July 20, 2026 04:26 PM GMT

Greater China Technology Hardware | Asia Pacific

# TFT-LCD Panel Prices for July 2026: TVs -2%, Monitors and NBs Flat MoM

TV panel prices started to decline in July, and we expect IT panel prices to follow from 4Q26. Overall, we believe it is still premature to value panel stocks based on the potential glass opportunities in advanced packaging.

## Key Takeaways

- TV panel prices declined 2% MoM in July, mainly due to softer panel order momentum following earlier procurement in 1H26.
- IT panel prices remained flat MoM in July, as panel makers remained unwilling to concede on pricing amid elevated component costs despite softer demand.
- For panel stocks, we do not find the risk-reward attractive based on the potential adoption of glass in advanced packaging.

**TV panel prices fell 2% MoM in July:** Mainstream 32", 43", 55", 65", and 75" TV panel prices dropped 3%, 3%, 2%, 2%, 1%, respectively, for the month of July. This is consistent with our view. We continue to expect TV panel prices to decline over the coming months, as TV panel shipments in 2H26 are likely to fall below seasonal levels following the pull-forward in demand during 1H26 ahead of major sporting events. This could weaken panel makers' bargaining power in price negotiations and create downward pressure on TV panel prices. That said, supply-side discipline should help prevent significant price declines during this period. We believe the next key checkpoint will be demand in Aug–Sep, when brands begin preparing for year-end promotions. On a quarterly average basis, we expect TV panel prices to decline by a low single-digit % QoQ in 3Q26.

**IT panel prices remained flat in July:** Monitor and notebook panel prices were flat MoM during the month. Both segments are experiencing slower demand in 2H26 as brand customers pulled forward restocking into 1H26. However, panel makers continue to face significant component cost pressures and remain unwilling to concede on pricing in the near term. On a quarterly average basis, we expect IT panel prices to remain flat QoQ in 3Q26.

**Risk/reward less attractive:** We view valuations as fair post-recent correction, particularly for Taiwan names AUO (2409.TW; 1.3x P/B) and Innolux (3481.TW; 1.7x P/B), as incremental contributions from advanced packaging are likely to take longer to materialize and competition could intensify as the industry moves toward mass production, with multiple supply chain players targeting the opportunity. In China, we prefer BOE (000725.SZ; 1.6x P/B) over TCL (000100.SZ; 1.7x P/B) on BOE's scale advantage and faster progress in glass core substrates.

MORGAN STANLEY TAIWAN LIMITED+
Derrick Yang
Equity Analyst
Derrick.Yang@morganstanley.com +886 2 2730-2862

MORGAN STANLEY & CO. INTERNATIONAL PLC+
Shawn Kim
Equity Analyst
Shawn.Kim@morganstanley.com +44 20 7677-1018

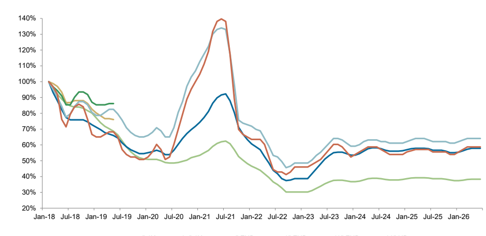
MORGAN STANLEY TAIWAN LIMITED+
Vivi Huang
Research Associate
Vivi.Huang@morganstanley.com +886 2 2730-2860

MORGAN STANLEY ASIA LIMITED+
Andy Meng, CFA
Equity Analyst
Andy.Meng@morganstanley.com +852 2239-7689



| GREATER CHINA TECHNOLOGY HARDWARE | |
|---|---|
| Asia Pacific | |
| Industry View | In-Line |
| **S. KOREA TECHNOLOGY** | |
| Asia Pacific | |
| Industry View | Attractive |

**Exhibit 1 :** TFT-LCD TV Panel Price Trends




Source: Trendforce, Morgan Stanley Research

# Pricing Chart

**Exhibit 2:** TFT-LCD Panel Prices – July 2026

| Screen Size | Format | Resolution | BLU | 1/1/2025 | 2/1/2025 | 3/1/2025 | 4/1/2025 | 5/1/2025 | 6/1/2025 | 7/1/2025 | 8/1/2025 | 9/1/2025 | 10/1/2025 | 11/1/2025 | 12/1/2025 | 1/1/2026 | 2/1/2026 | 3/1/2026 | 4/1/2026 | 5/1/2026 | 6/1/2026 | July-26 (A) | July-26 (E) | Diff % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 75" | 4K2K | 3840x2160 | Open-Cell | 253 | 256 | 257 | 257 | 257 | 256 | 253 | 253 | 253 | 251 | 248 | 245 | 245 | 247 | 250 | 251 | 251 | 251 | 248 | 248 | 0.0% |
| Change (%) | | | | 1.2% | 1.2% | 0.4% | 0.0% | 0.0% | -0.4% | -1.2% | 0.0% | 0.0% | -0.8% | -1.2% | -1.2% | 0.0% | 0.8% | 1.2% | 0.4% | 0.0% | 0.0% | -1.2% | -1.2% | |
| 65" | 4K2K | 3840x2160 | Open-Cell | 184 | 186 | 187 | 187 | 187 | 186 | 183 | 183 | 183 | 181 | 178 | 178 | 179 | 182 | 185 | 187 | 187 | 187 | 184 | 184 | 0.0% |
| Change (%) | | | | 1.1% | 1.1% | 0.5% | 0.0% | 0.0% | -0.5% | -1.6% | 0.0% | 0.0% | -1.1% | -1.7% | 0.0% | 0.6% | 1.7% | 1.6% | 1.1% | 0.0% | 0.0% | -1.6% | -1.6% | |
| 55" | 4K2K | 3840x2160 | Open-Cell | 135 | 136 | 137 | 137 | 137 | 136 | 134 | 134 | 134 | 133 | 131 | 131 | 132 | 134 | 136 | 136 | 136 | 136 | 134 | 134 | 0.0% |
| Change (%) | | | | 0.7% | 0.7% | 0.7% | 0.0% | 0.0% | -0.7% | -1.5% | 0.0% | 0.0% | -0.7% | -1.5% | 0.0% | 0.8% | 1.5% | 1.5% | 0.0% | 0.0% | 0.0% | -1.5% | -1.5% | |
| 32" | HD | 1366x768 | Open-Cell | 35 | 35.5 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 35 | 36 | 37 | 37 | 37 | 37 | 36 | 36 | 0.0% |
| Change (%) | | | | 2.9% | 1.4% | 1.4% | 0.0% | 0.0% | 0.0% | -2.8% | 0.0% | 0.0% | 0.0% | -2.9% | 0.0% | 2.9% | 2.9% | 2.8% | 0.0% | 0.0% | 0.0% | -2.7% | -2.7% | |
| 23.8" | FHD | 1920x1080 | Edge-LED | 49.2 | 49.2 | 49.4 | 49.7 | 49.9 | 49.9 | 49.9 | 49.9 | 49.9 | 49.9 | 49.9 | 49.9 | 49.9 | 50.1 | 50.4 | 50.7 | 50.9 | 51 | 51 | 51 | 0.0% |
| Change (%) | | | | 0.0% | 0.0% | 0.4% | 0.6% | 0.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.4% | 0.6% | 0.6% | 0.4% | 0.2% | 0.0% | 0.0% | |
| 14.0" | WUXGA | 1920x1200 | Flat-LED | 42.10 | 42.10 | 42.10 | 42.10 | 42.10 | 42.10 | 42.10 | 42.10 | 42.10 | 42.10 | 42.00 | 41.90 | 41.70 | 41.50 | 41.50 | 41.50 | 41.50 | 41.50 | 41.50 | 41.50 | 0.0% |
| Change (%) | | | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | -0.2% | -0.2% | -0.5% | -0.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| 11.6" | HD | 1366x768 | Flat-LED | 25.05 | 25.05 | 25.05 | 25.05 | 25.05 | 25.05 | 25.05 | 25.05 | 25.05 | 25.05 | 25.05 | 25.05 | 24.95 | 24.85 | 24.85 | 24.85 | 24.85 | 24.85 | 24.85 | 24.85 | 0.0% |
| Change (%) | | | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | -0.4% | -0.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |

