



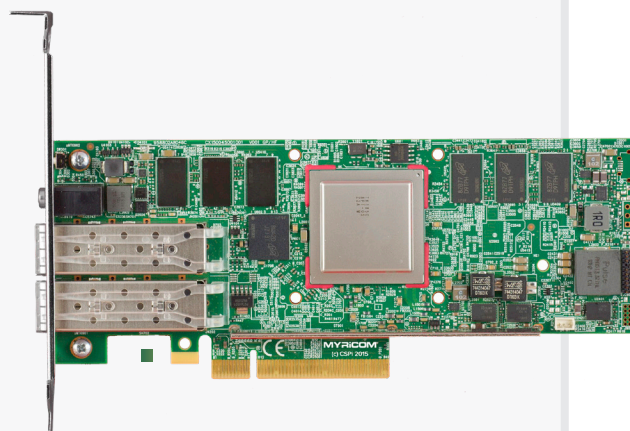
Myricom SIA Express

A 2x25G SmartNIC with an 8-core ARM processor, 16MB of DRAM, and 36 watt power consumption, in a compact HHHL form factor that fits in any standard data-center server or OEM appliance

The latest addition to the Myricom Secure Intelligent Adapter (SIA) SmartNIC family is a low-profile 25G dual-port adapter designed to solve today's data center and cybersecurity challenges related to power consumption, scalability performance, and security.

Key Benefits

- Offload security applications with 8, 3 GHz ARMv8 Cortex-A72 cores
- Provides a secure root of trust with secure boot, TrustZone, and eFuses
- Highly efficient hardware acceleration blocks for: crypto functions, key management functions, and packet classification
- Rich APIs allow for the integration with existing applications and systems
- Low 36 watt power draw
- Compatible with industry-standard server platforms, utilizing PCIe HHHL add-in cards



The Myricom SIA line sets itself apart from other SmartNICs because it allows for the deployment and offload of advanced networking and security features. For example, when running the ARIA™ SDS Packet Intelligence (PI) application on the Myricom SIA Express, you receive faster and more accurate network analytics that can be used for network monitoring, SLA enforcement, packet accounting, and threat detection and response, all while offloading this processing from the host CPU.

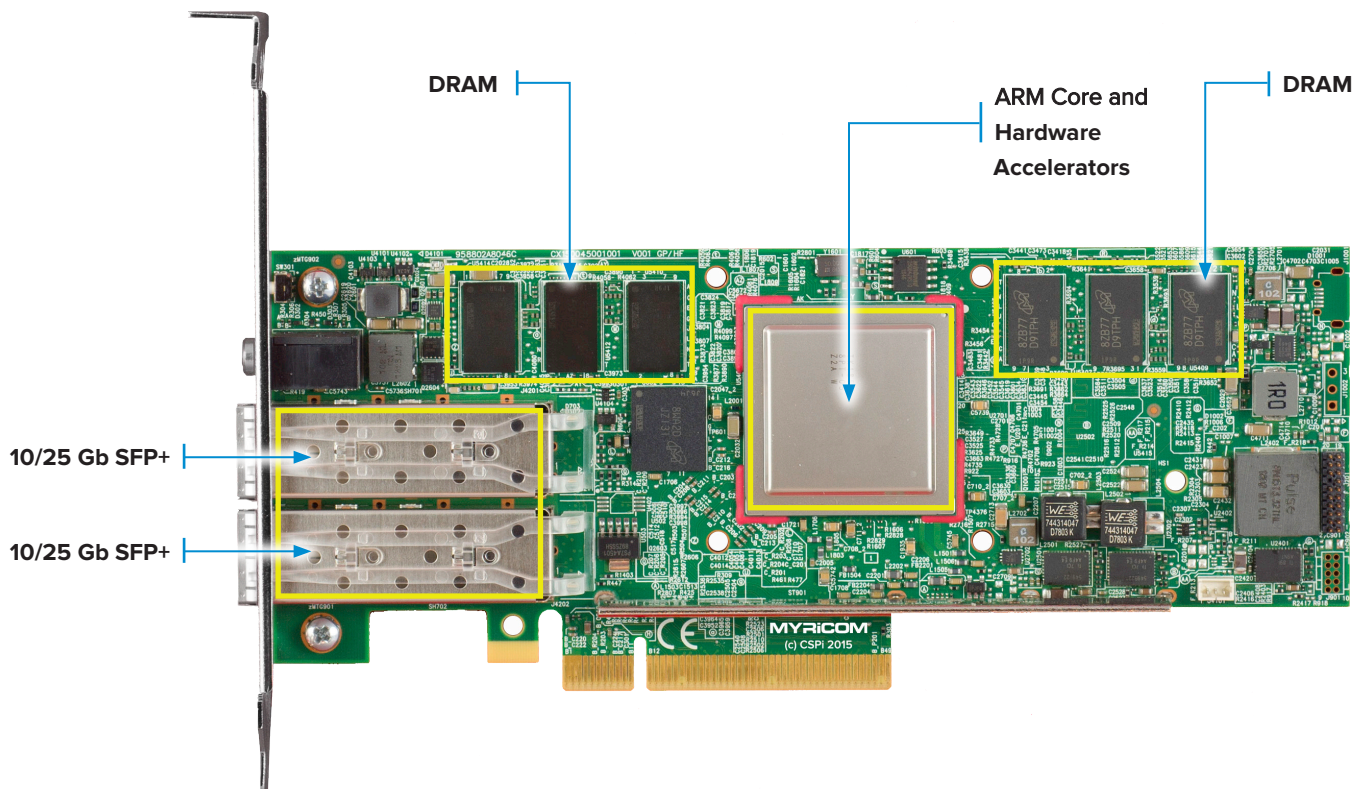
This industry-standard half-height and half-length (HHHL) form factor is convenient for integration with data center servers, as support for larger form factor cards can be less common. The Myricom SIA Express also features a high-performance data center system on chip (SoC), which incorporates an advanced network controller, a high-performance ARM CPU block, PCI Express (PCIe) 3.0x8 interface, hardware accelerators for compute offload, and a high-speed memory subsystem, including L3 cache and DDR4 interfaces—all interconnected by a coherent network-on-chip (NoC) fabric.

