

LMM104RM0 Regulated 48V – 12V Intermediate Bus Converter

1 Features

- Supports wide input voltage range: 40V to 60V
- Rated output power: 1.6kW
- Peak power: 2.4kW (< 200ms)
- Fully regulated output voltage: 12V
- Typical peak efficiency: 97.6% at 48V and 97.6% at 54V
- Typical full load efficiency: 96.8% at 48V and 96.6% at 54V
- Non-isolated design
- Typical switching frequency: 200kHz
- Supports PMBus communication
- Fully protected:
 - Input UVLO
 - Input OVP
 - Output OVP
 - Output OCP
 - OTP
- Typical output voltage ripple: 100mV
- Heat spreader for top side cooling
- Mechanical dimensions: 58.4mm × 36.8mm × 15.5mm

2 Applications

- Data center intermediate bus converters (IBCs)
- Power distribution board (PDB) for servers and communications
- DC-DC converters

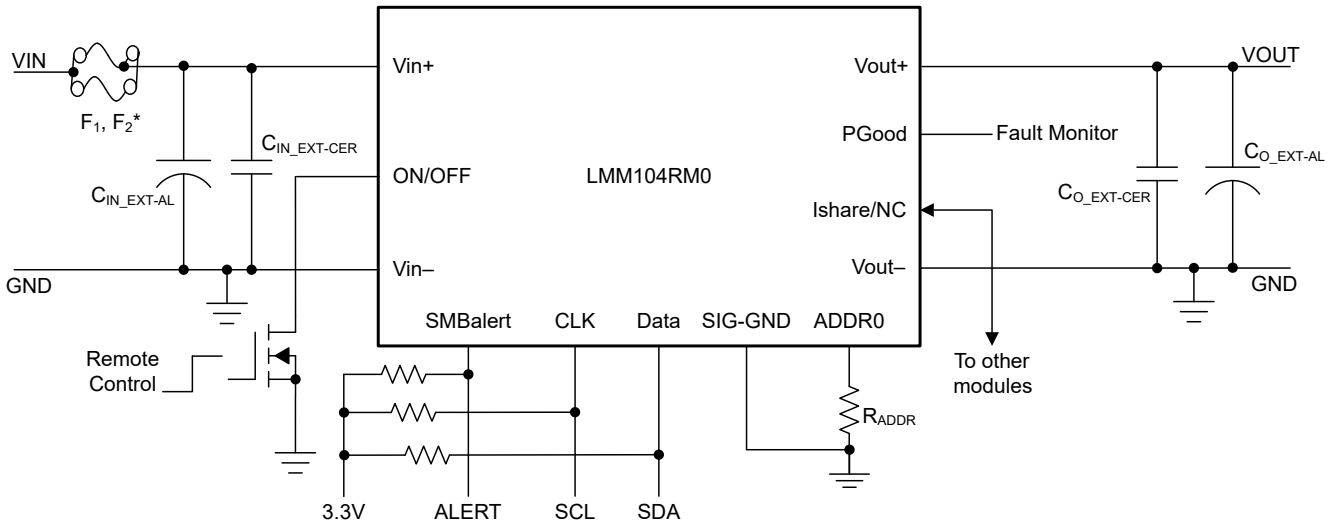
3 Description

The LMM104RM0 module is an evolution within the TI intermediate bus converters family. This module is a high-efficiency, regulated, non-isolated, 1.6kW thermal design power (TDP), in a standard quarter-brick footprint. The modular design provides a high-power density power conversion from 48V bus to a regulated 12V output, with options for parallel connection with multiple modules and current sharing through active-current control.

Package Information

PART NUMBER	PACKAGE	PACKAGE SIZE ⁽¹⁾
LMM104RM0	Quarter Brick (DOSA)	58.4mm × 36.8mm × 15.5mm

(1) The package size (length × width × height) is a nominal value and includes pins, where applicable.



Typical Application

4 Device and Documentation Support

TI offers an extensive line of development tools. Tools and software to evaluate the performance of the device, generate code, and develop solutions are listed below.

4.1 Receiving Notification of Documentation Updates

To receive notification of documentation updates, navigate to the device product folder on ti.com. Click on *Notifications* to register and receive a weekly digest of any product information that has changed. For change details, review the revision history included in any revised document.

4.2 Support Resources

TI E2E™ [support forums](#) are an engineer's go-to source for fast, verified answers and design help — straight from the experts. Search existing answers or ask your own question to get the quick design help you need.

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4.3 Trademarks

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4.4 Electrostatic Discharge Caution



This integrated circuit can be damaged by ESD. Texas Instruments recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage.

ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.

4.5 Glossary

[TI Glossary](#) This glossary lists and explains terms, acronyms, and definitions.

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