IDT P9120: Three Channel Synchronous Step-Down Switcher with Integrated FET

Integrated Device Technology

CLOCKS AND TIMING | INTERFACE AND CONNECTIVITY | MEMORY AND LOGIC | **POWER MANAGEMENT** | RF PRODUCTS

FEATURES

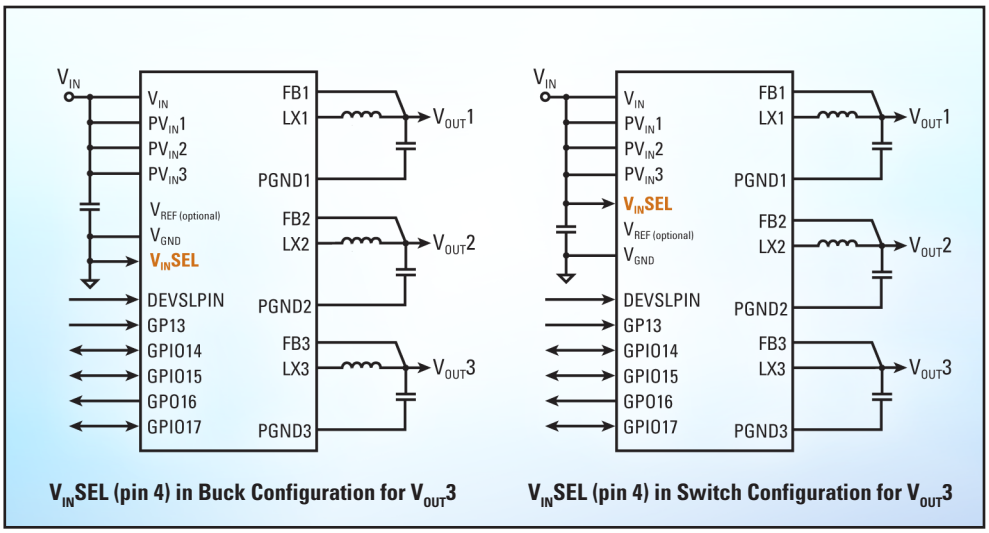
- Input Voltage Range: 2.7 V to 5.5 V
- 3 step-down converters with integrated FETs
  - Buck 1: 2 A
  - Buck 2: 2 A
  - Buck 3: 3 A
- Switching frequency 2 MHz
- Buck 3 with optional 'analog switch mode'
- Low quiescent current: 25 µA (No load, PFM mode)
- Device sleep mode with less than 1µA Iq
- Factory programmable output voltage: 0.8 - 3.4 V
- Automatic PFM/PWM or forced PWM mode
- Power Good and/or Power On Reset output
- Optional programmable sequence mode
- QFN 24-lead 4 x 4 mm x 0.8 mm
- Optional reference voltage output (VREF)
- No external filter/compensation
- Benchmarking efficiency

BENEFITS

- Configurable PMIC solution
- Minmal external component count
- Optional in-circuit programming

TARGET APPLICATIONS

- Point-of-load regulation in a variety of low power applications:
  - Solid State Disk Drive (SSD) Power Management
  - Low power USB powered applications
  - Set Top Box / TV power supply
  - Portable gaming



The IDT P9120 supports several modes to control the three buck regulators and to generate status information like PG (power good) or POR (power on reset).

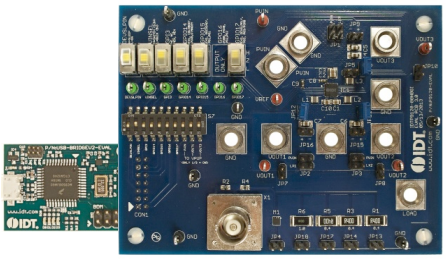
The IDT P9120 is a fully integrated power management IC designed to provide three programmable, high efficiency voltage regulator outputs with ultra-low quiescent currents during sleep mode or no-load conditions. To support low power operation, the IDT P9120 supports both sleep and standby modes.

The device can operate the third regulator in either buck or pass through switch configuration to support 5 V or 3.3 V supplied systems with a single solution.

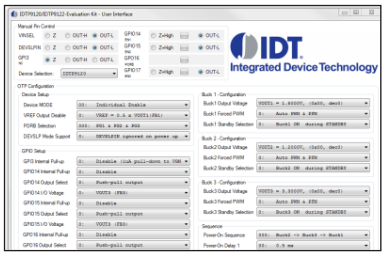
Flexible production programming options allow for selectable direct buck enable inputs or programmable sequencing with power good and power on reset generation as well as programmable output voltages without the need for external adjustment components.

The P9120 is available in a 4 mm x 4 mm, 24-lead, QFN package and is guaranteed to operate over the industrial ambient temperature range of -40°C to +85°C.

USB-BRIDGEV2-EVAL and IDTP9120-EVAL



Graphical User Interface



Various device features can be configured during production using one time programmable fuse memory (OTP). During evaluation, the options can be evaluated using the compatible IDT P9120 Evaluation Kit (IDTP9120-EVAL) and USB-Bridge (USB-BRIDGEV2-EVAL).

For More Information
Visit www.idt.com/go/pmic

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