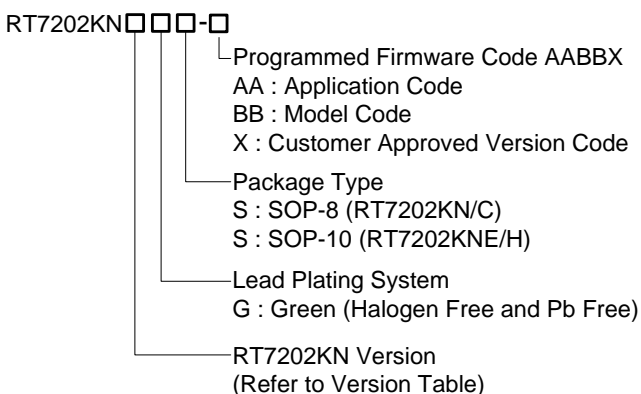


## Highly-Integrated USB Type-C Power Delivery Controller with Built-In N-MOSFET Driver

### General Description

The RT7202KNx series is a secondary-side USB Type-C Power Delivery (PD) controller for high-efficiency off-line AC-DC converters. Through the high integration of control regulators and built-in N-MOSFET driver, more compact designs are easily implemented. The embedded MCU solution with Bi-phase Mark Coding (BMC) transceiver is introduced to handle PD and other proprietary protocols. Furthermore, the digital-to-analog converter (DAC) is utilized in serving commands for constant-voltage (CV) and constant-current (CC) regulations to achieve high-precision control in various applications.

### Ordering Information



Note :

The products are :

- ▶ RoHS compliant and compatible with the current requirements of IPC/JEDEC J-STD-020.
- ▶ Suitable for use in SnPb or Pb-free soldering processes.

### Marking Information

For marking information, contact our sales representative directly or through a Richtek distributor located in your area.

### Features

- Protocol Support
  - ▶ USB PD2.0/PD3.0 and PPS
- High Integration
  - ▶ Wide Operating Range from 3.3V to 21V for VDD
  - ▶ Built-In Shunt Regulator for Constant-Voltage and Constant-Current Regulations
  - ▶ Built-In N-MOSFET Driver
  - ▶ Built-In Quick Discharge in VDD and USBP
  - ▶ Linear Cable Compensation
  - ▶ Less than 5.6mA Operating Current in Normal Mode
  - ▶ Less than 2mA Operating Current in Idle Mode
  - ▶ Less than 750µA Operating Current in Green Mode
  - ▶ Embedded MCU with 16kB OTP-ROM for Flexible Design Consideration
  - ▶ Embedded BMC Transceiver
  - ▶ Built-In VCONN Power
- Protection
  - ▶ Adaptive Output Over-Voltage Protection
  - ▶ Adaptive Output Under-Voltage Protection
  - ▶ CC1/CC2 Over-Voltage Protection
  - ▶ USBP Under-Voltage Protection
  - ▶ Programmable Output Over-Current Protection
  - ▶ Programmable Over-Temperature Protection

### Applications

- USB Type-C PD Chargers/Adapters for Smart Phones, NBs, Tablets and All Other Electronics
- USB Type-C PD Extension Cores with Offline AC-DC Converters