

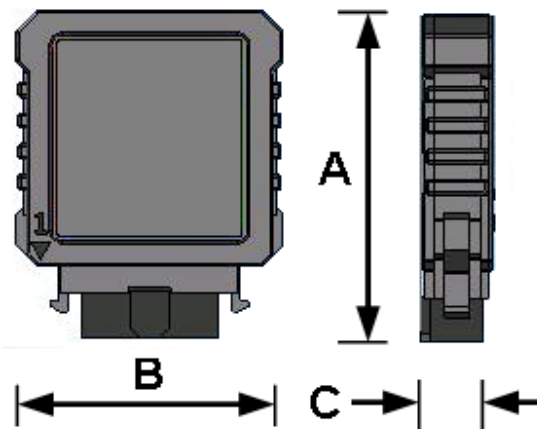
TS512M~4GUFM-V

512M~4GB USB Flash Module(Vertical)

Description

Transcend USB Flash Module, available in memory capacities from 512MB – 4GB. A USB Flash Module is ideal for use in the harsh environments where Industrial PCs, Set-Top Boxes and other systems are used.

Outline



Features

- RoHS compliant products
- Hi-Speed USB 2.0 compliant; backward compatible with USB 1.1
- True Plug and Play functionality
- Fully compatible with devices and Operating Systems (OS) that support the USB standard
- Integrated 80C51 compatible 8-bit microprocessor with enhanced feature
- Leading 0.16um CMOS technology, 1.8 Volt low power core operation
- Operates on a single power supply (Vdd = 5.0V)
- Support dual channel for Flash memory with enhanced performance
- Lower Power Consumption
- Fully compliant with open industry standards
- Write protection switch

System Requirement

- Hardware: An available 10-pin USB port (pitch = 2.54mm) on motherboard
- Operating System: Windows® 98SE, Windows® Me, Windows® 2000, Windows® XP, and Linux™ Kernel 2.4 or later

Dimensions

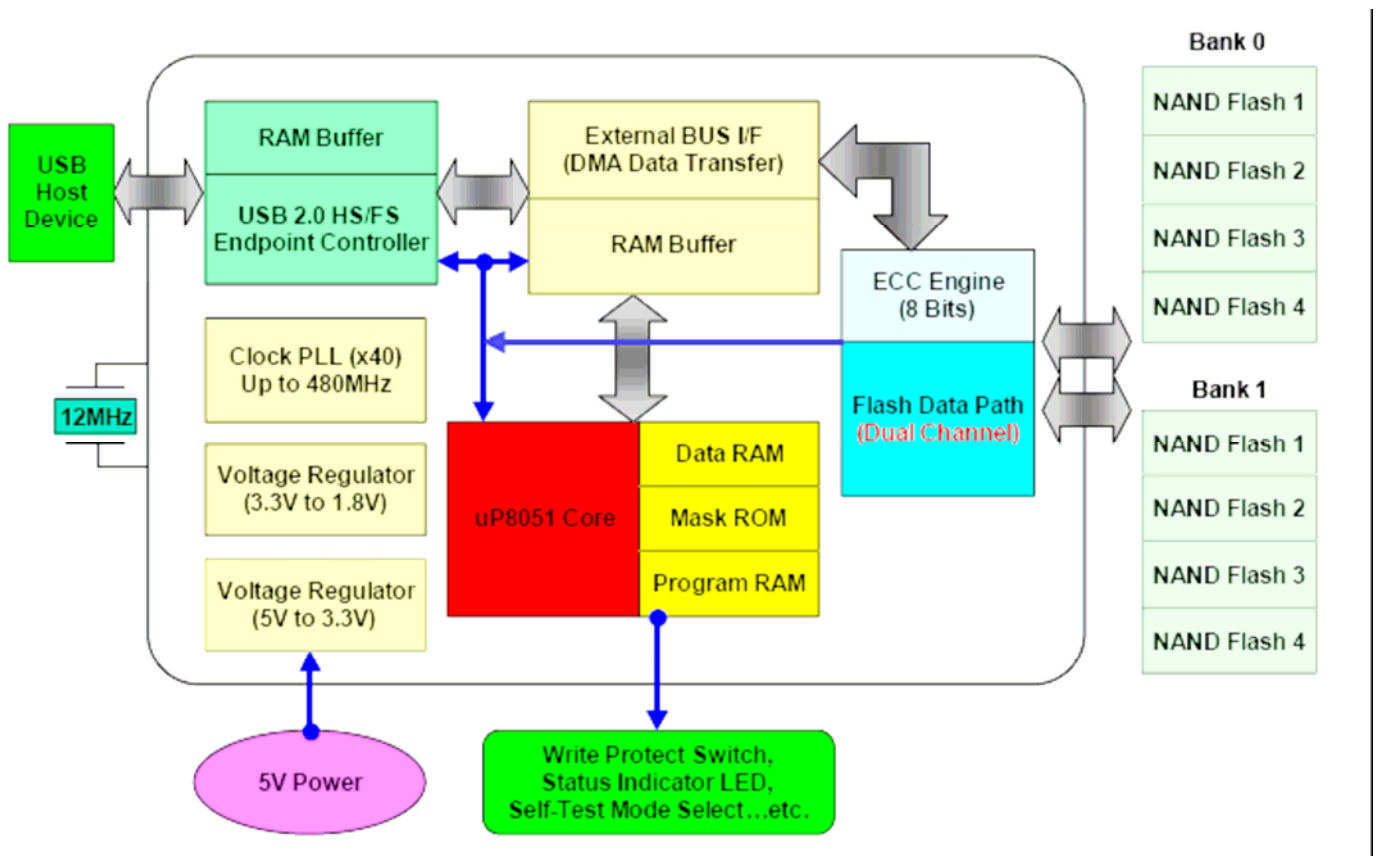
Side	Millimeters	Inches
A	31.80 ± 1.00	1.25 ± 0.04
B	26.00 ± 1.00	1.02 ± 0.04
C	7.00 ± 1.00	0.28 ± 0.04

