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UPDATE

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Greater China Technology Hardware | Asia Pacific

ABF Substrate: Risk to NYPCB and Unimicron ABF Supply Share?

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GREATER CHINA TECHNOLOGY HARDWARE

Asia Pacific
Industry View **In-Line**

Key Takeaways

- NYPCB's share price was down 12% in the past two trading days (vs. TAIEX up 0.8%).
- Investors have asked us if NYPCB would face share losses if Broadcom (AVGO, covered by Joe Moore) were to produce substrates on its own.
- Separately, we have been receiving questions from investors about the pricing outlook for BT substrate in 4Q.
- We see limited impact on our OW thesis for Unimicron and NYPCB, both of which produce BT substrates and are Broadcom's incumbent suppliers.

On the latest earnings call, Broadcom's CEO noted that the company is building substrate capacity in its Singapore factory with a partner. We believe he was referring to AST, the JV Broadcom has been developing with Toppan (7911.T, Not Covered) since March 2024 (news). This is Toppan's first overseas substrate plant, with phase 1 of the two-phase fab targeted to start production by EoY 2026. We see Broadcom securing FC-BGA substrate supply rather than bringing production in-house, and therefore expect limited impact on the current supply positions of Unimicron and NYPCB.

On BT substrate pricing, the price hikes since 2H25 have been driven by raw material cost inflation, including T glass, gold and copper. We have expected T glass supply constraints to peak in 2026 and gradually ease from 2027 as more suppliers are qualified. Thus, it would not surprise us if raw-material-driven price hikes plateau going forward. That said, our OW thesis on Unimicron and NYPCB centers on ABF substrate tightness, so we see limited impact from BT price fluctuations on our ratings for both stocks.

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Valuation Methodology and Risks

Unimicron (3037.TW)

Base case, residual income (RI) valuation model, which we think derives the most accurate value of the firm given that it takes into account cost of equity. We use a cost of equity of 9.2% [risk-free rate of 1% (10-year Taiwan government note yield), equity risk premium of 8.7%, and a beta of 1.0], a medium-term growth rate of 15%, and a terminal growth rate of 3%.

Risks to Upside

- Better-than-expected ABF substrate demand from PC and server customers
- Capex cuts; halt to its capacity expansion plan
- Continued yield issues of alternative technology that doesn't require substrate (e.g., CoWoP)

Risks to Downside

- Sudden demand shortfall
- Technological change that would not require ABF substrates
- Intensifying competition
- Yield issues or production hiccups when ramping new capacity

Nan Ya PCB (8046.TW)

Base case, residual income (RI) valuation model, which we think derives the most accurate value of the firm given that it takes into account cost of equity. We use a cost of equity of 9.3% [risk-free rate of 1% (10-year Taiwan government note yield), equity risk premium of 8.7%, and a beta of 1.0], a medium-term growth rate of 17%, and a terminal growth rate of 3%.

Risks to Upside

- Better-than-expected ABF and BT demand
- Faster-than-expected pickup in AI and 5G demand
- Stronger-than-expected ASP hike
- Continued yield issues of alternative technology that doesn't require substrate (e.g. CoWoP)

Risks to Downside

- Sudden demand shortfall, creating headwinds for ABF substrate demand and pricing
- Technological change that would not require ABF substrates
- Intensifying competition

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(as of August 31, 2026)
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	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	1555	42%	450	48%	29%	767	44%
Equal-weight/Hold	1577	43%	395	42%	25%	770	44%
Not-Rated/Hold	3	0%	1	0%	33%	1	0%
Underweight/Sell	559	15%	93	10%	17%	216	12%
Total	3,694		939			1754	

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.

