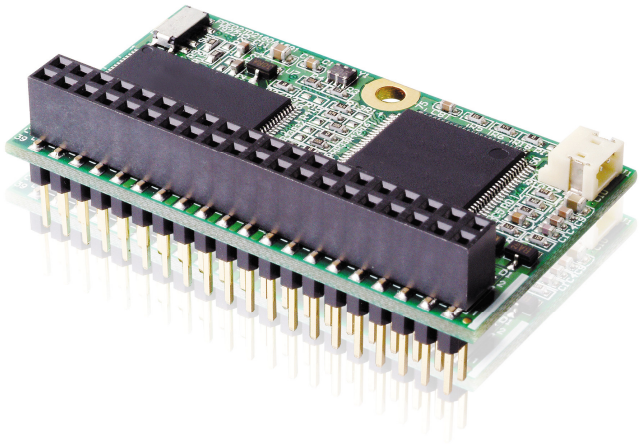
DiskOnModule

Standard DE & DE Wide Temp Series



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Revision History

Revision	Date	History	Remark
A.0	01/26 '05	First document announced	
A.1	08/30 '05	Correct Spec data	
A.2	07/07 '06	Modify the format	

1. Description

PQI's **DiskOnModule DE series** 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 32MB~2GB
- 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 4GB. In the future, the capacity will be increased up to 8GB.

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4. Specification

Environment Specifications		
Temperature(Industrial)	Operating Non-Operating	0℃ to +70℃ -40℃ to +85℃
Temperature(Wide Temp)	Operating Non-Operating	-40℃ to +85℃ -55℃ to +95℃
Relative Humidity		8% to 95% (with no condensation)
Vibration	Operating Non-operating	15G 15G
Shock	Operating Non-operating	1000G 1000G
Configuration		
Capacity		32Mbytes to 2Gbytes
Sector size		512Bytes
System Performance		
Media transfer rate *note 1	Read	4.3 MB/sec
	Write	3.3 MB/sec
Interface burst transfer rate		
PIO mode 2		8.3 MB/sec (max)
Reliability		
MTBF		2,000,000 hours
ECC		1bit random correction 2bits detection per each 256bytes
Power Requirement		
Voltage		DC+3.3V±5%
		DC +5.0V±10%
Power Consumption		
Read		30mA (typ.)
Write		28mA (typ.)
Stand by		3mA (typ.)
Dimensions		
Height		30.4mm ± 0.2mm
Width		55.0mm ± 0.2mm
Thickness		Depends on connector type

