

# **64Gbit T-Flash Specification**

## Contents

<b>1. Overview.....</b>	<b>3</b>
<b>1.1 Product Description.....</b>	<b>3</b>
<b>1.2 Features Summary.....</b>	<b>3</b>
<b>2. Pin Assignment.....</b>	<b>4</b>
<b>3. Product List.....</b>	<b>4</b>
<b>4. Current Consumption.....</b>	<b>5</b>
<b>5. Operational Environment.....</b>	<b>5</b>
<b>6. Physical Dimension.....</b>	<b>6</b>
<b>7. Recommended Schematic.....</b>	<b>7</b>
<b>8. Ordering Information.....</b>	<b>8</b>

## **1. Overview**

### **1.1 Product Description**

The T-Flash are highly integrated flash memories with serial and random access capability. Can be use in the device which can support SD2.0 standard. It is accessible via a dedicated serial interface optimized for fast and reliable data transmission. It has been developed to provide an inexpensive, mechanically robust storage medium in card form for multimedia consumer applications. T-Flash card allows the design of inexpensive players and drivers without moving parts. A low power consumption and a wide supply voltage range favors mobile, battery-powered application such as audio players, organizers, palmtops, electronic books, encyclopedia and dictionaries. Using very effective data compression schemes such as MPEG, the SD card will deliver enough capacity for all kinds of multimedia data.

### **1.2 Features Summary**

- Capacity: 64Gbit
- Complies to SD Specification V2.0
- Voltage range for communication: 2.7~3.6V
- Variable clock rate 0-25 MHz (standard), 0-50 MHz (high performance)
- Up to 25 MB/sec data transfer rate (using four parallel data lines)
- password protection (CMD42-LOCK\_UNLOCK)
- Sophisticated system for error recovery including a powerful ECC
- Global Wear Leveling
- Power management for low power operation

