

# DiskOnModule

## Hi-Speed DJ Series



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**Revision History**

<b>Revision</b>	<b>Date</b>	<b>History</b>	<b>Remark</b>
A.0	05/23 '05	First document announced	
A.1	09/06 '05	To add multi-word DMA data	
A.2	01/10 '06	Add new Disk capacity	
A.3	07/03 '06	Modify the format	

"PQI reserves the right to make changes without notification when fit, form, function, quality and reliability are not affected. The data sheets do not constitute contract documents and should not be considered part of the specification for purposes of any warranty."

## 1. Description

PQI's **DiskOnModule** based on NAND type flash memory controller technology. This product complies with 40 PIN IDE (ATA) standard interface and is suitable for data storage memory medium for portable system. By using **DiskOnModule** it is possible to operate good performance for the portable system which have IDE interface slots.

## 2. Features

- High Performance
- Non-volatile Flash Memory  
The DOM is implemented by using NAND type flash memory, which is a high density, non-volatile read/write device. Flash data retention is guaranteed for at least 10 years, with no battery or other power source required.
- 100% True Mode IDE HDD Compatible
- Broad Operating System and Processors Supports
- Capacities 32Mbytes-6Gbytes
- Low Power Consumption
- Robust Error Correction
- High Reliability

## 3. Introduction

### 1. About This Manual

This manual provides instructions for the installation and specification of PQI's **DiskOnModule**, **DiskOnModule** is designed for use in PCs, and their respective compatible computers.

### 2. What is DiskOnModule?

PQI's **DiskOnModule** is a storage device based on flash memory technology, which emulates an ordinary magnetic hard disk. The **DiskOnModule** series products provide an all in one module solution for solid-state flash disk. The **DiskOnModule** is suitable for use in portable and embedded systems which have limited space and power consumption.

Unlike standard IDE drives, no signal cable and extra, special space is required. The **DiskOnModule** is a solid-state solution for IDE Hard Disk drive, which has no moving parts. That provides a good stability in a moving system. The **DiskOnModule** products are also free from extra and special algorithm or some firmware driver. Just plug the **DiskOnModule** into the IDE slot and play it, users can play the **DiskOnModule** as same as the Hard Disk Drives.

The **DiskOnModule** family provides the capacities ranging from 32MB up to 8GB. In the future, the capacity will be increased up to 16GB.

#### 4. Specification

Environment Specifications		
Temperature	Operating	0°C to +70°C
	Non-Operating	-40°C to +85°C
Relative Humidity		8% to 95% (with no condensation)
Vibration	Operating	15G
	Non-operating	15G
Shock	Operating	1000G
	Non-operating	1000G
Configuration		
Capacity		32Mbytes to 6Gbytes
Sector size		512Bytes
System Performance		
Media transfer rate	Write	> 5.4 MB/sec (typ.)*
	Read	> 6.7 MB/sec (typ.)*
Interface burst transfer rate		
PIO mode 4 Multi-Word DMA 2		16.6 MB/sec (max)
Reliability		
MTBF(@25°C)		1,000,000 hours
Read/Write Cycle		2,000,000 times
ECC		Two bytes per 256bytes
Power Requirement		
Voltage		DC+3.3V±5%(Option)
		DC +5.0V±10%
Power Consumption		
Read		< 15mA (typ.)
Write		< 20mA (typ.)
Sleep		< 3mA (typ.)
Dimensions		
Height		27.2mm ± 0.1mm
Width		59.2mm ± 0.1mm
Thickness		6.2mm± 0.1mm

\*The value is various bases on the testing platform.

**Capacity Specifications**

<b>Capacity</b>	<b>Cylinder</b>	<b>Head</b>	<b>Sector</b>	<b>Total sectors</b>
32MB	500	8	16	64000
64MB	500	8	32	128000
128MB	500	16	32	256000
256MB	1000	16	32	512000
512MB	1015	16	63	1023120
1024MB	2031	16	63	2047248
2048MB	4063	16	63	4095504
3072MB	6095	16	63	6143760
4096MB	8146	16	63	8211168
6144MB	12190	16	63	12287520

5. Physical outline

DJ0XXXX22XX0 (40 PIN)

