

RoHS Compliant

SDC Design Guide

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Revision History

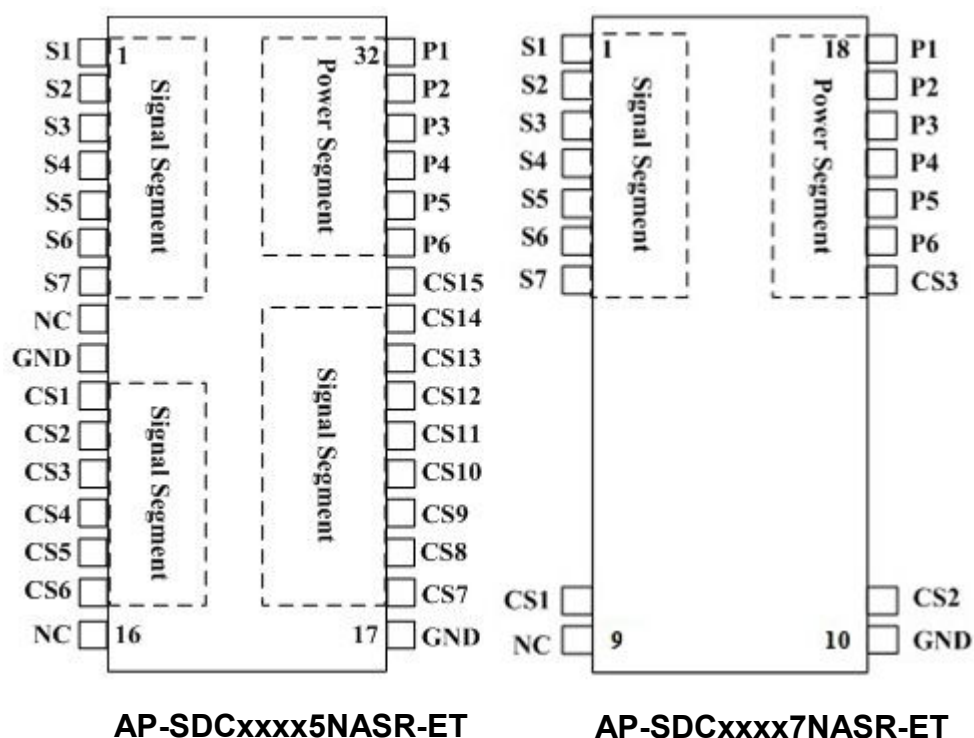
Revision	Date	Description	Remark
0.1	08/29/2008	Preliminary release	
0.2	09/05/2008	Updated physical dimensions	

Introduction

Apacer's SATA-Disk Chip (SDC) is well-built and designed for embedded flash memory data system with sturdiness. It is equipped with a built-in micro controller and file management firmware as well as packaged in either the standard 32-pin DIP or the specific 18-pin DIP for easy and economical mounting to a system board. This product is specialized in storage applications with expanded functionality and is a cost efficient replacement for a conventional arrangement.

There are two types of connectors for SDC: SDC (AP-SDCxxxx5NASR-ET) with 32-pin and SDC (AP-SDCxxxx7NASR-ET) with 18-pin.

SATA-Disk Chip Pin Assignment



Signal Description

P1~ P6 – Used to connect to power supply of 3.3 volts as the power segment.

S1~ S7 – This is a bi-directional data bus between the Host System and the SDC.

For AP-SDCxxxx5NASR-ET

CS1~CS5, CS8~CS14– Reserved.

CS6– Used to indicate serial ATA physical layer communication.

CS7– Used to indicate that SDC is active and usually connected to a LED indicator on the system to report activity.

CS15– Used to protect the SDC from being written. When WP# pin is low, the SDC is write-protected to prohibit any inadvertent writes.

For AP-SDCxxxx7NASR-ET

CS1– Used to indicate serial ATA physical layer communication.

CS2– Used to indicate that SDC is active and usually connected to a LED indicator on the system to report activity.

CS3– Used to protect the SDC from being written. When WP# pin is low, the SDC is write-protected to prohibit any inadvertent writes.

