



## FEATURES

- USB Type-C 2.1 and USB PD 3.1 compliant
  - Support 5 V, 9 V, 12 V, 15 V and 20 V FPDOS
  - Support 2 programmable APDOs
- Support BC1.2 DCP and HVDCP protocols
  - BC 1.2 DCP mode
  - Apple 5 V 2.4 A mode
  - QC 2.0/3.0/QC 3.0+ class A or class B
  - AFC, FCP and LVSCP/HVSCP
  - PE 1.1+ and 2.0
  - UFCS
- Support 3-ports application
- As low as 5 mA light load detection
- External N-MOSFET supported
- Support constant voltage loop(CV) and constant current loop(CC) operation
- Multiple cable compensation options
- Integrated OVP, UVP, UVLO, OCP, FOC, CC/DPDM OVP, TSD and OTP protections
- QFN-32L (4 mm x 4 mm) package

- $\pm 6$  kV HBM ESD rating for USB IO pins

## APPLICATIONS

Adaptor  
Car charger

## GENERAL DESCRIPTION

The **HUSB391A** is a high performance, high integration 3-Ports controller. When only one port is attached, the USB PD or HVDCP fast charging protocols are enabled, and it outputs only 5 V when 2 or 3 ports are attached simultaneously.

The **HUSB391A** is a USB PD 3.1 SRC controller that supports 5 FPDOS and 2 APDOs with programmable current and voltage. Besides the **HUSB391A** also supports BC 1.2 DCP, Apple 2.4 A, QC 2.0/3.0/QC 3+, AFC, FCP, SCP, PE 1.1+/2.0, and UFCS protocols.

The **HUSB391A** integrates all of required protections such as Over Voltage Protection (OVP), Under Voltage Protection (UVP), Under Voltage Lockout (UVLO), Over Current Protection (OCP), Fast Over Current Protection (FOCP), CC or DPDM Over Voltage Protection (Port OVP), Over Temperature Protection(OTP)and Thermal Shut Down (TSD).

It is available in QFN-32L (4 mm x 4 mm) package.