JMB381
PCI Express to x2 1394a Host Controller

Overview

JMB38X is product family that includes 1394a OHCI and Memory Card Reader Host Controller. They are all 1-lane PCI Express to 1/2-port 1394a and 1-slot Combo Memory Card Reader (SD/MMC/MS/xD) Host Controller. The table below shows the brief feature lists of JMB38X product family.

	JMB380		JMB388		JMB381		JMB385		JMB387		JMB389			
Host IF	PCIe		PCIe		PCIe		PCIe		PCIe		PCIe			
1394a IF	x1 Port		x1 Port		x2 Port		None		None		None			
Card Reader	x1 Combo**		x1 Combo**		None		x1 Combo**		x1 Combo**		x1 Combo**			
Package	QFN48		QFN48		LQFP48		LQFP48 /QFN48		LQFP48		LQFP48 /QFN48			
Version	--	C	A	B	--	C	B	C	A	B	A	B	C	D
On-board Application	--	V	V	X	--	V	V	V	V	X	V	X	V	X
Add-on / Express Card Application	--	X	X	V	--	V	X	X	X	V	X	V	X	V
SDXC UHS-1	--	X	V	V	--	X	X	X	X	X	V	V	V	V
D3E	--	V	V	X	--	X	V	V	V	X	V	X	V	X
EEPROM	--	X	X	V	--	V	X	X	X	V	X	V	X	V
Boot Function	--	X	V*	X	--	X	X	X	V	V	V	X	X	V
CR1_CD2	--	V	V	X	--	X	X	V	V	X	V	X	V	X
Co-layout	Co-layout													

(*): JMB388 has no SPI interface on chip, it needs BIOS support

(**): "Combo Memory Card Reader Mechanism" supporting SD/MMC/MS/MS Duo/MS-HG (1/4/8-bit) & xD.

Feature

Compliance

- Compliant with PCI Express Base Spec. Revision 1.1
- Compliant with 1394 Open Host Controller Interface (OHCI) Release 1.1

Overall

- Integrated 1-Lane PCI Express PHY (2.5Gbps) and 2-port 1394a PHY (100/200/400Mbps)
- Integrated two PLL for both PCI Express bus and 1394a interface
- Output swing control and Automatic impedance calibration for both PCI Express and 1394a PHY
- Fabricated 0.18um/3.3V CMOS Standard Logic Process with single 3.3V power source

PCI Express

- Supports 1-Lane 2.5Gbps PCI Express bus
- Internal native interface multiplexed to OHCI and Memory Card (SD/MMC/MS/xD)
- All registers of Memory Card accessible in unified memory space

1394a

- Supports 1394a PHY hub function between 2-port
- Supports Hot Plugging on 1394a port

Peripherals Components

- Supports External Serial EEPROM

DOS Utility

- Provide Serial EEPROM DOS Update Utility
- Provide GUID Setting DOS Program Utility for Main BIOS

Related Product Information

Name	Description	Controller
JMB380	PCI Express to x1 Combo Memory Card and x1 1394a	Host Controller
JMB381	PCI Express to x2 1394a	Host Controller
JMB385	PCI Express to x1 Combo Memory Card	Host Controller
JMB387	PCI Express to x1 Combo Memory Card (with SD Boot function)	Host Controller
JMB388	PCI Express to x1 Combo Memory Card and x1 1394a (SDXC UHS-1 compliant)	Host Controller
JMB389	PCI Express to x1 Combo Memory Card (SDXC UHS-1 compliant)	Host Controller

Supporting Document

1	Product Brief
2	Data Sheet
3	Hardware Design Guide
4	Application Schematic

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