



# Say hello to Matterhorn

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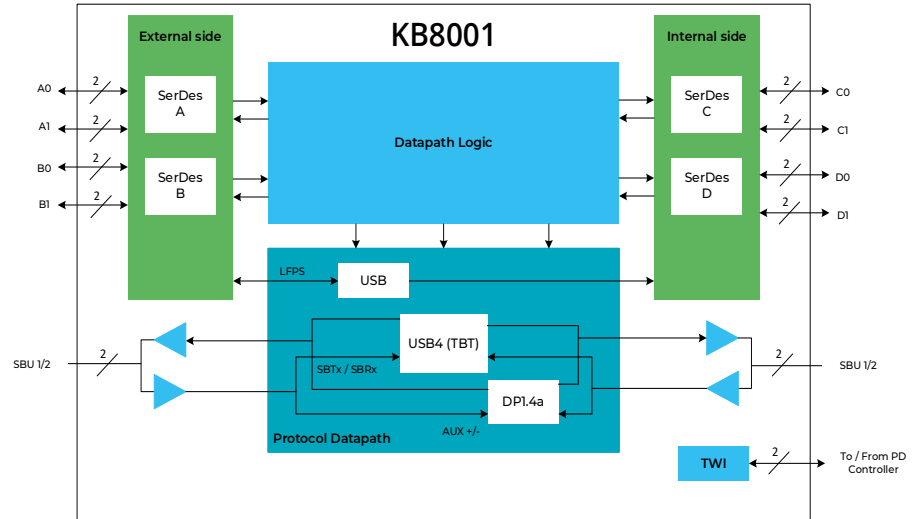
USB-C™ 40 Gbps Multiprotocol Switch and  
Bidirectional Bit-Level Retimer.



# KB8001 – Product Overview

## Features

- USB4 Gen2, Gen3 signalling (20 / 40 Gbps)
- USB 3.2 Super Speed+ signaling (5 / 10 / 20 Gbps)
- DisplayPort 1.4 (8.1 / 5.4 / 2.7 / 1.62 Gbps) x1, x2, x4
- Thunderbolt 3, 2 (20.625 / 10.3125 Gbps)
- Simple TWI interface to the PD controller
- Integrated DC blocking caps on the SBU lines
- Integrated temperature sensor
- 3 x Supplies : 3.3V, 1.0V and 1.2V
- ESD Rating : 250V CDM; 1000V HBM
- Package: 81p, 4x4 mm, FCCSP, 0.4mm pitch



# Target Applications

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Mobile PC, Desktop PC and Tablets



Docks



Active Cables



Gaming Consoles



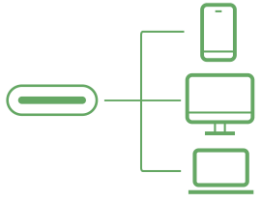
Monitors



HDD / Solid state drives

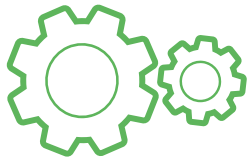
# Matterhorn™ – Benefits

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- ✓ **Multiple Protocols** – Switch and bidirectional re-timer which supports USB4 Gen2, Gen3, USB 3.2 Gen 1, Gen 2, DisplayPort and Thunderbolt on same USB-C connector.

- ✓ **Low BOM Cost** – Integrated DC Blocking capacitors, analogue mux, pull-up / pull-down resistors for multiple protocols and no requirement for external EEPROM.

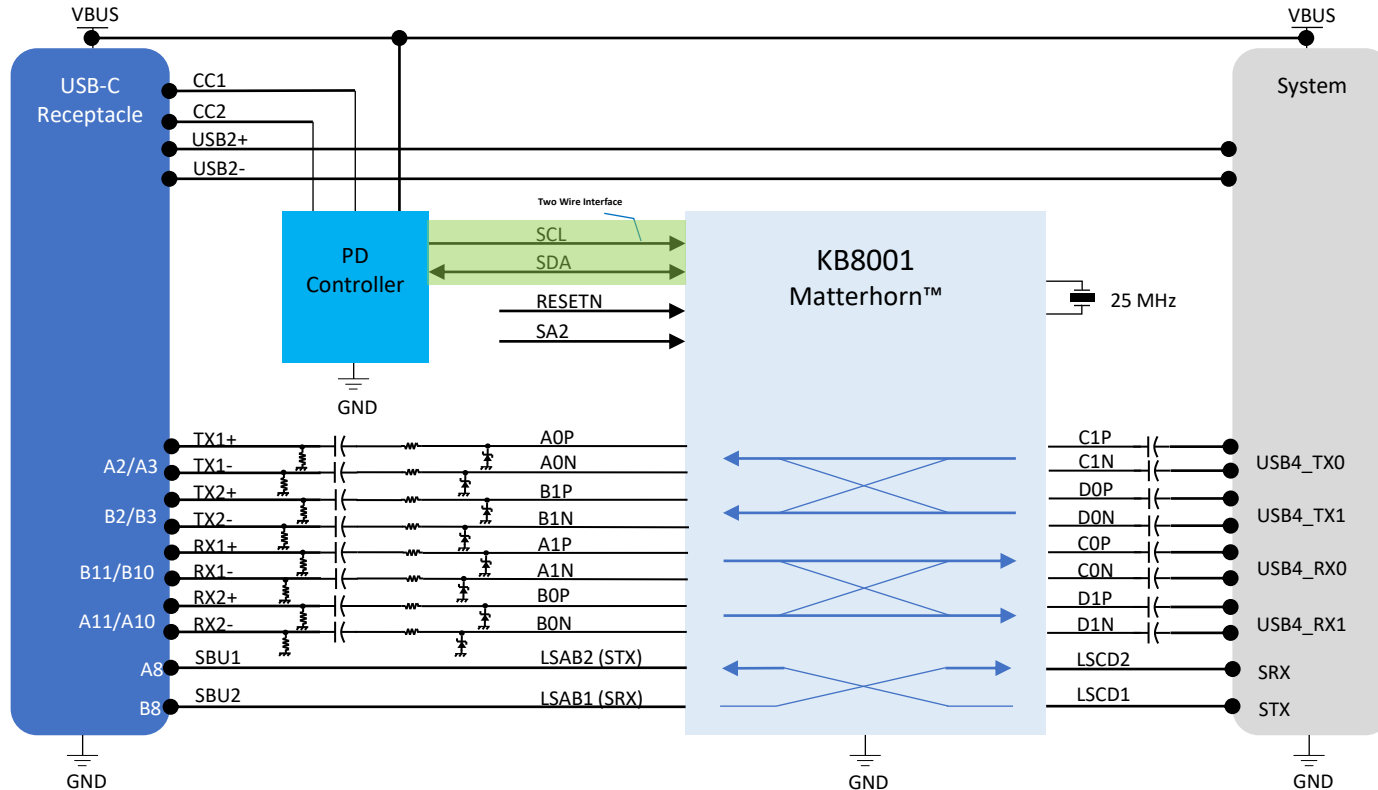


- ✓ **Autonomous Rx Equalization (ARxE™)** – Dynamic correction for extreme channel characteristics providing a hardware and software independent solution. This enables longer PCB traces and longer cables using more cost effective materials.

- ✓ **Flexible Orientation** – Bidirectional architecture which supports both source and sink applications. Therefore OEM do not need to worry about orientation



# KB8001 – USB4 Host block diagram



# Thank You

Unlocking the power  
of your technology

