

STUSB4700/10, STUSB4500/L SERIES



Supply your device with USB Type-C® controllers



Plug & play standalone controllers for effective and safe migration to USB Type-C

ST offers certified controllers for both source (**STUSB4700/10**) and sink (**STUSB4500/L**) applications. These ICs combine USB PD stack with high voltage analog blocs to ease USB-C implementation.

The ST **USB Type-C power delivery controllers** are able to operate autonomously without external software while ensuring effective electrical protection, fast charging, and high interoperability.

KEY FEATURE

- Standalone controllers
- High-voltage analog ICs
- Short-to- V_{BUS} overvoltage protection
- Integrated discharge path
- V_{BUS} gate drivers
- V_{BUS} monitoring
- Dead battery support (STUSB4500/L)

KEY BENEFITS

- Plug and play
- No software needed
- Easy device configuration
- Reliable and certified hardware
- Robust and safe for devices and users

KEY APPLICATIONS

- Source
 - DC-DC power hubs
 - Power banks
 - Docking
 - Gaming
- Sink
 - Portable consumer devices
 - Smart speakers
 - Industrial and LED lighting
 - IoT devices and drones
 - Healthcare and wearables
 - WiFi routers and set top boxes
 - Battery-powered devices

STUSB4700/10

Standalone USB PD controller for source applications

The STUSB47 series is designed for power-source applications like power hubs, docking stations, smart plugs, and displays. It supports up to 5 power profiles and handles connection setups autonomously. An I²C interface allows multiple ICs to connect to a microcontroller for power-sharing in multiport setups.

Scan the QR code for the STUSB4710 evaluation board and detailed documentation.



STUSB4500L

Standalone USB Type-C sink controller for 5 V applications

The STUSB4500L targets 5 V sink devices, supporting dead battery mode for direct V_{BUS} power. It autonomously manages attach detection, source-to-sink connection, device identification, cable orientation, and V_{BUS} power path configuration and monitoring. High voltage protections ensure safe operation.

Scan the QR code for the EVAL-SCS002V1 reference design and detailed documentation.

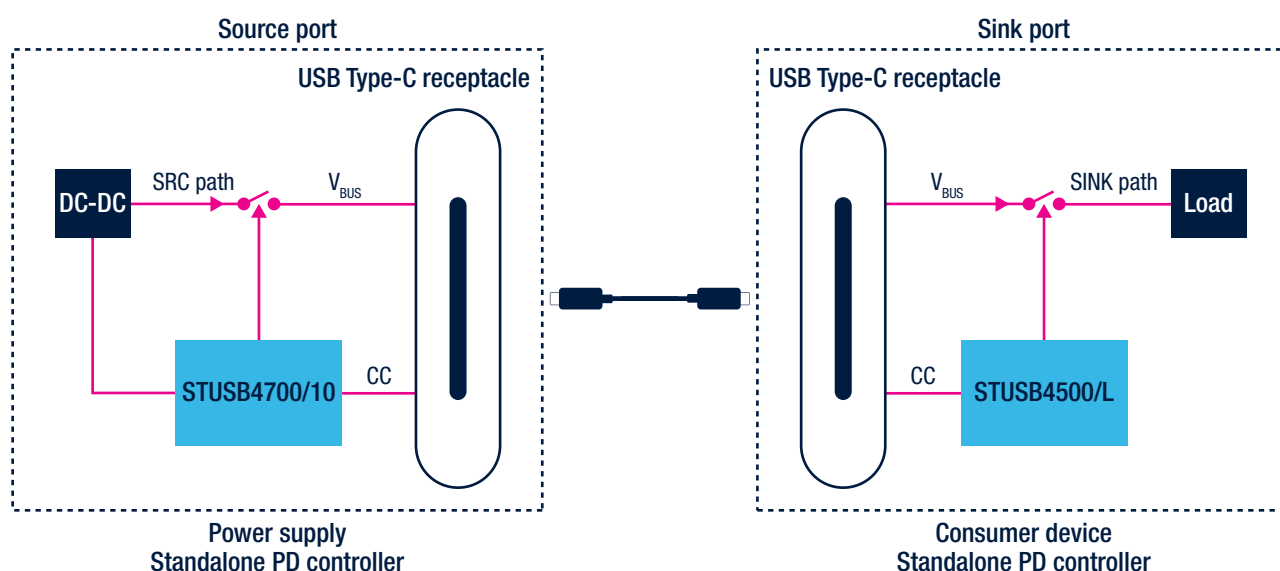


STUSB4500

Standalone USB PD controller for sink applications

The STUSB4500 is ideal for USB Type-C power-sink devices, enabling automatic high-power profile charging without software support. It includes dead battery mode and negotiates Power Delivery contracts using default power profiles stored in internal memory.

Scan the QR code for the STUSB4500 evaluation board and detailed documentation.



Product portfolio

Part number	Role	Typical power	Target applications	Package
STUSB4700	Source	Captive cable: up to 100 W (20 V; 5 A) Receptacle: up to 60 W (20 V; 3 A)	Industrial – consumer single port and multi-port with power sharing	QFN-24 (4x4)
STUSB4710			Industrial – consumer entry level/single port	QFN-16 (3x3)
STUSB4500L	Sink	Up to 15 W (5 V; 3 A)	USB micro-B replacement single cell battery powered device	QFN-24 (4x4)
STUSB4500		Up to 100 W (20 V; 5 A)	DC barrel replacement multi cell battery powered device	WLCSP-25 (2.6x2.6)



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