

Single-Chip USB-to-QUAD UART Data Transfer

- Four independent UART interfaces
- Integrated USB transceiver; no external resistor required
- Integrated clock; no external crystal required
- Integrated programmable EEPROM for storing customizable product information
- On-chip power-on reset circuit
- On-chip voltage regulator: 3.3 V output

USB Peripheral Function Controller

- USB Specification 2.0 compliant; full-speed (12 Mbps)
- USB suspend states supported via SUSPEND pins

Virtual COM Port Drivers

- Works with existing COM port PC applications
- Royalty-Free distribution license
- Windows 8/7/Vista/XP/Server 2003
- Mac OS X
- Linux

Supply Voltage

- Self-powered: 3.0 to 3.6 V
- USB bus powered: 4.0 to 5.5 V
- V_{IO} voltage: 1.8 V to V_{DD}
- V_{IOHD} voltage: 2.7 to 6 V

UART Interface Features

Each UART interface supports the following:

- Supports hardware flow control (RTS/CTS)
- Supports all modem control signals
- Data formats supported:
 - Data bits: 5, 6, 7, and 8
 - Stop bits: 1, 1.5, and 2
 - Parity: odd, even, set, mark and none
- Baud rates: 300 bps to 2 Mbps
- UART 3 (pins 1-6) supports interfacing to devices up to 6 V

GPIO Interface Features

- Total of 16 GPIO pins with configurable options
- Suspend pin support
- Usable as inputs, open-drain or push-pull outputs
- 4 configurable clock outputs for external devices
- RS-485 bus transceiver control
- Toggle LED upon transmission
- Toggle LED upon reception

Package Options

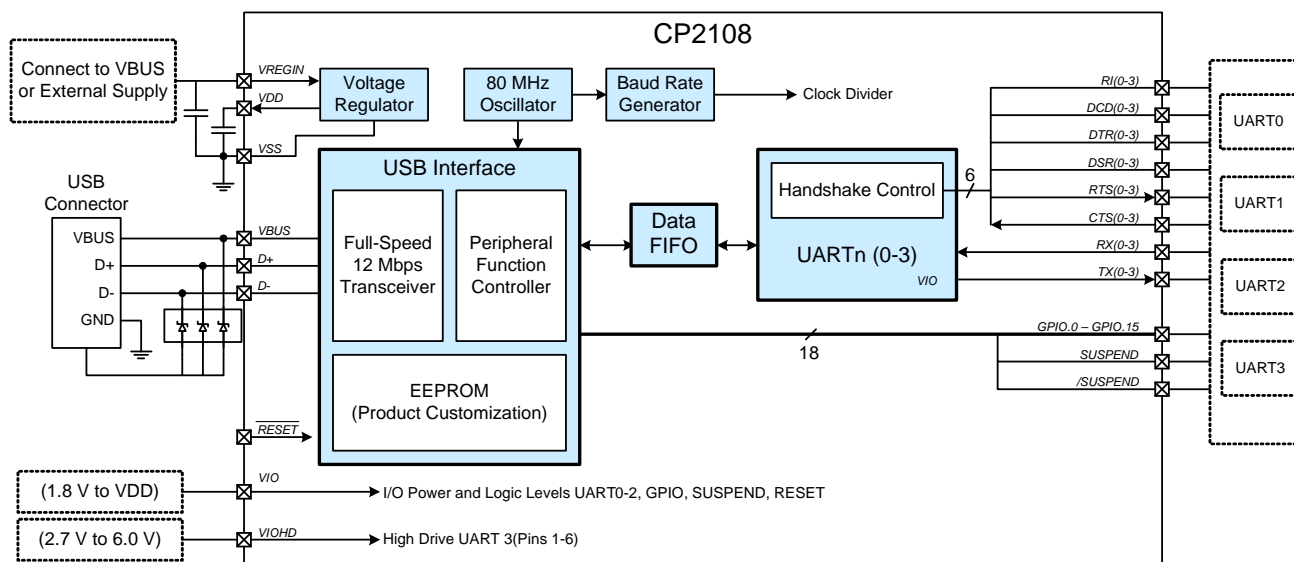
- RoHS-USB 3 compliant 64-pin QFN (9x9 mm)

Temperature Range

- -40 to +85 °C

Ordering Part Number

- CP2108-B01-GM



Selected Electrical Specifications

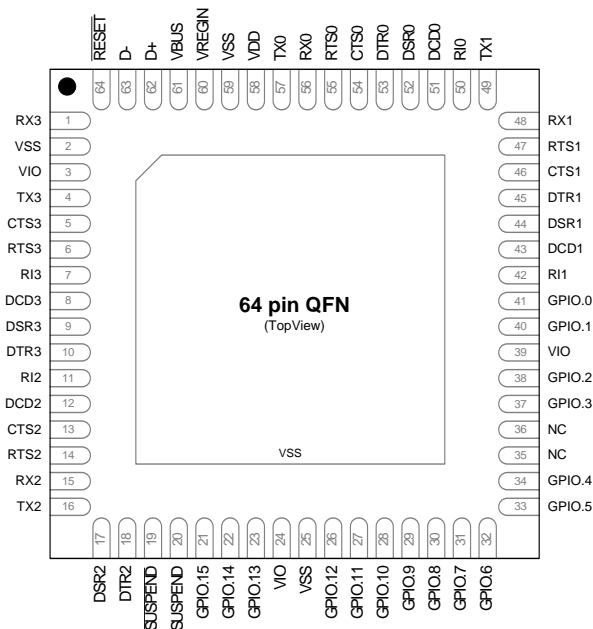
V_{DD} = 3.0 to 3.6 V, -40 to +85 °C unless otherwise specified.

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Operating Supply Voltage V_{DD}	V_{DD}		3.0	—	3.6	V
Operating Supply Voltage V_{REGIN}^4	V_{REGIN}		4	—	5.5	V
Operating Supply Voltage V_{IO}	V_{IO}		1.8	—	V_{DD}	V
Supply Current—Normal ²	I_{DD}	Normal Operation	—	56	—	mA
Supply Current—Suspended ²	I_{DD}	Bus Powered	—	460	—	μ A
		Self Powered		330	—	μ A
Supply Current—USB Pull-up ³	I_{PU}		—	200	228	μ A
Operating Ambient Temperature	T_A		-40	—	85	°C
Operating Junction Temperature	T_J		-40	—	105	°C

Notes:

1. All voltages are with respect to V_{SS} .
2. If the device is connected to the USB bus, the USB pull-up current should be added to the supply current for total supply current.
3. The USB pull-up supply current values are calculated values based on USB specifications.
4. This applies only when using the regulator. When not using the regulator, V_{REGIN} and V_{DD} are tied together externally and it is allowable for V_{REGIN} to be equal to V_{DD} .

Package Information



QFN-64 Pinout Diagram (Top View)

CP2108EK Evaluation Kit

The CP2108EK allows a complete evaluation and customization of the CP2108 USB to QUAD Bridge including all GPIO functions, transmit LEDs, and receive LEDs. USB and 4 serial cables and full documentation are included.

