# EP7136 *Triple Output Integrated Voltage Regulator IC*

***Product Brief***

## Features

- Three Step-down Integrated Voltage Regulators (IVR): 6A, 3A, and 3A from 3.3V nominal VIN
- Zero discrete inductors or capacitors required
- Industry's highest current density: 340mA / $mm^2$
- Programmable output voltage: 0.5V to 2.5V
- Output voltage set point accuracy: ± 1.0% over PVT
- Ultra-fast transient response with no output caps
- Programmable fast DVS: up to 6 mV/ns
- Auto-phase shedding
- High efficiency and wide bandwidth
- Programmable GPIOs for user-defined features such as fault warnings, sequencing and DVS-on-demand
- Extensive fault protection, programming and warning: OVLO, UVLO, OVP, OCP, short-circuit
- Accurate current (± 8%), voltage (± 2%), and temperature reporting (± 4°C)
- Adjustable soft-start to support low in-rush current
- Programmable power-up sequencing
- I2C interface to coordinate sequencing, telemetry, and diagnostics with system and SoC

## Applications

- Optical Transceivers
- Memory Modules
- Network Equipment of Servers, Switching, Routing, Storage, Interface cards
- Server POL
- Client/Enterprise/Data Center SSD & NAS
- Artificial Intelligence (AI) Processors
- 5G Applications

## Description

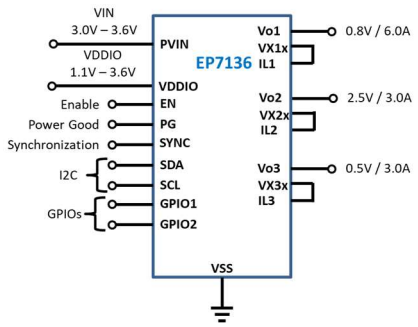
The EP7136 is a high-performance highly Integrated Voltage Regulator (IVR) with three outputs totaling 12A that enables the full integration of multiple voltage rails all in one IC, eliminating all external components. Operating from a 3.3V input supply, the EP7136 offers the industry best density, efficiency, transient performance, and dynamic voltage scaling (DVS) from any system input voltage.

The multiple outputs are capable of 12A in total to provide flat efficiency curves and ultra-wide bandwidth.

The EP7136 offers extensive independent programmability for each of its outputs, requiring no external discrete components. Highly accurate telemetry, diagnostics, warnings, and protection as well as operating parameters such as output voltage, soft-start time and sequencing, and DVS ramp speed are all programmable via the I2C interface. The EP7136 also features configurable IO logic levels through the VDDIO pin to support a range of 1.1V to 3.6V, and a pair of configurable GPIOs to support multiple user-defined features. The EP7136 reduces PCB power management area and components by 10x or more, reduces system power loss by 10-50%, and reduces power routing complexity on the PCB.

Offered in a 5mm x 7mm x 0.70mm FcCSP package, the EP7136 is perfect for space constrained and thin profile applications. Die form is available.

## Typical Application



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