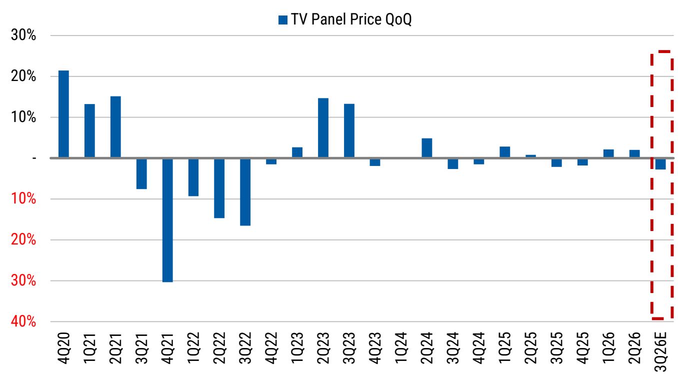
Source: TrendForce, Morgan Stanley Research

*Note: To be more consistent with the industry practice, WitsView changed the way it publishes panel price quotes in January 2025. It now only provides expectations of the full-month panel price outlook on the 5th of every month, instead of specific quotes for the first half of the month. It will then provide finalized prices for the month on the 20th of every month, which will be similar to the original 2H panel pricing quotes.*

## TV Panel Prices Start Trending Down from 3Q26

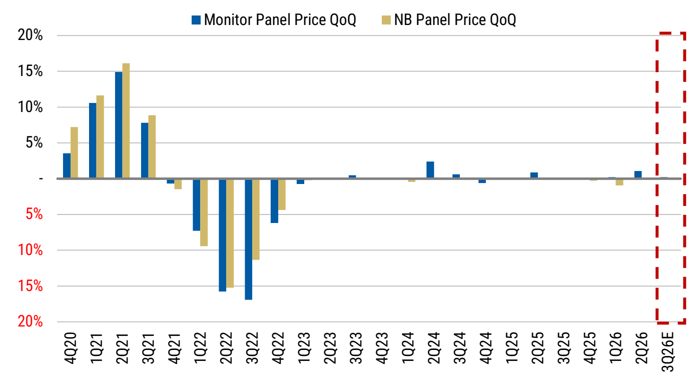
TV panel prices started to edge up at the beginning of this year, rising 1% MoM in January, 2% MoM in February and 2% MoM in March. April, May and June were largely flat, while July was down 2% MoM, in line with our expectation that TV panel prices would start trending down from 3Q26 onwards. That said, we do not expect a significant decline as supply-side discipline should provide downside support.

**Exhibit 3:** TV Panel Price Trend (QoQ)




Source: Trendforce, Morgan Stanley Research (E) estimates

**Exhibit 4:** IT Panel Price (QoQ)




Source: Trendforce, Morgan Stanley Research (E) estimates

## Below-Seasonal Panel Shipments in 2H26

Over the past decade, TV panel shipments have typically been split 49%–51% between 1H and 2H. In 2026, we expect the mix to skew toward 1H, as TV brands restocked ahead of major promotional events, including the Winter Olympics in February, the FIFA World Cup in June–July, and China's 618 shopping festival. We see no clear evidence that these events will materially boost global TV demand, but they have historically shifted shipment timing across quarters. As a result, we expect the restocking momentum seen since the start of the year to fade, with panel order momentum slowing in 2H26.

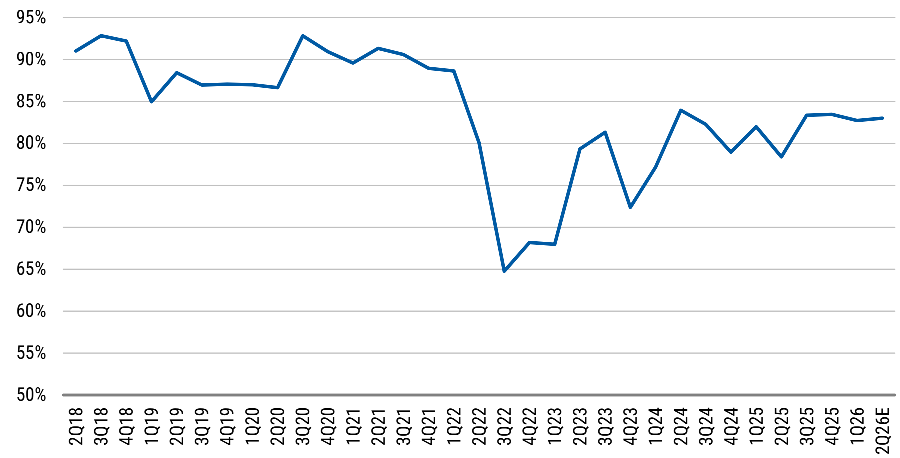
## Display Fab Utilization Stayed at 80%-85% in 2Q26

Stronger TV panel shipments supported display fab utilization of ~80% in 4Q24 and 82% in 1Q25. Utilization declined to 78% in 2Q25 as brands adopted a more cautious stance following earlier pull-ins and as the impact of China's trade-in program moderated. Utilization rebounded to 80%–85% in 3Q25 as brands restocked for year-end promotions and remained at similar levels in 4Q25 despite seasonal softness, as well as in 1Q26. Industry utilization stayed broadly flat QoQ at 80%–85% in 2Q26, reflecting continued supply discipline.

Over the medium to long term, we continue to believe the display industry is undergoing structural change. Chinese panel makers have shifted their focus from top-line growth to profitability, while lower government subsidies have reinforced supply discipline. We believe investors increasingly recognize that the industry's production-to-order model can remain sustainable, particularly as panel price cycles shortened to quarters in 2023–24 versus multi-year cycles in the previous decade. Consolidation actions, including LG Display's sale of its Gen 8.5 Guangzhou fab to TCL and Sharp's closure of its Gen 10 Sakai fab, also support a healthier supply backdrop (for more information, see Display –

Structural Changes on Supply Side Not Fairly Priced In, June 17, 2021).

**Exhibit 5:** Industry Average Utilization at Display Fabs




Source: WitsView, Morgan Stanley Research (E) estimates

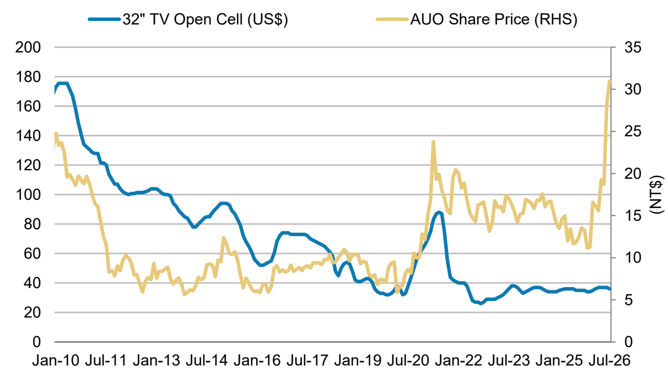
## Risk/Reward Fair After Recent Correction

We view risk-reward as broadly balanced following the recent correction in panel stocks. Below are our current views:

- **AUO (2409.TW, Derrick Yang):** We rate AUO Equal-weight with a PT of NT $27.00, based on a 1.4x 2026e P/B multiple. While we believe the current round of TV panel price increases is nearing an end, major panel makers should continue to demonstrate solid supply discipline, providing downside support. We appreciate AUO's efforts to diversify its business, but meaningful earnings contributions are likely to take time.
- **BOE (000725.SZ, Derrick Yang):** We prefer BOE due to its scale advantage, higher exposure to display, and faster progress in glass core substrates. Our PT of Rmb9.30 is based on 2.5x 2026e P/B, which we view as reasonable given our estimated ROE of 5–8% over 2026–28, compared with BOE's average P/B of 1.1x and ROE of 2–4% during 2023–25.
- **Innolux (3481.TW, Derrick Yang):** In semiconductors, we believe Innolux is participating in a foundry customer's glass core substrate project. However, we do not expect meaningful contributions before 2028, and additional competitors could enter as the industry moves toward mass production. We maintain our Equal-weight rating and PT of NT$60.00, based on a 2.1x 2026e P/B multiple.
- **LG Display (034220.KS, Shawn Kim):** Meaningful OLED revenue contribution should increasingly improve earnings from 2H25, but potentially weaker end-markets keep us from turning bullish on LGD. The stock trades at 0.8x 2026e P/B vs. a historical mid-cycle level of 0.5x.
- **TCL (000100.SZ, Derrick Yang):** We are EW with a price target of Rmb4.70 (1.7x 2026e P/B). The stock is trading at 1.7x 2026e P/B vs. its mid-cycle average of 1.4x since 2022.

