

# SANGRAHAN ABHIJIT

Fastest Mid-Range *Victorious Data Management SSD*  
M.2 PCIe Gen 3.0 x4 NVMe 1.4 Internal Solid State Drive

**CONSCIOUS CIRCUIT**  
Indigenous Technology Solutions

The **Sangrahan Abhijit** series represents the **Pinnacle** of indigenous storage engineering, designed to bridge the gap between high-end performance and mainstream accessibility. Powered by the advanced **22nm** engineering and **128-layer 3D TLC NAND**, the **Abhijit** delivers a seamless experience for gamers, creative professionals, and enterprise deployments. With intelligent **HMB technology** and superior thermal efficiency, it is optimized for the demanding environments of the Indian market.

**3000 MB/s**

MAX SEQ. READ

**2500 MB/s**

MAX SEQ. WRITE

**2.0M Hours**

MTBF RELIABILITY

**5 Years**

LIMITED WARRANTY

## TECHNICAL SPECIFICATIONS

MODEL NAME	SANGRAHAN ABHIJIT (ABH3000G3)
CAPACITY	256GB, 512GB, 1TB, 2TB
FORM FACTOR	M.2 2280
NAND FLASH	128-LAYER 3D TLC (XTACKING ARCHITECTURE)
CONTROLLER	32-BIT DUAL-CORE ARM CORTEX-R5
INTERFACE	PCIe Gen 3.0 x4, NVMe 1.4
SEQUENTIAL READ (MAX)	UP TO 3000 MB/s
SEQUENTIAL WRITE (MAX)	UP TO 2500 MB/s
4KB RANDOM READ IOPS(MAX)	UP TO 400,000 IOPS
4KB RANDOM WRITE IOPS(MAX)	UP TO 390,000 IOPS
MTBF	2,000,000 Hours
TBW	150 TBW, 300 TBW, 600 TBW, 1200 TBW
WARRANTY	5 YEARS

## Performance-Driven Solutions

These solutions are solved by Abhijit's 3000MB/s+ Raw Throughput and High IOPS.



SOLUTIONS	TECHNICAL SPEC/ PART THAT SOLVES IT	ROLE IN THE SOLUTIONS
APEX GAMER	400,000 RANDOM READ IOPS	ELIMINATES "TEXTURE POP-IN." HIGH IOPS ENSURES THE GAME ENGINE CAN PULL THOUSANDS OF SMALL FILES (TEXTURES/SOUNDS) INSTANTLY DURING OPEN WORLD GAMEPLAY.
CREATIVE STUDIO	128-LAYER 3D TLC NAND	SUSTAINED PERFORMANCE FOR 4K/8K RENDERING. UNLIKE CHEAP QLC DRIVES THAT SLOW DOWN AFTER 5 MINUTES OF VIDEO EXPORTING, ABHIJIT'S TLC CELLS MAINTAIN SPEED.
MEDIA & BROADCAST	PCIe GEN 3.0 x4 INTERFACE	PROVIDES THE MASSIVE BANDWIDTH. REQUIRED TO "SCRUB" THROUGH A RAW VIDEO TIMELINE IN REAL-TIME WITHOUT THE "BUFFERING" CIRCLE APPEARING.

## Reliability & Enterprise Solutions

These are solved by the 2.0 Million Hour MTBF and Industrial Controller Engineering.



SOLUTION	TECHNICAL SPEC/ PART THAT SOLVES IT	ROLE IN THE SOLUTIONS
DATA CENTER & CLOUD	22NM MAXIOTECH CONTROLLER	THERMAL EFFICIENCY. IN A DENSE SERVER RACK, HEAT IS THE ENEMY. THE 22NM PROCESS RUNS COOLER, ALLOWING FOR "HIGH-DENSITY" STACKING WITHOUT OVERHEATING THE SERVER.
BFSI (BANKING)	AES-256 & SM4 HARDWARE ENCRYPTION	"SECURITY. IT ENCRYPTS FINANCIAL DATA" AT THE HARDWARE LEVEL BEFORE IT LEAVES THE DRIVE, MAKING IT NEARLY IMPOSSIBLE FOR HACKERS TO STEAL DATA FROM A STOLEN TERMINAL.
HEALTHCARE & IMAGING	VIRTUAL PARITY RECOVERY (VPR)	ZERO-FAILURE STORAGE. IF A MEMORY CELL DEGRADES, VPR RECONSTRUCTS THE LOST DATA. THIS ENSURES A PATIENT'S CRITICAL X-RAY OR MRI FILE NEVER BECOMES "CORRUPTED."

