

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# ATP Industrial Grade SD/SDHC/SDXC

Targeted Product Portfolio, Engineered Specifically for Your Mission Critical Applications





ATP Industrial Grade SD/SDHC/SDXC cards are designed for application in demanding industries, such as automotive, healthcare, and aviation, where critical data requires the highest level of reliability, durability, and data integrity. They are also suitable for removable application and small footprint mechanism devices.

ATP SD cards with read disturb protector-AutoRefresh technology and Autoscan features are best suited for read intensive applications. For instance in the automotive industry, ATP SD cards have been recognized by worldwide major tier 1 Auto Infotainment Suppliers and tier 2 telematics electronic vehicle system developers/service providers for their map system, IVI (in-vehicle-infotainment), and OS boot-up. On the other hand, ATP SD cards with SLC mode and Power cycling solution are ideal for write intensive applications. Such applications include data logging and storage of hospital medical devices and surveillance systems.

Moreover, with ATP's SIP (System-In-Packaging) manufacturing process, the operating/ storage temperature of ATP Industrial Grade SD cards is -40 to 85 degrees Celsius. All ATP Industrial Grade products go through multi data pattern burn in test. This is to screen for early fallout occasionally seen in any semiconductor technology.

### **Key Features**

- SLC (Single-Level-Cell) NAND flash and MLC (Multi-Level Cell / 2-bit per Cell) NAND Flash
- Advanced Wear Leveling algorithm
- Bad Block Management
- Read Disturb Protector AutoRefresh to ensure data integrity during read operation
- IP67 waterproof/Dustproof test (IEC 60529)
- Highly reliable and pass environmental test (Bend/Torque/Salt Spray/Solar radiation)
- ESD resistance
- Life Monitor (Note: The compatibility and support of Life Monitor may vary on different platform/operation system)

#### **Applications**

- Industrial PC
- Medical devices
- Automation
- Automotive IVI systems
- Test and Measurement
- Surveillance systems
- Drive recorders
- Navigations
- Network cameras
- Mobile/Handheld computers



















# **Specifications**

Product Name	SD/SDHC/SDXC				
Flash Type	SLC	iTemp MLC	MLC	aMLC	
Density	512MB to 8GB	8GB to 32GB	8GB to 128GB	4GB to 8GB	
Performance	Sequential Read up to 68.86 MB/s	Sequential Read up to 93.89 MB/s	Sequential Read up to 91.1 MB/s	Sequential Read up to 74.4 MB/s	
	Sequential Write up to 38.14 MB/s	Sequential Write up to 37.75 MB/s	Sequential Write up to 58.9 MB/s	Sequential Write up to 27.3 MB/s	
Interface	SD2.0 Class 6 (512MB~2GB) SD3.0 UHS-I (4GB~8GB)	SD4.2 UHS-I	SD3.0 UHS-I	SD3.0 UHS-I	
Operation Temperature	-40°C to +85°C		-25°C to +85°C		
Reliability	<ul><li>Advanced Static</li><li>Dynamic Wear-Leveling</li><li>AutoRefresh</li></ul>	<ul><li>Advanced Static</li><li>Dynamic Wear-Leveling</li><li>AutoRefresh</li><li>Dynamic Data Refresh</li></ul>	<ul><li>Advanced Static Dynamic Wear-Leveling</li><li>AutoRefresh</li></ul>	<ul> <li>Advanced Static</li> <li>Dynamic Wear-Leveling</li> </ul>	
	TBW*(max.): 192 TB	TBW*(max.): 38.4 TB	TBW*(max.): 153 TB	TBW*(max.): 128 TB	
	MTBF@25°C: >5,000,000 hours	MTBF@25°C: >2,000,000 hours			
	Number of Insertions: 10,000 minimum				
Dimensions: LxWxH (mm)	32.0 x 24.0 x 2.1				

<sup>\*</sup> All TBW data listed are under highest sequential write value in each product line. The TBW data are subject to change by density, configuration and customers' applications.

# **Ordering Information**

Density	SLC	iTemp MLC	MLC	aMLC
512MB	AF512SDI-ZADXM	-	-	-
1GB	AF1GSDI-ZADXM	-	-	-
2GB	AF2GSDI-ZAEXM	-	-	-
4GB	AF4GSDI-WADXM	-	-	AF4GSD3A-WAAXX
8GB	AF8GSDI-WADXM	AF8GSD3-WACIM	AF8GSD3-WACXM	AF8GSD3A-WAAXX
16GB	-	AF16GSD3-WACIM	AF16GSD3-WACXM	-
32GB	-	AF32GSD3-WABIM	AF32GSD3-WABXM	-
64GB	-	-	AF64GSD3-WACXM	-
128GB	-	-	AF128GSD3-WAAXM	-

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