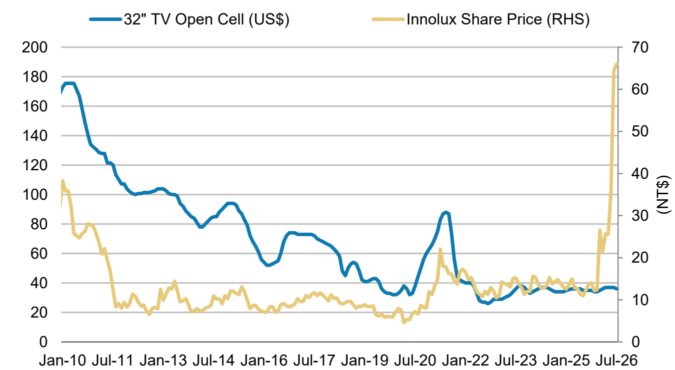
- **Corning (GLW.N, Meta Marshall):** Corning's display business continues to operate efficiently and should benefit from further margin support through additional currency-related price increases. Its optical communications business is also returning to growth as carrier fiber deployments accelerate. Corning's display business remains closely correlated with panel maker utilization rates and is the company's largest earnings contributor.
- **Greater China DDIC supply chain implications – Novatek (3034.TW, Daniel Yen):** Daniel's Underweight thesis reflects weaker PC, smartphone, and automotive demand, gross margin pressure, and a lack of new growth drivers. That said, Novatek's OLED DDI roadmap appears more competitive than those of its key Korean peers in terms of both performance and cost, helping it gain share in Apple's iPhone supply chain.

**Exhibit 6:** AUO Share Price vs. Panel Price



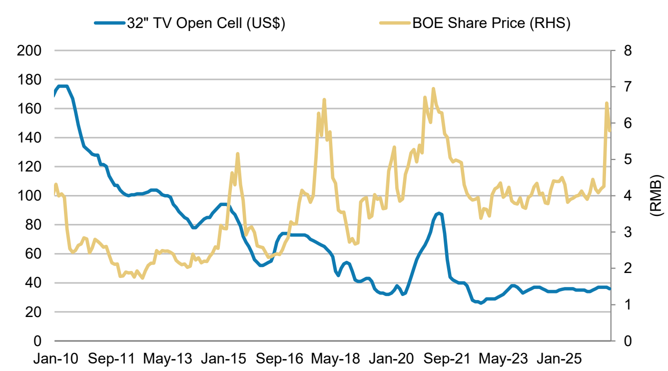

Source: Company data, WitsView, FactSet, Morgan Stanley Research

**Exhibit 7:** Innolux Share Price vs. Panel Price



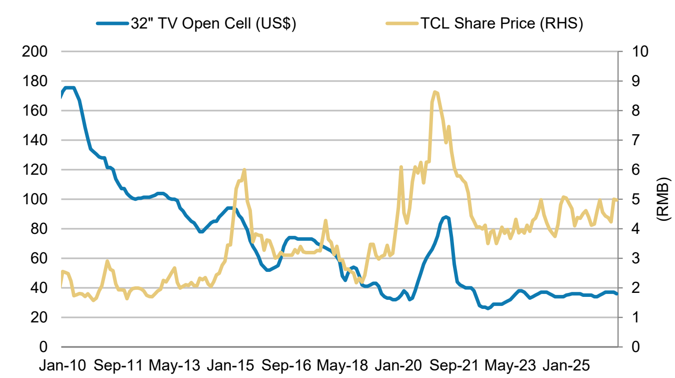

Source: Company data, WitsView, FactSet, Morgan Stanley Research

**Exhibit 8:** BOE Share Price vs. Panel Price




Source: Company data, WitsView, FactSet. Morgan Stanley Research

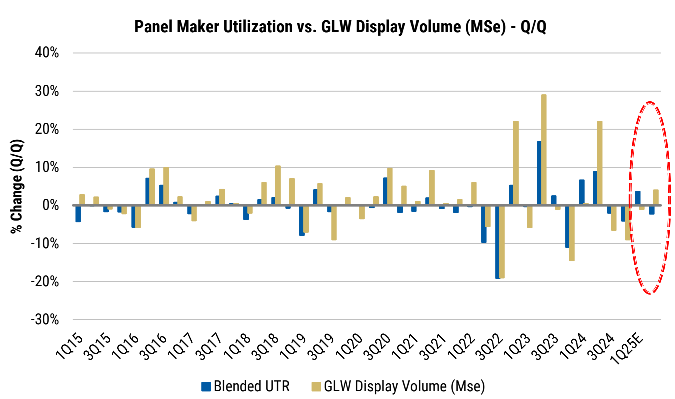
**Exhibit 9:** TCL Share Price vs. Panel Price




Source: Company data, WitsView, FactSet, Morgan Stanley Research

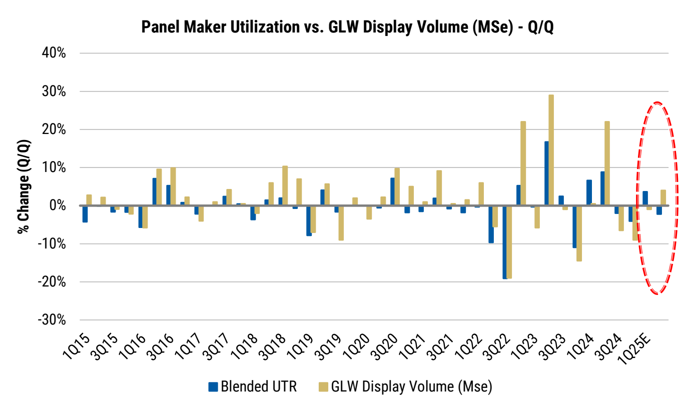
*Past performance is no guarantee of future results. Results shown do not include transaction costs.*

**Exhibit 10:** GLW Display Volumes vs. Utilization




Source: Company data, WitsView, Morgan Stanley Research estimates

**Exhibit 11:** GLW Display Revenue vs. Utilization




Source: Company data, WitsView, Morgan Stanley Research estimates

## Where Could We Be Wrong?

- **Stronger end-demand:** If end-demand for major applications turns out to be better than expected, there could be stronger panel shipments and less panel price pressure.
- **More stringent output control:** If major panel makers collectively adjust utilization to an extreme extent, they could mitigate pricing pressure in the case of softer demand.
- **Non-commodity display business:** If the non-commodity business progresses faster than expected, panel makers could show better financial results.

# Disclosure Section

The information and opinions in Morgan Stanley Research were prepared or are disseminated by Morgan Stanley Asia Limited (which accepts the responsibility for its contents) and/or Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research), and/or Morgan Stanley Taiwan Limited and/or Morgan Stanley & Co International plc, Seoul Branch, and/or Morgan Stanley Australia Limited (A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents), and/or Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents), and/or Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105); Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at Altimus, Level 39 & 40, Pandurang Budhkar Marg, Worli, Mumbai 400018, India; Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: tejarshi.hardas@morganstanley.com; Grievance officer details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com which accepts the responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research, and their affiliates (collectively, "Morgan Stanley"). Morgan Stanley India Company Private Limited (MSICPL) may use AI tools in providing research services. All recommendations contained herein are made by the duly qualified research analysts.