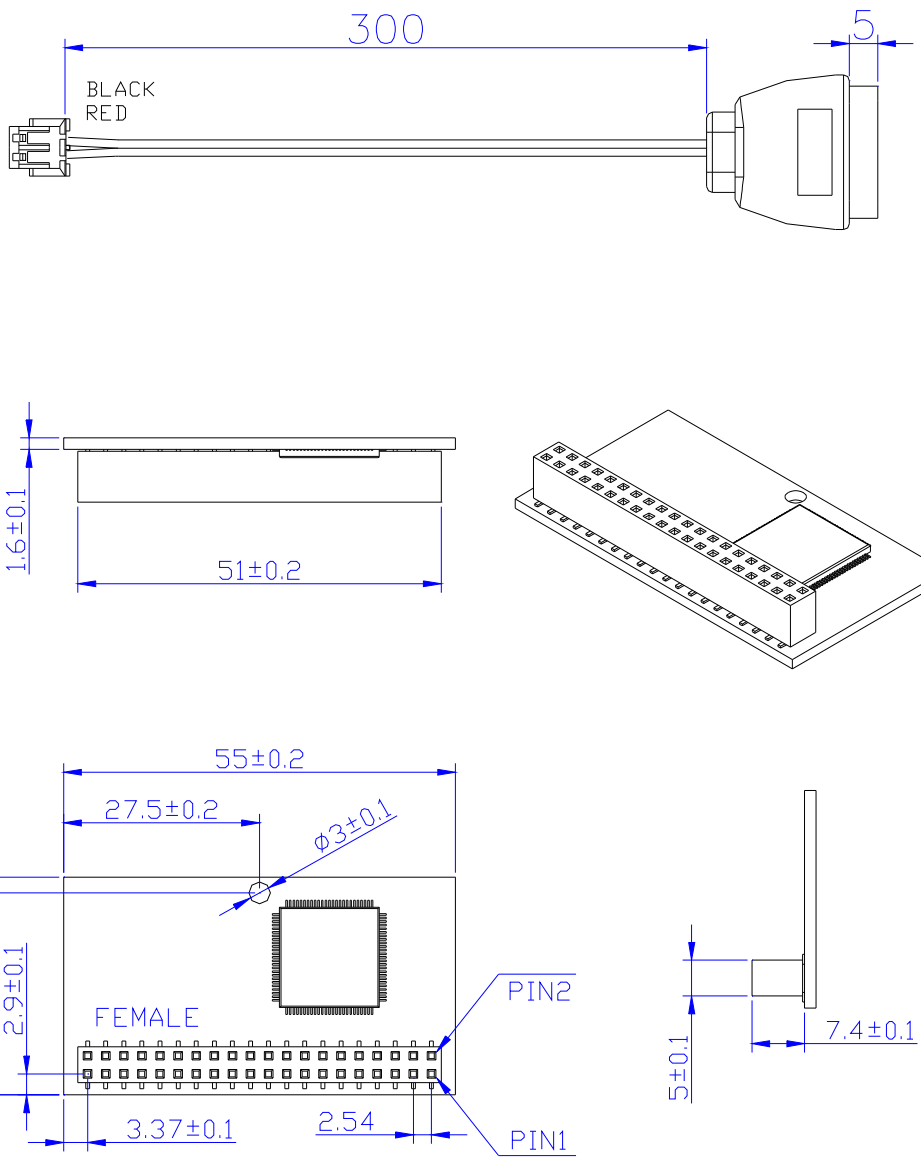
Note1: There will be different figures shown in different platforms

Capacity Specifications

Capacity	Cylinder	Head	Sector	Total sectors
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
1536MB	3047	16	63	3071376
2048MB	4063	16	63	4095504

5. Physical Outline

DE0XXXX44XX1 (40 PIN)



