

XFMEXPRESS™

New technology for removable PCIe® attached, NVMe™ memory devices

With a new form factor and an innovative connector, XFMEXPRESS™ delivers an unparalleled combination of features designed to revolutionize ultra-mobile PCs, IoT devices and several embedded applications. Recognizing the need for a new class of removable storage, KIOXIA leveraged its extensive background in single package memory designs to develop XFMEXPRESS™ technology and offer these key features:

Game-Changing Serviceability

XFMEXPRESS™ technology enables a new category of small memory devices and SSDs that are easy to service or upgrade.

Mobile-Friendly Footprint

The XFMEXPRESS™ form factor's no-compromise size and low profile (14mm x 18mm x 1.4mm) offers a 252mm² footprint⁽¹⁾, optimizing the mounting space for ultra-compact host devices without sacrificing performance or serviceability. With this minimized z-height, the XFMEXPRESS™ form factor creates new design possibilities for next-generation applications and systems.

Leading-Edge Performance

Designed for speed, XFMEXPRESS™ technology implements a PCIe® 3.0, NVMe™ 1.3 interface with 2 lanes (2L), supporting up to 2GB/s theoretical bandwidth in each direction, and up to 4GB/s in each direction for next generation use-cases⁽²⁾. XFMEXPRESS™ technology's performance capabilities and durable form factor provide a compelling alternative to the status quo, enabling superior computing and entertainment experiences.

Flexible, Future-Proof Design

XFMEXPRESS™ technology offers the necessary flexibility and scalability to stand the test of time. It is both PCIe® 3.0 and 4.0 capable and is designed to deploy current and future 3D flash memory sizes, ensuring that products using the XFMEXPRESS™ form factor can scale with the market.



Product image may differ from the actual product.

Key Features

- KIOXIA 96-Layer BiCS FLASH™
- PCIe® Gen3 x2, NVMe™
- Capacities up to 1,024 GB
- Small Form Factor with Low Profile
- Removable Design with Innovative Hinge Connector and Screw-less Locking Mechanism

Key Applications

- Notebook PC as thin and light 2-in-1
- Industrial, IoT, Industry 4.0 and 5G
- Automotive
- Portable Storage, Security Cameras, Gaming

Specifications

Form Factor		XFMEEXPRESS™ W:14mm x D:18mm x H:1.4mm
Weight	0.8g (including connector 1.6 g)	
Capacity	M.2 2280-S2 Single-sided	
IF	Gen3x2 PCI® Express Base Spec. Rev. 3.1a	
Command Protocol	NVMe™ 1.3b	
NAND Generation	BiCS FLASH™	
DRAM	None	
HMB	Support	
Theoretical Bandwidth	Up to 2GB/s	
Power	Power State	OPS: PS0, PS1, PS2 NOPS: PS3, PS4
	APST	Support
Power Supply	2.5 / 1.8 / 1.2 V	

(1) 22.2mm x 17.75mm x 2.2mm drive + connector

(2) Theoretical speeds based on PCIe® spec of 8GT/s per lane on PCIe® 3.0 and 16GT/s per lane on PCIe® 4.0. KIOXIA defines a gigabyte (GB) as 1,000,000,000 bytes.

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