# Company Profile

**BIWIN STORAGE TECHNOLOGY CO., LTD.** 

2025 Q1

BIWIN Storage Technology CO., Ltd. (SSE STAR Market, Stock Symbol: 688525) produces high quality NAND flash storage and is now known in embedded, consumer, corporate and industrial segments for its independent development capabilities in hardware, software, firmware and storage algorithms.

Our founders started in the flash storage business in 1995, in Shenzhen, China, embracing the "WIN-WIN" **business philosophy** that would later become the hallmark for BIWIN.

In 2009, they made a key decision for the business: to add IC encapsulation (or IC packaging) process into the factory A remarkable milestone that the vast of majority of competing companies still don't have (they outsource the process or buy the packaged IC). This successful step led to the 2010 creation of the company we know today.

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**Product Lines & Services** 

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# 01

# **Product Lines** and Services

Industrial & Automotive, Embedded, PC OEM & Enterprise, Consumer, and IC Packaging & Testing

## **Product Lines, Storage & Memory Solutions**

Industrial & Automotive	Embedded	PC OEM & Enterprise	Consumer
Industrial: • SATA SSD (2.5", mSATA, M.2 2280/2242) • PCIe SSD (M.2 2280/2242) • SODIMM/UDIMM (DDR4, DDR5) • ECC SODIMM/UDIMM (DDR4) • SD/microSD Card • eMMC • SPI NOR Automotive: • eMMC (5.1) • UFS (3.1) • SPI NOR and more	<ul> <li>eMMC (5.1, 5.2)</li> <li>UFS (2.1, 2.2, 3.1)</li> <li>ePOP</li> <li>eMCP</li> <li>uMCP</li> <li>LPDDR (3, 4/4X, 5/5X)</li> <li>BGA SSD (PCIe 3.0/4.0)</li> <li> and more</li> </ul>	<ul> <li>PC OEM:</li> <li>SATA SSD (2.5")</li> <li>M.2 SSD (M.2 2280/2242/2230)</li> <li>SODIMM (DDR4, DDR5)</li> <li>UDIMM (DDR4, DDR5)</li> <li>UDIMM (DDR4, DDR5)</li> <li>PCIe SSD (U.2, E1.S, E3.S)</li> <li>RDIMM (DDR5)</li> <li>CXL DRAM (AIC, E3.S)</li> <li> and more</li> </ul>	<ul> <li>SATA SSD (2.5")</li> <li>PCIe SSD (M.2 2280/2230)</li> <li>SODIMM/UDIMM (DDR4, DDR5)</li> <li>CUDIMM (DDR5)</li> <li>Portable SSD</li> <li>CFexpress Type-A Card</li> <li>CFexpress Type-B Card</li> <li>SD/microSD Card</li> <li>USB Flash drive</li> <li>Card Reader</li> <li>and more</li> </ul>



### **Products and Applications**



**BIWIN STORAGE TECHNOLOGY CO., LTD.** 



## **Embedded Chips**

Product	eMMC		LPDDR				uM	СР
Туре	eMMC 5.1	eMMC 5.1	LPDDR4X	LPDDR5/5X	LPDDR5/5X	LPDDR5/5X	UFS 2.2 + LPDDR4X	UFS 2.2 + LPDDR5
Photo							in the	0.0476
Dimensions (mm)	8.0 x 7.5 x 0.75	11.5 x 13.0 x 0.9	10.0 x 14.5 x 1.0 10.0 x 15.0 x 1.0	12.4 x 15.0 x 1.0	14.0 x 12.4 x 0.8	8.2 x 12.4 x 0.8	11.5 x 13.0 x 1.2	11.5 x 13.0 x 1.2
Packaging	FBGA 153b	FBGA 153b	FBGA 200b	FBGA 315b	FBGA 496b	FBGA 245b	FBGA 254b	FBGA 297b
Max.Capacity	64GB	512GB	64Gb	64Gb	128Gb	64Gb	512GB+64Gb	256GB+64Gb
	еМСР							
Product	eM	ICP		ePOP		UFS	BGA	SSD
Product Type	eM eMMC 5.1 + LPDDR3	CP eMMC 5.1 + LPDDR4X	eMMC 5.1 + LPDDR3	ePOP eMMC 5.1 + LPDDR4X	eMMC 5.1 + LPDDR5X	UFS UFS2.2/3.1	BGA PCIe GEN 4X2	SSD PCIe GEN 4X4
	eMMC 5.1	eMMC 5.1		eMMC 5.1				
Туре	eMMC 5.1 + LPDDR3	eMMC 5.1		eMMC 5.1				
Type Photo Dimensions	eMMC 5.1 + LPDDR3	eMMC 5.1 + LPDDR4X	+ LPDDR3	eMMC 5.1 + LPDDR4X	+ LPDDR5X	UFS2.2/3.1	PCIe GEN 4X2	PCIe GEN 4X4

