Timetec 35TTFP6PCIE-1TB

Timetec 1TB NVMe PCIe Gen3 M.2 2280 SSD Instruction Manual

Model: 35TTFP6PCIE-1TB | Brand: Timetec

1. INTRODUCTION AND OVERVIEW

This manual provides comprehensive instructions for the Timetec 1TB NVMe PCIe Gen3x4 M.2 2280 Solid State Drive. Designed for high performance in PC laptops and desktops, this SSD utilizes 3D NAND technology with SLC Cache to deliver sequential read speeds up to 2,000MB/s and write speeds up to 1,600MB/s. It is built for durability with an industry-leading 1,500,000 hours Mean Time Before Failure (MTBF).
Key features include:

- **NVMe PCIe Gen3x4 Interface:** Ensures high-speed data transfer.
- **3D NAND Technology with SLC Cache:** Enhances performance and extends lifespan.
- **Wide Compatibility:** Supports Windows 11/10/8.1/8/7, Linux 2.6.33+, and is backward compatible with PCIe Gen 2 and Gen 1.
- **Advanced Technologies:** Includes S.M.A.R.T., TRIM, Garbage Collection, Wear-Leveling, Power Management (APST/ASPM), RAID, ECC, LDPC, and ONFi interfaces for optimized performance.
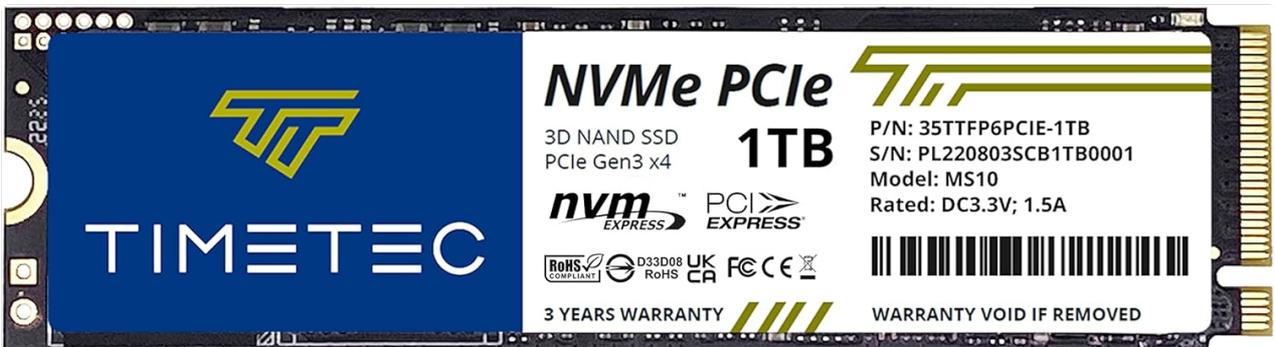

Figure 1: Timetec 1TB NVMe PCIe Gen3 M.2 2280 SSD.

2. SETUP AND INSTALLATION

Before proceeding with installation, ensure your system is powered off and disconnected from the power source. It is recommended to wear anti-static gloves to prevent electrostatic discharge.

2.1 Compatibility Check

Verify that your desktop or laptop motherboard has an M.2 2280 slot that supports NVMe PCIe Gen3x4 SSDs. This drive is compatible with the latest NVMe 1.3 protocol and is backward compatible with PCIe Gen 2 and Gen 1.

