Venus T5c series

SATA RAID

User Manual

Model: DS-2350C

(For 3.5" SATA)

Model: DS-2250C

(For 2.5" SATA)

1. Features of Venus T5c

- **Aluminum Frame, Aluminum cover**
- **Interface support SATA-I, SATA-II**
- **Transfer rate: 3Gb/s(eSATA)、5Gb/s(USB3.0)**
- **Plug & play ,hot swappable**
- **AC Power control**
- **Easy RAID setting by DIP switch & apply (change mode) switch**
- **LED indicators(for System Ready, HDD Error, HDD Access, Temperature, fan)**
- **8x8cm Fan X 2— High/Low speed selectable**
- **Reset switch or OTB switch for option**
- **Color: BLACK**
- **Dim:215(L)x156(W)x211(H)mm**
- **Patent products with advanced structure design**
- **Patent balance handle-no skew in/out problem and avoid the abrasion during connection**
- **Precisely connection on connector (see Figure 1)**
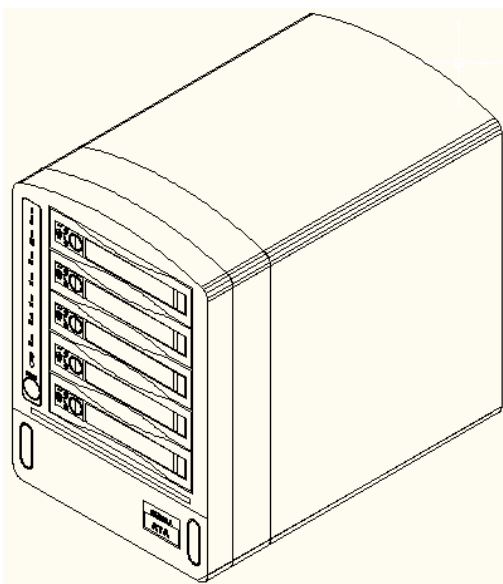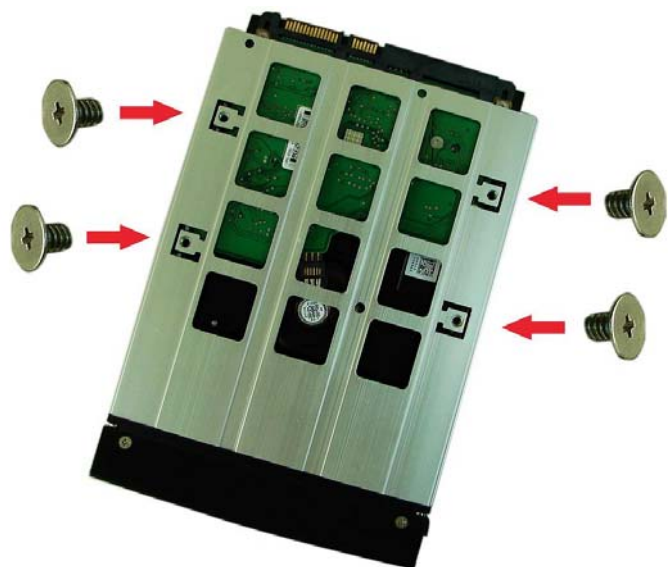
Figure 1