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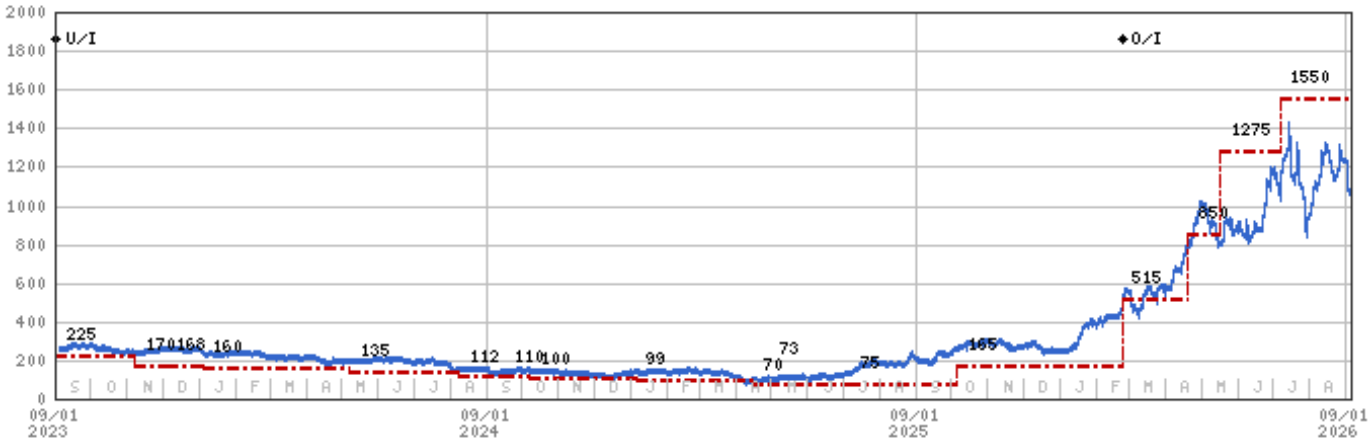
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Stock Price, Price Target and Rating History (See Rating Definitions)



Nan Ya PCB (8046.TW) - As of 09/05/26 GMT in TWD
Industry : Greater China Technology Hardware



Stock Rating History: 9/1/21 : NA/I; 10/22/21 : O/I; 6/1/22 : E/I; 12/21/22 : U/I; 2/23/26 : O/I

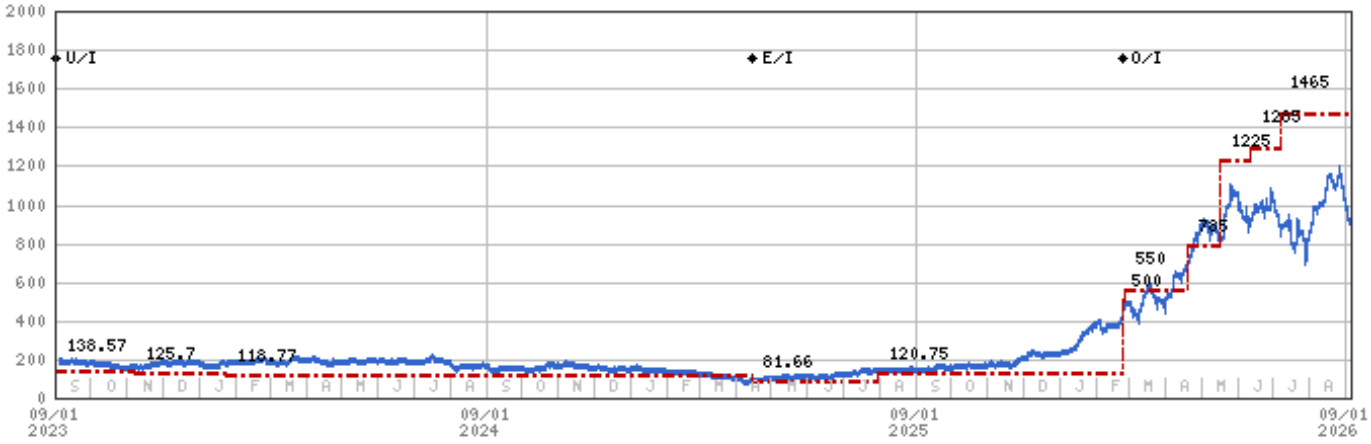
Price Target History: 10/22/21 : 580; 11/9/21 : 630; 2/9/22 : 650; 2/25/22 : 670; 6/1/22 : 420; 8/23/22 : 275; 10/27/22 : 235; 12/21/22 : 180; 2/2/23 : 165; 2/25/23 : 155; 6/7/23 : 225; 11/7/23 : 170; 12/4/23 : 168; 1/4/24 : 160; 5/7/24 : 135; 8/9/24 : 112; 9/15/24 : 110; 10/8/24 : 100; 1/6/25 : 99; 4/15/25 : 70; 4/29/25 : 73; 7/7/25 : 75; 10/6/25 : 165; 2/23/26 : 515; 4/20/26 : 850; 5/18/26 : 1275; 7/7/26 : 1550

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target No Price Target Assigned (NA)
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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)

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Unimicron (3037.TW) - As of 09/05/26 GMT in TWD
Industry : Greater China Technology Hardware



Stock Rating History: 9/1/21 : NA/I; 10/22/21 : O/I; 6/1/22 : E/I; 2/22/23 : U/I; 4/15/25 : E/I; 2/23/26 : O/I

