

# LSI Fusion-MPT™ Architecture

Fusion-MPT – Faster, Simpler, Versatile and Proven!



### KEY BENEFITS

#### UNRIVALED I/O PERFORMANCE

- Fusion-MPT™ architecture off-loads system processor
- Truly scalable architecture
- Thinner operating system drivers reduce I/O overhead
- Optimized messaging interface streamlines I/O transactions

#### FASTER TIME-TO-MARKET

- Open architecture eases driver development
- Thinner simpler drivers cut development time
- Single OS device driver

Fusion-MPT architecture marks the next generation of I/O architecture designed to deliver the highest performance available today while reducing time to market, integration, and certification time. Based on industry standard ARM® processor technology, the LSI Fusion-MPT technology supports Ultra320 SCSI, Fibre Channel, and Serial Attached SCSI (SAS), and is designed to be extensible to other physical interfaces as they emerge. Fusion-MPT architecture, the culmination of several generations of intelligent interface controllers, is available today and is shipping on the LSI Ultra320 SCSI, Fibre Channel, and SAS products.

### Description

The main elements of Fusion-MPT architecture are Fusion-MPT firmware, the SAS, U320 SCSI, and Fibre Channel hardware cores, and the operating system level drivers that support these technologies.

#### Fusion-MPT Host Device Driver

Fusion-MPT architecture has the unique feature of having a single device driver that supports all Fusion-MPT based I/O controllers. LSI provides a complete suite of industry standard operating system drivers.

Figure 1. Fusion-MPT Architecture

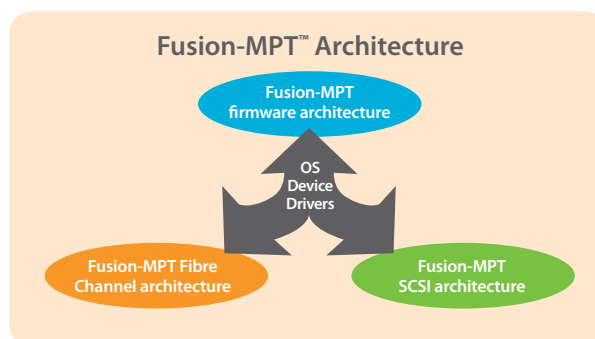
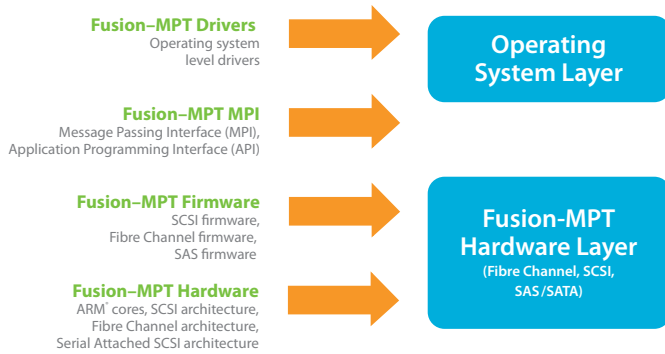


Figure 2. Fusion-MPT Architecture Diagram



### Fusion-MPT Message Passing Interface

The program interface for the LSI Fusion-MPT architecture is available for embedded system developers or systems designers who wish to develop their value added operating systems level device drivers for the LSI Fusion-MPT based I/O products. The message passing interface provides a message passing transport architecture that defines the host interface use by all LSI Fusion-MPT Chipsets. LSI provides a software development kit for developers who wish to develop their own drivers for these controllers.

### Fusion-MPT Firmware

The LSI U320 SCSI, SAS and Fibre Channel controllers contain firmware that presents a multi-protocol service layers based on the LSI Fusion-MPT architecture. The firmware isolates the host drivers from the hardware and controls the device side of the message passing interface to the host drivers.

### Fusion-MPT Hardware

The Fusion-MPT hardware encapsulates various technologies that deliver new levels of performance. GigaBlaze® transceivers are utilized in the Fusion-MPT technology based Fibre Channel and SAS products. LVDlink™ transceivers ensure robust, high-performance SCSI transfers in the Fusion-MPT U320 SCSI product family.

### Fusion-MPT Performance

Fusion-MPT technology delivers industry leading performance due to hardware components such as GigaBlaze transceivers, sophisticated I/O pads, high -performance ARM processors, and streamlined firmware architecture optimized for efficient message passing. Unparalleled performance, easy adoption, and an open program interface allow for reduced software development, seamless integration and certification time and reduced time to market benefits.

### KEY FEATURES

- Fusion-MPT architecture
  - Based on industry standard ARM technology
  - Supports
    - Ultra320 SCSI
    - Fibre Channel
    - Serial Attached SCSI
- Faster
  - High performance ARM based architecture
- Simpler
  - One device driver supports all Fusion-MPT based I/O controller



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