Figure 2

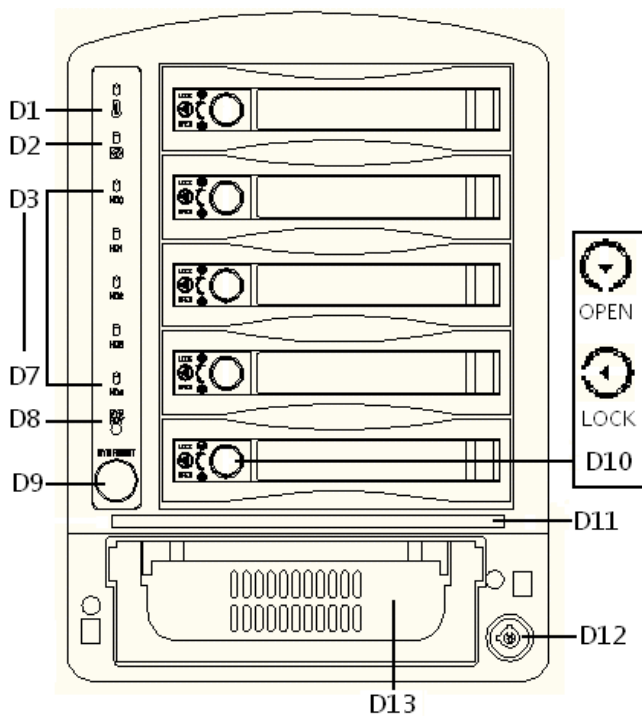Figure 3

---Front Panel--- (see **Figure 4**)

Figure 4

| |
|---|
| **D1:Temperature LED** |
| **D2:Fan LED** |
| **D3---D7: HDD Access and failure LED (Green LED is lighting when HDD link and blinking when HDD access; the LED will turn red when HDD failed. The green LED and red LED will alternate during rebuilding)** |
| **D8:SYS LED: Lighting while system is ready** |
| **D9:SYS Reset or Backup (option)** |
| **D10:HDD Safety Lock** |
| **D11:Power LED** |
| **D12:Power Safety Lock (The safety lock prevent it bouncing out while HDD is working)** |
| **D13:120W Switching Power Supply** |

---Rear View--- (see **Figure 5**)
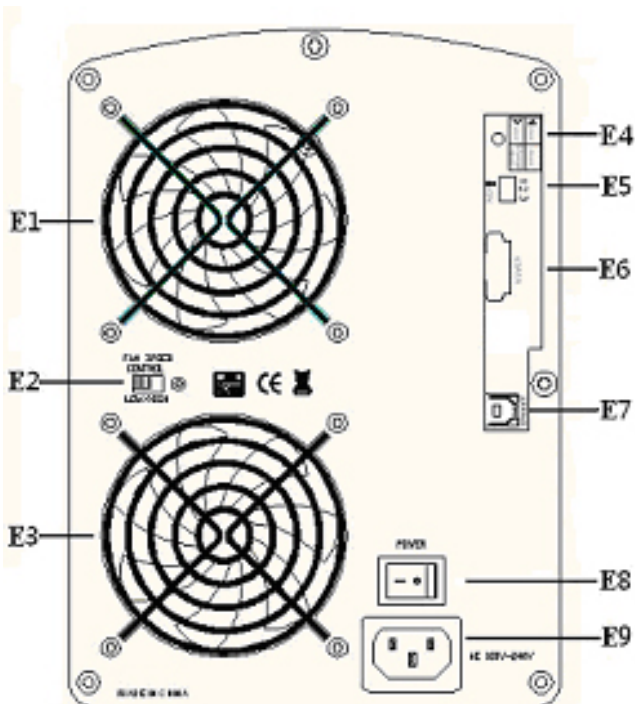
Figure 5

| |
|---|
| **E1:Cooling Fan #1 (8x8cm)** |
| **E2:Fan Speed Control FAN RPM HIGH(3600rpm)& LOW(2800 rpm) Options(If you want the fan to run at a high speed ,switch to the right; otherwise , switch to the left** |
| **E3: Cooling Fan #2 (8x8cm)** |
| **E4: Reset/Change Mode (push button less than 2 seconds for system reset / hold button over than 2 seconds for apply new RAID mode)** |
| **E5:RAID CONFIGURE SW** |
| **E6:ESATA** |
| **E7:Power SW** |
| **E8:Power Input(AC 100V-240V)** |

2. DIP Switch and RAID Mode cross reference

User can configure any RAID mode as below by DIP switch and apply change by Change Mode button.

RAID Mode	Dip Switch		
	1	2	3
RAID 0	ON	ON	ON
RAID 10	ON	ON	OFF
JBOD (Large)	ON	OFF	ON
RAID 3	ON	OFF	OFF
Clone	OFF	ON	ON
RAID 5	OFF	ON	OFF
Reserved	OFF	OFF	ON
Normal (Single)	OFF	OFF	OFF

＊**PS:** When DIP-SW is RAID10, 2 HDDs is RAID1 Mode and 4 HDDs is RAID10 Mode.