The SIA Express integrates powerful networking and processing subsystems for the offloading of CPU-intensive applications such as the encryption and decryption of DNS over HTTPs or TLS. It can also run ARIA SDS applications, such as Packet Intelligence, for enterprise-wide network visibility.

The network interface is powered by the latest generation of network controller technology, delivering a high packet rate and low latency.

An on-chip configurable flow accelerator adds a powerful packet inspection and processing capability in the hardware, moving common flow-processing workloads into hardware and freeing ARM CPUs for application workloads. The ARM CPU subsystem features eight ARMv8 Cortex-A72 CPUs at 3.0 GHz, arranged in a multi-cluster configuration.

The Ethernet interface uses a multirate SerDes PHY connected to two SFP28 connectors to provide dual port 25Gb connectivity. The interface supports direct connection of optical modules or DAC (direct-attach copper) cables.



SPECIFICATIONS	
Dimensions	2.7" x 6.6"
Bus interface	PCI Express Gen 3, 8 lanes wide
Form factor	PCI Express half-height, half-length (HHHL)
Electrical power	< 40W ¹
Cooling Requirements	It is required that adapters be installed into servers that provide air flow over the PCIe slots.
Cooling Options	Active cooling
Operating Temperature	0-50 deg C (290 LFM min at max ambient temperature)
Storage Temperature	- 40 to 70 deg C
Storage Humidity	5% to 90% non-condensing
Processor	Network SoC – 8x, 3.0 GHz ARM cores
Hardware Acceleration	Traffic flow accelerator engine. 100 Gb/s cryptography engine with single-pass hashing and encryption/decryption. Deep packet inspection (DPI) Flow generation
Memory	16GB Flash
Network Connectivity	Dual SFP+/SFP28 ports; 10 or 25G
Software Support	Host side drivers available for Linux (CentOS, RHEL, and Ubuntu) Supports DPDK for Linux (high-performance packet processing)
SW Version supported	ARIA SDS
Security	ARIA Packet Intelligence and ARIA KMS ARM TrustZone Secure Boot Secure Key Storage NC-SI over MCTP (SMBus, PCIe VDM) NC-SI over RMB
Throughput	2x 10/25Gb per Second
WARRANTY AND COMPLIANCE	
Safety	CE/European Union - EN 62368-1:2014 UL/USA - IEC 62368-1 (ed. 2)
Regulatory approvals, compliance	RoHS (Reduction of Hazardous Substances). EMI and EMC: Class B USA, Canada, and Europe.
Country of Origin	Taiwan
Warranty	One year for hardware defects and 90 days for software defects. 90 days of “getting started” telephone and email support, as well as any software upgrades shipped within that window. Refer to the support datasheet for options extending the 90-day window
ORDERING DETAILS	
	25G-PCIE3-8C-2S SIA – Dual 10/25G low-profile, (HHHL). Includes 16 GB of DDR4 memory.
ACCESSORIES	
	Refer to accessories datasheet for compatible transceivers and cables.

¹ The SIA Express adapters have typical power consumption of 36W in full operation under nominal environmental conditions of 290 LFM (1.47 m/s) airflow at 50°C. The maximum power consumption is 40W under worst-case environmental conditions of 100 LFM (0.51 m/s) airflow at 50°C. NOTE: Adapter power estimates are based on passive direct-attach-copper (DAC) cables. Use of active modules will increase total board power by the amount consumed by the modules, 5W additional for transceivers.

Contact Us to Schedule a Technical Demonstration or Arrange an Evaluation ✉ ARIAsales@ariacybersecurity.com

ABOUT ARIA CYBERSECURITY SOLUTIONS

ARIA Cybersecurity Solutions recognizes that better, stronger, more effective cybersecurity starts with a smarter approach. Our solutions provide new ways to monitor all internal network traffic, while capturing and feeding the right data to existing security tools to improve threat detection and surgically disrupt intrusions. Customers in a range of industries rely on our solutions each and every day to accelerate incident response, automate breach detection, and protect their most critical assets and applications. With a proven track record supporting the Department of Defense and many intelligence agencies in their war on terror, and an award-winning portfolio of security solutions, ARIA Cybersecurity Solutions is committed to leading the way in cybersecurity success.

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