For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/eqr/disclosures/webapp/generalresearch, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

For valuation methodology and risks associated with any recommendation, rating or price target referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

## Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Shawn Kim; Andy Meng, CFA; Derrick Yang.

.

## Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflictpolicies. A Portuguese version of the policy can be found at www.morganstanley.com.br

## Important Regulatory Disclosures on Subject Companies

As of June 30, 2026, Morgan Stanley beneficially owned 1% or more of a class of common equity securities of the following companies covered in Morgan Stanley Research: AAC Technologies Holdings, Accton Technology Corporation, ACM Research Inc, Advanced Micro-Fabrication Equipment Inc, Advanced Wireless Semiconductor Co, AirTAC International, Alchip Technologies Ltd, AllRing Tech Co., AP Memory Technology Corp, Apple, Inc., Arista Networks, ASE Technology Holding Co. Ltd., ASMPT Ltd, AU Optronics, Auras Technology Co Ltd, Axon Enterprise Inc, Bizlink, BOE Technology, Cambricon Technology Corporation, Catcher Technology, Chenbro, Chroma Ate Inc., Ciena Corporation, Cisco Systems Inc, Coherent Corp, Compal Electronics, Corning Inc, Delta Electronics Inc., Dosilicon Co Ltd, E Ink Holdings Inc., Eoptolink Technology Inc Ltd, F5 Inc, Fadu Inc, FOCI Fiber Optic Communications Inc, Fositek Corp, Genius Electronic Optical Co. Ltd., Giga-Byte Technology Co. Ltd., GigaDevice Semiconductor Beijing Inc, GlobalWafers Co Ltd, Gold Circuit Electronics Ltd., Gudeng Precision, Hangzhou Silan Microelectronics Co. Ltd., Hiwin Technologies Corp., Innolux, Isu Petasys Co. Ltd., Keysight Technologies Inc, King Yuan Electronics Co Ltd, L&F Co Ltd, LandMark Optoelectronics Corporation, Largan Precision, Leeno Industrial Inc., LG Display, LG Innotek, Lingyi Itech Guangdong Co, Lite-On Technology, Lotes Co. Ltd., Lumentum Holdings Inc, Macronix International Co Ltd, MediaTek, Montage Technology Co Ltd, Motorola Solutions Inc, Nan Ya PCB, Parade Technologies Ltd, Phison Electronics Corp, Powerchip Semiconductor Manufacturing Co, Radiant Opto-Electronics Corporation, Samsung Electro-Mechanics, SG Micro Corp., Shanghai Fudan Microelectronics, Silergy Corp., Silicon Motion, SK hynix, SK Square Co Ltd., Sunny Optical, Suzhou TFC Optical Communication Co Ltd., TCL Corp., TSMC, UMC, Unigroup Guoxin Microelectronics Co Ltd, Unimicron, Vanguard International Semiconductor, Visual Photonics Epitaxy Co Ltd, WIN Semiconductors Corp, Winbond Electronics Corp, Wistron Corporation, Wiwynn Corp, WPG Holdings, WT Microelectronics Co. Ltd., Xiaomi Corp, Yageo Corp., Zebra Technologies Corporation, Zhejiang Crystal-Optech Co Ltd, Zhen Ding, Zhongji Innolight Co Ltd, ZTE Corporation.

Within the last 12 months, Morgan Stanley managed or co-managed a public offering (or 144A offering) of securities of Alchip Technologies Ltd, Iluvatar CoreX Semiconductor Co., Ltd., LG Electronics, Lumentum Holdings Inc, Montage Technology Co Ltd, Powerchip Semiconductor Manufacturing Co, Samsung Electronics, SK hynix, Unimicron, Wistron Corporation, Wiwynn Corp, Zhen Ding.

Within the last 12 months, Morgan Stanley has received compensation for investment banking services from ASMPT Ltd, Coherent Corp, Corning Inc, Iluvatar CoreX Semiconductor Co., Ltd., Lenovo, LG Electronics, Lumentum Holdings Inc, Montage Technology Co Ltd, Motorola Solutions Inc, Powerchip Semiconductor Manufacturing Co, Samsung Electronics, SK hynix, Unimicron, Wistron Corporation, Wiwynn Corp, Xiaomi Corp, Yageo Corp., Zebra Technologies Corporation, Zhen Ding.

In the next 3 months, Morgan Stanley expects to receive or intends to seek compensation for investment banking services from AAC Technologies Holdings, Accton Technology Corporation, Acer Inc., Advanced Micro-Fabrication Equipment Inc, Advantech, AirTAC International, Alchip Technologies Ltd, AP Memory Technology Corp, Apple, Inc., Arista Networks, ASE Technology Holding Co. Ltd., Asia Vital Components Co. Ltd., ASMedia Technology Inc, ASMPT Ltd, Aspeed Technology, Asustek Computer Inc., AU Optronics, Axon Enterprise Inc, Bizlink, Catcher Technology, Chenbro, Ciena Corporation, Cisco Systems Inc, Coherent Corp, Compal Electronics, Corning Inc, Delta Electronics Inc., E Ink Holdings Inc., Ecopro BM, Ennostar Inc, Eoptolink Technology Inc Ltd, Espressif Systems, F5 Inc, FIT Hon Teng Ltd, Giga-Byte Technology Co. Ltd., GigaDevice Semiconductor Beijing Inc, GlobalWafers Co Ltd, GoerTek Inc, Gold Circuit Electronics Ltd., Gudeng Precision, HD Hyundai Electric Co Ltd, Himax Technologies Inc, Hon Hai Precision, Hua Hong Semiconductor Ltd, Iluvatar CoreX Semiconductor Co., Ltd., Innolux, Innoscience, Keysight Technologies Inc, King Yuan Electronics Co Ltd, L&F Co Ltd, Lenovo, Lens Technology, LG Display, LG Electronics, Lingyi Itech Guangdong Co, Lite-On Technology, Lumentum Holdings Inc, Luxshare Precision Industry Co., Ltd., Macronix International Co Ltd, MediaTek, MetaX Integrated Circuits, Montage Technology Co Ltd, Motorola Solutions Inc, Novatek, Pegatron Corporation, Phison Electronics Corp, Powerchip Semiconductor Manufacturing Co, Q Technology (Group) Company Ltd, Quanta Computer Inc., Realtek Semiconductor, Samsung Electronics, SG Micro Corp., Shanghai Conant Optical Co Ltd, Shenzhen Longsys Electronics Co Ltd, Shenzhen Transsion Holdings Co Ltd, SICC Co Ltd, Silergy Corp., Silicon Motion, SK hynix, SK Square Co Ltd., Suzhou TFC Optical Communication Co Ltd., TCL Corp., TSMC, UMC, Unimicron, Universal Scientific Ind. (Shanghai), Vanguard International Semiconductor, Winbond Electronics Corp, WinWay Technology Co Ltd, Wistron Corporation, Wiwynn Corp, WPG Holdings, WT Microelectronics Co. Ltd., Xiaomi Corp, Yageo Corp., Yangtze Optical Fibre and Cable JSC Ltd, Zebra

Technologies Corporation, Zhen Ding, Zhongji Innolight Co Ltd.

Within the last 12 months, Morgan Stanley has received compensation for products and services other than investment banking services from AAC Technologies Holdings, Accton Technology Corporation, Acer Inc., Apple, Inc., ASE Technology Holding Co. Ltd., Asustek Computer Inc., AU Optronics, Axon Enterprise Inc, BYD Electronics, Ciena Corporation, Cisco Systems Inc, Coherent Corp, Compal Electronics, Corning Inc, E Ink Holdings Inc., Eoptolink Technology Inc Ltd, Giga-Byte Technology Co. Ltd., GoerTek Inc, Hon Hai Precision, Innolux, King Yuan Electronics Co Ltd, Lenovo, Lingyi Itech Guangdong Co, Lumentum Holdings Inc, MediaTek, Motorola Solutions Inc, Nanya Technology Corp., Novatek, Nuvoton Technology Corporation, Quanta Computer Inc., Realtek Semiconductor, Samsung Electronics, Silicon Motion, SMIC, TSMC, UMC, Universal Scientific Ind. (Shanghai), Winbond Electronics Corp, WT Microelectronics Co. Ltd., Xiaomi Corp, Yageo Corp., Zebra Technologies Corporation.

