

Product Brief

PMBus SupIRBuck™ voltage regulators

IR3806x series (6 A/15 A/25 A/35 A)

The PMBus SupIRBuck™ is an easy-to-use, fully integrated and highly efficient DC-DC regulator with I²C/PMBus interface. The on-board PWM controller and MOSFETs make the family a space efficient solution, providing accurate power delivery for low output voltage and high current applications.

The IR3806x family of PMBus enabled SupIRBuck™ voltage regulators offers:

- > Compactness of integrated controller, driver and MOSFETs
- > High performance analog voltage mode engine
- > Flexibility of a rich PMBus interface

Main features

- > PMBus revision 1.2 compliant
- > 66 PMBus commands
- > V_{in} range 1.2 V–21 V
- > Differential remote sense
- > Ultra-low jitter voltage mode engine

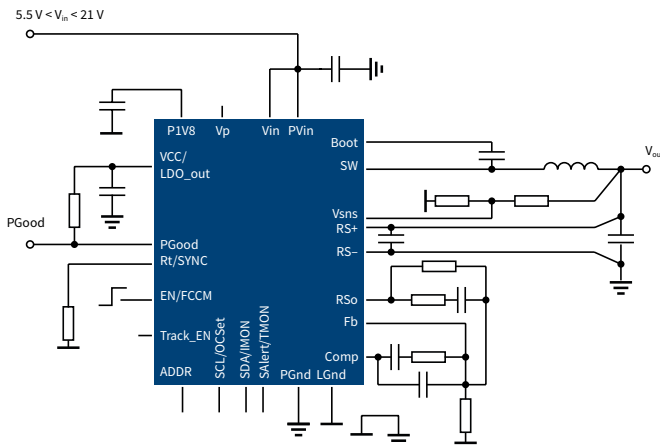
Main benefits

- > Telemetry status via digital bus
- > Remote monitoring and update
- > Parameter changes by register
- > Flexible sequencing
- > High accuracy/low ripple

Applications

- > Telecom
- > Datacom
- > Server
- > Storage
- > Embedded computing
- > ASIC/FPGA platforms

Application diagram



Digital Graphic User Interface (GUI) for configuration and system monitoring



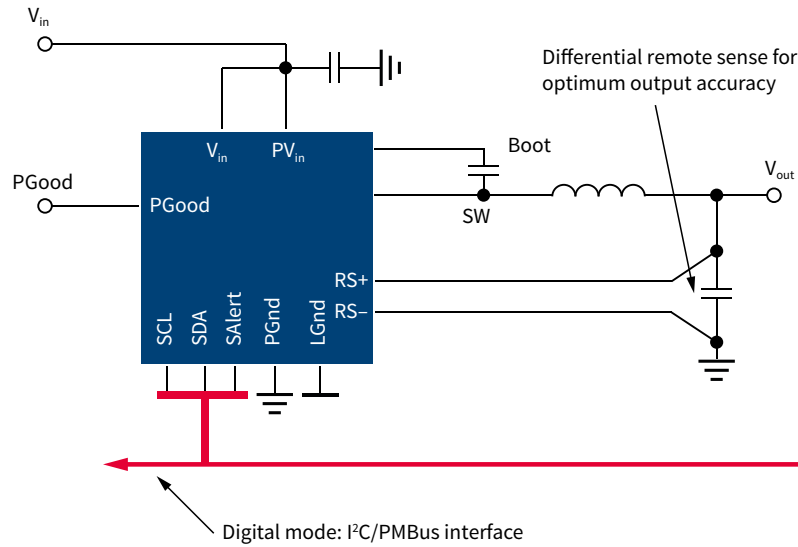
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PMBus IC capabilities

The PMBus SupIRBuck™ is a versatile regulator which offers programmability of switching frequency and current limit while operating in a wide input and output voltage range. The family can be comprehensively configured via PMBus and the configuration stored in internal memory. In addition, PMBus commands allow run-time control, fault status and telemetry.



Inventory

e.g.: Device ID

Configuration

e.g.: On/Off configuration, fault/warnings

Control

e.g.: Sequencing delay/ramp fault response

Telemetry

e.g.: V_{out} , I_{out} , power, temperature, peak values

Status

e.g.: Comms, date, temp

Telemetry accuracy

Parameter	Accuracy	Condition
V_{out}	± 0.6% (typ)	$1 V \leq V_{out} \leq 1.5 V / 0^\circ C$ to $85^\circ C$
I_{out}	± 5% (typ)	$I_{out} > 5 A / 0^\circ C$ to $125^\circ C$
Temperature	± 5%	$-40^\circ C$ to $125^\circ C$

Support tools

- > PowIRCenter GUI
- > SupIRBuck™ on-line simulator
- > Demoboard

Product portfolio

Part	Output current [A]	Input voltage [V]	Moisture Sensitivity Level (MSL)	Package	Ordering code
IR38060	6	1.5–21	2	PQFN 5x6	IR38060MTRPBF
IR38062	15	1.5–21	2	PQFN 5x7	IR38062MTRPBF
IR38063	25	1.5–21	2	PQFN 5x7	IR38063MTRPBF

Published by
Infineon Technologies Austria AG
9500 Villach, Austria

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