

Silanna Semiconductor Expands Multi-Port Fast Charger Reference Design Portfolio with 65W 1C1A Option

AnyPort™ design is production-ready solution combining industry-leading ACF controller and ultra-high-power-density DC/DC converter technology

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/EINPresswire.com/ -- [Silanna Semiconductor](https://www.silanna.com), The Power Density Leader, has unveiled the latest addition to its family of AnyPort™ fully integrated reference designs that provide everything an engineer needs to prototype and test fully functional multi-port fast charger applications rapidly. Built around Silanna's CO2 Smart Power™ advanced AC/DC controller and high-frequency DC/DC converter technology and featuring a superjunction FET, the RD-35 simplifies and speeds the development of low-energy consumption multi-port 65W fast chargers offering USB Type-A and Type-C functionality.

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Manufacturers are looking to create multi-port fast chargers that address stringent performance, power density and efficiency requirements within tight time-to-market deadlines.”

Ahsan Zaman, Silanna Semiconductor's Director of Product Marketing

Silanna's RD-35 is a high-power-density, ultra-efficient, production-ready solution for multi-port 65W USB-PD applications delivering currents up to 3.25A. Operating efficiency greater than 92% minimizes power consumption during charging, while no-load consumption of less than 300 mW reduces standby power. Efficiency is relatively flat across the universal (90 – 265Vac) input voltage range and low-to full-load conditions.

The RD-35 combines Silanna's SZ1131 fully-integrated AC/DC active clamp flyback (ACF) controller and the company's SZPL3102A high-voltage, high-efficiency



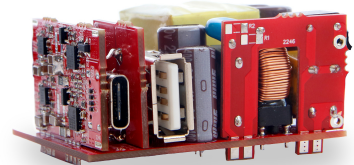
RD-35

65W 1C1A Reference Design

> 92% End-to-End Peak Efficiency

High Power Density and Competitive BOM Cost

 **CO₂ Smart Power™**
from Silanna Semiconductor
[powerdensity.com](https://www.powerdensity.com)



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integrated 65W buck converter. AnyPort™ architecture provides 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. This allows a single base charger design to be deployed across a variety of end products with different Type-C and Type-A output configurations. Time-to-market is further reduced as the RD-35 exceeds conducted and radiated EMI requirements, eliminating the need for pre-production validation and certification.

“Manufacturers are looking to create multi-port fast chargers that address stringent performance, power density and efficiency requirements within tight time-to-market deadlines,” says Ahsan Zaman, Silanna Semiconductor’s Director of Product Marketing. “In line with our other production-ready reference designs, the combination of Silanna’s CO2 Smart Power family of advanced AC/DC and DC/DC technologies and the innovative AnyPort architecture enable engineers to reduce the time needed to develop and test 65W 1C1A multi-port designs and ensure the fastest possible route from prototyping to full production.”

The RD-35 is the latest addition to Silanna’s comprehensive family of production-ready reference designs that provide everything needed to develop high-density chargers with low operational and no-load/ stand-by power consumption and minimum component count, BOM cost and size. This family includes all-silicon 33W and 45W solutions and silicon- and GaN-based single- and multiple-output 65W and 100W USB-PD reference designs.

Full availability of PCB Gerber and production files further reduces the time from prototyping to full production.

RD-35 Key Features

- 65W 1C1A high-power-density AnyPort™ reference design with standard superjunction FET
- > 92% peak efficiency
- Flat efficiency across universal (90 – 265Vac) input voltage and load
- Uses Silanna Semiconductor’s newest fully integrated ACF controller (SZ1131)
- SZ1131 integrates ACF controller with UHV active clamp FET, active clamp driver, and start-up regulator
- Up to 146kHz switching frequency operation
- OptiMode™ cycle-by-cycle adaptive digital control
- Self-tuning valley mode switching (VMS)
- Multi-mode operation (burst mode, QR, VMS)
- < 30mW system no-load power consumption for up to 65W single port (1C) designs
- OTP, OVP, OCP, OPP, and output short circuit protections
- Space-saving 16-pin SOIC package
- Uses Silanna Semiconductor’s high-voltage, high-efficiency 65W integrated buck converter (SZPL3102A)
- Synchronous buck regulator with switching frequencies up to 2MHz
- Optimal high efficiencies for 3.3V to 21V VOUT

- Maximum output current of 3.25A
- Wide input voltage range: 7V to 27V
- Selectable soft start times
- OCP/OVP/OTP protection
- Programmable UVLO
- 3mm x 3mm QFN package
- CO2 Smart Power by Silanna Semiconductor

Availability:□

Information is available at <https://powerdensity.com/reference-design/> or by contacting sales@silanna.com.

About Silanna Semiconductor

The Power Density Leader. Delivering on the ultimate Power Management challenge of best-in-class power density and efficiency performance that delights customers with unprecedented BoM savings. Silanna Semiconductor's AC/DC and DC/DC power converter ICs are driving key innovations in Travel Adapters, Laptop Adapters, Appliance Power, Smart Metering, Computing, Lighting, Industrial Power, and Display Power utilizing the latest digital and analog control and device technologies. In addition to our global engineering sales force, customers are supported by regional design centers and online tools. 'Power Density Hero' is an online design tool where customers input their power needs and instantly receive a complete design, schematic, and 'Bill of Materials' (BOM). The Asian Center of Excellence (ACE) has a dedicated team of power system engineers to support our customers in their application specific design needs.

Silanna Semiconductor, with its family of CO2 Smart Power™ ICs, offers technologies that will benefit the planet and the people on it by delivering best-in-class power density and efficiency.

Silanna Semiconductor, headquartered in San Diego, CA, is a privately-held semiconductor company, and has global facilities supporting customers with design centers and offices in North America, Europe, Asia, and Australia.

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