2.2 Installation Steps (Desktop PC)

1. **Open PC Case:** Power off your computer and open the side panel of your PC case.
2. **Locate M.2 Slot:** Find an available M.2 slot on your motherboard. Refer to your motherboard manual for exact locations.
3. **Insert SSD:** Gently insert the Timetec M.2 SSD into the slot at a 30-degree angle. Push it in until it is fully seated.
4. **Secure SSD:** Push the SSD down and secure it with the provided screw (not included with SSD, typically supplied with motherboard).
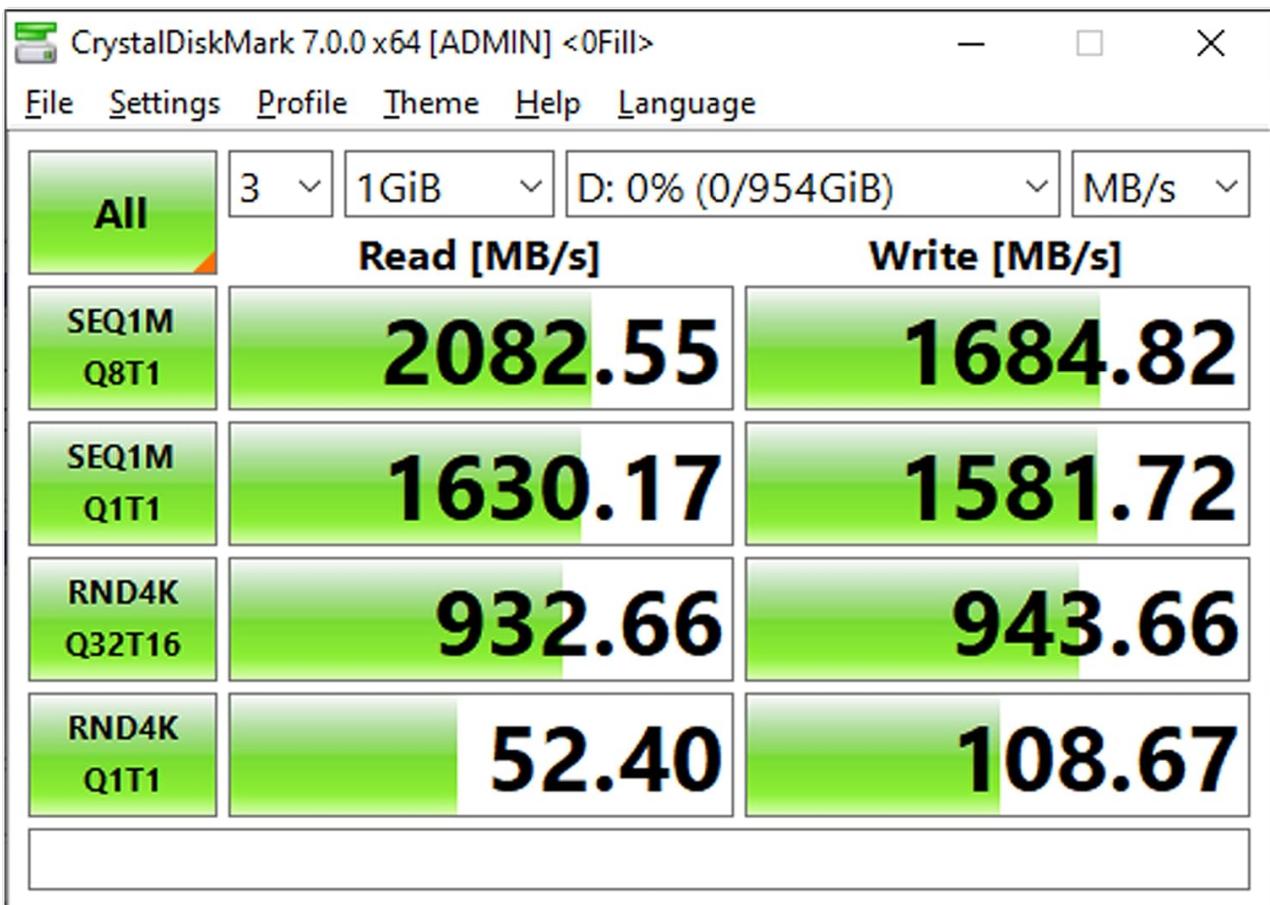5. **Close PC Case:** Close the PC case and reconnect the power.

Figure 2: Timetec SSD installed in a desktop motherboard.

2.3 Installation Steps (Laptop)

1. **Power Off Laptop:** Shut down your laptop and disconnect the power adapter.
2. **Access M.2 Slot:** Depending on your laptop model, you may need to remove the back panel or a specific access door to locate the M.2 slot.
3. **Insert SSD:** Carefully insert the Timetec M.2 SSD into the slot at a 30-degree angle.
4. **Secure SSD:** Gently push the SSD down and secure it with the screw (not included with SSD, typically supplied with laptop).
5. **Reassemble Laptop:** Reattach the back panel or access door and reconnect the power.

Figure 3: Timetec SSD installed in a laptop M.2 slot.

2.4 Initializing the SSD

After physical installation, you may need to initialize and format the SSD in your operating system before it can be used. For Windows, open Disk Management, find the new SSD, initialize it (GPT partition style recommended), and then create a new simple volume.

3. OPERATING YOUR SSD

The Timetec NVMe PCIe Gen3 SSD provides significant performance improvements over traditional hard drives and SATA SSDs. Its high sequential read/write speeds (up to 2,000/1,600 MB/s) ensure faster boot times, quicker application loading, and smoother multitasking.

3.1 Performance Benefits

- **Faster Boot-up:** Experience significantly reduced operating system boot times.
- **Quick Application Launch:** Applications and games load much faster.
- **Improved Responsiveness:** Overall system responsiveness is enhanced, making your computing experience smoother.
- **Efficient Data Transfer:** Large file transfers are completed in a fraction of the time compared to older storage devices.