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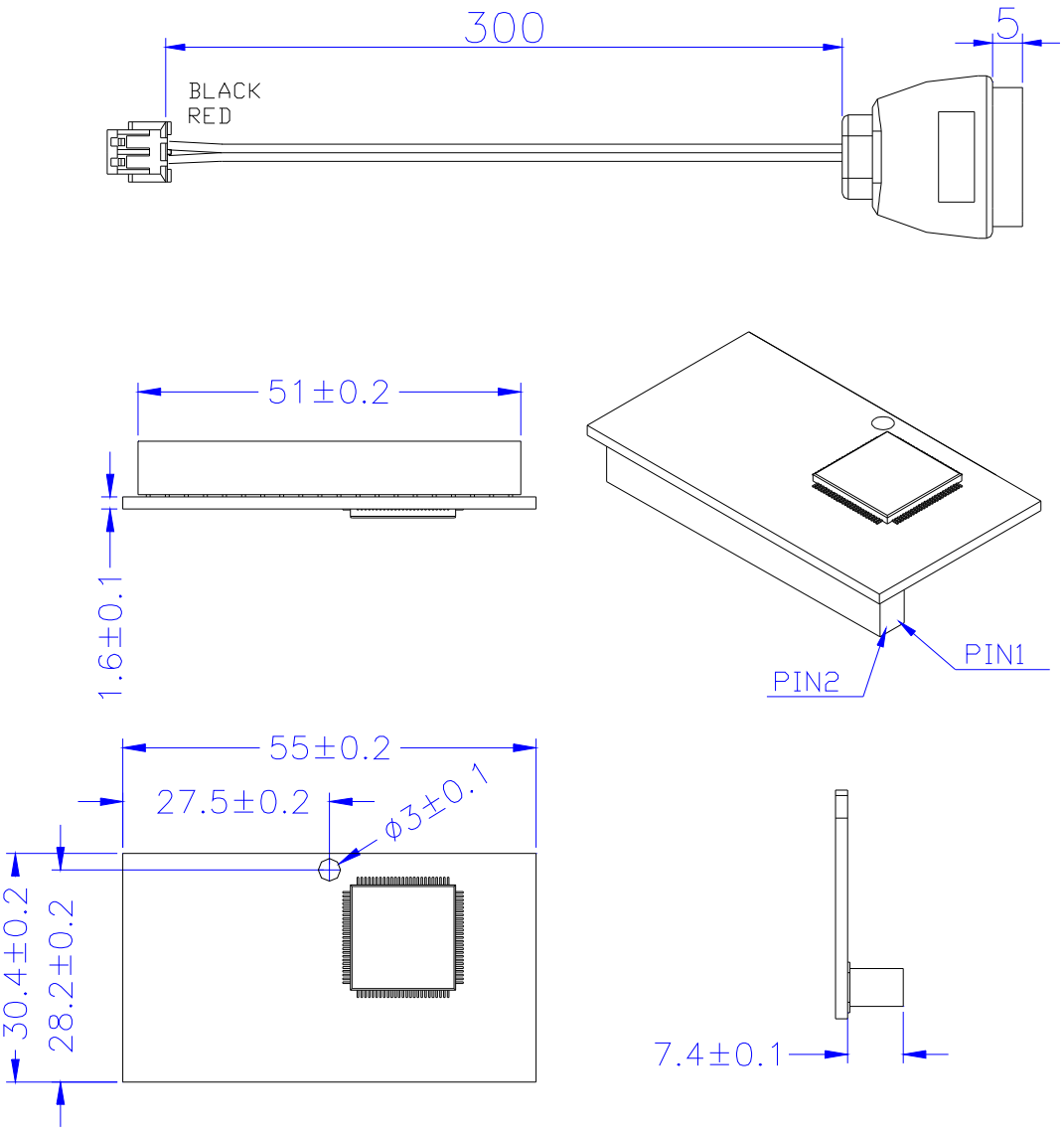

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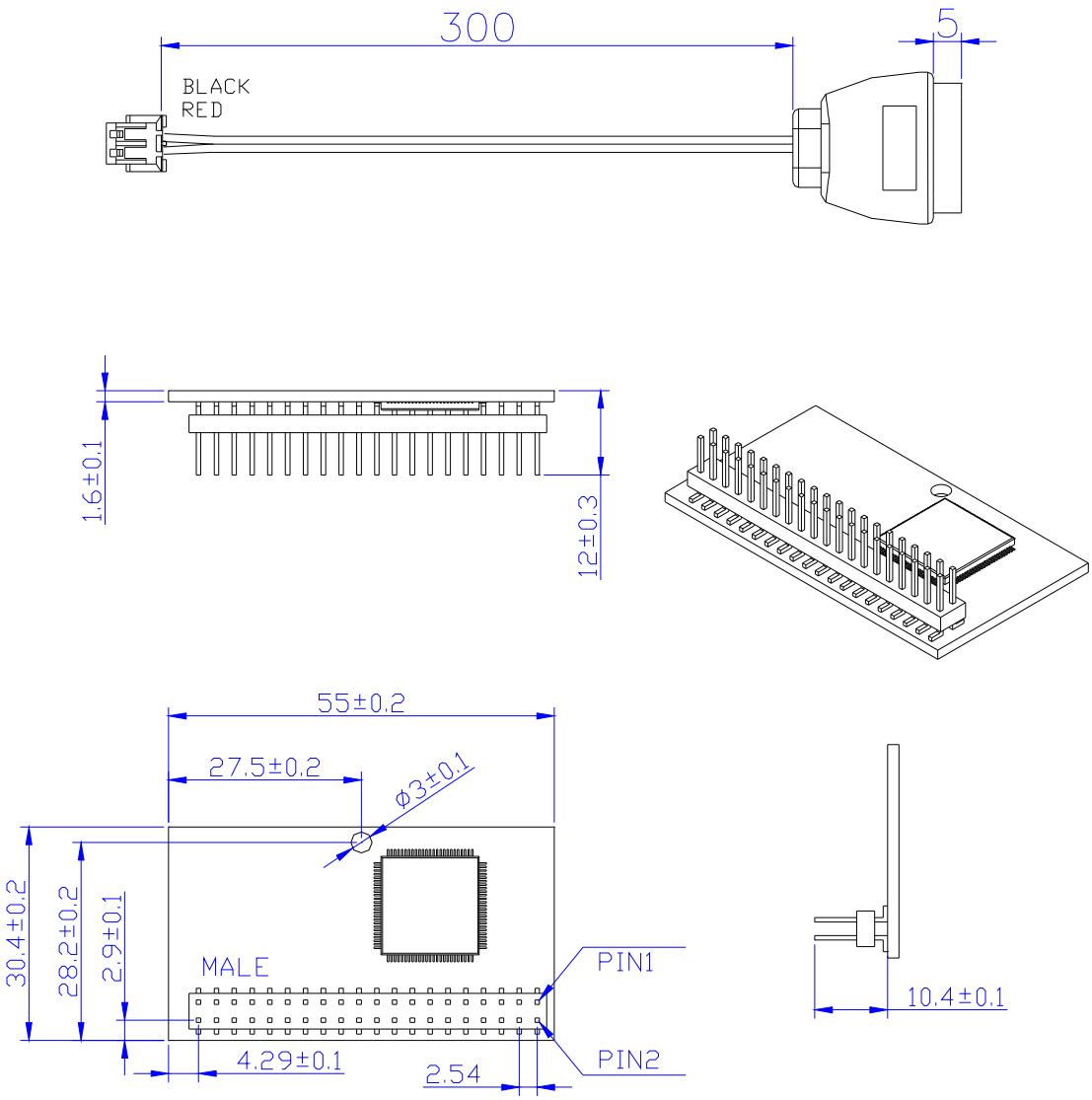