## 2. Pin Assignment

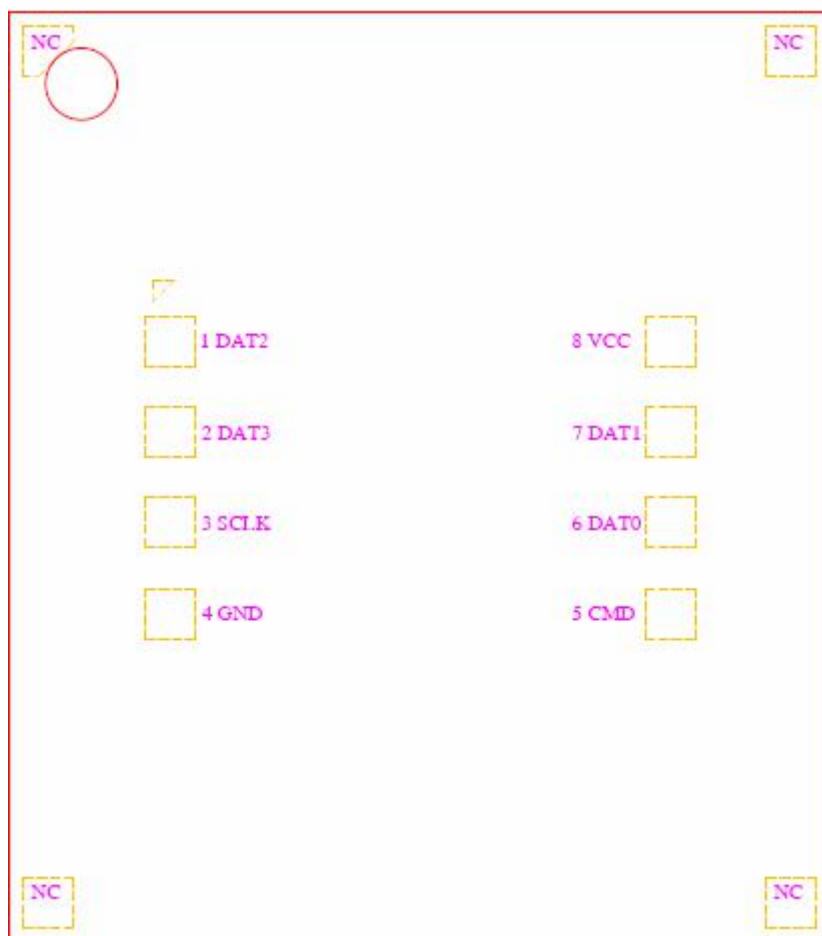


Figure 1:Top View

Pin No.	SD Mode		
	Name	Type	Description
1	DAT2	I/O/PP	Data Line [Bit 2]
2	DAT3	I/O/PP	Data Line [Bit 3]
3	SCLK	I	Clock
4	GND	S	Supply voltage ground
5	CMD	PP	Command/Response
6	DAT0	I/O/PP	Data Line [Bit 0]
7	DAT1	I/O/PP	Data Line [Bit 1]
8	VCC	S	Supply voltage

Table 1: Pin Assignment

### 3. Product List

	Capacity	Actual Size	Sequential R/W (Note1)	Package
	64Gb	7618MB	20 /16 MB/s	11.5*13.0 (mm)

**Table 2: Product List**

**note1:** Measurement based on RTS5308 card reader, HDBench V3.40 software

## 4. Current Consumption

Standby current: 250uA (Maximum value)

Standby current: 120uA (average value)

Operating current: 100mA (Maximum value)

Operating current: 50mA (average value)

\*Test condition: RTS5308 card reader (Voltage 3.3V), Fluke289c multi-meter.

## 5. Operational Environment

Parameter	Range	
Temperature	Operating	-25°C~85°C
	Non-Operating	-40°C~85°C
Humidity	Operating	25% to 85%, non-condensing
	Non-Operating	25% to 85%, non-condensing
Electrostatic Discharge (ESD)	IEC 61000-4-2 contact discharge: +/- 2[kV] and +/- 4[kV] 150[pF],330[Ohm] air discharge: up to +/- 15[kV] 150[pF], 330[Ohm]	

**Table 3: Operational Environment**

## 6. Physical Dimension

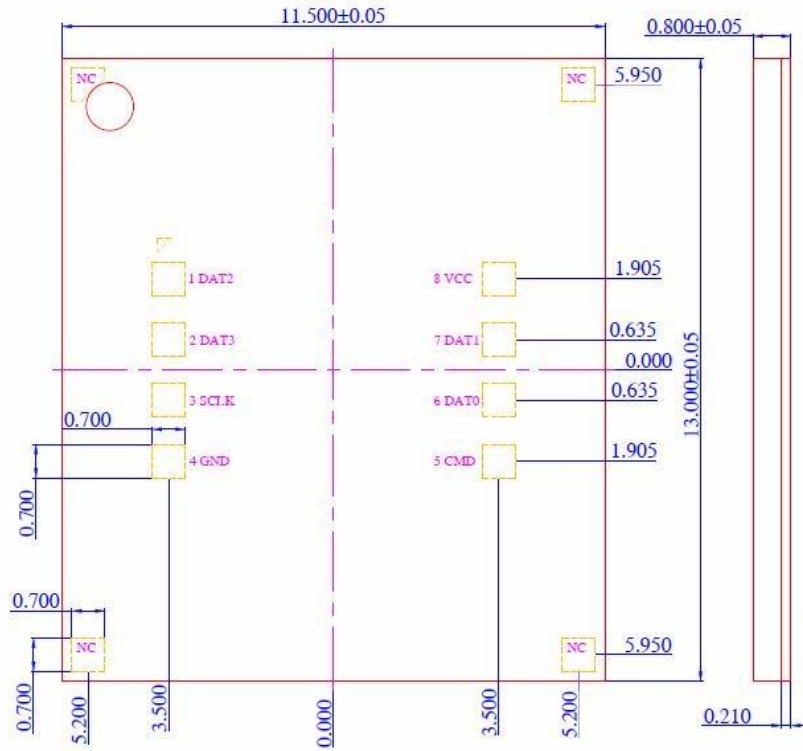


Figure 2: Top View and Side View (Unit:mm)