Within the last 12 months, Morgan Stanley has provided or is providing investment banking services to, or has an investment banking client relationship with, the following company: AAC Technologies Holdings, Accton Technology Corporation, Acer Inc., Advanced Micro-Fabrication Equipment Inc, Advantech, AirTAC International, Alchip Technologies Ltd, AP Memory Technology Corp, Apple, Inc., Arista Networks, ASE Technology Holding Co. Ltd., Asia Vital Components Co. Ltd., ASMedia Technology Inc, ASMPT Ltd, Aspeed Technology, Asustek Computer Inc., AU Optronics, Axon Enterprise Inc, Bizlink, Catcher Technology, Chenbro, Ciena Corporation, Cisco Systems Inc, Coherent Corp, Compal Electronics, Corning Inc, Delta Electronics Inc., E Ink Holdings Inc., Ecopro BM, Ennostar Inc, Eoptolink Technology Inc Ltd, Espressif Systems, F5 Inc, FIT Hon Teng Ltd, Giga-Byte Technology Co. Ltd., GigaDevice Semiconductor Beijing Inc, GlobalWafers Co Ltd, GoerTek Inc, Gold Circuit Electronics Ltd., Gudeng Precision, HD Hyundai Electric Co Ltd, Himax Technologies Inc, Hon Hai Precision, Hua Hong Semiconductor Ltd, Iluvatar CoreX Semiconductor Co., Ltd., Innolux, Innoscience, Keysight Technologies Inc, King Yuan Electronics Co Ltd, L&F Co Ltd, Lenovo, Lens Technology, LG Display, LG Electronics, Lingyi Itech Guangdong Co, Lite-On Technology, Lumentum Holdings Inc, Luxshare Precision Industry Co., Ltd., Macronix International Co Ltd, MediaTek, MetaX Integrated Circuits, Montage Technology Co Ltd, Motorola Solutions Inc, Novatek, Pegatron Corporation, Phison Electronics Corp, Powerchip Semiconductor Manufacturing Co, Q Technology (Group) Company Ltd, Quanta Computer Inc., Realtek Semiconductor, Samsung Electronics, SG Micro Corp., Shanghai Conant Optical Co Ltd, Shenzhen Longsys Electronics Co Ltd, Shenzhen Transsion Holdings Co Ltd, SICC Co Ltd, Silergy Corp., Silicon Motion, SK hynix, SK Square Co Ltd., Suzhou TFC Optical Communication Co Ltd., TCL Corp., TSMC, UMC, Unimicron, Universal Scientific Ind. (Shanghai), Vanguard International Semiconductor, Winbond Electronics Corp, WinWay Technology Co Ltd, Wistron Corporation, Wiwynn Corp, WPG Holdings, WT Microelectronics Co. Ltd., Xiaomi Corp, Yageo Corp., Yangtze Optical Fibre and Cable JSC Ltd, Zebra Technologies Corporation, Zhen Ding, Zhongji Innolight Co Ltd.

Within the last 12 months, Morgan Stanley has either provided or is providing non-investment banking, securities-related services to and/or in the past has entered into an agreement to provide services or has a client relationship with the following company: AAC Technologies Holdings, Accton Technology Corporation, Acer Inc., Apple, Inc., ASE Technology Holding Co. Ltd., Asustek Computer Inc., AU Optronics, Axon Enterprise Inc, BYD Electronics, Ciena Corporation, Cisco Systems Inc, Coherent Corp, Compal Electronics, Corning Inc, E Ink Holdings Inc., Eoptolink Technology Inc Ltd, Giga-Byte Technology Co. Ltd., GoerTek Inc, Hon Hai Precision, Innolux, King Yuan Electronics Co Ltd, Lenovo, Lingyi Itech Guangdong Co, Lumentum Holdings Inc, MediaTek, Montage Technology Co Ltd, Motorola Solutions Inc, Nanya Technology Corp., Novatek, Nuvoton Technology Corporation, Quanta Computer Inc., Realtek Semiconductor, Samsung Electronics, Silicon Motion, SK hynix, SMIC, TSMC, UMC, Universal Scientific Ind. (Shanghai), Winbond Electronics Corp, WT Microelectronics Co. Ltd., Xiaomi Corp, Yageo Corp., Zebra Technologies Corporation, Zhen Ding.

Morgan Stanley & Co. LLC makes a market in the securities of Motorola Solutions Inc.

The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues. Equity Research analysts' or strategists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report. Morgan Stanley trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of the debt research report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

## STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

## Global Stock Ratings Distribution

(as of June 30, 2026)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.

For disclosure purposes only (in accordance with FINRA requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

| | Coverage Universe | | Investment Banking Clients (IBC) | | | Other Material Investment Services Clients (MISC) | |
|---|---|---|---|---|---|---|---|
| Stock Rating Category | Count | % of Total | Count | % of Total IBC | % of Rating Category | Count | % of Total Other MISC |
| Overweight/Buy | 1544 | 42% | 453 | 49% | 29% | 757 | 44% |
| Equal-weight/Hold | 1577 | 43% | 390 | 42% | 25% | 769 | 44% |
| Not-Rated/Hold | 3 | 0% | 1 | 0% | 33% | 1 | 0% |
| Underweight/Sell | 544 | 15% | 89 | 10% | 16% | 204 | 12% |
| Total | 3,668 | | 933 | | | 1731 | |

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

## Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

## Analyst Industry Views

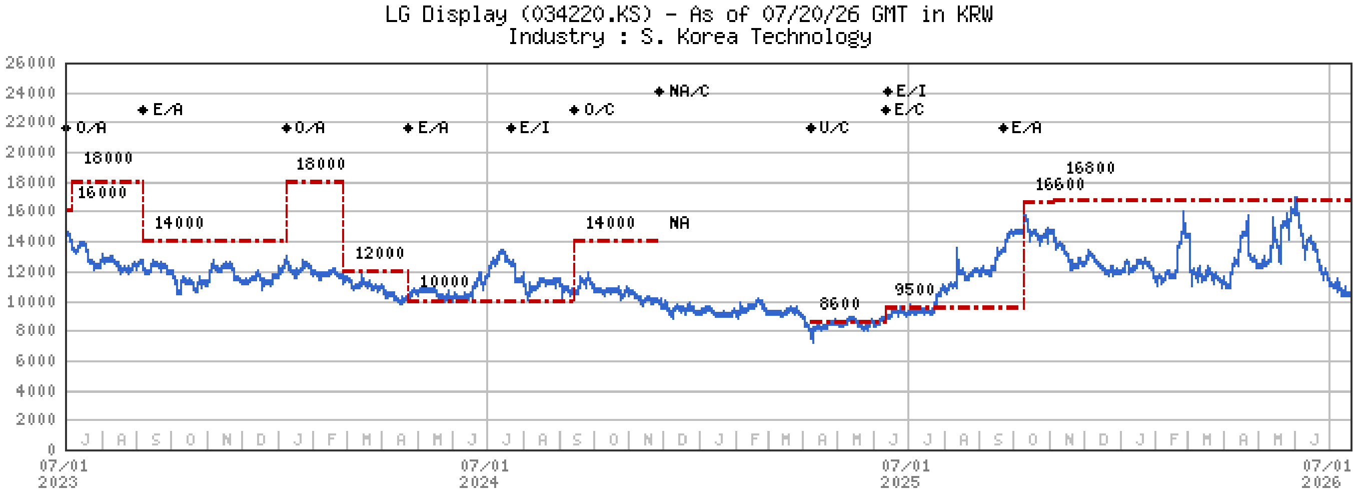
Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