#### BIWIN STORAGE TECHNOLOGY CO., LTD.



## **SSDs and Memory Cards**

Form Factors	NVMe M.2 2280	NVMe M.2 2242	NVMe M.2 2230	2.5 inch
Photos	APB73 27 E INNER IN I - V antici e I a CCTS G-U 2	Gantane CEPC	Town The	
Capacity	512 GB - 2 TB	32 GB - 2 TB	256 / 512 GB	128 GB - 2 TB
Form Factors	SATA M.2 2280	SATA M.2 2242	mSATA	2.5 U.2
Photos	Testas Tin UI II UI II	Productive and Andrew Construction Construction		The second se
Capacity	32 GB - 2 TB	32 GB - 2 TB	32 GB - 2 TB	32 GB - 2 TB
Form Factors	E3.S	U.2	E1.S	SD Card / microSD Card
Photos	Biwin #68-0cm/sat			256m
Capacity	15.36 TB	3.84 TB	12.8 TB	32 - 256 GB

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## **DRAM Modules**

DDR	DDR5	DDR5	DDR5	DDR5
DIMM	SODIMM	UDIMM	CU-DIMM	LPDDR5 CAMM2
Photos				
Capacity	16 GB / 32 GB	16 GB / 32 GB	16 GB / 32 GB	16 GB / 32 GB / 64 GB
Data Rate (up to)	4800 MT/s / 5600 MT/s	4800 MT/s / 5600 MT/s	6400 MT/s ~ 8800 MT/s	6400 MT/s ~ 9600 MT/s
Model	DDR4	DDR4	DDR4	DDR4
Model DIMM	DDR4 ECC SODIMM Wide-Temperature	DDR4 ECC UDIMM Wide-Temperature	DDR4 Non-ECC SODIMM	DDR4 Non-ECC UDIMM
DIMM	ECC SODIMM Wide-Temperature		Non-ECC SODIMM	Non-ECC UDIMM





## **Official Licensed Consumer Brands**



#### **Brand License**

BIWIN is the HP business partner and official licensee, with HP for the marketing, sale, promotion, and distribution of aftermarket internal solid state drives, external portable SSDs, synchronous dynamic random access memory (SDRAM) and memory cards for the consumer market.





#### **Global Exclusive License**

In July 2020, BIWIN and Acer reached a global exclusive brand licensing agreement. We have become the exclusive global brand licensee of Acer and Predator: memory, SSD, eSports memory, portable SSD, and other products.





#### **Global Exclusive License**

Predator branded storage products are designed and manufactured by BIWIN Storage Technology Company, a leading maker of high-end gaming memory modules and SSDs for eSports and gaming enthusiasts.





#### **Brand License**

Lenovo's story has always been about shaping computing intelligence to create a better world. By designing, producing, and marketing an officially licensed range of Lenovo branded SSDs, BIWIN embraces Lenovo's vision of Smarter Technology for All.





# **Biwin Consumer Brand**

It's a digital world. We all need our digital devices-- and these devices need the best storage and memory to perform at their best.

For decades, Biwin has made the critical storage and memory in many of the leading digital devices that have defined our digital world.

Our consumer brand brings you the best of our experience, a range of SSDs, DRAM, memory cards and related accessories that will help you get the most out of your devices.

Our cutting-edge facilities use the latest technologies including our own chip packaging, software and hardware labs, state-of-the-art clean rooms, and our own award-winning manufacturing equipment. We are especially proud of our extraordinary rigorous chain of testing that assures you we're working to bring you the best in reliability.

Whether at work, at play or entertainment, we believe you can count on winning with our Biwin brand.

