

SANGRAHAN ABHIJIT

FASTEST~MID RANGE VICTORIOUS DATA MANAGEMENT SSD

M.2 2280 NVME PCIE GEN 3.0 X4 NVME 1.4 INTERNAL SOLID STATE DRIVE

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 NODE** 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	MICRON / YMTC 128-LAYER 3D TLC (XTACKING ARCHITECTURE)
CONTROLLER	MAXIO 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 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 & WHOLESALE	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.

