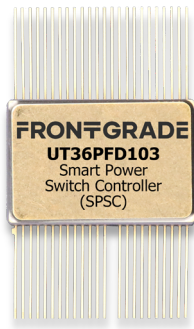


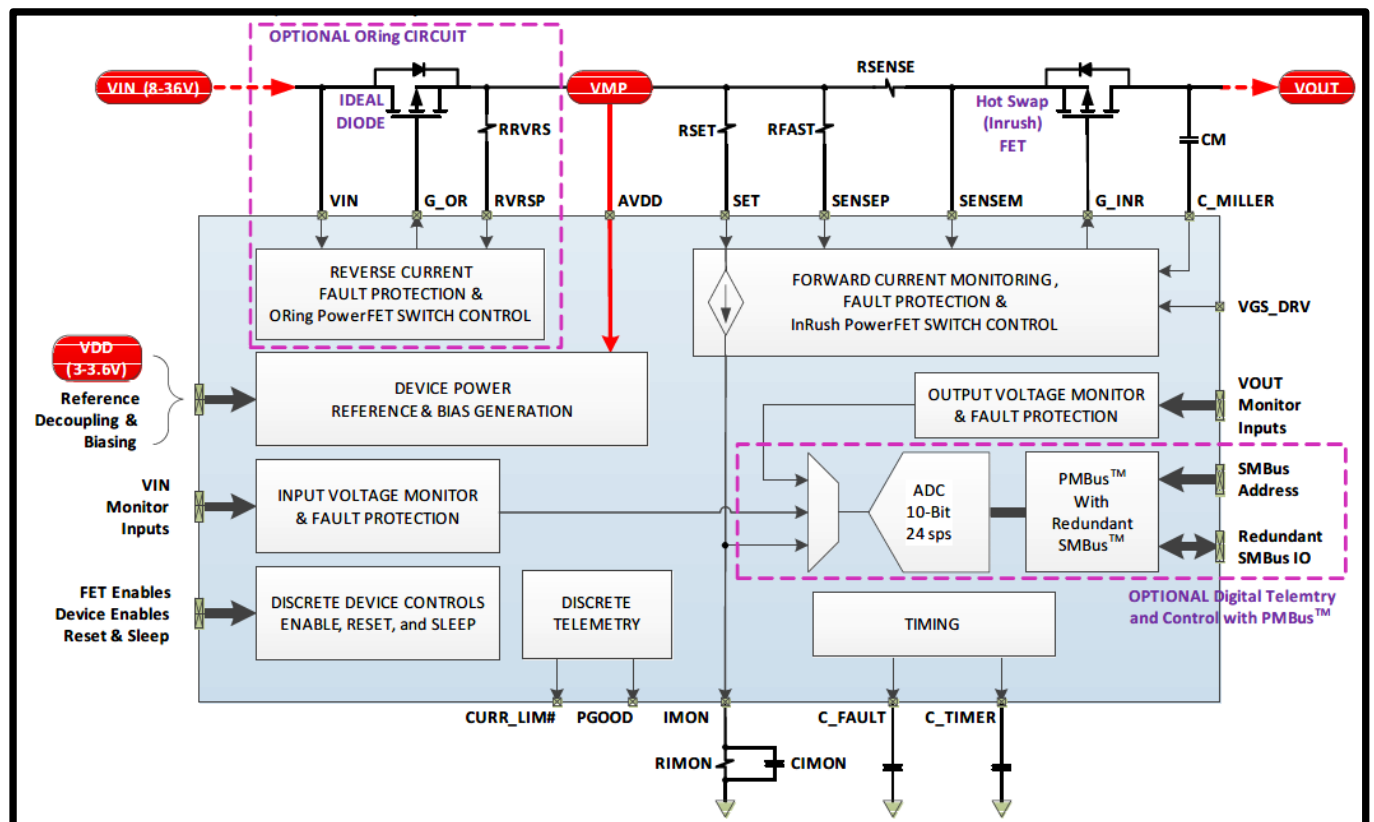
## UT36PFD103



For space applications demanding the highest reliability and radiation-hardened products, Frontgrade's, UT36PFD103, Smart Power Switch Controller (SPSC) provides extensive fault detection, isolation, and recovery capabilities in a single package.

The UT36PFD103 is an intelligent PowerMOSFET controller with load-side inrush current limiting and eFUSE protection of current faults. Combining adjustable current and voltage monitoring capability with flexible fault detection, isolation and recovery, the SPSC integrates many of the critical functions required for power switching applications and often implemented with a number of discrete components.

The UT36PFD103 SPSC accommodates protection of the PowerFET Safe Operating Area (SOA) while providing flexible power switching control for a wide range of space applications



UT36PFD103 Block Diagram

Smart Power Switch Controller

# UT36PFD103

---

**Features:**

- 8 V – 36 V eFUSE Power Switch Controller
  - Single or Dual-Supply Operation
    - High Voltage Power Supply +8 V to +36 V
    - Lower Voltage Digital and Analog +3.0 V to +3.6 V
  - Load Power Switching with Inrush Current Limiting
  - Forward Overcurrent and Short Circuit Protection
    - <500ns Typical Short Circuit Break Response
  - Optional OR-FET with Reverse Current Protection
  - Line and Load Side Voltage Monitor and Protection
  - Optional Digital Voltage and Current Telemetry
    - 10-bit VIN/VOUT/IDS Telemetry (via PMBus™)
  - Latching/Retriggerable/Pulsing Power FET Control
- 

**Applications:**

- SpaceVPX PowerUM Power Switching
  - SEL Fault Protection
  - Subsystem Electronics Power Switching
  - 5V Uninterruptable Power Supplies
- 

**Operational Environment:**

- Temp Range: -55°C to +125°C
  - TID: > 300 krad(Si)
  - SEL Immune: < 100 MeV-cm/mg
  - SEU Rate: <1 x E<sup>-10</sup> errors/bit-day
  - SET Onset: >37 Mev-cm<sup>2</sup>/mg
- 

**Physical:**

- 47-lead Dual Flat Pack
  - 16.1 mm x 10.75 mm, 0.635 mm pitch
- 

**Power:**

- 70 mW with Dual Supply at 36 V AVDD & 3.6 V VDD
- 

**Qualifications:**

- QML-Q, QML-V Qualified
-