**PCIe® 6.0 Architecture: The Future of PCIe Technology**

PCIe specification doubles the I/O bandwidth every three years and continues to meet industry demand.

**Market Growth**

Market growth is predicted to show steady growth across PCI Express technology for Client SSD, Cloud, and Enterprise.

**PCI 6.0 Technology in Diverse, Data-Intensive Markets**

- High Performance Computing (HPC)
- Data Center
- Artificial Intelligence (AI) / Machine Learning (ML)
- Internet of Things (IoT)
- Automotive
- Military / Aerospace

**PCIe 6.0 Specification: Key Benefits**

1. **Double the Bandwidth**
   - Increases the data rate to 64 GT/s, doubling the data rate of the PCIe 5.0 specification and providing a maximum bidirectional bandwidth of up to 256 GB/s for x16 lanes

2. **Low Latency**
   - Utilizes Flow Control Units with fixed size (Flits), which allow the use of a lightweight Forward Error Correction (FEC) with Pulse Amplitude Modulation with 4 levels (PAM4) signaling and a strong cyclic redundancy check (CRC) — with no impact to latency

3. **Backwards Compatibility**
   - Maintains compatibility with all previous generations of PCIe technology, protecting customer investments and supporting connections to millions of existing products

Source: SSD Insights August 2021, Forward Insights

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