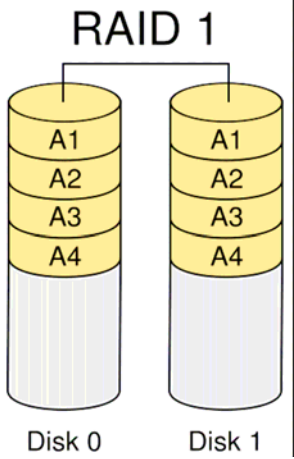## 2.1 RAID 0 for High Performance

RAID 0(or Stripe) is the segmentation of logically sequential data, such as a single file, so that segments can be assigned to multiple hard disks in a round-robin fashion and thus written concurrently. (If any hard disk becomes defective, information stored in this RAID0 will be invalid.)

RAID 0

A1   A2
A3   A4
A5   A6
A7   A8

Disk 0   Disk 1
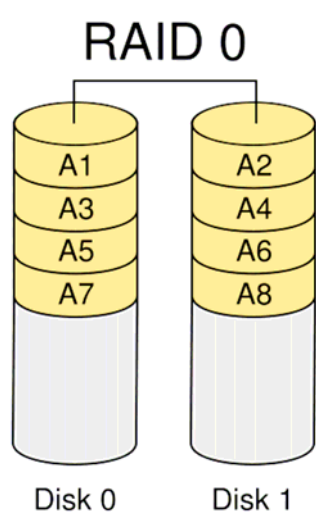
## 2.2 RAID 1 (Mirror) for High Security

Mirror or RAID 1 is the replication of data onto separate hard disks in real time to ensure continuous availability. Take a RAID 1 system with two hard disks as an example, data in a hard disk will be exactly the same as the data in another hard disk.

(Failure in a hard disk, Host controller still could read/write data. Users have to replace the defect hard disk. T5 will enter on-line-auto-rebuild mode automatically)


2.3 Stripe + Mirror (RAID 10) for High Performance and High Security

T5 could be configured to support Stripe and Mirror at the same time, i.e. RAID 10. Take four hard drives RAID 10 as an example. Hard drive 0 and hard drive 1 could act as Mirror 1. Hard drive 2 and hard drive 3 could act as Mirror 1 too. 2350ESR then configure these two Mirrors as Stripe.
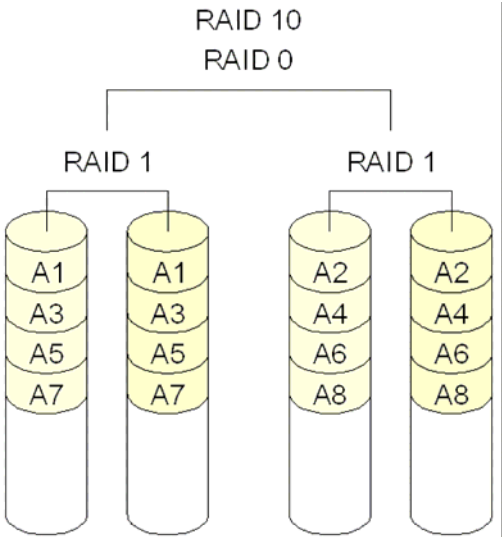

2.4 Clone

The action of Clone is similar to RAID 1. However, all of the hard disks will be the mirrors. For example, in a four hard drives Clone environment, data in each hard drive will be same. This mode is useful especially when users would like to copy data from a hard drive to several hard drives at the same time.
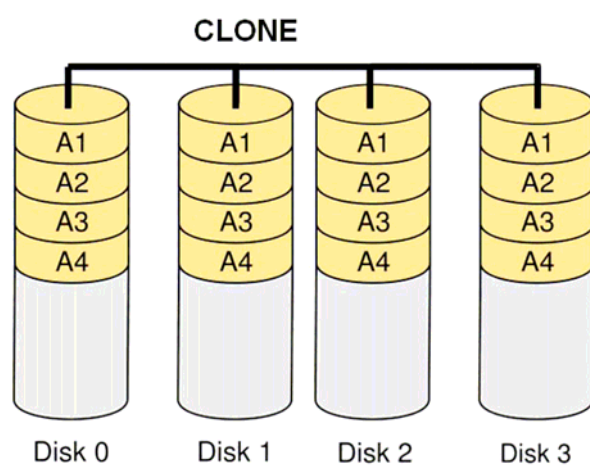