## Stock Price, Price Target and Rating History (See Rating Definitions)




Stock Rating History: 7/1/21 : E/A; 7/19/21 : E/I; 8/12/21 : E/C; 4/27/22 : U/C; 10/4/22 : O/A; 9/6/23 : E/A; 1/8/24 : O/A; 4/23/24 : E/A; 7/21/24 : E/I; 9/15/24 : O/C; 11/27/24 : NA/C; 4/7/25 : U/C; 6/11/25 : E/C; 6/13/25 : E/I; 9/21/25 : E/A

Price Target History: 4/28/21 : 25000; 9/29/21 : 19000; 1/24/22 : 22000; 3/18/22 : 18000; 4/27/22 : 15000; 7/11/22 : 14000; 7/27/22 : 13000; 10/4/22 : 17000; 10/26/22 : 16000; 7/6/23 : 18000; 9/6/23 : 14000; 1/8/24 : 18000; 2/27/24 : 12000; 4/23/24 : 10000; 9/15/24 : 14000; 11/27/24 : NA; 4/7/25 : 8600; 6/11/25 : 9500; 10/10/25 : 16600; 11/5/25 : 16800

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target -- No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as ♦ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

## Important Disclosures for Morgan Stanley Smith Barney LLC Customers

Important disclosures regarding any material conflict of interest that can reasonably be expected to have influenced Morgan Stanley Smith Barney LLC's choice of a third-party research provider or the subject company of a third-party research report, are available on the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures. For Morgan Stanley specific disclosures, you may refer to https://www.morganstanley.com/eqr/disclosures/webapp/generalresearch.

Each Morgan Stanley research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval is conducted by the same person who reviews the research report on behalf of Morgan Stanley. This could create a conflict of interest.

## Other Important Disclosures

As of July 16, 2026, Morgan Stanley beneficially owned a net long position exceeding 0.5% of the total issued share capital of the following companies covered in Morgan Stanley Research: Lingyi Itech Guangdong Co.

A member of Research who had or could have had access to the research prior to completion owns securities (or related derivatives) in the Apple, Inc., Cisco Systems Inc. This person is not a research analyst or a member of research analyst's household.

Morgan Stanley Research policy is to update research reports as and when the Research Analyst and Research Management deem appropriate, based on developments with the issuer, the sector, or the market that may have a material impact on the research views or opinions stated therein. In addition, certain Research publications are intended to be updated on a regular periodic basis (weekly/monthly/quarterly/annual) and will ordinarily be updated with that frequency, unless the Research Analyst and Research Management determine that a different publication schedule is appropriate based on current conditions.

Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.

Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.

Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (http://www.morganstanley.com/terms.html). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound by our Terms of Use (http://www.morganstanley.com/terms.html). In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan Stanley processes personal data, how we use cookies and how to reject cookies see our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html). Please use the provided link to review the Terms and Conditions and Most Important Terms and Conditions for Morgan Stanley India Company Private Limited (https://www.morganstanley.com/assets/pdfs/about-us-global-offices/india/Terms_and_conditions.pdf) and the following link to review the audit report (https://ny.matrix.ms.com/eqr/research/webapp/researchdocs/MSICPL_Morgan_Stanley_Research_Audit_Report.pdf).

If you do not agree to our Terms of Use and/or if you do not wish to provide your consent to Morgan Stanley processing your personal data or using cookies please do not access our research. Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

The "Important Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management.

Morgan Stanley may make investment decisions that are inconsistent with the recommendations or views in this report.

To our readers based in Taiwan or trading in Taiwan securities/instruments: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Any non-customer reader within the scope of Article 7-1 of the Taiwan Stock Exchange Recommendation Regulations accessing and/or receiving Morgan Stanley Research is not permitted to provide Morgan Stanley Research to any third party (including but not limited to related parties, affiliated companies and any other third parties) or engage in any activities regarding Morgan Stanley Research which may create or give the appearance of creating a conflict of interest. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

Certain information in Morgan Stanley Research was sourced by employees of the Shanghai Representative Office of Morgan Stanley Asia Limited for the use of Morgan Stanley Asia Limited. Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves. Neither this report nor any part of it is intended as, or shall constitute, provision of any consultancy or advisory service of securities investment as defined under PRC law. Such information is provided for your reference only.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A. located at Av. Brigadeiro Faria Lima, 3600, 6th floor, São Paulo - SP, Brazil; and is regulated by the Comissão de Valores Mobiliários; in Mexico by Morgan Stanley México, Casa de Bolsa, S.A. de C.V which is regulated by Comision Nacional Bancaria y de Valores. Paseo de los Tamarindos 90, Torre 1, Col. Bosques de las Lomas Floor 29, 05120 Mexico City; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents) and by Morgan Stanley Bank Asia Limited; in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and by Morgan Stanley Bank Asia Limited, Singapore Branch (Registration number T14FC0118J); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105); Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at Altimus, Level 39 & 40, Pandurang Budhkar Marg, Worli, Mumbai 400018, India; Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: tejarshi.hardas@morganstanley.com; Grievance officer details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com. Morgan Stanley India Company Private Limited (MSICPL) may use AI tools in providing research services. All recommendations contained herein are made by the duly qualified research analysts; in Canada by Morgan Stanley Canada Limited; in Germany and the European Economic Area where required by Morgan Stanley Europe S.E., authorised and regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin) under the reference number 149169; in the US by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, disseminates in the UK research that it has prepared, and research which has been prepared by any of its affiliates, only to persons who (i) are investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"); (ii) are persons who are

## INDUSTRY COVERAGE: Greater China Technology Hardware

| COMPANY (TICKER) | RATING (AS OF) | PRICE* (07/20/2026) |
|---|---|---|
| **Andy Meng, CFA** | | |
| AAC Technologies Holdings (2018.HK) | O (01/29/2024) | HK$38.94 |
| Accelink Technologies Co. Ltd. (002281.SZ) | U (05/12/2022) | Rmb170.51 |
| BYD Electronics (0285.HK) | O (04/28/2023) | HK$24.14 |
| China TransInfo Technology Co Ltd (002373.SZ) | E (07/18/2023) | Rmb7.38 |
| Dahua Technology Co. Ltd. (002236.SZ) | E (12/12/2024) | Rmb16.24 |
| Eoptolink Technology Inc Ltd (300502.SZ) | O (02/27/2026) | Rmb510.00 |
| Genius Electronic Optical Co. Ltd. (3406.TW) | E (04/23/2025) | NT$500.00 |
| GoerTek Inc (002241.SZ) | U (04/23/2025) | Rmb23.21 |
| Gosuncn Technology Group Co Ltd (300098.SZ) | U (11/07/2022) | Rmb4.24 |
| HIKVision Digital Technology (002415.SZ) | E (12/12/2024) | Rmb34.28 |
| Largan Precision (3008.TW) | O (07/10/2026) | NT$3,875.00 |
| LianChuang Electronic Technology Co Ltd (002036.SZ) | U (06/12/2024) | Rmb6.55 |
| Lingyi Itech Guangdong Co (002600.SZ) | U (04/23/2025) | Rmb11.55 |
| Luxshare Precision Industry Co., Ltd. (002475.SZ) | O (10/24/2016) | Rmb56.80 |
| OFILM Group Co Ltd (002456.SZ) | U (06/12/2024) | Rmb7.00 |
| Q Technology (Group) Company Ltd (1478.HK) | U (03/23/2026) | HK$6.73 |
| Quectel Wireless Solutions Co Ltd (603236.SS) | E (10/09/2024) | Rmb48.35 |
| Shanghai Conant Optical Co Ltd (2276.HK) | O (04/10/2026) | HK$28.36 |
| Shenzhen Transsion Holdings Co Ltd (688036.SS) | E (03/23/2026) | Rmb61.05 |
| Sunny Optical (2382.HK) | E (03/23/2026) | HK$54.80 |

