TS-RDS2

USB 2.0 Compact Card Reader

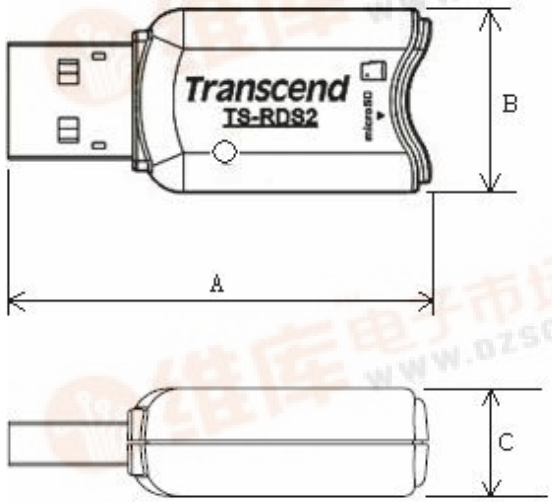
Description

TS-RDS2 is a USB 2.0 Compact Card Reader. It is a small device specifically designed for fast and easy data transfer. The Card Reader accepts the direct insertion of **microSD**™ Memory Cards.

Features

- Fully Compliant with the Hi-Speed USB 2.0 specification
- Supports the direct input of Memory Card: **microSD**™
- Hi-Speed Data transfer rates up to 480Mb/s
- USB powered (no external power or battery needed)

Placement



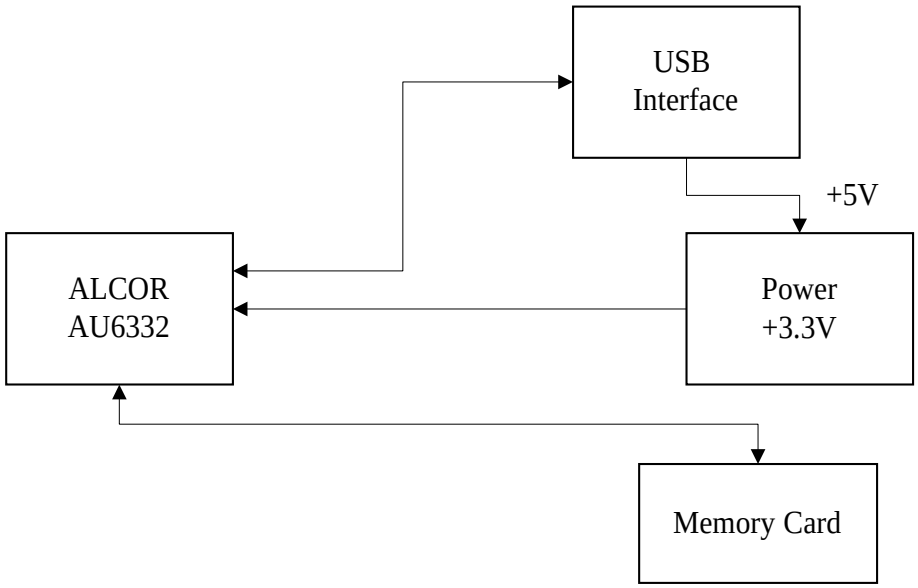
Dimensions

Side	Millimeters	Inches
A	44.00± 1.00	1.73±0.04
B	19.00±1.00	0.75±0.04
C	11.00±1.00	0.43±0.04

System Requirements

- Desktop or notebook computer with a working USB port
- One of the following Operating Systems:
  - Windows® Me
  - Windows® 2000
  - Windows® XP
  - Windows Vista™
  - Mac™ OS 9.0, or later
  - Linux™ Kernel 2.4.2, or later

Block Diagram



Pinouts

Pin No.	Pin Name
01	VCC
02	USB-
03	USB+
04	VSS

Pin Identification

Symbol	Function
USB- USB+	USB differential signal: The pairs are used to transmit Data/Address/Command
VSS	Ground
VCC	USB Power Input

Absolute Maximum Ratings

SYMBOL	PARAMETER	RATING	UNITS
V_{DDHM}	Power Supply	-0.3 to V_{DDHM} +0.3	V
V_{IN}	Input signal Voltage	-0.3 to 3.6	V
V_{OUT}	Output signal Voltage	-0.3 to V_{DDHM} +0.3	V
T_{STG}	Storage Temperature	-40 to 150	^{O}C

Recommended Operating Conditions

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS
V_{DDHM}	Power Supply	3.0	3.3	3.6	V
V_{DD}	Digital Supply	1.62	1.8	1.98	V
V_{IN}	Input signal Voltage	0	3.3	3.6	V
T_{OPR}	Operating Temperature	0		70	^{O}C

General DC Characteristics

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
I_{IN}	Input current	no pull-up or pull-down	-10	±1	10	µA
I_{OZ}	Tri-state leakage current		-10	±1	10	µA
C_{IN}	Input capacitance	Pad Limit		2.8		ρF
C_{OUT}	Output capacitance	Pad Limit		2.8		ρF
C_{BID}	Bi-directional buffer capacitance	Pad Limit		2.8		ρF

DC Electrical Characteristics of 3.3V I/O Cells

SYMBOL	PARAMETER	CONDITIONS	Limits			UNIT
			MIN	TYP	MAX	
V_{DDHM}	Power supply	3.3V I/O	3.0	3.3	3.6	V
V_{il}	Input low voltage	LVTTL			0.8	V
V_{ih}	Input high voltage		2.0			V
V_{ol}	Output low voltage	$\lvert I_{ol} \rvert$ =2~16mA			0.4	V
V_{oh}	Output high voltage	$\lvert I_{oh} \rvert$ =2~16mA	2.4			V
R_{pu}	Input pull-up resistance	PU=high, PD=low	55	75	110	KΩ
R_{pd}	Input pull-down resistance	PU=low, PD=high	40	75	150	KΩ
I_{in}	Input leakage current	V_{in}= V_{DDHM} or 0	-10	±1	10	μA
I_{oz}	Tri-state output leakage current		-10	±1	10	μA

Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
VD33	Analog supply voltage		3.0	3.3	3.6	V
VDDA VDDU	Digital supply voltage		1.62	1.8	1.98	V
I_{CC}	Operating supply current	High speed operating at 480 MHz			55	mA
$I_{CC(susp)}$	Suspend supply current	In suspend mode, current with 1.5kΩ pull-up resistor on pin RPU			120	μA

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.