Schematic Reference

Fig.1 16x2

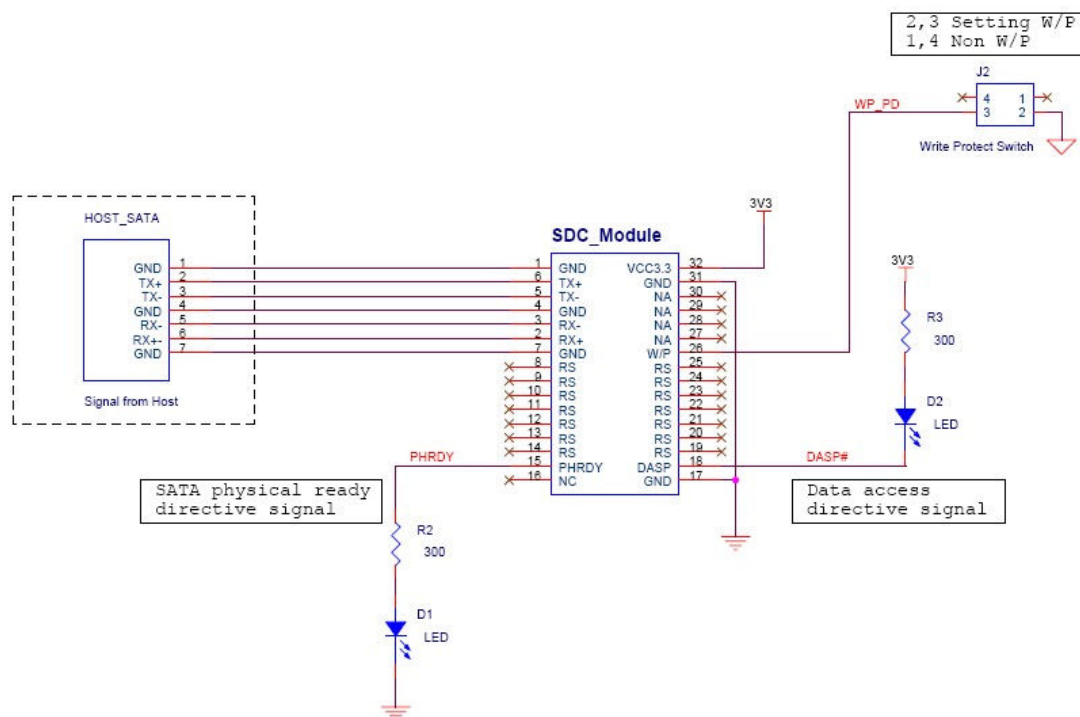
