

Architecture Simplifies Development Of Multi Port Chargers

[Silanna Semiconductor](#) will make its flexible AnyPort architecture for multiport chargers available for a wide variety of silicon- and GaN-based designs supporting power levels beyond 100 W. AnyPort is an innovative new architecture that gives designers the flexibility to complete a charger design for a given power level prior to specifying and configuring the specific number and type of output ports.

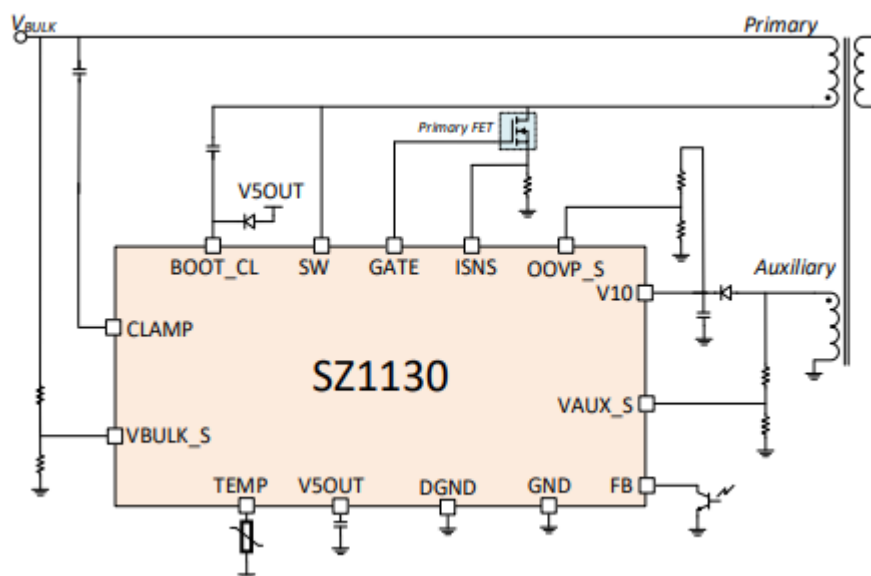
By allowing a single base charger design to be deployed across a variety of end products with different output configurations, AnyPort can significantly speed the development and reduce the complexity of fast chargers and adapters with multiple type-C and/or type-A output ports.

AnyPort brings together Silanna's CO₂ Smart Power families of advanced ACF controllers and high-frequency dc-dc converters to deliver high-power-density, ultra-efficient, multi-port charger solutions for USB-PD applications between 30 W and 150 W. The ability to specify port count and type at the end of the design process is made possible by combining a fixed-output front-end ac-dc stage powered by Silanna Semiconductor's ACF controller and multiple downstream dc-dc stages independently regulating any number of type-C and type-A ports.

AnyPort was first deployed in Silanna Semiconductor's RD-5 all-silicon reference design, a production-ready solution that provides everything an engineer needs to rapidly prototype and test a fully functional 65-W 2C charger (see the figure). As well as incorporating AnyPort into future silicon- and GaN-based reference designs, the company is now planning to make the AnyPort architecture available to all customers of its advanced ac-dc and dc-dc technologies.

"By allowing designers to start work on a charger design before deciding on the number and type of outputs AnyPort represents a significant step forward in terms of the design flexibility it offers OEM and aftermarket charger and adapter manufacturers," says Hubie Noto, Silanna Semiconductor's director of product marketing. "Basing a design around AnyPort architecture speeds development, minimizes the BoM required across multiple charger models and allows companies to launch and modify high-efficiency, high-power-density products in the shortest possible timescales."

For more information, see the reference design [page](#) or contact sales@silanna.com.



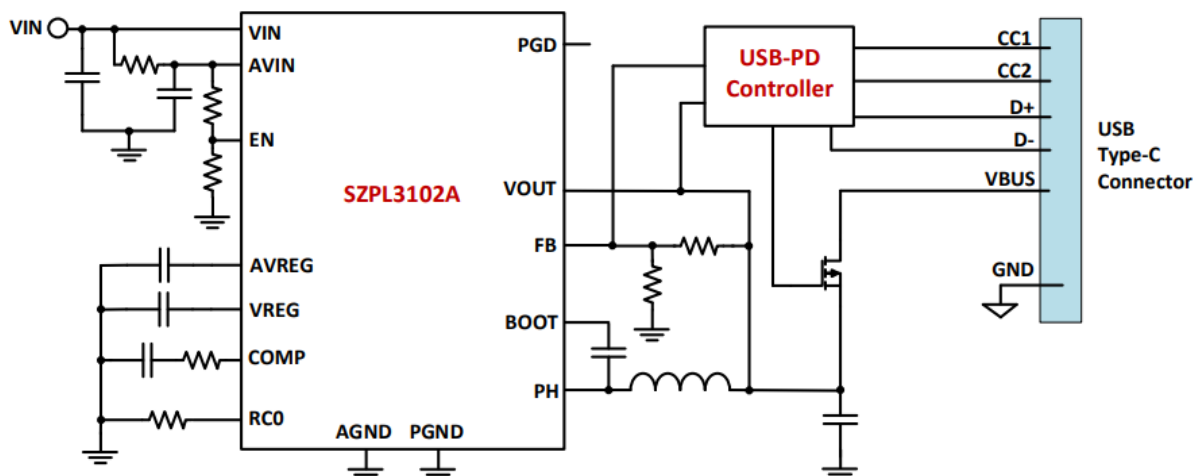


Figure. An example of a design based on the AnyPort architecture, the RD-5 reference design describes a 65-W dual port Type-C (2C) universal input offline power supply with programmable output voltage (5 V, 9 V, 12 V, 15 V, or 20 V) for single port and power sharing for dual port (dual 5-V, 9-V, 12-V, 15-V or 20-V outputs). The power supply uses the SZ1130-02 flyback PWM controller with integrated active clamp circuit, the SZPL3102A synchronous buck converter and Cypress CYPD3175 USB PD controller. By choosing AnyPort architecture designers can quickly configure additional ports to new and existing high-efficiency, fast charger designs.