Figure 4: Example performance metrics for Timetec M.2 PCIe Gen 3 SSD.

4. MAINTENANCE AND LONGEVITY

To ensure the long-term performance and reliability of your Timetec SSD, several advanced technologies are integrated:

- **S.M.A.R.T. Technology:** Self-Monitoring, Analysis, and Reporting Technology monitors the drive's health and predicts potential failures.
- **TRIM Command:** Optimizes performance by allowing the operating system to inform the SSD which data blocks are no longer in use and can be wiped.
- **Garbage Collection:** An internal process that reclaims unused data blocks to maintain performance and extend endurance.
- **Wear-Leveling Technology:** Distributes data writes evenly across all NAND flash memory blocks to maximize the lifespan of the SSD.
- **ECC (Error Correction Code):** Detects and corrects data corruption to ensure data integrity.
- **LDPC (Low-Density Parity Check):** An advanced error correction method for improved data reliability.
- **Power Management Support (APST / ASPM):** Optimizes power consumption for energy efficiency.

Regularly check your SSD's health using compatible software that supports S.M.A.R.T. monitoring.

5. TROUBLESHOOTING

If you encounter issues with your Timetec SSD, consider the following:

- **SSD Not Detected:**
  - Ensure the SSD is correctly seated in the M.2 slot.
  - Check your motherboard's BIOS/UEFI settings to confirm the M.2 slot is enabled and configured correctly (e.g., NVMe mode).
  - Verify that your motherboard drivers are up to date.
  - If it's a new drive, ensure it has been initialized and formatted in Disk Management (Windows) or a similar utility (Linux).

- **Slow Performance:**

  - Confirm the SSD is operating in PCIe Gen3x4 mode. Check your motherboard specifications and BIOS settings.
  - Ensure TRIM is enabled in your operating system.
  - Check for background processes consuming system resources.
  - Monitor the SSD temperature. Excessive heat can lead to thermal throttling and reduced performance.

- **Operating System Issues:**

  - Ensure your operating system (Windows 11/10/8.1/8/7, Linux 2.6.33 or later) is compatible.
  - Install the latest NVMe drivers for your operating system.

For further assistance, refer to the Warranty and Support section.

6. SPECIFICATIONS

Feature	Detail
Model	35TTFP6PCIE-1TB
Digital Storage Capacity	1 TB
Hard Drive Interface	Raid
Connectivity Technology	PCIe Gen3x4
Brand	Timetec
Special Feature	SSD
Hard Disk Form Factor	M.2 2280 Inches
Hard Disk Description	Solid State Drive
Compatible Devices	Desktop, Laptop, Gaming Console
Installation Type	Internal Hard Drive
Color	Black
Sequential Read Speed	Up to 2,000 MB/s
Sequential Write Speed	Up to 1,600 MB/s
NAND Flash	3D NAND
MTBF	1,500,000 hours
Terabytes Written (TBW)	600TB

CrystalDiskInfo 8.4.1 x64				

Good 31 °C C: Good 51 °C D:

35TTFP6PCIE-1TB 1024.2 GB

Health Status

Good 100 %

Temperature

51 °C

Firmware	S0614D0	
Serial Number	AA000000000000000942	
Interface	NVM Express	
Transfer Mode	PCIe 3.0 x4 | PCIe 3.0 x4	
Drive Letter	D:	
Standard	NVM Express 1.3	
Features	S.M.A.R.T.	

Total Host Reads	255 GB
Total Host Writes	230 GB
Rotation Rate	---- (SSD)
Power On Count	3 count
Power On Hours	0 hours

