



New Product Announcement

AP25810L

USB Type-C, Downstream-Facing Port Controller with 3A Power Switch

The DIODES™ AP25810L is a USB Type-C®, downstream-facing port (DFP) controller with an integrated 3A USB power switch.

The device's power switch has a 30mΩ on-resistance with two selectable fixed-current limits that align with USB Type-C current levels.

The USB Type-C (CC) lines determine when a USB device is attached. When an upstream-facing port (UFP) device is attached, the AP25810L applies power to VBUS and advertises the selectable VBUS current-sourcing capability to the UFP via the pass-through CC line. If the UFP is attached using an electronically marked cable, the AP25810L also applies VCONN power to the cable CC pin.

To save system standby power, the device typically draws less than 0.7μA when no device is attached.

The AP25810L is available in the exposed PAD W-QFN3040-20 package with improved thermal performance.

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The DIODES™ Advantage

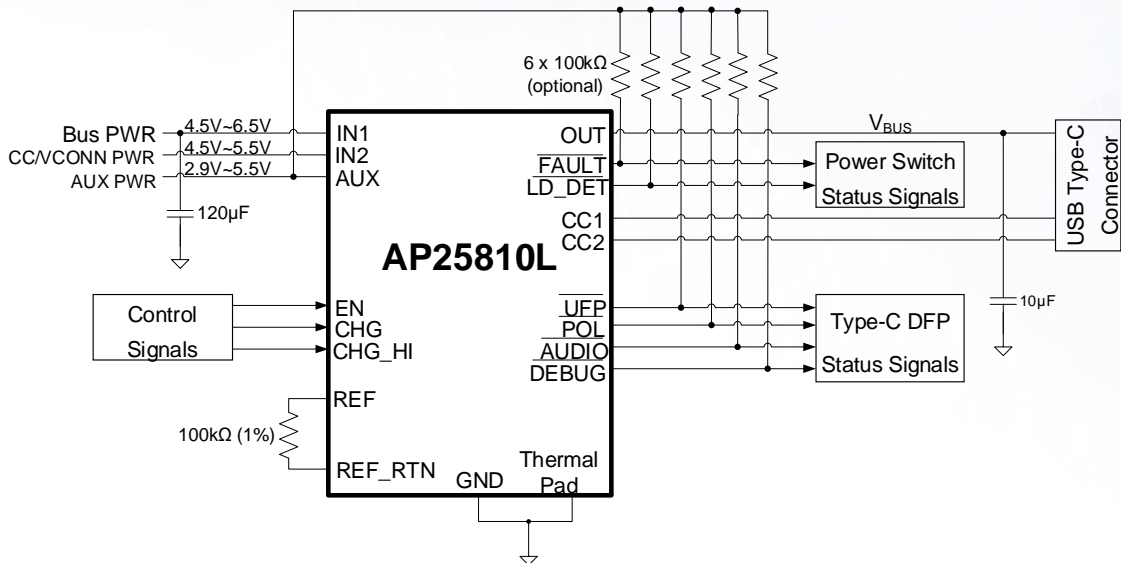
Highly integrated USB Type-C DFP controller with power switch supports USB Type-C charging applications.

- **Selectable High-Accuracy Current Limit of 1.7A or 3.4A**
Provides flexible VBUS power ratings of 7.5W or 15W, according to input power capabilities
- **Low 0.7μA Standby Current when Port is Not Attached**
Saves system power in standby operations
- **Higher Power Bus Supply Range to 6.5V**
Supports cable voltage drop compensation and keeps port VBUS voltage higher than 4.75V under 3A operation
- **Low 30mΩ On-Resistance VBUS Power Switch**
Reduces power dissipation and voltage drop
- **Fast Detection of Cable Orientation and Device Attachment**
CC1 and CC2 pins detect attachment to the port and quickly resolve orientation

Applications

- Notebooks / Desktops
- Docking Stations
- Charging Cradles
- TVs / Monitors
- Smart Speakers

Application Diagram



Product Portfolio

Part Number	IN1 / IN2 Range (VBUS/VCONN Supply)	AUX Range (Device Supply)	Max Current (VBUS)	Max Current (VCONN)	Typ R _{ON} (VBUS/VCONN)	Ambient Temperature	Package
	V	V	A	mA	mΩ	°C	
AP25810L	4.5 to 6.5 / 4.5 to 5.5	2.9 to 5.5	1.5 or 3 (Selectable)	250	30/365	-40 to 85	W-QFN3040-20

Ordering Information

Orderable Part Number	Package Code	Package	Moisture Sensitivity	Reel Size	Tape Width	Quantity
AP25810LDFZ20-13	DFZ	W-QFN3040-20	MSL 1	13 inches	8mm	3000