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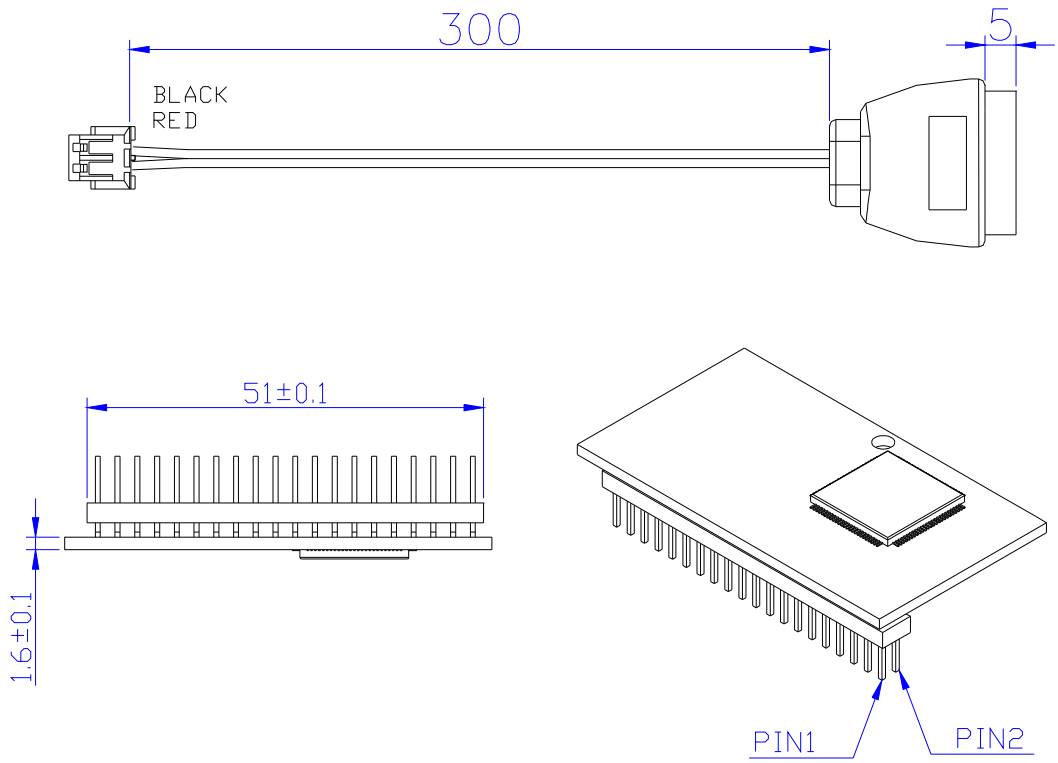

