



# NVMe M.2 ArmourDrive™

88 Series

Product Brief

## Product Description

The NVMe M.2 ArmourDrive™ family consists of industrial solid state drives (SSDs) with a high-performance PCIe interface. Supporting the NVMe protocol, the 88 Series provides low latency and fast read/write speeds. To maximize power savings, NVMe M.2 ArmourDrive SSDs support Autonomous Power State Transition (APST) and Active State Power Management (ASPM).\* Operating at extreme temperatures, NVMe M.2 ArmourDrive is ideal for high transactional and business critical applications requiring removable data storage able to withstand demanding environments.

The 88 Series implements advanced NAND flash management technology to preserve data integrity and extend SSD lifespan. Built in 2230, 2242 and 2280 form factors and backed by Greenliant's technical support, NVMe M.2 ArmourDrive gives customers high-speed, high-reliability solid state storage for space-constrained, embedded and enterprise systems. Industrial temperature NVMe M.2 2280 ArmourDrive SSDs also offer AES-256/TCG OPAL compliant hardware encryption for the highest levels of user data protection.



## Key Features

### Industrial NVMe M.2 SSDs

- 2230 (22mm x 30mm) PCIe Gen4x4
- 2242 (22mm x 42mm) PCIe Gen3x2
- 2280 (22mm x 80mm) PCIe Gen3x4

### High Performance

- Sequential Read / Write performance up to 3,600MB/s / 3,000MB/s
- IO queuing support
- DRAM for better sustained performance\*

### Energy Efficient

- 3.3V low power supply
- APST to implement power savings\*
- ASPM to reduce power consumption\*
- L1.2 Mode less than 2mW\*

\*select models

### Pre-programmed Firmware

- Field-upgradeable firmware to add new features and enhance device performance
- Configurable algorithms optimize data retention based on the usage model
- Embedded FFS enables seamless capacity upgrade with no change to host software

### Advanced Flash Management

- Dynamic and static wear leveling algorithms maximize product lifespan
- Supports TRIM commands to remove invalid data which is no longer in use

### Bad Block Management

- Replaces bad blocks with spare blocks in the NAND flash to prevent uncorrectable errors

### Built-in ECC

- Uses advanced bit error detection and correction optimized for 3D NAND

### SSD Lifespan Monitoring

- Supports SMART command-based alerts indicating the remaining useful product life

### Data Security

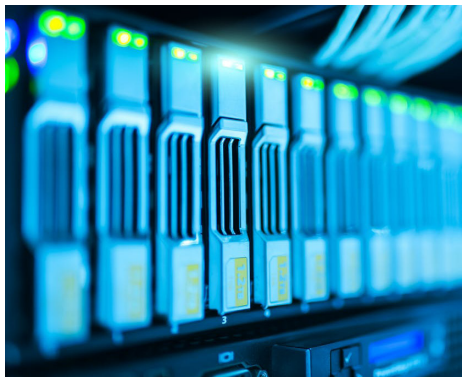
- Secure Erase for quick data wipe/factory reset
- AES-256 / TCG OPAL / Pyrite encryption\*

### Wide Range of Capacities

- 2230 products: 256 GB - 1 TB
- 2242 products: 64 GB - 512 GB
- 2280 products: 128 GB - 2 TB

### Industrial and Commercial Temperatures

- Industrial operation: -40°C to +85°C
- Commercial operation: 0°C to +70°C



## Applications

- Cloud computing
- Broadcasting
- Gaming
- Industrial PC
- Endpoint / Thin client
- Enterprise storage
- Industrial automation & control
- Network server
- Gateway / Switch
- Blade server
- Network-attached storage
- Surveillance
- Data recorder
- Video conferencing
- Digital signage
- Base station

### Greenliant

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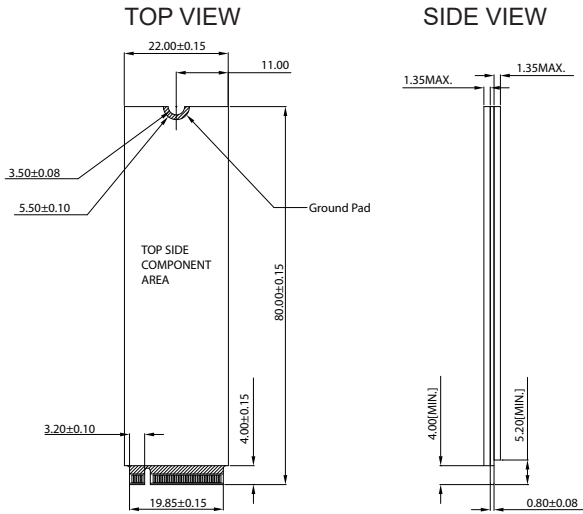
Tel: 1-408-200-8000