#### Biwin, Built to Win-

## BLACK OPAL (Gaming)

Biwin Black Opal is designed for gamers, enthusiasts, modders and overclockers seeking top-tier performance. The result of years of experience in SSDs and DRAM manufacturing, Black Opal durability matches the more strenuous needs of gamers, content providers and professional users.





#### What is OC Lab?

OC Lab is an overclocking laboratory focused on maximizing memory module performance, pushing the limits of memory overclocking. Using advanced chip selection, OC Lab rigorously chooses topquality memory chips and fine-tunes them to unlock exceptional overclocking potential, thereby delivering unmatched speed, stability, and reliability.



# **Amber (Mobility)**

Biwin Amber is ideal for professionals on the go requiring superior mobile storage solutions.



# **Biwin (Mainstream)**

The Biwin consumer brand offers the best of Biwin's experience, a range of SSDs, DRAM, memory cards and related accessories that will help you get the most out of your devices.



## **Supply Chain & Business Partners\***

	Google	2	Meta	ZTE	PX P	oxconn.
Mobile & Wearable	SKYWORTH 创编	TCL	TRANS	SION 時音聲段	<b>国泰科技</b>	WATER
Smart Devices	<b>TINNO</b> 天斑	<b>③</b> 在最相望	8 HR		<b>ENCE</b>	TINND 夫班典語
	WEI3U #5	进展式	oppo	100	ring	Centerm
Enterprise Storage	10 C - 2		7.34	國友	insp	山口浪潮
PC	acer		Leno	vo	(	P
Industrial Storage	mindra	y .	Stream Right		4	STAK-NET 回往記讀

\* Each trademark belongs to its respective owner.

\* BIWIN Embedded Storage Shipments, No. 8 Worldwide (Source: China Flash Market)



## **Supply Chain & Business Partners\***



**BIWIN STORAGE TECHNOLOGY CO., LTD.** 

🖉 Biwin



# R&D Capabilities

Storage Medium Characteristic Analysis, Firmware Development, and Automated Testing

## **Increasing Investment in R&D for New Productivity**

#### **01. Development in Solutions**

#### **Building Product Competitiveness**

- Increasing investment in media characteristics research, firmware, software & hardware, and testing development.
- Improving product competitiveness by optimizing performance, power consumption, capacity, size, etc.
- Developing innovative products in smart wearables, industrial and automobile solutions, high-performance mobile phones/PCs, CXL, and more.

#### 02. IC Design

#### **Self-developed controller**

- BIWIN has produced the tape-out and verification of our first
   Storage Controller—demonstrating excellent performance.
- BIWIN develops the next generation
   12nm/6nm advanced storage controller to meet the needs of AI applications



### 03. Intellectual Property Rights

#### **Increasing Investment in Core R&D**

- The proportion of R&D investment in total revenue is approximately 7%.
- BIWIN has obtained a total of 307 domestic and overseas patents and 27 software copyrights.
- In 2023, 84 new patent applications were filed, with 56 patents granted, and 1 new IC layout design patent was granted.

#### 04. Test equipment

#### Software + Hardware + Platform

 BIWIN develops storage testing machines, ranging from ATE, BI to SLT, among which the TY-S101A testing machine won the "Most Innovative Award".





## From R&D to Packaging & Testing: Integration Services



**BIWIN STORAGE TECHNOLOGY CO., LTD.** 



## From R&D to Packaging & Testing: Integration Services















## A One-stop Service to Bring Your Products to Market Faster

Wafer	Design	Production	Product
SAMSUNG CanSemi	<ul> <li>Packaging Solutions</li> <li>Testing Solutions</li> <li>Module Solutions</li> <li>Reliability Validation</li> <li>Simulation &amp; Eye Diagrams</li> <li>Substrates</li> </ul>	<ul> <li>Packaging:</li> <li>SiP</li> <li>FC CSP/BGA</li> <li>WB BGA/QFN</li> <li>Module</li> <li>Bumping</li> <li>Fanin/Fanout</li> <li>2.5D/3D</li> <li>Chiplet</li> </ul>	Consumer-Grade         The second se
micron. UMC	<ul><li>Frames</li><li>Masks</li><li>Stencils</li><li>Etc.</li></ul>	<ul> <li>Testing:</li> <li>CP (Wafer Probing)</li> <li>FT</li> <li>ATE</li> <li>Burn-in (Aging Test)</li> <li>SLT (System-Level Testing)</li> </ul>	Automotive Industrial-Grade