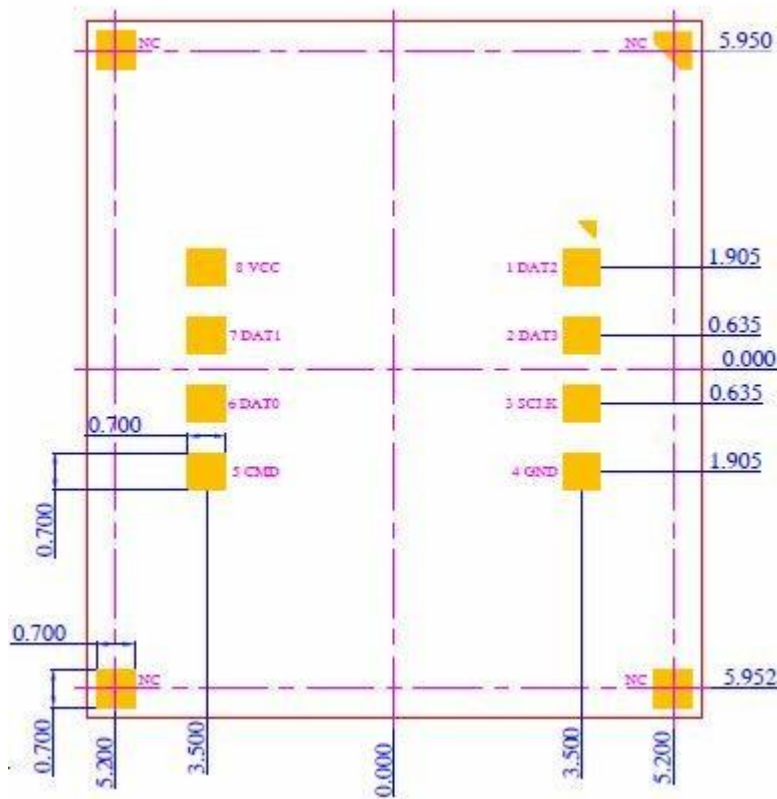
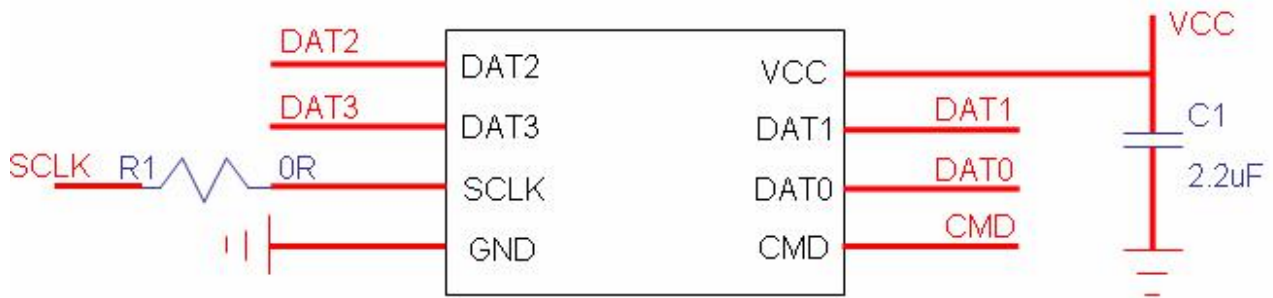


Figure 3: Bottom View (Unit:mm)

## 7.Recommended Schematic



**Figure 4: Recommended Schematic**

**Notice:**

1. SCLK should be reserved a position for a 0 ohm resistor.
2. Capacitor C1 should be connected with VCC as closely as possible.
3. We recommend that DAT 0, DAT 1, DAT 2, DAT 3, SCLK, CMD should be surrounded by GND.  
If not, please make sure the distance between lines is 2 times wider than the line width.
4. The pads in the middle are fixed, please connect GND.



## 8. Ordering Information

