

# MA8168A

## USB 2.0 SD/MMC/MS/xD/CF Card Reader Controller

### Description

The MA8168A is a new generation high performance USB 2.0 multiple slots single Lun (Logical Unit Number) card reader which supports multiple cards which includes most updated Secure Digital Card (SD3.0), MultiMedia Card, xD-Picture Card, Memory Stick, Memory Stick Pro, Memory Stick PRO-HG Duo, MemoryStick XC-HG, Compact Flash, Smart Media Card, and Micro Drive.

The MA8168A integrates USB 2.0 transceiver, MCU, DC-DC regulators and memory card access unit into a single chip. In order to provide best performance, MA8168A integrates a high speed 8051 microprocessor and a high efficiency hardware engine for best data transfer performance between USB and various memory card interfaces.

In order to meet market standard, MA8168A integrates power MOSFET to improve ESD performance, over current protection design to prevent from short current. For reducing BOM cost, MA8168A reserves flexibility to remove external 12Mhz Crystal on PCB, which means the clock source is generated from MOAI's proprietary on chip clock design.

### Features

#### ◆ USB

- USB Specification Rev. 2.0
- USB Device Class for Mass Storage Bulk Only Transport Specification Rev. 1.0.
- USB Bus-powered
- Support Suspend, Remote Wake-up and Wake-up Resume
- Integrated USB 2.0 UTMI transceiver and Serial Interface Engine (SIE)
- Endpoint:
  - ✓ Endpoint 0: 64 bytes control transfer.
  - ✓ Endpoint 1: 512 bytes bulk transfer for IN transaction.
  - ✓ Endpoint 2: 512 bytes bulk transfer for OUT transaction.

### **Prolific Technology Inc.**

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◆ **SD/MMC**

- Support Secure Digital Card (SD) specification v1.0/v1.1/v2.0/v3.0 UHS-1 for SDR50 & DDR50.
- Support up to 2 TB SDXC card capacity.
- Support MMC 4.0/4.1/4.2/4.4 (4 bit & 8bit), RS-MMC, and MMC-Mobile.
- Complies with Multi-Media Card specification 3.3/4.4
- Automatic CRC7 generation for command and CRC7 verification for response on CMD
  - ✓ Support automatic CRC16 generation and verification on DAT7-0

## Package

LQFP48

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