| | | |
|---|---|---|
| Suzhou TFC Optical Communication Co Ltd. (300394.SZ) | E (11/06/2025) | Rmb213.54 |
| Wingtech Technology Co Ltd (600745.SS) | U (05/18/2026) | Rmb17.19 |
| Xiaomi Corp (1810.HK) | O (04/14/2021) | HK$27.74 |
| Yangtze Optical Fibre and Cable JSC Ltd (601869.SS) | U (10/13/2021) | Rmb382.00 |
| Yangtze Optical Fibre and Cable JSC Ltd (6869.HK) | O (07/15/2026) | HK$141.00 |
| Yongxin Optics Co Ltd (603297.SS) | E (11/15/2022) | Rmb90.00 |
| Zhejiang Crystal-Optech Co Ltd (002273.SZ) | O (11/15/2022) | Rmb25.05 |
| Zhongji Innolight Co Ltd (300308.SZ) | ++ | Rmb1,004.00 |
| ZTE Corporation (0763.HK) | O (06/04/2026) | HK$23.46 |
| ZTE Corporation (000063.SZ) | E (06/04/2026) | Rmb33.73 |
| **Derrick Yang** | | |
| Accton Technology Corporation (2345.TW) | O (06/06/2024) | NT$2,090.00 |
| Advantech (2395.TW) | O (01/20/2021) | NT$516.00 |
| AirTAC International (1590.TW) | O (04/16/2025) | NT$1,335.00 |
| Asia Vital Components Co. Ltd. (3017.TW) | O (07/30/2024) | NT$2,135.00 |
| AU Optronics (2409.TW) | E (02/10/2026) | NT$25.40 |
| Auras Technology Co Ltd (3324.TWO) | E (05/04/2023) | NT$858.00 |
| Bizlink (3665.TW) | O (03/10/2025) | NT$1,820.00 |
| BOE Technology (000725.SZ) | O (09/06/2019) | Rmb5.79 |
| Chenbro (8210.TW) | O (07/23/2025) | NT$1,080.00 |
| Chroma Ate Inc. (2360.TW) | O (10/05/2021) | NT$1,835.00 |
| Delta Electronics Inc. (2308.TW) | O (07/13/2017) | NT$1,705.00 |
| E Ink Holdings Inc. (8069.TWO) | O (05/11/2026) | NT$175.50 |
| Ennostar Inc (3714.TW) | U (09/23/2022) | NT$51.70 |
| Fositek Corp (6805.TW) | O (06/25/2025) | NT$1,305.00 |
| Hiwin Technologies Corp. (2049.TW) | O (03/30/2026) | NT$300.00 |
| Innolux (3481.TW) | E (04/07/2025) | NT$50.40 |
| King Slide Works Co. Ltd. (2059.TW) | O (11/08/2023) | NT$7,750.00 |
| Lens Technology (300433.SZ) | E (07/22/2020) | Rmb34.22 |
| Lite-On Technology (2301.TW) | E (01/15/2025) | NT$193.50 |
| Radiant Opto-Electronics Corporation (6176.TW) | E (03/01/2024) | NT$83.10 |
| TCL Corp. (000100.SZ) | E (04/07/2025) | Rmb4.97 |
| Tianma Microelectronics (000050.SZ) | U (01/24/2018) | Rmb6.15 |
| Wuhan Jingce Electronic Group Co Ltd (300567.SZ) | E (11/26/2021) | Rmb210.81 |
| **Howard Kao** | | |
| Acer Inc. (2353.TW) | U (04/23/2025) | NT$29.25 |
| Asustek Computer Inc. (2357.TW) | U (11/16/2025) | NT$688.00 |
| Catcher Technology (2474.TW) | U (11/17/2025) | NT$190.00 |
| Compal Electronics (2324.TW) | U (04/23/2025) | NT$34.40 |
| FIT Hon Teng Ltd (6088.HK) | O (11/03/2025) | HK$5.39 |
| Foxconn Industrial Internet Co. Ltd. (601138.SS) | O (07/10/2019) | Rmb56.50 |
| Giga-Byte Technology Co. Ltd. (2376.TW) | E (11/16/2025) | NT$331.00 |
| Gold Circuit Electronics Ltd. (2368.TW) | O (10/06/2022) | NT$927.00 |
| Hon Hai Precision (2317.TW) | O (03/15/2024) | NT$234.50 |
| Inspur Electronic Information (000977.SZ) | E (08/28/2023) | Rmb81.29 |
| LandMark Optoelectronics Corporation (3081.TWO) | E (03/26/2026) | NT$1,435.00 |
| Lenovo (0992.HK) | O (07/10/2026) | HK$21.42 |
| Lotes Co. Ltd. (3533.TW) | E (05/12/2025) | NT$1,905.00 |
| Nan Ya PCB (8046.TW) | O (02/23/2026) | NT$1,105.00 |
| Pegatron Corporation (4938.TW) | E (03/25/2026) | NT$80.00 |
| Quanta Computer Inc. (2382.TW) | O (05/01/2023) | NT$316.00 |
| Shengyi Technology Co Ltd. (600183.SS) | E (05/26/2022) | Rmb123.34 |
| Shennan Circuits Co Ltd (002916.SZ) | E (08/24/2023) | Rmb324.36 |
| Unimicron (3037.TW) | O (02/23/2026) | NT$750.00 |
| Visual Photonics Epitaxy Co Ltd (2455.TW) | E (09/11/2023) | NT$277.00 |

| | | |
|---|---|---|
| Wistron Corporation (3231.TW) | O (07/12/2023) | NT$143.50 |
| Wiwynn Corp (6669.TW) | O (11/10/2025) | NT$4,685.00 |
| Yageo Corp. (2327.TW) | O (10/28/2025) | NT$630.00 |
| Zhen Ding (4958.TW) | O (05/18/2026) | NT$478.50 |

Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.

## INDUSTRY COVERAGE: S. Korea Technology

| COMPANY (TICKER) | RATING (AS OF) | PRICE* (07/20/2026) |
|---|---|---|
| **Ryan Kim** | | |
| Ecopro BM (247540.KQ) | U (03/20/2023) | W104,100 |
| Fadu Inc (440110.KQ) | O (09/21/2025) | W71,600 |
| Hanmi Semiconductor Co. Ltd. (042700.KS) | O (08/16/2024) | W222,000 |
| HD Hyundai Electric Co Ltd (267260.KS) | O (03/25/2025) | W752,000 |
| Isu Petasys Co. Ltd. (007660.KS) | O (02/03/2025) | W84,400 |
| L&F Co Ltd (066970.KS) | E (04/03/2025) | W83,600 |
| Leeno Industrial Inc. (058470.KQ) | O (04/03/2025) | W69,100 |
| Lotte Energy Materials Corp (020150.KS) | U (04/03/2025) | W29,900 |
| LS Electric (010120.KS) | O (01/22/2026) | W179,300 |
| POSCO FUTURE M (003670.KS) | U (04/03/2025) | W136,800 |
| SK IE Technology (361610.KS) | U (04/03/2025) | W13,600 |
| SK Square Co Ltd. (402340.KS) | O (05/06/2026) | W1,177,000 |
| Wonik IPS Co Ltd (240810.KQ) | O (08/08/2025) | W115,100 |
| **Shawn Kim** | | |
| LG Display (034220.KS) | E (06/11/2025) | W9,880 |
| LG Electronics (066570.KS) | E (04/07/2025) | W167,200 |
| LG Innotek (011070.KS) | E (03/12/2025) | W602,000 |
| Samsung Electro-Mechanics (009150.KS) | O (07/31/2025) | W1,275,000 |
| Samsung Electronics (005935.KS) | O (11/18/2019) | W169,200 |
| Samsung Electronics (005930.KS) | O (11/18/2019) | W244,000 |
| SK hynix (000660.KS) | O (09/21/2025) | W1,764,000 |

Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.

