



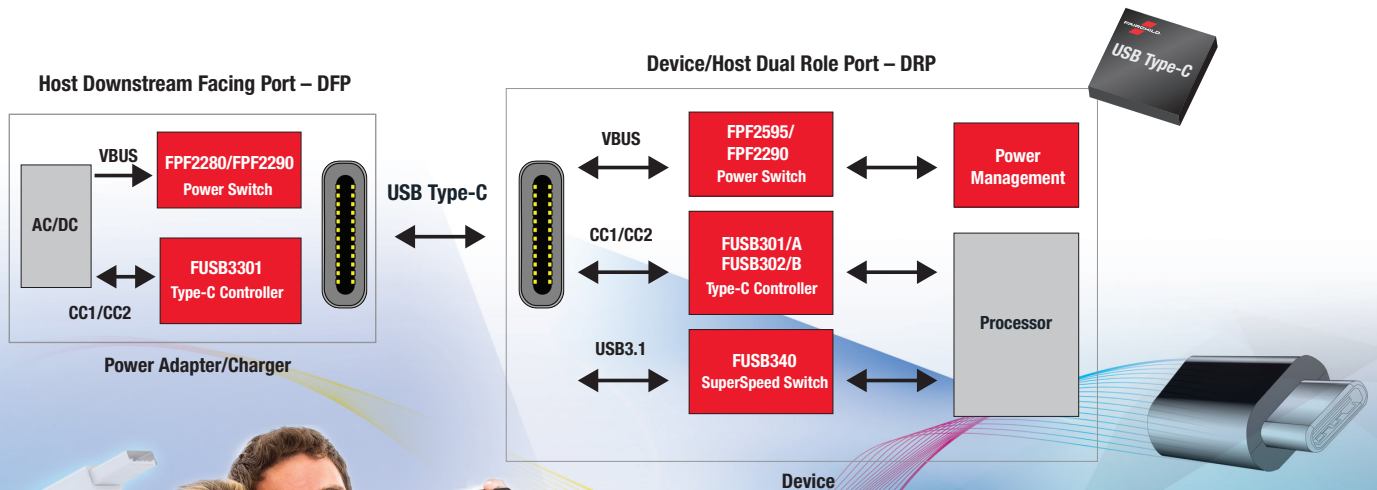
# USB Type-C™ Portfolio

## Broad Portfolio of Smallest, Lowest Power USB Type-C Solutions

The new USB Type-C standard enables higher performance and promises convenience for users as well as simplicity for designers and manufacturers. Fairchild delivers a complete portfolio of discrete, flexible USB Type-C solutions from controllers to power switches and SuperSpeed switches. The portfolio is optimized for cost, footprint, and low-power use with power consumption 1/20 of the nearest competitive solution and packages up to 95% smaller. Solutions cover Dual Role Port (DRP), Downstream Facing Port (DFP), and Upstream Facing Port (UFP) implementations and accessory detection while providing software flexibility for multi-platform support. I<sup>2</sup>C interface also enables easy updates to support future standard changes.

## Benefits of Fairchild USB Type-C Solutions

- Ultra-low-power consumption in standby mode
- Flexible to accommodate standard changes
- DFP, UFP, DRP role support
- Active cable detection and power support
- Small solutions in WLCSP and MLP packages, as small as 1.2 x 1.3 x 0.6 mm
- Thin USB Power Delivery (PD) interface for adaptive charging and vendor-defined messages
- Audio and Debug Accessory Detection



