

# AOZ96779QE

VR13.HC Digital Multi-Phase Dual Channel Controller

Preliminary

## **General Description**

The AOZ96779 is a high performance dual output digital controller designed to power high current loads, like Intel's VR13.HC processors. All required parameters are programmable through the PMBus<sup>™</sup> interface.

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

The AOZ96779 can support up to 8 phases and allows programmable phase assignment between the two loops.

The AOZ96779 supports Power State transitions featuring Pulse Skipping, and programmable Dynamic Phase Management (DPM) maintaining the best efficiency over all loading conditions, without compromising transient response. The device assures fast and independent protection against load over current, under/over voltage and feedback disconnections.

The device is available in QFN-40L 5x5mm.

#### **Device Summary**

Order Code	Package	Packing
AOZ96779QE	QFN 5x5mm	Tape and Reel

### **Features**

- N+M=8 phase compact digital controller
- Programmable phase assignment between two loops; from 8+0 to 4+4, lower phase counts are also supported
- Intel<sup>®</sup> VR13.HC compliant w/ 25MHz SVID bus rev1.8
- PMBus™ rev 1.2 at 400kHz
- High-performance digital control loop (Digital COT<sup>™</sup>)
- Controller is fully configurable through PMBus<sup>™</sup>
- AutoDPM Automatic Dynamic Phase Management
- Output voltage range: 0.5 to 2.5 V
- Remote sense; 0.5% Vout accuracy
- Current monitor signal
- Programmable voltage positioning
- Over Voltage, Under Voltage and Feedback disconnection protection
- Embedded Non-Volatile Memory (NVM)
- Black-Box recorder captures critical FAULT information in NVM
- 0c to 125c Operating Temperature Range
- QFN 5x5mm package

## Applications

- High-current power regulation for VR13.HC Intel<sup>®</sup> based microprocessors
- DDR Memory power regulation for VR13 Intel<sup>®</sup> based systems
- Networking and Information Infrastructure
- ASIC and FPGA power
- High Current POL power







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