

ASMedia's ASM2464PD USB4® Device Silicon
World's First to Receive USB-IF Certification

Release Date: May 17, 2023 (United States)

On April 14, 2023, the ASM2464 PD (TID: 8924) from ASMedia Technology Inc. (5269.TPE) has become first USB4® device silicon in the world to receive USB-IF certification, which brings in a new era of USB4 solutions.

ASMedia's President Che-Wei Lin said, "Our device silicon [ASM2464PD] excels in USB4 technology in the world. After repeated testing of hundreds of items, ASMedia's expertise and technology is finally approved by the USB-IF. For USB4 generation, we will provide silicon that can support higher speed, enhanced multitasking and are compatible with USB4, Thunderbolt 3 as well as traditional USB devices. With our team's devotion and hard work, we are now able to fulfill our promise to the high-speed transmission market. This is really an incredible matter, and it helps complete the USB4 ecosystem."

ASMedia's ASM2464PD silicon incorporates the six chips originally placed on the printed circuit board (PCB) of the Thunderbolt 3 device product. In addition to increasing supportable specifications for customers, the silicon can support past product specifications, improve the efficiency to achieve 40Gbps, reduce bills of materials (BOM) costs, shrink the PCB size, and simplify the PCB trace routing. It achieves several goals that we were unable to in the past.

In terms of the increased data transfer speed, the USB4 Version 1.0 can reach up to 40Gbps (i.e., for the highest efficiency, it can reach approximately 3800MB/s; see note 1), which is twice the speed of USB 3.2 (approximately 2000MB/s). Unlike traditional data transfer mechanisms, USB4 uses its protocol tunneling to transfer data. This feature allows for USB data transfers to operate in parallel with other independent protocols and improve data transfer rate. Additionally, USB4 uses a USB Type-C® connector. Briefly, the USB Type-C connector is reversible, works both ways, and has no up or down orientation; as a result, this improves convenience for end users.

For multitasking capabilities, with the PCIe Gen4 Packet Switch technology built in the ASM2464PD, it allows easier connection with multiple PCIe devices or NVMe for flash storage (i.e., it can support up to four devices without connecting to the external chips). This feature takes

advantage of the high bandwidth and dynamic bandwidth allocation that are unique to USB4, and users can fully utilize the bandwidth while connecting to USB flash drives, SSDs, CFexpress cards, high-speed PCIe WiFi cards and AHCI cards with multiple ports.

ASMedia's USB4 products that have earned itself international renown, whether host or device silicon, build on more than ten years of valuable experience hard-gained in the past, and we have finally fulfilled our promise to create higher speed, better efficiency, low power and multitasking technologies. ASMedia will continue to cultivate the high-speed transmission field, aiming for breakthroughs and making innovations, and will strive to provide better solutions to meet the needs of our customers.

Note 1: This has to work with the latest high-efficiency platform.

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1st USB4[®] certified Device - ASM2464PD

- **Upstream USB 40Gbps**
- **Downstream PCIe Gen4x4**
- **Supports USB and/or PCIe Tunneling**
- **Backwards compatible with USB 3.2 Gen 2x2 and all previous versions of USB**
- **Supports TBT3 specification (TBT4 certification is ongoing.)**
- **Built-in PD function**

6 in 1

PCIe Clock Mux	PCIe Clock Gen
USB to NVMe Silicon	USB PD Silicon
USB4/TBT3 Device Silicon	PCIe Gen4 Switch

→ **ASM2464PD**

CERTIFIED USB 40Gbps **asmedia**
ASMEDIA TECHNOLOGY INC

Picture: ASMedia's ASM2464PD is the world's first USB4 device product to receive USB-IF certification.