## INDUSTRY COVERAGE: Telecom & Networking Equipment

| COMPANY (TICKER) | RATING (AS OF) | PRICE* (07/17/2026) |
|---|---|---|
| **Meta A Marshall** | | |
| Arista Networks (ANET.N) | O (10/31/2023) | US$168.61 |
| Axon Enterprise Inc (AXON.O) | O (12/03/2024) | US$510.28 |
| Ciena Corporation (CIEN.N) | E (10/10/2025) | US$374.41 |
| Cisco Systems Inc (CSCO.O) | O (04/08/2024) | US$111.94 |
| Coherent Corp (COHR.N) | E (12/13/2023) | US$277.60 |
| Corning Inc (GLW.N) | E (06/13/2024) | US$154.61 |
| F5 Inc (FFIV.O) | E (04/12/2022) | US$409.10 |
| Keysight Technologies Inc (KEYS.N) | O (07/13/2026) | US$315.90 |
| Lumentum Holdings Inc (LITE.O) | E (05/12/2021) | US$732.82 |
| Motorola Solutions Inc (MSI.N) | O (12/17/2025) | US$413.31 |
| Zebra Technologies Corporation (ZBRA.O) | E (12/02/2024) | US$267.40 |

Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.

## INDUSTRY COVERAGE: Greater China Technology Semiconductors

| COMPANY (TICKER) | RATING (AS OF) | PRICE* (07/20/2026) |
|---|---|---|
| **Charlie Chan** | | |
| ACM Research Inc (ACMR.O) | O (03/07/2023) | US$83.92 |
| Advanced Micro-Fabrication Equipment Inc (688012.SS) | O (11/06/2023) | Rmb342.50 |
| Advanced Wireless Semiconductor Co (8086.TWO) | U (07/14/2025) | NT$115.00 |
| Alchip Technologies Ltd (3661.TW) | O (05/14/2021) | NT$3,365.00 |
| ASE Technology Holding Co. Ltd. (3711.TW) | O (09/15/2024) | NT$597.00 |
| Cambricon Technology Corporation (688256.SS) | O (04/27/2026) | Rmb1,209.00 |
| Global Unichip Corp (3443.TW) | O (06/24/2026) | NT$3,745.00 |
| GlobalWafers Co Ltd (6488.TWO) | E (05/19/2026) | NT$1,265.00 |
| Gudeng Precision (3680.TWO) | O (11/25/2025) | NT$437.50 |
| Hua Hong Semiconductor Ltd (1347.HK) | E (03/12/2026) | HK$142.90 |
| Iluvatar CoreX Semiconductor Co., Ltd. (9903.HK) | O (04/27/2026) | HK$519.50 |
| King Yuan Electronics Co Ltd (2449.TW) | O (03/03/2023) | NT$270.50 |
| Maxscend Microelectronics Co Ltd (300782.SZ) | U (01/11/2021) | Rmb72.21 |
| MediaTek (2454.TW) | O (11/28/2025) | NT$3,340.00 |
| MetaX Integrated Circuits (688802.SS) | E (04/27/2026) | Rmb821.00 |
| Nanya Technology Corp. (2408.TW) | O (05/28/2026) | NT$381.00 |
| NAURA Technology Group Co Ltd (002371.SZ) | O (11/06/2023) | Rmb676.91 |
| OmniVision Integrated Circuits Group Inc (603501.SS) | E (11/17/2025) | Rmb101.16 |
| Phison Electronics Corp (8299.TWO) | E (02/25/2026) | NT$1,735.00 |
| SG Micro Corp. (300661.SZ) | E (11/03/2025) | Rmb98.01 |
| Silergy Corp. (6415.TW) | U (05/19/2026) | NT$427.50 |
| SMIC (0981.HK) | O (10/21/2025) | HK$69.75 |
| TSMC (2330.TW) | O (02/07/2022) | NT$2,320.00 |
| UMC (2303.TW) | O (05/19/2026) | NT$130.00 |
| Vanguard International Semiconductor (5347.TWO) | E (01/14/2026) | NT$152.50 |
| WIN Semiconductors Corp (3105.TWO) | U (07/14/2025) | NT$313.50 |
| **Daisy Dai, CFA** | | |
| ASMPT Ltd (0522.HK) | O (07/24/2025) | HK$161.20 |
| China Resources Microelectronics Limited (688396.SS) | U (03/02/2026) | Rmb59.53 |
| Empyrean Technology Co Ltd (301269.SZ) | E (01/17/2025) | Rmb93.72 |
| Hangzhou Silan Microelectronics Co. Ltd. (600460.SS) | U (08/25/2025) | Rmb29.88 |
| Hygon Information Technology Co., Ltd. (688041.SS) | O (07/03/2026) | Rmb320.12 |
| Innoscience (2577.HK) | E (10/13/2025) | HK$43.92 |
| JCET Group Co Ltd (600584.SS) | E (01/16/2026) | Rmb76.99 |
| Shanghai Fudan Microelectronics (1385.HK) | O (03/07/2025) | HK$25.16 |
| SICC Co Ltd (688234.SS) | O (03/20/2026) | Rmb93.00 |
| StarPower Semiconductor Ltd (603290.SS) | E (05/14/2026) | Rmb81.74 |
| Unigroup Guoxin Microelectronics Co Ltd (002049.SZ) | U (01/10/2023) | Rmb61.77 |
| Universal Scientific Ind. (Shanghai) (601231.SS) | O (11/05/2025) | Rmb23.73 |
| Yangjie Technology (300373.SZ) | O (06/10/2022) | Rmb86.90 |
| **Daniel Yen, CFA** | | |
| AP Memory Technology Corp (6531.TW) | O (07/11/2025) | NT$780.00 |
| ASMedia Technology Inc (5269.TW) | U (10/03/2025) | NT$1,470.00 |
| Aspeed Technology (5274.TWO) | O (06/09/2025) | NT$12,915.00 |
| Egis Technology Inc (6462.TWO) | E (01/28/2026) | NT$96.90 |
| Elan Microelectronics Corp (2458.TW) | O (10/03/2025) | NT$161.50 |
| Espressif Systems (688018.SS) | O (05/15/2023) | Rmb102.17 |
| GigaDevice Semiconductor Beijing Inc (603986.SS) | O (05/15/2025) | Rmb432.30 |
| Macronix International Co Ltd (2337.TW) | O (09/18/2025) | NT$117.50 |
| Montage Technology Co Ltd (6809.HK) | O (03/18/2026) | HK$264.00 |
| Montage Technology Co Ltd (688008.SS) | O (03/18/2026) | Rmb189.94 |
| Novatek (3034.TW) | U (02/04/2026) | NT$458.00 |

| | | |
|---|---|---|
| Nuvoton Technology Corporation (4919.TW) | U (11/10/2025) | NT$135.50 |
| Parade Technologies Ltd (4966.TWO) | O (05/27/2026) | NT$567.00 |
| Powerchip Semiconductor Manufacturing Co (6770.TW) | O (10/27/2025) | NT$63.00 |
| Realtek Semiconductor (2379.TW) | E (01/30/2026) | NT$709.00 |
| Shenzhen Goodix Technology Co Ltd (603160.SS) | U (07/14/2025) | Rmb49.39 |
| Winbond Electronics Corp (2344.TW) | O (05/28/2026) | NT$151.00 |
| WPG Holdings (3702.TW) | O (03/16/2026) | NT$106.50 |
| WT Microelectronics Co. Ltd. (3036.TW) | O (01/27/2026) | NT$187.00 |
| **Duan Liu** | | |
| Dosilicon Co Ltd (688110.SS) | U (09/06/2024) | Rmb100.38 |
| Shenzhen Longsys Electronics Co Ltd (301308.SZ) | E (02/25/2026) | Rmb376.49 |
| **Tiffany Yeh** | | |
| AllRing Tech Co. (6187.TWO) | O (09/23/2025) | NT$935.00 |
| FOCI Fiber Optic Communications Inc (3363.TWO) | O (01/15/2025) | NT$503.00 |
| Himax Technologies Inc (HIMX.O) | E (02/04/2026) | US$12.80 |
| Hon Precision (7769.TW) | O (04/17/2026) | NT$6,005.00 |
| MPI Corporation (6223.TWO) | O (04/17/2026) | NT$5,455.00 |
| Silicon Motion (SIMO.O) | O (05/06/2024) | US$264.33 |
| WinWay Technology Co Ltd (6515.TW) | O (04/17/2026) | NT$6,050.00 |

Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.