

# UWE Announced UPD350 - The Global First RISC-V based USB PD/Type-C Microcontroller

Weihai, Shandong, China June 25, 2019

UWE Technologies Corp., Ltd. (UWE) an innovation leader in high performance USB PD/Type-C microcontroller chipset solutions, today announced the commercial availability of UPD350. As the 2<sup>nd</sup> generation chipset of UWE USB PD product line, UPD350 supports USB PD 3.0 (the latest USD PD standard) with hierarchical TCPM/TCPC, and it incorporates with a 32bit RISC-V based MCU, which offers a very open and powerful architecture in supporting more applications beyond PD (PD plus), the typical PD plus applications include digital power control, board management, etc.



## **UPD350 Hardware Feature Highlights**

- Compliant with USB Type-C 1.3 and Power Delivery 3.0 specification
- Supports the following USB-PD 3.0 optional features:



- Programming power supply (PPS)
- Fast Role Swap (FRS)
- Extended messages with 260Bytes
- Optimized Open-source RISC-V ISA Based 32bit MCU running @ 33MHz
- On-chip Flash/SRAM
- High-integration to reduce BOM material
  - Integrates Type-C detect circuit with configuration CS/Rd, ADC, SWITCH etc.
  - Standard-compliant Type-C Configuration Channel, 1.05~1.2V voltage level
  - Integrates USB PD PHY and protocol layers
  - Integrates Clock, High voltage LDO, PRG, POR etc.
- Integrates multiple channel ADC for CC detection etc.
- Integrates Low side CSA, Shunt regulator
- Extensive peripherals, UART/I2C/SPI/PWM/GPIO
- AON for Low-power mode
- ICP, ISP flash program
- Ultra-small package with reduced Pin
  - o QFN24, 4\*4mm
  - QFN32, 5\*5mm

### **UPD350 Software Feature Highlights**

- Completed USB PD/Type-C Stack Library with continuous upgrade
  - SRC, SNK, DRP (SRC/SNK) operation
  - PD3.0 power negotiation (Back-compatible with PD2.0)
  - Optional Programmable Power Supply (PPS)
  - Optional extended message (Battery, Manufactory, Country, Status etc.)
  - Optional Secure authentication message via PD protocol
  - DR swap, PR swap, VCONN swap
  - Vendor Defined Message



- Scalable Device/System policy Manager
- FreeRTOS real-time embedded OS with open source
- CLI console
- Eclipse-based IDE (Integrated Development Environment)
- Toolkits for PD protocol capture/analysis, firmware downloading, manufacture testing

## **UPD350 Application Scenarios**

- Power Adapter, Power Bank
- Notebook, PC
- Printer, Projector
- Monitor, Smart TV
- Type-C dongle, docking



With the powerful hardware and software feature sets, UPD350 enables the system designers to utilize the MCU resources in a more reasonable and efficient way, which can simplify the system design in building differentiated applications and shorten the TTM (Time To Market),

"Selecting RISC-V as the MCU of UPD350 gives us a new degree of freedom to support future innovative applications, such as protocol upgrade, power management, multi-protocol, multiport and multi-application extension, etc. which can bring add-on value to our customers"



Carter Huang, Founder and CEO of UWE: "We played with RISC-V for over years on FPGA platform, the test results show that RISC-V instruction set is stable and reliable. In addition, as an open ISA, RISC-V has neither development license fee nor distributed license fee, which can help us build cost competitive product."

"UWE is a leading supplier of USB PD/TYPE-C chip solutions and dedicates in building open platforms and differentiated application design concepts. We selected UWE first generation PD chipset - UPD300 couple years ago to power our mini printer, which has been in mass shipment. It's stable and highly efficient in power delivery. Now we are evaluating UPD350 as our next generation mini printer power solution, we hope to integrate more functionalities into UPD350 to reduce the product BOM and size, which is the key for the mini printer." Chuntao Wang, CTO of SNBC commented.

### **About UWE**

UWE Technologies Corp., Ltd., founded in December 2015, is a start-up company specializing in the design, development and sales of SoC integrated circuit chips in consumer electronics, industrial control, communications technology and automotive electronics. Headquartered in Weihai High-tech District, it has a R&D center in Shanghai. The team members are from top IC design companies, with the international vision and more than 15 years of relevant experience. At present, the company is committed to the development and marketing of USB PD/Type-C, industrial control, IoT Internet of Things products. So far, the USB PD/Type-C product family has evolved to the 2<sup>nd</sup> generation.

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# About SNBC

SNBC (Shandong New Beiyang Information Technology Co., Ltd.) was established in December 2002 with registered capital of 600 million RMB. On March 23rd, 2010, SNBC listed on the small and medium-sized enterprise board of Shenzhen Stock Exchange (Stock no. 002376), China.

SNBC specializes in research and development, production, sales and service of thermal printing, identification as well as smart system integration products provides leading products and complete solutions for many industries in the world in terms of special printers, scanners and formed large scale production through independent innovation.

SNBC has the international sales service network, and the products have been in batches exported to many countries and regions in Europe, North America and Asia-Pacific. Holding the largest comprehensive market share of China's specialty printing/scanning market among Chinese brand enterprises, SNBC is a professional manufacturer and service provider of special printer and scanner.

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