

PRODUCT BRIEF

AMD SOLARFLARE™ X4 SERIES LOW-LATENCY ETHERNET ADAPTERS



OVERVIEW

For 15+ years, the combination of AMD Solarflare low-latency Ethernet adapters and Onload™ family software have been used in virtually all facets of Capital markets such as leading-edge exchange systems, deterministic brokerage services, and sophisticated algorithmic trading applications.

The two X4 variants, supported by the Onload product family, provide exceptional performance, accelerated speed, backward compatibility, and feature enhancements.

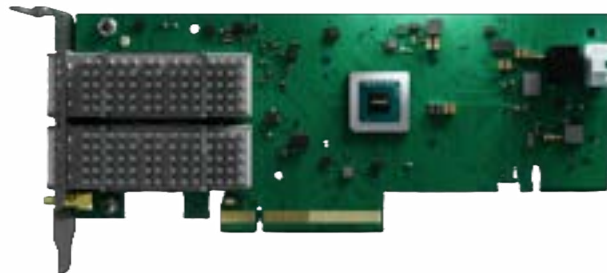
AMD SOLARFLARE™ X4522

- Dual SFP56
- 2x 1/10/25/50GE



AMD SOLARFLARE™ X4542

- Dual QSFP56
- 4x 1/10/25GE
- 2x 40/50/100GE



KEY FEATURES

- PCIe® Gen5 x8 NIC
- Supports 1/10/25/40/50/100G Ethernet
- Support for FEC and non-FEC interfaces
- <25W, passively cooled
- HHHL form factor
- Time synchronization and PTP
- Backward compatible with Onload™
- NIC sideband management
- Programmable packet processing
- OpenOnload™ and EnterpriseOnload™

CUSTOM DESIGNED LOW-LATENCY ASIC

- PCIe® Gen5 x8 | CXL
- Up to 53G PAM4 support
- Express data path for low-latency applications
- Enterprise data path for full-featured applications
- 8K queues & Filters
- 32K RX Descriptors per Queue
- TCAM-based flow classifier
- Secured NIC



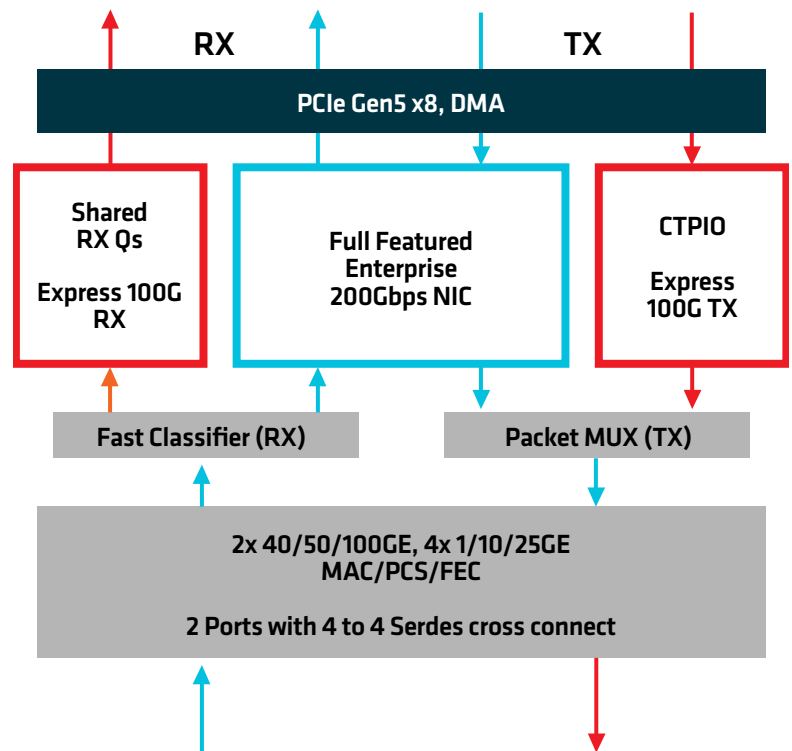
TWO DATA PATHS FOR FLEXIBILITY

Enterprise Data Path

- Low-latency full-featured datapath
- Stateless & Stateful offloads
- Multicast packet replication
- Jumbo frame support

Express Data Path

- Lowest latency datapath with CTPIO
- Up to 128 active CTPIO senders
- Out-of-order delivery without DMA fallback
- Shared receive queues



ORDERING INFORMATION

- X4542-PLUS
- X4522-PLUS

TAKE THE NEXT STEP

Contact your local sales representative or visit us online at [AMD Solarflare™ Ethernet Adapter](#).

DISCLAIMERS

The information presented in this document is for informational purposes only and may contain technical inaccuracies, omissions, and typographical errors. The information contained herein is subject to change and may be rendered inaccurate for many reasons, including but not limited to product and roadmap changes, component and motherboard version changes, new model and/or product releases, product differences between differing manufacturers, software changes, BIOS flashes, firmware upgrades, or the like. Any computer system has risks of security vulnerabilities that cannot be completely prevented or mitigated. AMD assumes no obligation to update or otherwise correct or revise this information. However, AMD reserves the right to revise this information and to make changes from time to time to the content hereof without obligation of AMD to notify any person of such revisions or changes.

THIS INFORMATION IS PROVIDED "AS IS." AMD MAKES NO REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE CONTENTS HEREOF AND ASSUMES NO RESPONSIBILITY FOR ANY INACCURACIES, ERRORS, OR OMISSIONS THAT MAY APPEAR IN THIS INFORMATION. AMD SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT WILL AMD BE LIABLE TO ANY PERSON FOR ANY RELIANCE, DIRECT, INDIRECT, SPECIAL, OR OTHER CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF ANY INFORMATION CONTAINED HEREIN, EVEN IF AMD IS EXPRESSLY ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

COPYRIGHT NOTICE

AMD, the AMD Arrow logo, Solarflare, Onload, OpenOnload, and combinations thereof are trademarks of Advanced Micro Devices, Inc. PCIe® is a trademark of PCI-SIG Corporation. Other product names used in this publication are for identification purposes only and may be trademarks of their respective companies. © 2025 Advanced Micro Devices, Inc. All Rights Reserved.