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Universal Flash Storage Host Controller Interface (UFSHCI), Unified Memory Extension

Version 1.0

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UNIFIED MEMORY EXTENSION, Version 1.0**

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Foreword

This Unified Memory Extension standard is an extension to the UFSHCI standard, JESD223.

Introduction

The UFSHCI standard defines the interface between the UFS driver and the UFS host controller. In addition to the register interface, it defines data structures inside the system memory, which are used to exchange data, control and status information. Furthermore the UFSHCI standard defines the protocol layer structure and abstract entities within these layers.

Unified Memory offers the possibility to move Device internal working memory into the system memory to reduce overall system cost and to improve Device performance.

The Unified Memory feature impacts Host and Device side. This standard, UFSHCI Unified Memory Extension, describes the requirements to implement Unified Memory functionality in a UFS Host Controller. It is based on the “UFS Unified Memory Extension” standard, which describes the general Unified Memory protocol.

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1 Scope

This document provides a comprehensive definition of the requirements for implementation of a UFS Host Controller, which supports the optional Unified Memory extension.

2 Normative Reference

The following normative documents contain provisions that through reference in this text, constitutes provisions of this standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

[MIPI-UniPro], *MIPI Alliance Specification for Unified Protocol (UniProSM), Version 1.6*

[SAM], *INCITS T10 draft standard: SCSI Architecture Model – 5 (SAM–5)*

[UFSHCI], JEDEC JESD223B, *Universal Flash Storage Host Controller Interface (UFSHCI), Version 2.0*

[UFS], JEDEC JESD220B, *Universal Flash Storage (UFS), Version 2.0*

[UFS-UME], JEDEC JESD220-1, *UFS Unified Memory Extension, Version 1.0*