# 7-Channel DC-DC Converter for DSC

## Features

- 95% Efficient DC/DC Converter.
- Highly Integrated 7-CH DC/DC with integrated Power MOSFETs.
- CH1, CH2, CH6 and CH7 Boost-type Synchronous Rectified Current-Mode PWM Converters with true-shutdown function.
- CH2 Buck(G2105B) or Boost(G2105A) for all Battery Application.
- 6 Channel Built-in Synchronous Rectified Current-Mode PWM Converters, 1 Channel Built-in Non-Synchronous Rectified Current-Mode PWM Converters.
- Low Power Consumption (Sleep Mode) <10μA.
- Built-In Short-circuit Protection (SCP) and Over Current Protection (OCP) for MOSFETs.
- Built-In Under Voltage Lock Out (UVLO) and Over Load Protection (OLP).
- Built-In Soft-Start Function.
- Selectable CH7 Boost Type with Open LED Protection or Current Regulation Type LED Driver.
- Built-In Power ON/OFF Sequence Control.
- Fixed 2MHz(CH1~CH4) / 1MHz(CH5~CH7) Operating Frequency.
- All Channel with internal compensation
- All Power Switches integrated
- Built-in RTC LDO.
- Build-in thermal shutdown (TSD, 150°C ).

## Applications

- DSC Power Supply

## General Description

The G2105 provide a complete power supply solution for digital cameras. They improve performance, component count, and size compared to other multi-channel controllers in 2-cell AA(G2105A), 1-cell Li-Ion(G2105B), and multi-battery designs. On-chip MOSFETs provide up to 92~95% efficiency for critical power supplies. All channels DC/DC operate at Fixed 2MHz(CH1~CH4)/ 1MHz(CH5~CH7) Operating Frequency to optimize size, cost, and efficiency.

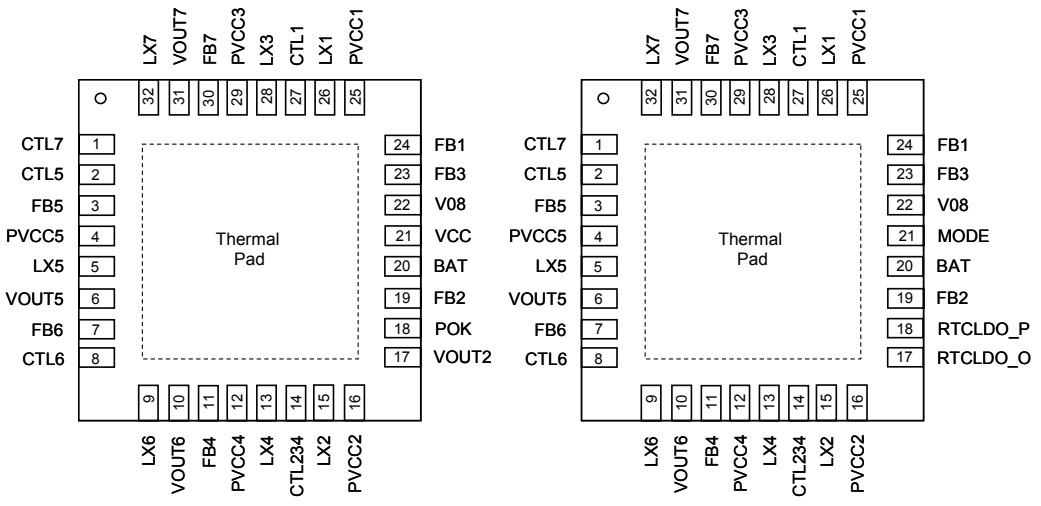
The G2105 is available in 32-pin TQFN (4X4) package.

## Ordering Information

| ORDER NUMBER | MARKING | TEMP. RANGE | PACKAGE (Green) |
|---|---|---|---|
| G2105AK11U | 2105A | -20°C to +85°C | TQFN4X4-32 |
| G2105BK11U | 2105B | -20°C to +85°C | TQFN4X4-32 |

Note: K1: TQFN4X4-32
1: Bonding Code
U: Tape & Reel

## Pin Configuration




**G2105**

| |
|---|
| CH1<br>Synchronous Rectified<br>Current Mode Step-Up |
| CH2<br>Synchronous Rectified<br>Current Mode Step-Up(G2105A)/<br>Step-Down(G2105B) |
| CH3<br>Synchronous Rectified<br>Current Mode Step-Down |
| CH4<br>Synchronous Rectified<br>Current Mode Step-Down |
| CH5 (CCD INV)<br>Current Mode Inverting |
| CH6 (CCD BST)<br>Synchronous Rectified<br>Current Mode Step-Up |
| CH7 (LED Driver)<br>Synchronous Rectified<br>Current Mode Step-Up or Current<br>Regulator Type LED Driver |

Note: Recommend connecting the Thermal Pad to the Ground for excellent power dissipation.