

AIT's New Shared Memory Network Products Offer 75% Higher Speed and Low-Latency Communications for Hardware-In-The-Loop Test and Simulation Applications

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OMAHA, Neb.--(BUSINESS WIRE)-- [Avionics Interface Technologies](#) (AIT) introduces its new [Shared Memory Network](#) (SMN) interface products, an optical, high-speed (2.125 Gbps), ring-based network that uses a replicated memory concept. SMN was developed for applications requiring real-time synchronization and control, such as hardware-in-the-loop simulations, test and measurement, industrial automation, and automotive systems simulations.

Typical networks contain protocol overhead that limits transfer speeds, especially for small data transfers such as 4, 8 or 16 bytes, which constitute the majority of network traffic. SMN has no protocol overhead. It was designed specifically to move small amounts of data efficiently, mimicking applications that write to local memory. The result is that data is moved over the network close to line rate speed, effectively decreasing communication time by 75%, reducing simulation time, and minimizing network size. This all adds up to saving the end user a considerable amount of time and reducing their investment in network hardware.

Networks typically also lack a fast way to interrupt remote applications or move data immediately upon events. SMN was designed to allow event-driven interrupts for prompting instantaneous actions as required in hardware-in-the-loop simulations. Time critical interrupts associated with these simulations benefit from immediate fault status and fault information that is sent simultaneously over the network. SMN is essential for networked safety critical applications, where an immediate notification is required in order to minimize the time that could cause system failures.

Furthermore, SMN is easy to implement. It treats networked computing as application threads that share common memory used for storing application data structures – similar to multi-threaded applications using local memory on a single system.

To learn more about SMN, visit <http://aviftech.com/products/shared-memory/>.

ABOUT SMN

SMN is an optical, high-speed (2.125 Gbps), ring-based network that uses a replicated memory concept. Network interface connections can be up to lengths of 10 km between systems. Each SMN module has 256 MB of memory and is available in several hardware form factors including: an XMC module, PXI Express, PCI Express, and PCI modules. All SMN modules are equipped with a full set of software drivers supporting Windows, Linux (Ubuntu/CentOS), VxWorks, LabVIEW, and LabVIEW Real-Time.

ABOUT AIT

[Avionics Interface Technologies](#), a division of [Teradyne, Inc.](#) (NYSE: TER), is a leading supplier of avionics databus modules and a wide array of simulation and analyzer products. AIT products include interfaces for MIL-STD-1553, ARINC-429, Fibre Channel, HS-1760, ARINC-664 and Deterministic Ethernet. AIT software solutions are used for testing and ARINC-615A and

ARINC-615 DataLoading. AIT is headquartered in Omaha, NE, with design and production based in Dayton, Ohio, near Wright Patterson AFB. AIT is a registered ISO9001:AS9100C company.



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Avionics Interface Technologies
Troy Troshynski, 402-763-9644
AIT Engineering Manager
troyt@aviftech.com

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