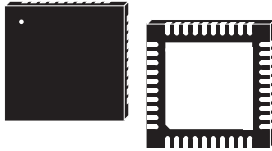


Dual digital multiphase controller with PMBus®



VFQFPN40 5x5 mm

Product status link

[PM6780](#)

Product summary

Order code	Package	Packing
PM6780	VFQFPN40 5x5x1 mm	Tape and reel

Features

- N+M phases compact digital controller
- Programmable phase assignment between two loops; from 8+0 up to 4+4
- Flexible CPU / GPU support
 - Intel® VR14 spec rev. 1.9
 - AVS bus rev. 1.3.1 part III
- PMBus® rev. 1.2 at 400 kHz
- High-performance digital control loop (Digital STVCoT™)
- Fully configurable through PMBus®
- Auto DPM - (Dynamic Phase Management)
- Output voltage range: 0.25 to 2.5 V
- Remote sense; 0.5% V_{out} accuracy
- Configurable current monitor signal
- Programmable voltage positioning
- OV, UV, and FB disconnection protection
- Embedded non-volatile memory (NVM)
- VFQFPN40 5x5 mm package

Applications

- High current power regulation for Intel® VR14/13-based microprocessors
- High current power regulation for AVS-based microprocessors
- DDR memory power regulation
- High current POL and networking application

Description

The **PM6780** is a high performance dual digital loop controller designed to power next-generation high performance microprocessors: it can be configured to work with Intel's VR14 or AVS compliant microprocessors. All the required parameters are programmable through the PMBus® interface.

The device utilizes digital technology to implement all control and power management functions to provide maximum flexibility and performance. NVM is embedded to store custom configurations. The **PM6780** can support up to 8 phases on a single rail (4+4 in dual rail) and allows programmable phase assignment between the two loops.

The **PM6780** supports pulse skipping, and programmable DPM, maintaining the best efficiency over all loading conditions without compromising transient response. The device assures fast and independent protection against load overcurrent, under/overvoltage, and feedback disconnections.

The device is available in VFQFPN40 5x5mm compatible with common footprint directions.

Revision history

Table 1. Document revision history

Date	Version	Changes
13-Dec-2023	1	Initial release.



Contents

Revision history2

List of tables

Table 1. Document revision history 2

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