Fax: 1-408-200-8099

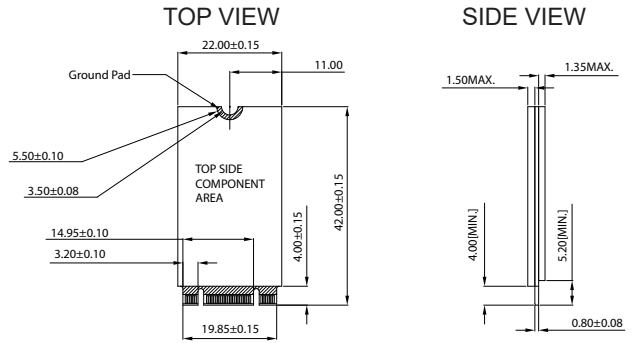
[www.Greenliant.com](http://www.Greenliant.com)

## NVMe M.2 ArmourDrive Physical Dimensions

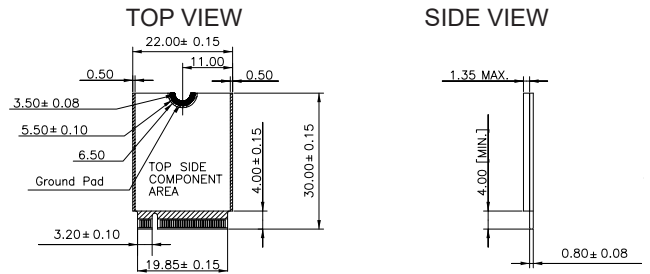
22mm x 80mm x 3.58mm (max), M key, Double Sided (DS)  
 22mm x 80mm x 2.23mm (max), M key, Single Sided (SS)  
 Pb-free (RoHS compliant)



22mm x 42mm x 3.73mm (max), B+M key  
 Double Sided (DS)  
 Pb-free (RoHS compliant)

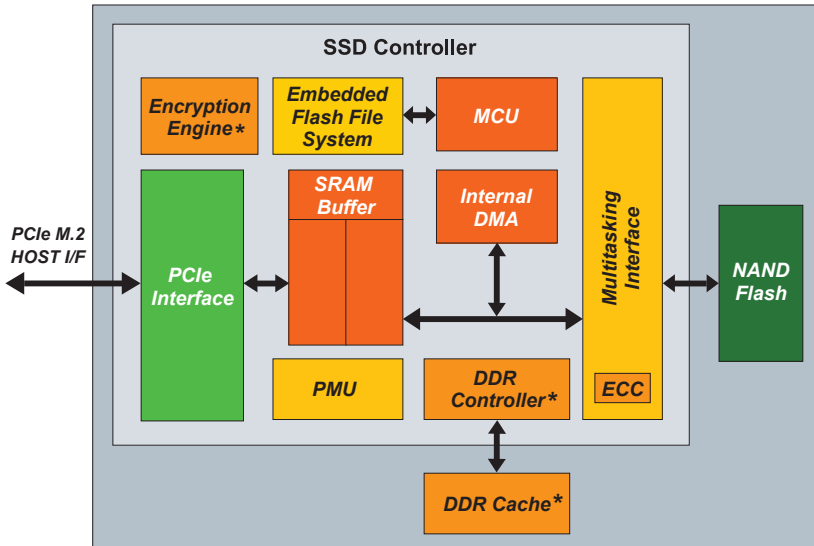


22mm x 30mm x 1.43mm (max), M key  
 Single Sided (SS)  
 Pb-free (RoHS compliant)



Note: All dimensions are in millimeters, unless otherwise specified.

## NVMe M.2 ArmourDrive Block Diagram



\*Available on select NVMe M.2 2280 products

## Product Lineup

88 Series NVMe M.2 ArmourDrive			
Product Series / Capacity	Form Factor	NAND Configuration / Endurance	Temperature Range
<b>PX</b> 64 GB - 512 GB	2242 DS	3-bit-per-cell TLC NAND / 3K P/E cycles	Industrial -40°C to +85°C
<b>PX</b> 240 GB - 1.92 TB (with DRAM)	2280 DS		
<b>PX</b> 256 GB - 1 TB	2230 SS	3-bit-per-cell TLC NAND / 3K P/E cycles	Commercial 0°C to +70°C
<b>PX</b> 128 GB - 2 TB	2280 SS		

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ArmourDrive FAQs: [www.greenliant.com/armourdrive-faqs](http://www.greenliant.com/armourdrive-faqs)

For more information, contact your Greenliant representative: [www.greenliant.com/sales](http://www.greenliant.com/sales)



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