## **Our Innovation Adds Growth in Intellectual Property**

STORIGTE BU				Types	Patented	Patent-pending	Total		
2011年1日 2011年日 201	实用新型专利证书 实用新型专利证书 ····································	外观设计专利证书 Process servers F - A refugation		Invention Patents	95	181	276		
control and the second se	$\label{eq:second} \begin{array}{c} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0$	Non-state       Non-state	<ul> <li>(1) (a) (a) interesting the second sec</li></ul>	<ul> <li>[1] S. L. S. M. S. M. S. S.</li></ul>	Patents (307)	Utility Model Patents	148	51	199
	·····································		·····································	Appearance Patents	64	7	71		
		1123m (212)	•	uter Software vrights (27)	27	9	36		
The "believe of the instant state."	United States of America Biwin barr Davis a Datawas Con. BIWIN	中華人民共和国国家原权局 甘菜机軟件著作权登记述 8 市市市市 (magerian : Ann 可) 市市市 (magerian : Ann 可)		International Trademarks	35	2	37		
America Control Izani Panet	In C. 7 Heat Constant Constant Constant Constant Constant Constant Principal Register Wester Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Const Constant Constant Constant Constant Constant Const Constant Constant Constant Constant Const Constant Constant Const Constant Constant Const Constant Const Constant Const Constant Const Constant Const Constant Const Constant Const Constant Const	Ing Salarian	Others (157)	Chinese Trademarks	121	24	145		
The second second	And Annual Street			IC Layout Design	1	0	1		
	100	200 UDS		Total	491	274	765		



# 03

# Manufacturing Capabilities

Monthly Productivity, Automated Testing System, Quality Control, and Advanced IC Packaging & Testing

### **GBAT** (Greater Bay Advanced Technology Co., Ltd.)



Greater Bay Advanced Technology Co., Ltd. (GBAT), founded in December 2016, is a wholly-owned subsidiary of Shenzhen BIWIN Storage Technology Co., Ltd. (Stock Code: 688525).

With over 1,500 employees, GBAT covers 38,000 square meters of land and has a total building area of 110,000 square meters.

GBAT specializes in advanced memory packaging and testing, and storage-computer integration. It masters cuttingedge manufacturing capabilities, including FC-BGA (Flip-Chip Ball Grid Array)/FC-CSP (Flip-Chip Chip Size Package), 16-layer stacked die, ultra-thin die (30-40 µm), FOD (Foreign Object Debris) management, vertical wire bonding, and multi-chip heterogeneous integration (SiP), all of which meet world-class industry standards.

With a core team of over 200 senior engineers and talent from both local and international backgrounds, GBAT's products are widely applied in sectors such as mobile smart terminals, personal computers, industrial terminals, data centers, intelligent vehicles, and portable storage.

GBAT is committed to becoming a distinguished benchmark for advanced testing and packaging solutions in the Greater Bay Area, focusing on "advanced storage + logic chips + automotive-grade" packaging and testing capabilities.

# **Monthly Productivity (Wire Bonding & Flip Chip)**

	Year	BGA/LGA Substrate	Flip Chip FCCSP & FCBGA		Module Product Line	
		<b>Product Line</b> (12-inch wafer)	FC Line	Monthly	SSD	Memory
2023	A1: Full Capacity	30,000 units/month	1	5 million	1.5 million/month	100K/month
2024	A2: Approaching	60,000 units/month	3	15 million	2 million/month	200K/month
2025	A3: Approaching	100,000 units/month	6	30 million	3 million/month	300K/month



A1 Building: FC 2 lines | DB 100 units

A2 Building: FC 2 lines | DB 100 units

A3 Building: FC 2 lines | DB 150 units



## **BIWIN Chip Packaging Advantages**





### **Automated Testing Systems**

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(	) (	

#### Our Great Team Our core members come from first-tier wafer OEMs and bring

first-tier wafer OEMs and bring rich experiences in testing and R&D.

#### **Testing Tools**

DVT

We own optimized test algorithms and automation tools. Our use case coverage and automation level are at the forefront of the industry.