2.5 JBOD (Concatenating)

This mode is also named Concatenating. In this mode, T5 will concatenate all of the hard drives into a single hard drive with larger capacity. For example, if three 500GB hard disks is connected to T5 in concatenating mode, user will get a single hard disk with capacity of 1,500 GB.
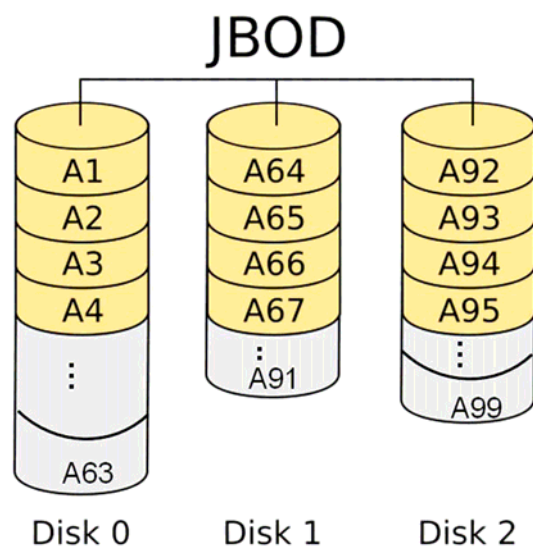
2.6 Parity Protection

XOR engine in T5 generate parity block. In RAID 3 mode, Parity Block will be stored in the same hard drive. While in RAID 5 mode, Parity Block will be spread over all of the different hard drives.
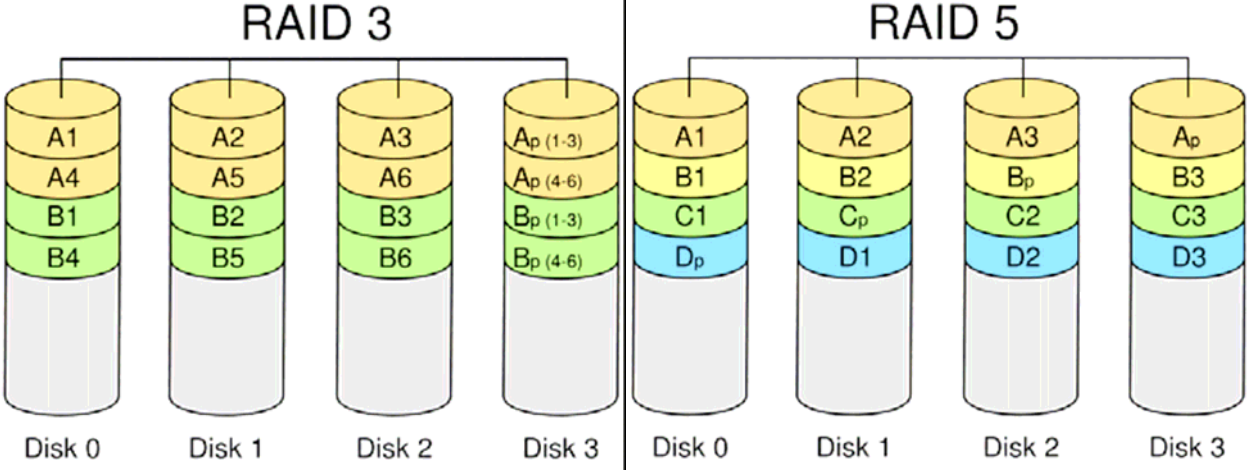
T5 will also make use of same size disk space in each hard disk under RAID 3/5 condition. (Failure in a hard disk will cause T5 enter degrade mode. Host controller still could read/write data thru T5 normally without knowing any defects. Users have to replace the defective hard disk. T5 then will enter on-line-auto-rebuild mode automatically.)

2.7 Normal Mode (Single)

Normal mode means all of the configured hard drives exist and T5 is not in rebuild condition. User can see the original hard drives from the host which supports port multiplier technology. (If the host does not support port multiplier, then you will find only one hard drive on operating system. The RAID tool is useful in this case.)