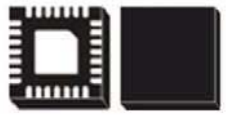
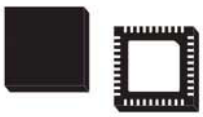
# PM6764, PM6766

## VR12.5™ digital multiphase controller with PMBus™

**Data brief**



VFQFPN28 4 x 4 mm



VFQFPN40 5 x 5 mm

## Features

- PM6764: 4-phase compact digital controller
- PM6766: 6-phase compact digital controller
- VR12.5™ compliant with 25 MHz SVID bus rev. 1.2, serial-VID with programmable IMAX, TMAX, VBOOT, ADDRESS
- High-performance digital control loop (digital STVCOT™)
- Fully configurable through PMBus™
- Flexible driver/DrMOS support
- Single NTC design for TM, LL and IMON thermal compensation
- DPM - dynamic phase management
- Remote sense; 0.5% Vout accuracy with calibration
- Current sense across DCR with calibration
- Autocalibration capability for current and voltage sense
- Programmable voltage positioning
- OV, UV and FB disconnection protection
- Embedded non-volatile memory (NVM)
- Black box recorder
- PM6764: VFQFPN28 4 x 4 mm package
- PM6766: VFQFPN40 5 x 5 mm package

## Applications

- High current power regulation for VR12.5 based Intel® based microprocessors
- DDR memory power regulation for VR12.5 based Intel based systems

## Description

The PM6764/66 is a high performance digital controller designed to power Intel's VR12.5 processors (PM6766) and memories (PM6764): all required parameters are programmable through a PMBus™ interface.

The device utilizes digital technology to implement all control and power management functions to provide maximum flexibility and performance. The NVM is embedded to store custom configurations.

The PM6764/66 device features up to 4/6-phase programmable operation. The PM6764/66 supports power state transitions featuring VFDE, 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 VFQFPN28 4 x 4 mm (PM6764) and VFQFPN40 5 x 5 mm (PM6766) packages.

**Table 1. Device summary**

| Order code | Package | Packing |
|---|---|---|
| PM6764 | VFQFPN28 4 x 4 mm | Tray |
| PM6764TR | | Tape and reel |
| PM6766 | VFQFPN40 5 x 5 mm | Tray |
| PM6766TR | | Tape and reel |

# Revision history

Table 2. Document revision history

| Date | Revision | Changes |
|---|---|---|
| 11-Mar-2014 | 1 | Initial release. |

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