



**Product Number: XRP7704EVB-XPM**

**In-Socket Programming Board for XRP-7704 -- Programmable Power System ICs Reduce Development Time, Cost and are Easily Reconfigured for Real-time Design Changes**

Exar has released the XRP7704, a 5Amp/channel regulator. These power ICs integrate the best of both worlds - the low cost and flexibility of digital power management and control, and the robust power capabilities of analog switching power supplies. Power<sup>XR</sup> products will reduce development time from weeks to hours enabling a significant time-to-market advantage. This PowerXR device permits real-time power system adjustments during design, in response to changing requirements or even after field-deployment.

"The XRP7704 is the first 5-channel power-system ICs to combine high performance analog technology with advanced, high-speed, proprietary digital control circuitry. These ICs deliver on the promise of Digital Power by providing engineers with a cost effective configurable power solution.

### **Key Product Features**

This XRP7704 device offers a wide input voltage range (6.5V to 20V), and output range (0.9V to 5.0V), with a built-in Low-Drop Out (LDO) for standby power, power sequencing capability, and integrated gate drivers. The 5-output, XRP7704 digital power system controller ICs contain four digital pulse width modulator (DPWM) controlled power supplies with an effective 12-bit resolution. This device also contains an integrated LDO regulator that provides a fifth voltage supply, which can also be employed as a standby-voltage source. The chip is fully configurable via an I<sup>2</sup>C interface for monitoring, control and management of DC/DC point-of-load power conversion. The device contains integrated gate drivers for the high-current outputs and up to 6 General Purpose Input/Output (GPIO) pins.

The XRP7704 uses a digital PID (proportional, integral, differential) control algorithm which performs full-digital loop control at switching frequencies to 1.5 MHz. The controller supports I<sup>2</sup>C interface commands for control, configuration, and management of the power supply.