DATA SHEET

Part No.	MVCA1Z MVCA2Z
Package Code No.	

MVCA1Z, MVCA2Z

SD Card Host IP

■ Overview

The SD Memory Card, which is being jointly developed by Matsushita Electric Industrial Co., Ltd., Toshiba Corporation and SanDisk Corporation, is a memory card with a copyright protection function. Matsushita was the first company to develop an SD host I/F controller embedded with an authentication and cryptographic calculation module. We ensured the quality of the controller by detailed verification with the RTL and an evaluation board. Finally, we designated the controller as IP (Intellectual Property) by means of careful documentation and have maintained the design data which is easily reusable.

We have design support of this IP by collaboration with Toppan Printing Co., Ltd.

High performance, high quality and many IP reuse/adopt results have been widely praised, and an LSI IP Design Award has been granted to this IP.

■ Feature

- CPRM (Content Protection for Recordable Media*) function implementation with SD host device is easy to use with hardware IP.
- SD host device has low power consumption with SD audio header analyze function.
- With CPRM IP(MVCA1Z) or without CPRM IP(MVCA2Z) are freely selectable.

■ Applications

Any SD memory Card Host Device (cellular phone/PDA/DSC, etc.)

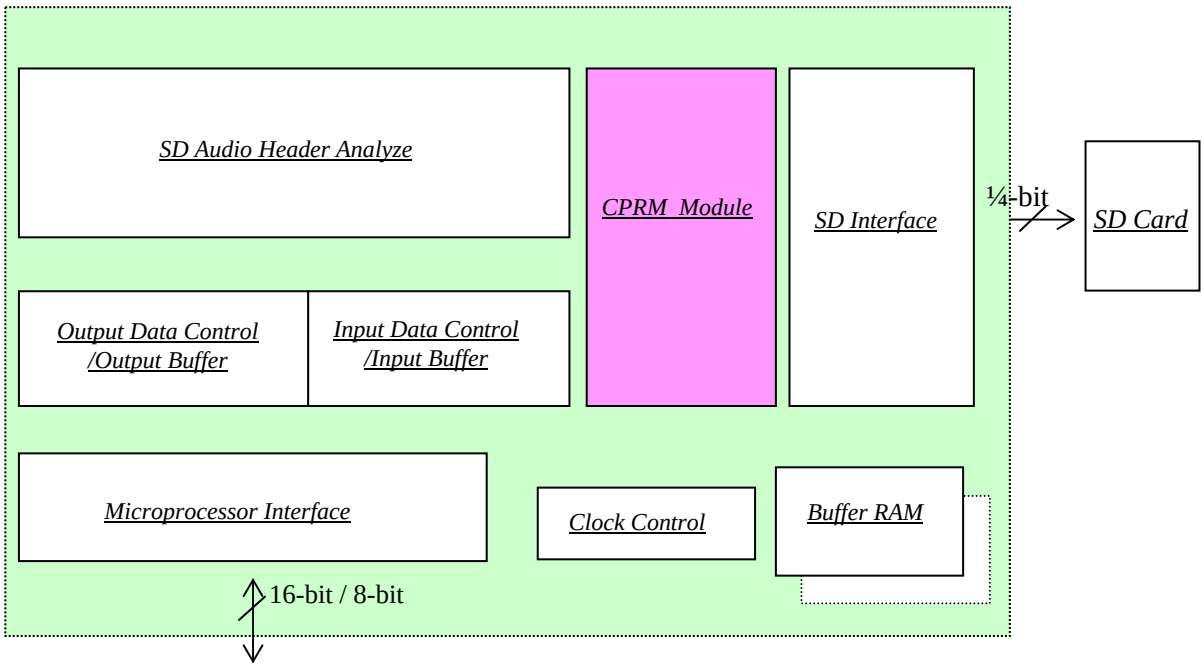
■IP deliverable

- Verilog-HDL RTL source code for function simulation
- Verilog-HDL RTL source code for synthesis
- Verilog-HDL test-bench/test-pattern source code for function simulation
- Verilog-HDL source code for function simulation
- Encrypted CPRM function model for function simulation
- Execution script
  simulation execute script, synthesis script, etc.
- Implementation tool for CPRM
- Sample software
  Card driver, file system, authentication library
- Documentation
  register specifications, implementation manual, function specifications, How to implement CPRM, etc.

* CPRM is a copy protection technology. It is developed by 4C Entity, LLC.

Note : The detailed information for this product is disclosed after non-disclosure agreement between your company and MEI.

■ Block diagram



■ IP functions

IP original function	SD I/F, CPU I/F	▪ Full support for SD memory / IO card interface ▪ Can select single buffer or double buffer (SD card to Host interface buffer) ▪ Support 16-bit / 8-bit CPU interface, Fixed cycle or Handshake
	CPRM	▪ Host IP implement authentication and secure access with hardware
	SD audio	▪ Includes Header analyze function ▪ SD Audio 1.1 Move, Preview support ▪ Available for play during download
	Low power	▪ For standby mode (Card not inserted) Available for card detection by supply only card detection clock ▪ Available for gated clock control of each function unit

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