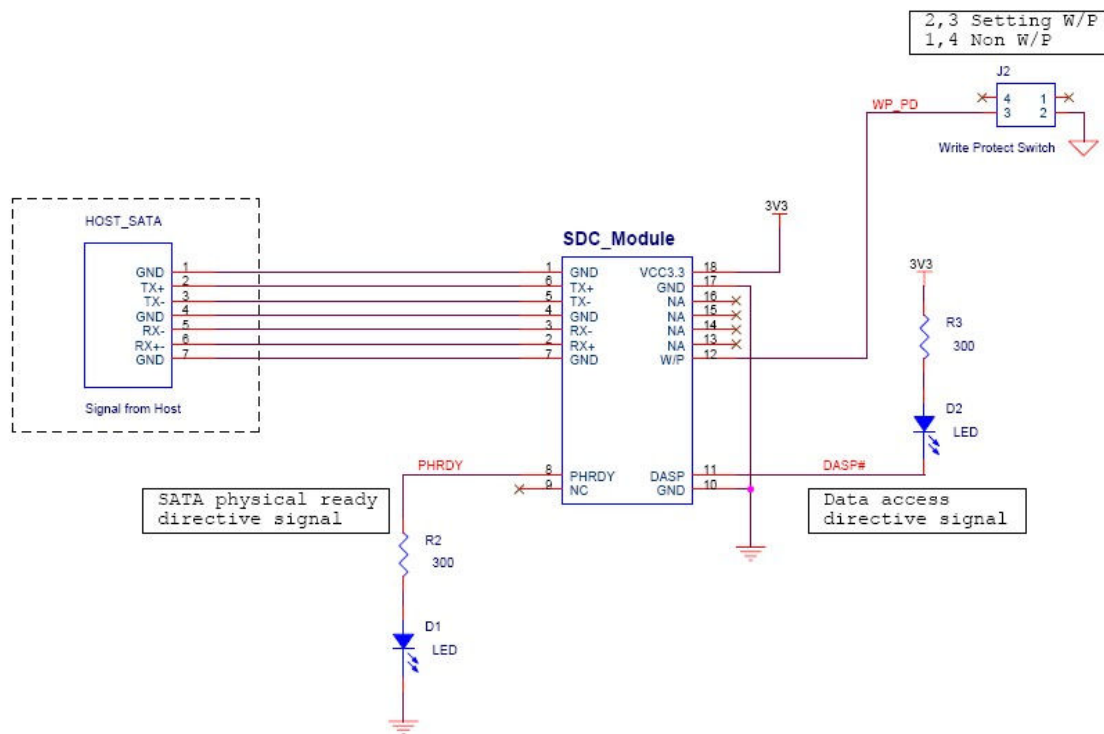
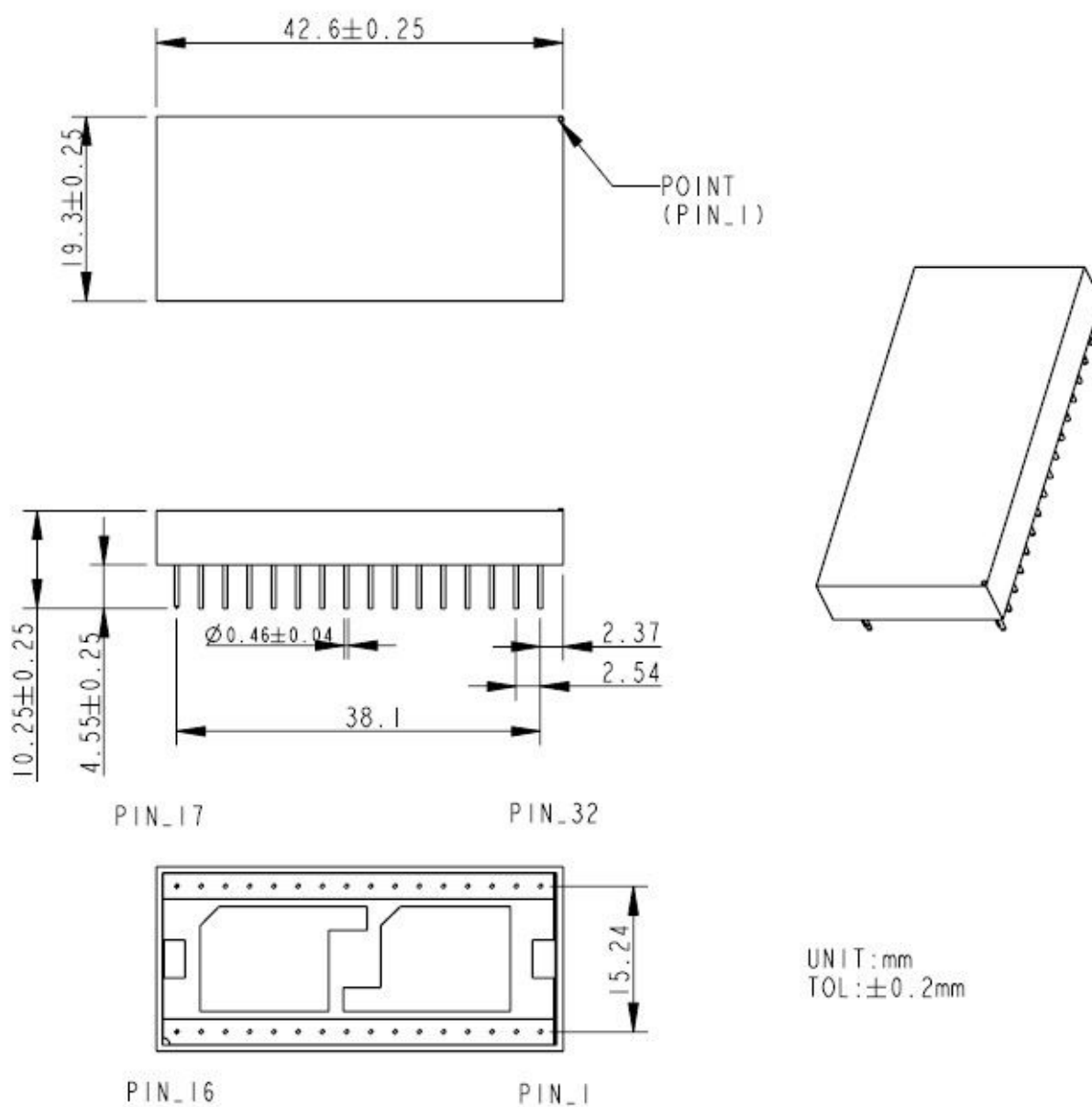


