

US5-XXX

Mobile USB Solid State Drive

Rev:1.0

Note:

Company will not give any notice for change of products specifications. This product manual is only for reference. Please contact with KingSpec Electronic Technology Co., Ltd. for more detail technical parameters and information.

Shenzhen KingSpec Electronics Technology Co., Ltd.

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1. Product introduction

1.1 Summary

US5-XXX Series is a mobile USB Solid State Drive which has excellent performance and high reliability. This device is made of semiconductor and nonvolatile 3D NAND Flash. The interface of the device is new Type-C, which supports positive and negative side plug in recognition. The data transfer speed achieves USB3.2 Gen2x2(Thunderbolt 4 only supports USB 3.2 Gen2x1).

1.2 Product model list

| Model | Flash Type | Capacity | Sequential Read | Sequential Write |
|---------|------------|----------|-----------------|------------------|
| US5-256 | 3D TLC | 256GB | 1650~1750MB/S | 1500~1600MB/S |
| US5-512 | 3D TLC | 512GB | 1700~1800MB/S | 1550~1650MB/S |
| US5-1TB | 3D TLC | 1TB | 1950~2050MB/S | 1700~1800MB/S |
| US5-2TB | 3D TLC | 2TB | 1950~2050MB/S | 1750~1850MB/S |

1.3 Features

1.3.1 USB3.2 Gen2x2 interface.

1.3.2 Support wear leveling.

1.3.3 Support Garbage collection.

1.3.4 Support Over-provisioning.

1.3.5 Support power management and intelligent management technology.

1.3.6 Support Native Command Queuing (NCQ) ;

1.3.7 Support TRIM (Disable Delete Notify) command;

1.3.8 Support Error Checking And Correcting(ECC);

1.3.8 Support Windows 10,Windows 11,Android,IOS,macOS,HarmonyOS,etc.

1.4 Specifications

1.4.1 Interface protocol: USB3.2 Gen2x2;

1.4.2 Input voltage: DC 5V ($\pm 5\%$);

1.4.3 Operating temperature: $-5^{\circ}\text{C} \sim 60^{\circ}\text{C}$;

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1.4.4 Storage temperature: -20°C ~ 75°C;

1.4.5 Physical dimension: 71.16mm length * 38.18mm wide * 11.00mm height
error ± 0.1 mm;

1.4.6 Read life: unlimited;

1.4.7 MTBF: 1,000,000 hours;

1.4.8 Support Capacity: 256GB, 512GB, 1TB, 2TB;

2. Measurements

L 71.16mm * W 38.18mm * H 11.00mm, Error ± 0.1 m (e.g. Figure 1)

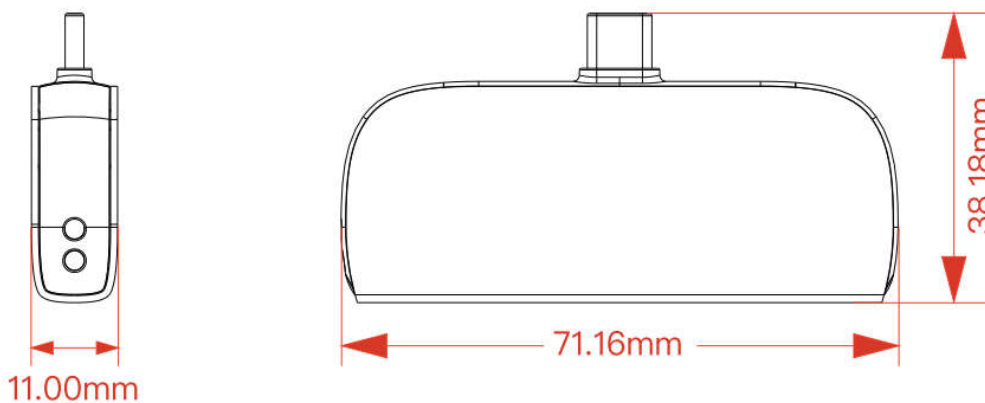


Figure 1

3. Interface description/Pin description (e.g. Figure 2)

| PIN | PIN Definition | PIN | PIN Definition |
|-----|----------------|-----|----------------|
| A1 | GND | B1 | GND |
| A2 | TX1+ | B2 | TX2+ |
| A3 | TX1- | B3 | TX2- |
| A4 | VBUS | B4 | VBUS |
| A5 | CC1 | B5 | CC2 |
| A6 | D+ | B6 | D+ |
| A7 | D- | B7 | D- |
| A8 | SBU1 | B8 | SBU2 |
| A9 | VBUS | B9 | VBUS |
| A10 | RX2- | B10 | RX1- |
| A11 | RX2+ | B11 | RX1+ |
| A12 | GND | B12 | GND |

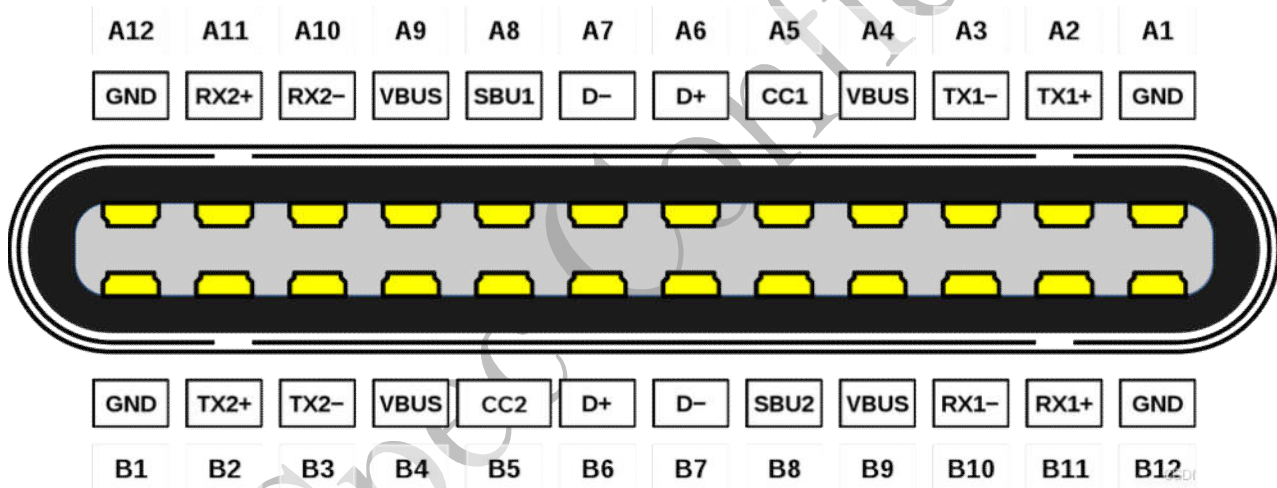


Figure 2