

CYPRESS

EZ-PD™ CCG3: USB TYPE-C PORT CONTROLLER WITH POWER DELIVERY



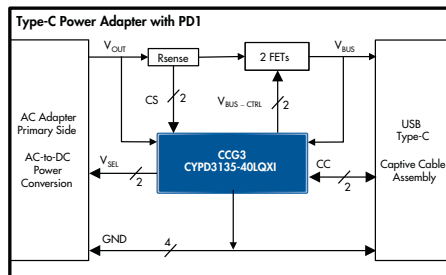
PRODUCT OVERVIEW

INTRODUCTION:

EZ-PD CCG3 is a single-chip USB Type-C port controller with Power Delivery (PD). CCG3 is ideal for various applications such as power adapters and Type-C accessories. CCG3 offers high levels of integration, including VBUS gate drivers, 2x64KB flash, USB Billboard controller and a Crypto Engine. CCG3 is a fully programmable solution, making it ideal for keeping up with continually changing USB Type-C and PD specifications, including the upcoming PD 3.0 standard.

Product Features

- Supports 20-V operation, including VBUS Gate Drivers, VBUS discharge, OVP and OCP circuitry
- Integrates 2x64KB flash with fail-safe flash updates
- Integrates a Crypto Engine supporting USB Authentication



FEATURES

DIRECT 20-V OPERATION:

- Integrates VBUS gate drivers
- OVP and OCP

USB BILLBOARD CONTROLLER:

- Supports USB Billboard Device Class

CRYPTO ENGINE:

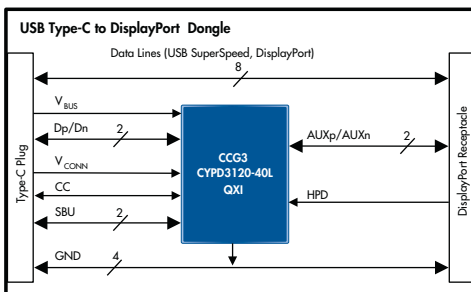
- Hardware encryption acceleration
- Supports USB Authentication

DUAL 64KB FLASH MEMORY:

- Supports fail-safe firmware updates

PACKAGES:

42-ball CSP (8.38 mm²), 40-pin QFN (36 mm²)

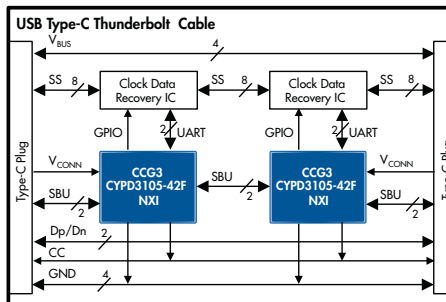


USB Type-C to DisplayPort Dongle

- Ships with USB-IF-compliant factory-programmed firmware
- Integrates USB Billboard Controller for Alternate Modes
- Integrates 2x64KB flash with fail-safe flash updates

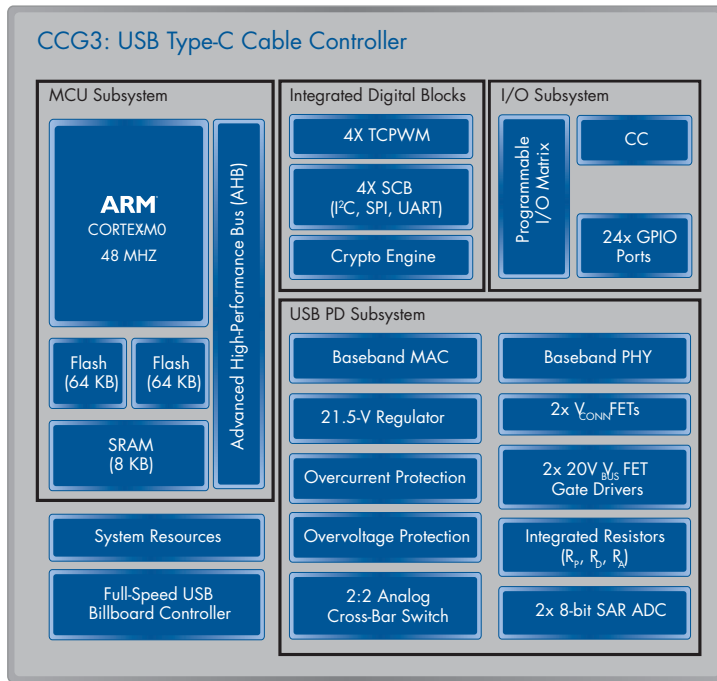
Type-C Cable for Thunderbolt™

- Includes an ARM® Cortex®-M0 with 2x64KB flash
- Ships with USB-IF-compliant factory-programmed firmware
- Available in an 8.38-mm² 42-ball CSP package



APPLICATIONS

Power Adapters | Thunderbolt Active Cables | Dongles | Monitors/Docks



EZ-PD CCG3 Block Diagram

EZ-PD CCG3 PORTFOLIO

Part number	Application	VCONN FETs	Role	Termination Resistor	Pin/Package
CYPD3105-42FXNI	Thunderbolt Active Cable	Yes	EMCA	R _A ^[1]	42-CSP
CYPD3120-40LQXI	Dongle	Yes	UFP	R _P ^[2] , R _D ^[3] , R _{D,DB} ^[4]	40-QFN
CYPD3121-40LQXI	Monitor/Dock (UFP)	Yes	UFP	R _P , R _D , R _{D,DB}	40-QFN
CYPD3122-40LQXI	Monitor/Dock (DFP)	Yes	DFP	R _P , R _D , R _{D,DB}	40-QFN
CYPD3125-40LQXI	Notebook, Smartphones	Yes	DRP	R _P , R _D , R _{D,DB}	40-QFN
CYPD3135-40LQXI	Power Adapter	Yes	DFP	R _P	40-QFN

Notes:

1. Termination resistor denoting an EMCA.
2. Termination resistor denoting a downstream facing port.
3. Termination resistor denoting an upstream facing port.
4. Termination resistor denoting dead battery termination.

GET STARTED NOW

For more information, please contact ccg3@cypress.com or visit www.cypress.com/ccg3

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