# USB Type-C Portfolio

## Controllers

Part Number	Function	Mode	Standby Current typ ( $\mu\text{A}$ )	Shutdown Current typ (nA)	Package / Dimensions (mm)
FUSB302B	Enhanced programmable controller with PD	DFP, UFP, DRP, accessory support	25	370	WLCSP-9, MLP-14 / 1.2 x 1.3 x 0.6, 2.5 x 2.5 x 0.8
FUSB302	Programmable controller with PD	DFP, UFP, DRP, accessory support	25	370	WLCSP-9, MLP-14 / 1.2 x 1.3 x 0.6, 2.5 x 2.5 x 0.8
FUSB301	Autonomous controller with SuperSpeed switch control	DFP, UFP, DRP, accessory support	5	3.5	TMLP-10 / 1.6 x 1.2 x 0.4
FUSB301A	Autonomous controller with configurable I <sup>2</sup> C address	DFP, UFP, DRP, accessory support	5	3.5	TMLP-12 / 1.6 x 1.6 x 0.4
FUSB3301	Autonomous controller for chargers and power adapters	DFP	10	—	MLP-10 / 3 x 3 x 0.8

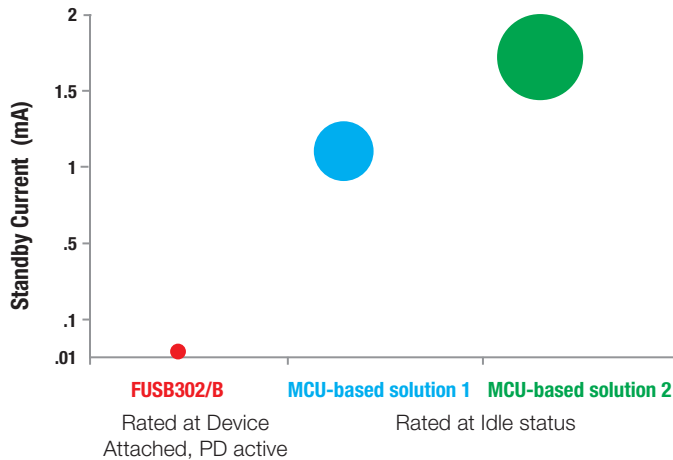
## Data Switches

Part Number	Function	Data Rate	Insertion Loss	Active Current ( $\mu\text{A}$ )	Package / Dimensions (mm)
FUSB340	USB 3.1 SuperSpeed switch	Up to 10 Gbps	-1.0 dB at 2.5 GHz	12	MLP-18 / 2 x 2.8 x 0.4

## Protection ICs

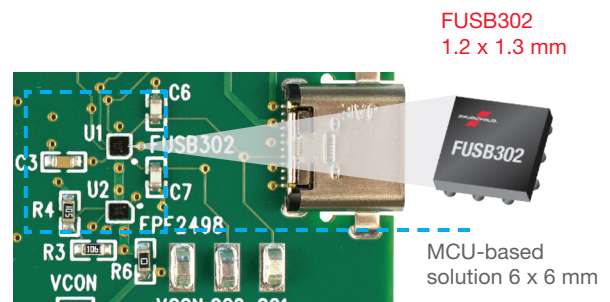
Part Number	Function	DC Current (A)	R <sub>DS(on)</sub> (m $\Omega$ )	Features	Package / Dimensions (mm)
FPF2280/81	Over-voltage protection for sink side, PD power profile support	4.5	30	Adjustable OVP, 100V surge protection	WLCSP-12 (1.3 x 1.8 x 0.6)
FPF2290	Over-voltage protection for sink side, PD power profile support	4.5	33	Selectable OVP, 100V surge protection	WLCSP-12 (1.3 x 1.8 x 0.6)
FPF2495	Over-voltage, Over-current protection for source side	2	70	28V at V <sub>OUT</sub> , adjustable current-limit control	WLCSP-9 (1.2 x 1.2 x 0.6)
FPF2595	Over-voltage, Over-current protection for source side	3.9	35	28V at V <sub>OUT</sub> , adjustable current-limit control	WLCSP-12 (1.8 x 1.3 x 0.5)

### Industry's Lowest Power Consumption



Ultra-low-power Fairchild solutions preserve mobile device battery life

### 95% Smaller Than MCU-based Solutions



Fairchild's products are the smallest on the market

Visit [fairchildsemi.com/usbtpe-c](http://fairchildsemi.com/usbtpe-c) for more information, datasheets, and samples.

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