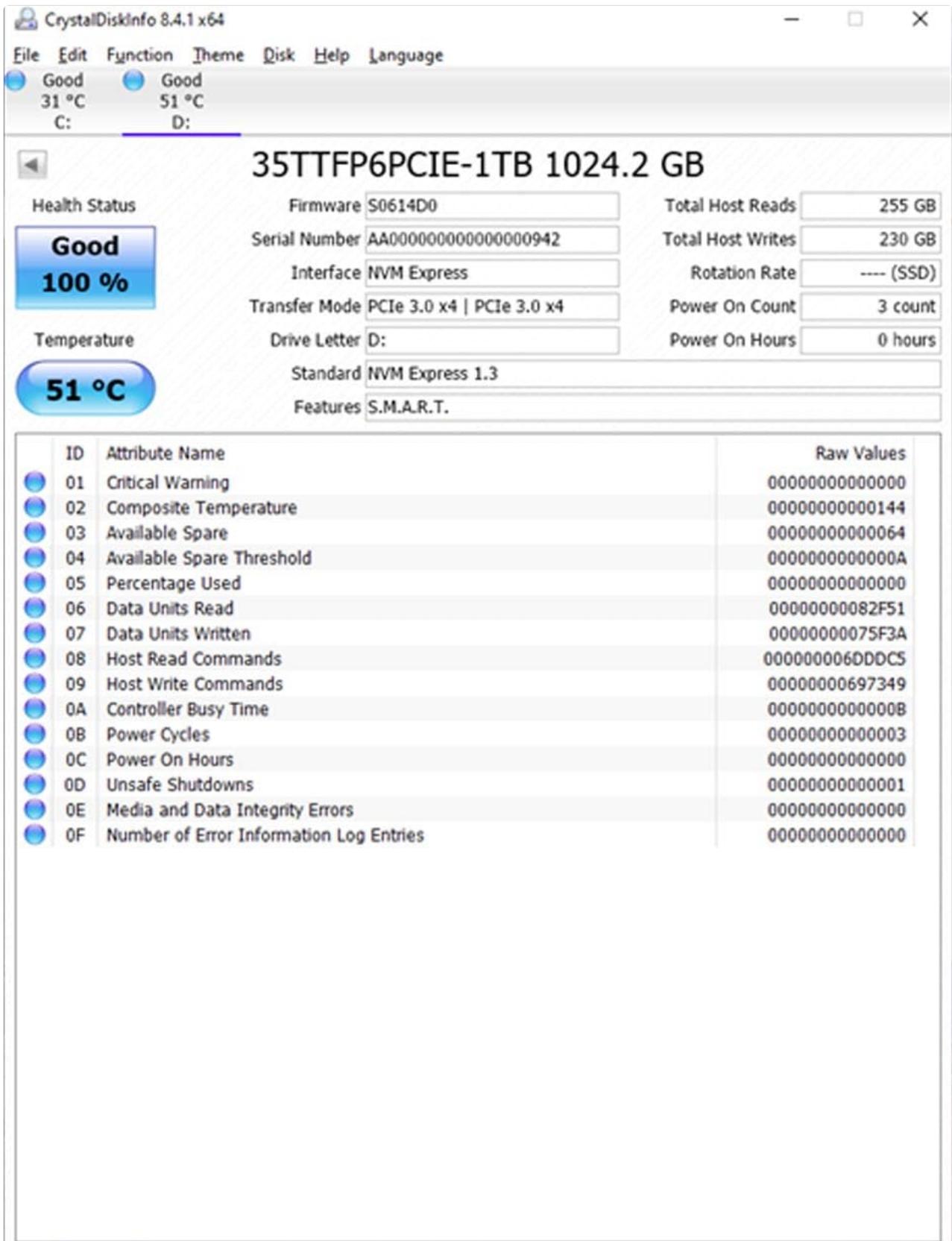| ID	Attribute Name	Raw Values
01	Critical Warning	00000000000000
02	Composite Temperature	00000000000144
03	Available Spare	00000000000064
04	Available Spare Threshold	0000000000000A
05	Percentage Used	00000000000000
06	Data Units Read	00000000082F51
07	Data Units Written	00000000075F3A
08	Host Read Commands	000000006DDDC5
09	Host Write Commands	00000000697349
0A	Controller Busy Time	0000000000000B
0B	Power Cycles	00000000000003
0C	Power On Hours	00000000000000
0D	Unsafe Shutdowns	00000000000001
0E	Media and Data Integrity Errors	00000000000000
0F	Number of Error Information Log Entries	00000000000000

Figure 5: Timetec SSD dimensions and M.2 2280 form factor.

7. WARRANTY AND SUPPORT

The Timetec 1TB NVMe PCIe Gen3x4 M.2 2280 SSD comes with a **Five-year limited warranty**. This warranty applies to Timetec M.2 PCIe SSDs purchased on or after August 1, 2020. For technical support or warranty claims, please contact Timetec International Inc. through their official channels.

Included Contents: M.2 2280 NVMe PCIe3x4 SSD. All other cables, screws, and brackets are not included and are typically supplied with your motherboard or laptop.

8. Product Videos

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Video 1: Official Timetec NVMe PCIe Gen3 SSD Product Overview. This video highlights the key features and benefits of the SSD.

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Video 2: Timetec NVMe PCIe Gen3 SSD Installation Preview. This short video demonstrates the physical installation of the SSD in a PC.