



XRP7708 Quad Channel Digital PWM Step Down Controller

General Description:

The XRP7708 is a quad-output pulse-width modulated (PWM) step-down DC-DC controller with a built-in LDO for standby power and GPIOs. The device provides a complete power management solution in one IC and is fully programmable via an I2C serial interface. Independent Digital Pulse Width Modulator (DPWM) channels regulate output voltages and provide all required protection functions such as current limiting and over-voltage



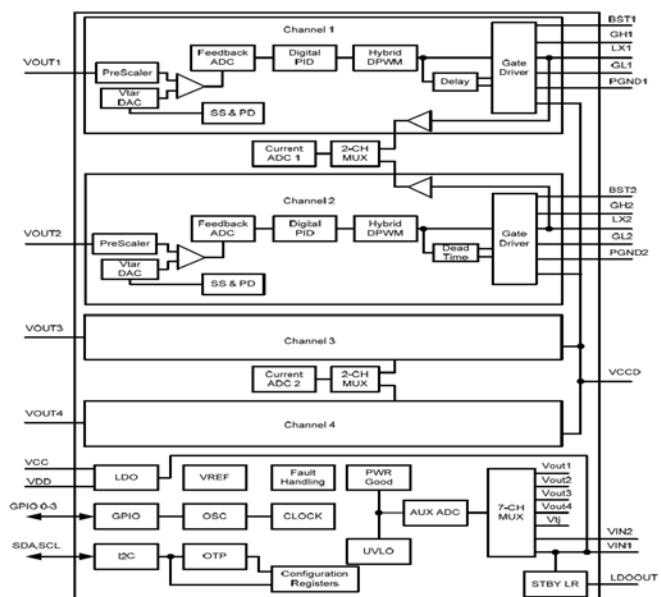
protection.

Each output voltage can be programmed from 0.9V to 5.1V without the need of an external voltage divider. The wide range of the programmable DPWM switching frequency (from 300 KHz to 1.5 MHz) enables the user to optimize between efficiency and component size. Input voltage range is from 6.5V to 20V. Two controllers support a load of up to 5A, while the other two controllers support up to 8A. I2C bus interface is provided to program the IC as well as to communicate with the host for fault reporting and handling, power rail parameters monitoring, etc.

The device offers a complete solution for softstart and soft-stop. The start-up delay and ramp of each PWM regulator can be independently controlled. The device can start up a pre-biased PWM channel without causing large negative inductor current.

Key Features:

- 4 Channel Step Down Controller
 - 2 x 5A Channels & 2 x 8A Channels
 - Programmable Output Voltage 0.9V-5.1V
 - Programmable 1.5MHz DPWM Frequency



- 6.5V-20V Single Input Voltage Range
- Up to 6 reconfigurable GPIO pins
- Fully programmable via I2C interface
- Independent Digital Pulse Width Modulator (DPWM) channels
- Complete power monitoring and reporting
- Full On Board Protection OTP, UVLO, OCP and OVP
- Built-in 3.3V/5V LDO
- Configuration development tools
- Green/Halogen Free 40-pin TQFN

Applications:

- Multi Channel Programmable
- Power Supplies
- Audio-Video Equipments
- Industrial & Telecom Equipments
- Processors & DSPs Based Equipments

Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
XRP7708ILB-F	1820309	73R0496	Quad Channel Digital PWM Step Down Controller- 40pin TQFN package- Vmax is 20V
XRP7714ILB-F	1820312	73R0502	Quad Channel Digital PWM Step Down Controller- 40 pin TQFN package- Vmax is 25V