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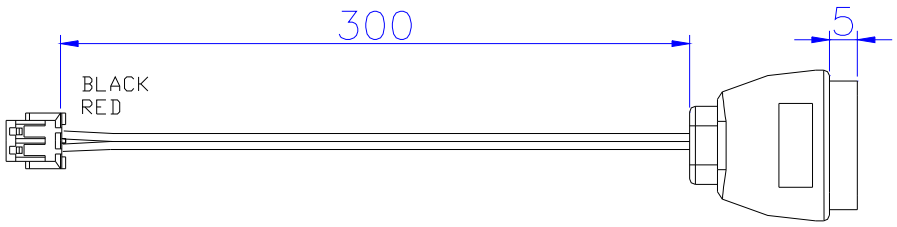

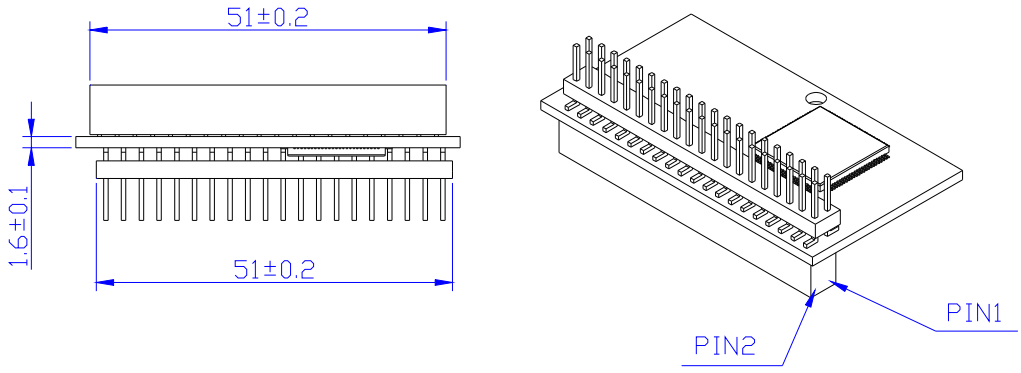

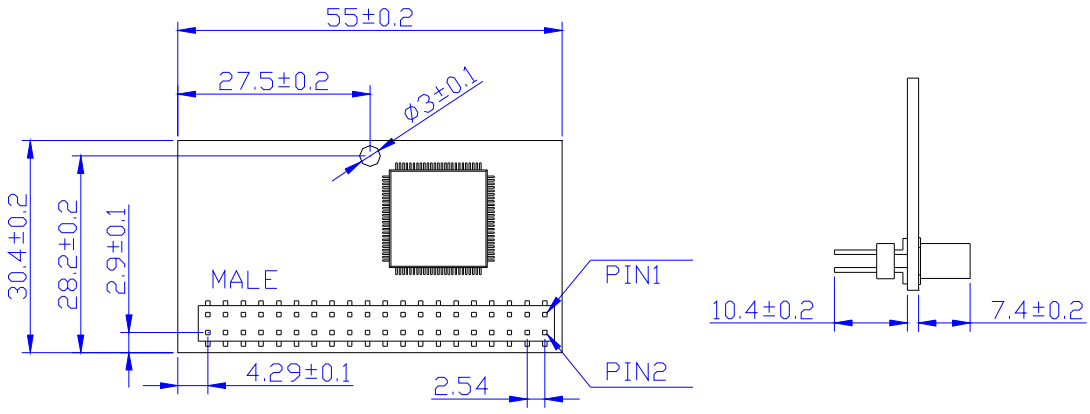

DE0XXXX44XX6 (40 PIN)