Electrical	SI Tests	Application	Compatibility	Verification
Tests		Tests	Tests	Tests
<ul> <li>O/S</li> <li>Functional</li> <li>Power Consumption AC Parameters</li> <li>DC Parameters</li> </ul>	<ul> <li>Signal Integrity</li> <li>SATA Eye Pattern</li> </ul>	<ul><li>Basic Functions</li><li>Performance</li><li>WA</li></ul>	<ul> <li>ATACT Command</li> <li>NCQ / Trim</li> <li>Diverse Platforms &amp; OS Compatibility Tests</li> </ul>	<ul> <li>RDT</li> <li>EST</li> <li>MST</li> <li>Power Cycle</li> <li>Dormancy</li> <li>Reboot</li> </ul>

#### Patented Test Equipment Invented by BIWIN



We boast a meticulous design verification test (DVT) to ensure product quality from front-end R&D.



We own a product verification test (PVT) to ensure exceptional performance and stable quality of our products.







#### BIWIN STORAGE TECHNOLOGY CO., LTD.

## **Testing Capabilities & Services**

- We offer a strong team with rich experience in IC testing.
- We are experienced in testing SSD, DDR, SoC and other chips– with the experience of success stories from well-known companies.
- With a complete delivery system and solutions, self-developed test equipment from BI to SLT, BIWIN delivers fast, efficient, and seamless customer support to help companies become leaders in their industries for the product quality, productivity, and cost.
  - BIWIN offers customized service for test cases, software and reliability tests.
  - Our experienced R&D team analyses the demand and any pain points to provide our customers expert turnkey solutions for project delivery (from design to implementation).





BIWIN provides testing services for products including ICs and modules. Our experience plus quality testing resources and professional testing equipment ensure product quality, productivity, and delivery.

Customized

Turnkey

Solution



## **Quality Control Capabilities**

#### R Quality Management (Hold Lot Mgmt & Disposition, SPC) е Р р а RTD & Dispatching (Robot Mgmt System, AMR etc.) 0 p r Traveler/Barcode SWR/CT Factory Modeling Material, Tooling& Setup WMS Efficiency & Finance / e-HR & Planning **Tool Management** Support System е n S MDSS g **Core Systems** MES Best ERP | Oracle s 3 S Quality Shop Floor Mgmt. **Tool Stability** D W Quality Control (Recipe Mgmt, Parameter Mgmt, Auto QC Inspection) ◄ а M/B Diagram 0 Smart Sampling System s **Equipment Automation Module** h Floor **Test Systems** Test OEE b EAP ←→ Monitoring TMS, B/I Automation -0 Ο а **Equipment Server** Wafer-Map BIT **Tester Software** w Remote Control **Connectivity Software** Substrate-Map $\rightarrow$ Software r d

### Advanced IT Automation System I Robotic Automatic Loading/Unloading

BIWIN STORAGE TECHNOLOGY CO., LTD.



### **Quality Management System**



#### Certifications Obtained by BIWIN: ISO9001 / IATF16949 / ISO14001 / ISO27001 / QC080000 / SA8000

**BIWIN STORAGE TECHNOLOGY CO., LTD.** 



### **GBCC** (Greater Bay Chiplet Company Co., Ltd.)



Greater Bay Chiplet Company Co., Ltd. (GBCC), established in September 2023, is a wholly-owned subsidiary of Shenzhen BIWIN Storage Technology Co., Ltd. (Stock Code: 688525).

GBCC operates on a 10,000-square-meter site and will feature a state-of-the-art cleanroom facility covering 70,000 square meters.

GBCC specializes in advanced wafer-level packaging for memory chips and the integration of memory and computer chips, mastering cutting-edge wafer bumping, fan-in, and 2.5D packaging technologies. With a core team of top-tier talents from both local and international backgrounds, GBCC provides comprehensive services in memory and logic chip integration, along with testing and R&D capabilities.

The company has established a comprehensive, internationally skilled team specializing in wafer-level memorycomputer chip packaging services. Its products are widely applied in mobile smart terminals, edge computing, data centers, intelligent vehicles, and other fields of information technology.

GBCC is committed to becoming a leading benchmark for advanced wafer-level packaging and testing solutions in the Greater Bay Area, with the capability to integrate 'advanced memory + computer chips'.

