Physical AI platforms interpret their surroundings using a diverse array of sensors, generating data that must be seamlessly transferred, integrated, and processed rapidly. Establishing priorities, data formats, and moving data to compute elements enables accurate, fast decision making in edge platforms:

- Industrial Networking: Rapid packet processing of data through multiple, switched ethernet ports with support for factory automation protocols

- 5G/6G Communications: Scalable L2/L3 Ethernet switch with flexible port counts/ speeds, including TSN and security

- Automotive Gateway: High-speed data packet networking with multiple communication interfaces and support for switching and bridging

- Datacenter Infrastructure: Standalone data processing units to handle highly multiplexed data streams corresponding to millions of network connections with high efficiency and low power

The MIPS® Sense portfolio enables low-latency data processing with high-reliability and functional safety capabilities, expanding data movement engines into compute subsystems that couple with edge AI engines.

Designed to accelerate data movement, the **MIPS I8600** subsystem is a turn-key accelerator for networking markets that need highly reliable packet processing with support for a variety of market-focused protocols. From ports, protocols, and interfaces, the MIPS I8600 is tailored to increase efficiency with MIPS innovative multithreading capabilities and enhance memory management capabilities.

MIPS I8600 data movement engines increase performance and efficiency using 4-way multi-threading capabilities and scalable coherent clusters combined with turnkey enablement of protocol stacks, middleware, and optimized compilers/libraries.

The MIPS I8600 range of compute subsystems will be available for customer evaluation in mid-2025, delivering significantly higher performance for networking packet processing than legacy, proprietary applications cores.

MIPS data movement subsystems, based on the open-specification RISC-V instruction set, are easy to adopt and reduce time to market by providing proven solutions to our customers for building their vision for technology.

Contact us to learn more.