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Block Diagram

USB Flash Drive controller



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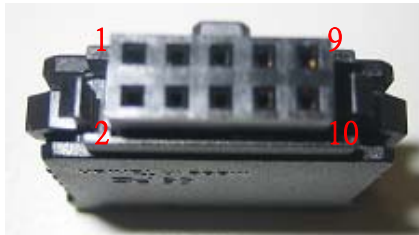
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Pin Outs

Pin No.	Pin Name
01	VCC
02	NC
03	USB(-)
04	NC
05	USB(+)
06	NC
07	VSS
08	NC
09	NC
10	NC

Pin Identification

Symbol	Function
USB(-)	USB differential signal: The pairs are used to transmit Data/Address/Command
USB(+)	
VSS	Ground
VCC	USB power input
NC	No connection



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Specifications

Environment		
Capacity		512MB~4GB
Temperature	Operating	0 °C to 70 °C
	Non-Operating	-40 °C to 85 °C
System Performance	Dual-Channel Read	33 MB/sec (Max.)
	Dual-Channel Write	20 MB/sec (Max.)
Power Requirement	Voltage	DC 5V ± 10%
Data Retention		10 years
Connector Durability		10,000 times
Erase Cycles		>100,000 times

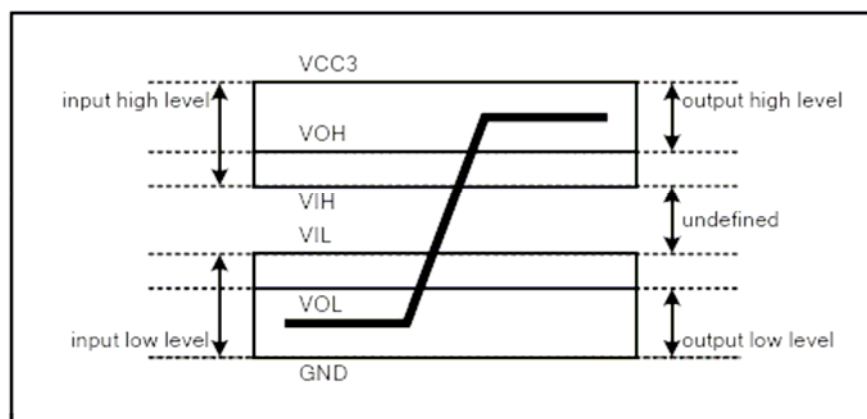
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AD/DC Characteristics

Parameter	Symbol	Min.	Max.	Unit	Remark
Peak voltage on all lines		-0.5	3.6	V	Except VCC5V input
All input leakage current		-10	10	uA	
All output leakage current		-10	10	uA	
Supply voltage	VCC3	2.7	3.6	V	

Bus Signal Level



Parameter	Symbol	Min.	Max.	Unit	Remark
Output High voltage	V_{OH}	2.4		V	
Output Low voltage	V_{OL}		0.4	V	
Input High voltage	V_{IH}	2.0		V	
Input Low voltage	V_{IL}		0.8	V	

Bus Signal Line Loading

Parameter	Symbol	Min.	Max.	Unit	Remark
Bus line capacitance	C_L		20	pF	

Above technical information is based on industry standard data and tested to be reliable. However, Transcend makes no warranty, either expressed or implied, as to its accuracy and assumes no liability in connection with the use of this product. Transcend reserves the right to make changes in specifications at any time without prior notice.