### **Development Strategy**





## **Advanced Packaging Capabilities**

	Existing Plant Capacities			Planned Capacities		
Hybrid BGA (SiP)		- Size: 3x3 ~ 30x30 mm - SiP (FC + WB) - Chip Thickness: 40 µm, 16-layer stacked Die	Bump (Cu Pillar)		- L/S: 2 ~ 10 μm - Height: 18 ~ 150 μm - Bump Size: 30 μm	
WB BGA/LGA	Lubstrate	- Size: 2x2 ~ 30x30 mm - Chip Thickness: 40 μm - 16-layer Die stacking	Fanin (WCSP)	000	- L/S: 2 ~ 10 μm - 2 ~ 6 Layers - LTPI@>80% Cu Density	
WB QFN	Board	- Framework: 100 x 300 - Wettable Flank - Plasma Saw	Fanout (EMC)	0000	- L/S: 2 ~ 10 μm - Single Chip & Multi Chips - Face Down/Up & RDL Frost	
Module	ALL CREE BREEL	- PCIe, SATA, M.2 - DRAM Module - Auto SSD	TSV		- Diameter: 2 ~ 100 μm - Thickness: 10 ~ 200 μm	
FlipChip (CSP)	IC Staterate PCB	- Size: 15 x 15 mm - Bump Size: 40 μm - Ι/Ο: ~ 450	НВМ	and pailed pa- and pailed pa- and pailed pa- and pailed pa- and pailed pa- and pailed pa- the file of the pail the file of the pail of the pail the file of the pail of the pail the file of the pail of the pail of the pail the file of the pail of the pail of the pail of the pail the file of the pail of the	- Chip to Chip (D2D) - 4 ~ 12 layers stacking - Double Bump Flip-chip, 30 μm & TCB	
FlipChip (BGA)	Unifertiti Substrate PCB	- Size: 50 x 50 mm - Bump Size: 40 μm - Ι/Ο: ~ 2000	Chiplet		- Bumping / Micro Bump / RDL - WLCSP (Fanin/Fanout) - TSV & Hybrid Bonding	

BIWIN STORAGE TECHNOLOGY CO., LTD.



## **Showcase: SiP MP Product**

#### **Advantages:**

- Smaller size, 0.7 mm
- 7\*7~31\*31
- Warpage control (thickness < 40µm in high temperature)

### **Key Techniques:**

- 40 µm Die (LG + SDBG)
- Die-stacking, narrow-pitch wire bonding, FOW, FMS, C-Molding
- Underfill
- Nitto / Disco / Fasford / KNS / BESI / TOWA

System in Package (SiP) is a method used for bundling multiple integrated circuits (ICs) and passive components into a single package where all work together.





# 04

# Sales and Marketing

Global Network, International Awards, Media Accolades, and Trade Shows

### **BIWIN Presence Reaches Across the Globe**



#### Headquarters

Global Headquarters: Shenzhen America Headquarters: Miami

#### R&D Centers

Shenzhen, Chengdu, Huizhou, Hangzhou

#### Manufacturing Plants

Huizhou, Manaus, Chennai, Reynosa, Matamoros...

#### Service Centers

Hong Kong, Beijing, Shanghai...

#### Local Presence

Los Angeles, New Delhi, Frankfurt, Taipei, Mexico City...



#### **BIWIN STORAGE TECHNOLOGY CO., LTD.**
### **International Awards and Honors**



### **Top Achiever in Consumer Storage Awards**

### Most Reliable Flash Storage Manufacturer Brand Awards

\* Each trademark belongs to its respective owner.

**The Leading Flash Storage Manufacturer** 

#### **BIWIN STORAGE TECHNOLOGY CO., LTD.**

#### www.biwintechnology.com



## **Media Accolades and What Press & Experts Say**

### tom'sHARDWARE

"The Acer Predator GM7 is the most efficient SSD we have ever tested, and it's no slouch with regard to performance. It's good to great in most benchmarks, and performance in sustained workloads is also reasonably good. The great power efficiency helps keep the drive cool, and the singlesided design makes this a great choice for laptops and the PS5."



"Best price-to-performance ratio at MSRP we've ever seen." "The first DRAM-less SSD with enough throughput for the PS5."



"The GM7 SSD is one more successful product under the Predator brand. It pleasantly surprised me multiple times and gave me some fun testing a new and original SSD that has a chance to change something on the already dull storage market."



\* Each trademark belongs to its respective owner.