## Industrial & AI Solutions

These are solved by Real-Time Data Processing and HMB (Host Memory Buffer) technology.



SOLUTION	TECHNICAL SPEC / PART THAT SOLVES IT	ROLE IN THE SOLUTION
AI & EDGE COMPUTING	32-BIT DUAL-CORE ARM CORTEX-R5	THE "BRAIN" OF THE DRIVE. IT PROCESSES AI MODEL WEIGHTS IN MILLISECONDS, ALLOWING AN EDGE AI BOX TO IDENTIFY A FACE OR LICENSE PLATE INSTANTLY AT THE "SOURCE."
SMART MANUFACTURING	SHOCK RESISTANCE (1500G/0.5MS)	INDUSTRIAL RUGGEDNESS. IN A FACTORY WITH VIBRATING ROBOTIC ARMS, THE ABHIJIT'S SOLID-STATE ARCHITECTURE ENSURES THE MACHINE NEVER "HANGS" DUE TO PHYSICAL MOVEMENT.
SURVEILLANCE & CITY SAFETY	INTELLIGENT HMB TECHNOLOGY	ACTS AS A HIGH-SPEED BUFFER FOR ANALYTICS. IT ALLOWS TRAFFIC CAMERAS TO HANDLE 24/7 "WRITE-INTENSIVE" WORKLOADS WITHOUT DROPPING FRAMES DURING A LICENSE PLATE SCAN.

## Repair, Retail & Legacy Solutions

These are solved by Compatibility and Indigenous Build Quality.



SOLUTION	TECHNICAL SPEC / PART THAT SOLVES IT	ROLE IN THE SOLUTION
LEGACY REVIVE	M.2 2280 FORM FACTOR	THE UNIVERSAL FIT. IT ALLOWS TECHNICIANS TO UPGRADE 2017-2022 LAPTOPS THAT HAVE AN EMPTY OR SLOW M.2 SLOT, BYPASSING THE ORIGINAL SLOW STORAGE ENTIRELY.
REPAIR STORAGE	3RD GEN LDPC ERROR CORRECTION	RELIABILITY FOR THE TECHNICIAN. IT FIXES "BIT-ERRORS" AUTOMATICALLY, MEANING FEWER "CUSTOMER RETURNS" FOR THE REPAIR SHOP AND A PERMANENT FIX FOR THE CLIENT.
RETAIL & WHOLESALER	5-YEAR LIMITED WARRANTY	TRUST. THE LONG WARRANTY PERIOD AND THE "MAKE IN INDIA" BRANDING GIVE THE RETAILER THE CONFIDENCE TO SELL A PREMIUM PRODUCT AGAINST GENERIC GLOBAL IMPORTS.

# ENVIRONMENTAL SPECIFICATIONS

OPERATING TEMPERATURE	0°C to 70°C
STORAGE TEMPERATURE	-40°C to 95°C
OPERATING HUMIDITY	5% to 95% RH (Non-condensing)
SHOCK RESISTANCE	1500G / 0.5MS
SUPPLY VOLTAGE	3.3V ± 5%

# EMI COMPLIANCES & CERTIFICATIONS

EMI COMPLIANCES	RoHS, REACH, FCC, CE, EPR
CERTIFICATIONS	NVM express, PCI express

# RELIABILITY & ADVANCED FEATURES

## Intelligent Thermal Management

Built on a **22nm process node**, the controller maintains peak performance with **minimal heat signature**, ensuring stability in fanless **industrial builds** and high-ambient temperature environments.

## Data Integrity & Security

Supports **AES-256** and **SM4** hardware encryption. Utilizes **3rd Gen LDPC Error Correction** and **Virtual Parity Recovery (VPR)** to safeguard data against cell degradation and power loss.

## Optimization Technologies

Full support for **S.M.A.R.T.** monitoring, **TRIM** commands, and **Advanced Wear Leveling** to maximize the lifespan of the NAND cells.

# ORIGINAL PRODUCT IMAGE



THE DATA WITHIN THIS SPECIFICATION IS SUBJECT TO CHANGE BY CONSCIOUS CIRCUIT WITHOUT NOTICE. PERFORMANCE NUMBERS MAY VARY BASED ON SYSTEM CONFIGURATION AND TESTING CONDITIONS.