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# Difference between PowerTrace Serial and PowerTrace III+Serial Preprocessor

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The following outlines the key distinctions:

## 1. Data Lane Capabilities:

- **PowerTrace Serial** supports up to:
  - 8 lanes/12.5 GT/s
  - 4 lanes/22.5 GT/s with Aurora 2 Preprocessor
- In contrast, the **Serial Preprocessor** allows for up to 4 lanes, with the speed distributed as follows:
  - Up to 6.25 GT/s per lane for configurations using 3 lanes.
  - Up to 5.00 GT/s per lane for configurations using 4 lanes.
- Serial interfaces are designed specifically for high-speed data transfers. Minimum transfer rates for each system are as follows:
  - **500 Mbps** for the PowerTrace Serial.
  - **625 Mbps** for the Serial Preprocessor.

## **2. Design Considerations for PCIe/HSDP**

If a customer plans to transition to a PCIe-based or HSDP project in the future, He cannot use the PowerTrace III with the Serial Preprocessor. Instead, the PowerTrace Serial should be used.