### **Worldwide Exhibitions**

The industry gathers at trade shows to see the latest in product and technology.

Important buying decisions are often made on trade show floors. Certainly, lasting relationships form between the manufacturers and the buyers during these important events.

Only truly global companies are able to follow the international schedule of events that puts a storage manufacturer on the world map.



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www.biwintechnology.com



### Local Events, Promotions, Product Training



Australia



BIWIE



## 05

## BIWIN Advantages

2

Why BIWIN?

## We're a Specialist Manufacturer of Flash Storage & DRAM

First, we are manufacturing specialists of FLASH STORAGE and DRAM, products which are significant in **the era of Internet of Everything**.

There are not that many of us (compared to other industries), so we serve a WIDE range of embedded, industrial & consumer applications.

Our products ensure the speed and reliability of computing performance inside PCs, industrial equipment & connected devices.





## **Our Expert Services for IC Packaging & Testing**

Second, there aren't many suppliers in flash storage and DRAM that also do IC packaging and testing.

That means that many other supplier must wait until the wafer producers (all large companies) do the packaging and stock their supply chain.

We offer a more flexible working relationship, more custom service, and improved time-to-market.











## We've Learned Much from Working with Tech's Top Companies

Third, because of our IC packaging and testing, many of the world's top consumer brands (as well as exciting start-ups), do business with us **because of our decades of experience in IC packaging and testing** we can help customize their solutions.

Our work is based on years of experience meeting the needs of the world's top brands.

# We work with THREE of the FIVE BIG TECH companies below.



Our big clients want anonymity so we can only tell you we're already supplying embedded storage to three out of the Big Five of the world's largest tech companies (Alphabet (Google), Amazon, Apple, Meta (Facebook), and Microsoft.)

\* Each trademark belongs to its respective owner.



## We're Also Working with the World's Top PC Brands

Fourth, under official license, we make the consumer storage and DRAM several top tier PC brands. This is not OEM but a much rarer business model. We compete for **an official license to design, build, market and sell under these famous computer brands**.

Imagine that as a Top 5 Global PC company that your most important asset is your brand and you'll realize that **license-to-build is a well-scrutinized decision** in the first place-with constant communication between company teams to ensure any chosen supplier to live up to the brand expectations.





## **Our Newest Facility: We've Greatly Increased Capacity**

Fifth, we opened Phase I of the new **BIWIN SCIENCE & TECHNOLOGY PARK**. It's one of the latest modern factories in our industry and a 110,000 sqm facility.

With this new campus, our production capacity is increased by multiples, bringing us all the commercial advantages that bigger purchasing power can provide our customers.





### We're Now a Public Company

Sixth, After being chosen for inclusion in the elite STAR MARKET Sci-Tech Innovation group, BIWIN concluded its IPO listing on the Shanghai Stock Exchange.

Besides a great vote of confidence in our future by the financial community, this listing creates many financial advantages that will help us increase our visibility on the global stage.





## **Even Our Manufacturing Machinery is Award-Winning**

We've designed and built some of our own manufacturing machinery. It worked so well, we've created a subsidiary to sell it industry-wide under its own brand Tytantest.

Our Tytantest TY-S101A won the **BEST OF SHOW Award for Most Innovative Memory Technology** at the 2023 Flash Memory Summit.





## **Why BIWIN? A Summary From This Presentation**



### Storage Algorithms & Firmware Development

BIWIN owns two R&D teams for firmware development. The core members have more-than-ten-year experience in firmware development, and have rich experience in mass production of selfdeveloped firmware.



### Full-range Product Testing Capability

BIWIN incessantly develops the memory chip testing algorithm and automation equipment. We lead the industries with our impressive test coverage and automation. Every product comes from us must undergo DVT and PVT.



### Outstanding Customization, Fast Response

BIWIN boasts the extraordinary customized R&D capabilities and the fast response to customers' needs. We hereby can meet the all-round requirements of 5G, IoT, smart industry, smart city, and vehicle network.



### Advanced Packaging & Testing

With the leading multi-chip and SiP packaging technology, BIWIN can process wafers as thin as 25 µm, support the mass production of 16-layer die stacking and achieve the smallest package in the industry.



# Infinite Storage, Unlimited Solutions

### **BIWIN STORAGE TECHNOLOGY CO., LTD.**

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