Fig. 2 7x2 + 2x2

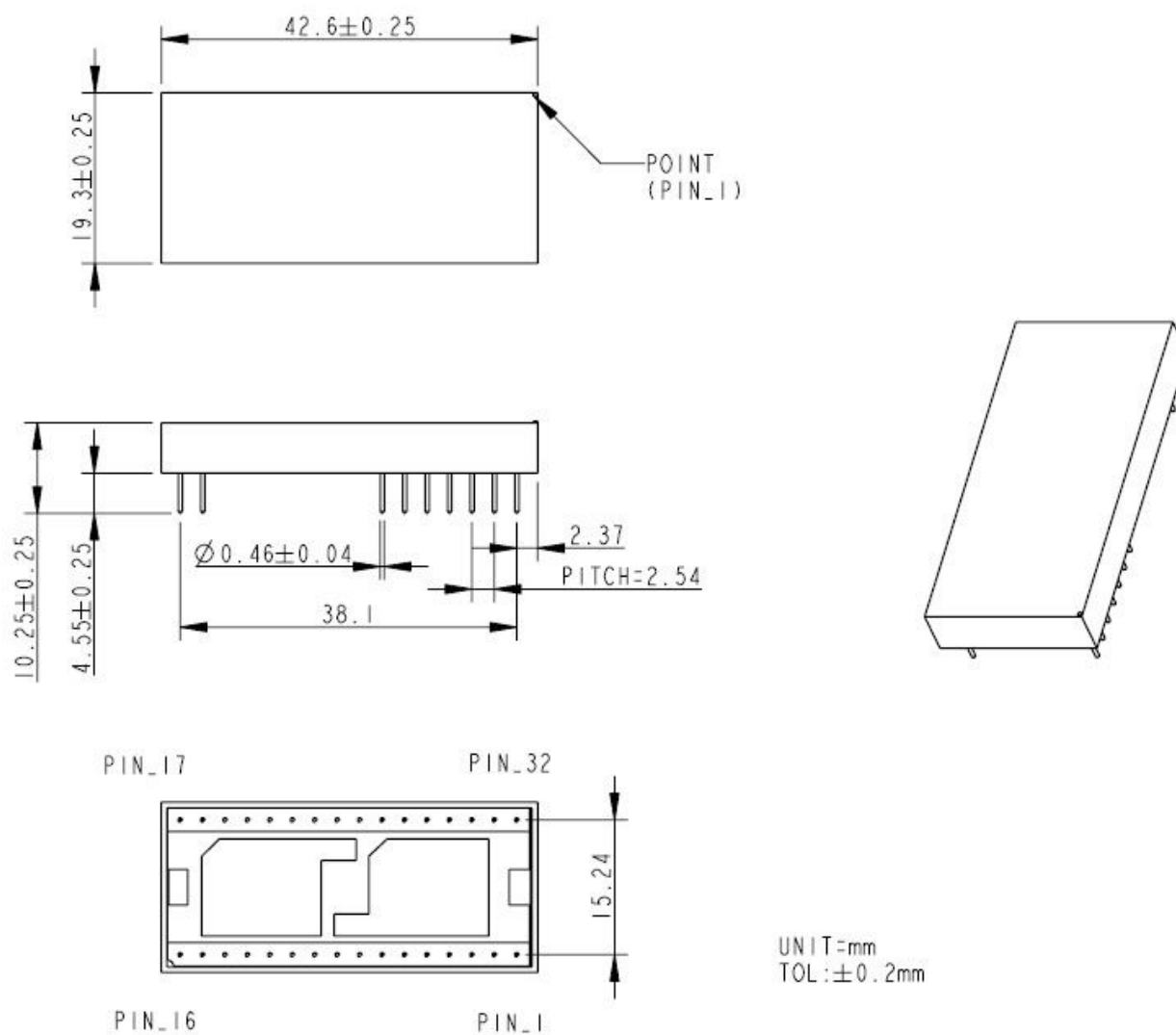


SDC Physical Dimensions

32 Pin (16x2)

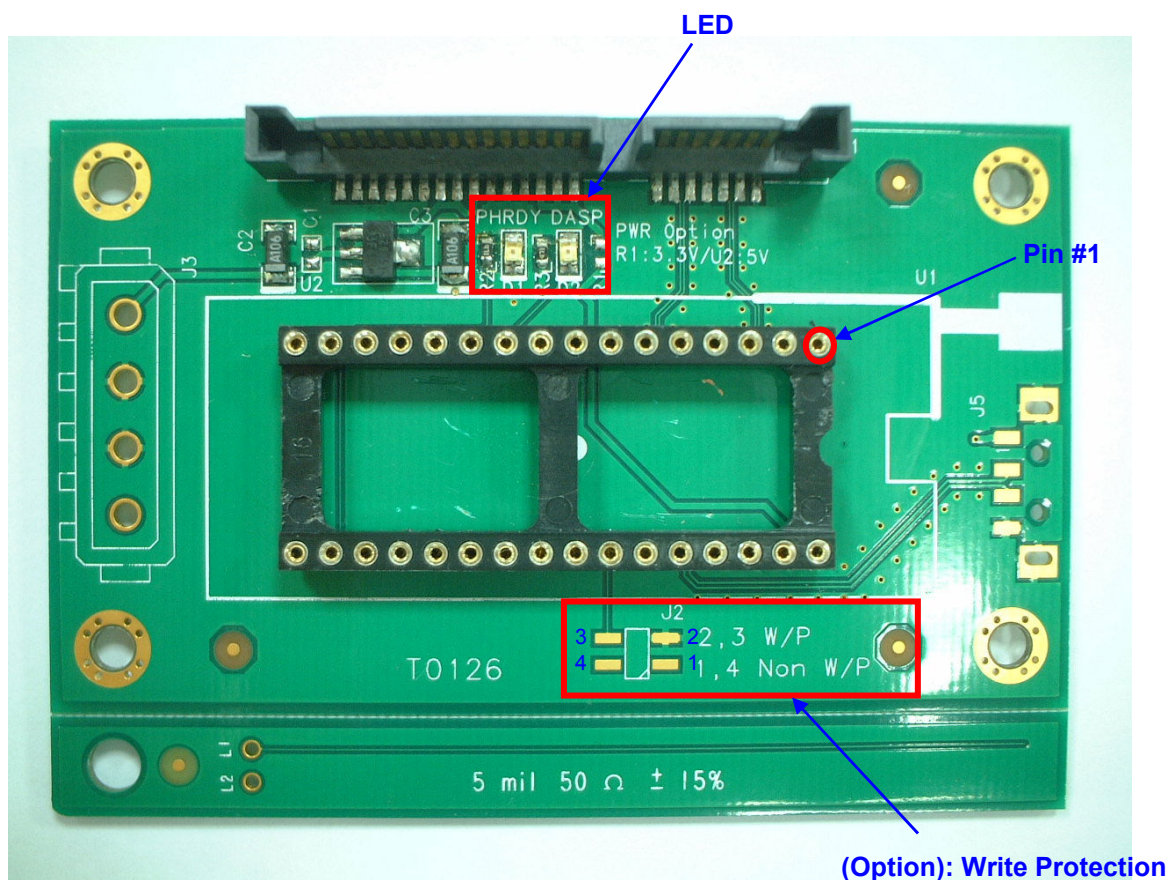


18 Pin (7x2 + 2x2)



SDC Evaluation Board

The SDC (SATA Disk Chip) evaluation board is for evaluation with the SDC functionalities through standard Serial ATA interface.



Socket

- Pin 1: The position is indicated by the red circle.

LED

- PHYRDY: Indicates the physical layer ready status between the host and device. When serial ATA physical layer communication is established, it should be steady on.
- DASP: Keeps flashing while data transfer is active.

Write Protection Jumper (Option)

- Enable: close 2 and 3
- Disable: close 1 and 4

Installation

- **SATA Disk Chip**

The green dot on the bottom left corner indicates the pin 1 of the SATA Disk Chip. Please do not mismatch the pin assignment during installation.



- **To Plug-In**

1. Be sure the dotted spot on the SDC cover pinpoint at the pin 1 of the socket on the board.
2. Firmly and evenly plug the SDC into the socket. Once successfully plugged, the SDC is ready for use.



A moderate installation is shown above.

- **To Unplug**

1. Be sure to unplug the SDC with a proper tool such as an IC puller; otherwise, damage to SDC may be caused.
2. Put both edges of the IC puller on both short ends of SCD, and firmly grab the IC puller and pull out the SDC.



IC Puller

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