -5.02 % above/belo... |
| MFR_IOUT_PEAK_LTC2974 | 0.0513 A |
| MFR_READ_IOUT_LTC2974 | 0.0000 A |
| READ_IOUT | 0.0004 A |
| MFR_IOUT_MIN_LTC2974 | 0.0004 A |
| MFR_IOUT_SENSE_VOLTAGE_LTC29... | 0.009 mV |
| MFR_TEMPERATURE_PEAK_LTC2978 | 32.06 °C |
| READ_TEMPERATURE_1 | 31.91 °C |
| MFR_TEMPERATURE_MIN_LTC2978 | 31.22 °C |
| READ_TEMPERATURE_2 | 31.38 °C |

Chip Dashboard --U1 (7h5D)

Ch 0

VOE: 0.0000 V
 IOUT: 0.00 A
 TEMPERATURE: 31.91 °C
 VOUT: 0.00 V / 0.00 A
 VOUT2: 1.20 V / 0.04 A

Telemetry Plot

READ_VOUT

| READ_VOUT (All Pages in System) | Value |
|---------------------------------|----------|
| bd1-3.2V | 3.1997 V |
| bd1-2.4V | 2.4000 V |
| bd1-1.7V | 1.7009 V |
| bd1-1.1V | 1.0997 V |
| bd2-3.3V | 0.0000 V |
| bd2-2.5V | 0.0000 V |
| bd2-1.8V | 0.0000 V |
| bd2-1.2V | 1.1996 V |