Price Target History: 10/22/21 : 188.06; 10/27/21 : 237.55; 2/9/22 : 267.24; 2/24/22 : 366.22; 6/1/22 : 237.55; 8/23/22 : 178.16; 10/27/22 : 133.62; 12/21/22 : 123.72; 2/2/23 : 116.79; 2/22/23 : 98.98; 6/7/23 : 138.57; 11/7/23 : 125.7; 1/24/24 : 118.77; 4/15/25 : 81.66; 7/30/25 : 120.75; 2/23/26 : 500; 2/26/26 : 550; 4/20/26 : 785; 5/18/26 : 1225; 6/12/26 : 1285; 7/7/26 : 1465

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)

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INDUSTRY COVERAGE: Greater China Technology Hardware

COMPANY (TICKER)	RATING (AS OF)	PRICE* (09/04/2026)
Andy Meng, CFA		
AAC Technologies Holdings (2018.HK)	O (01/29/2024)	HK$42.96
Accelink Technologies Co. Ltd. (002281.SZ)	U (05/12/2022)	Rmb167.70
BYD Electronics (0285.HK)	O (04/28/2023)	HK$25.16
China TransInfo Technology Co Ltd (002373.SZ)	E (07/18/2023)	Rmb7.75
Dahua Technology Co. Ltd. (002236.SZ)	E (12/12/2024)	Rmb16.31
Eoptolink Technology Inc Ltd (300502.SZ)	O (02/27/2026)	Rmb386.00
Genius Electronic Optical Co. Ltd. (3406.TW)	E (04/23/2025)	NT$1,055.00
GoerTek Inc (002241.SZ)	E (08/14/2026)	Rmb23.41
Gosuncn Technology Group Co Ltd (300098.SZ)	U (11/07/2022)	Rmb4.49
HIKVision Digital Technology (002415.SZ)	E (12/12/2024)	Rmb34.87
Largan Precision (3008.TW)	O (07/10/2026)	NT$7,400.00
LianChuang Electronic Technology Co Ltd (002036.SZ)	U (06/12/2024)	Rmb6.87
Lingyi Itech Guangdong Co (002600.SZ)	U (04/23/2025)	Rmb12.63
Lingyi Itech Guangdong Co (1688.HK)	O (08/14/2026)	HK$6.63
Luxshare Precision Industry Co., Ltd. (2475.HK)	O (08/14/2026)	HK$59.00
Luxshare Precision Industry Co., Ltd. (002475.SZ)	O (10/24/2016)	Rmb54.30
OFILM Group Co Ltd (002456.SZ)	U (06/12/2024)	Rmb7.51
Q Technology (Group) Company Ltd (1478.HK)	U (03/23/2026)	HK$5.85
Quectel Wireless Solutions Co Ltd (603236.SS)	E (10/09/2024)	Rmb62.17
Shanghai Conant Optical Co Ltd (2276.HK)	O (04/10/2026)	HK$42.10
Shenzhen Transsion Holdings Co Ltd (688036.SS)	E (03/23/2026)	Rmb56.78
Sunny Optical (2382.HK)	E (03/23/2026)	HK$70.50
Suzhou TFC Optical Communication Co Ltd. (300394.SZ)	E (11/06/2025)	Rmb248.70
Wingtech Technology Co Ltd (600745.SS)	U (05/18/2026)	Rmb18.13
Xiaomi Corp (1810.HK)	O (04/14/2021)	HK$28.44
Yangtze Optical Fibre and Cable JSC Ltd (601869.SS)	U (10/13/2021)	Rmb378.80
Yangtze Optical Fibre and Cable JSC Ltd (6869.HK)	O (07/15/2026)	HK$159.40
Yongxin Optics Co Ltd (603297.SS)	E (11/15/2022)	Rmb107.55
Zhejiang Crystal-Optech Co Ltd (002273.SZ)	O (11/15/2022)	Rmb24.89
Zhongji Innolight Co Ltd (300308.SZ)		Rmb814.00
ZTE Corporation (0763.HK)	O (06/04/2026)	HK$23.40
ZTE Corporation (000063.SZ)	E (06/04/2026)	Rmb33.07
Derrick Yang		
Accton Technology Corporation (2345.TW)	O (06/06/2024)	NT$2,100.00
Advantech (2395.TW)	O (01/20/2021)	NT$711.00
AirTAC International (1590.TW)	O (04/16/2025)	NT$1,395.00
Asia Vital Components Co. Ltd. (3017.TW)	O (07/30/2024)	NT$3,570.00
AU Optronics (2409.TW)	E (02/10/2026)	NT$26.80
Auras Technology Co Ltd (3324.TWO)	E (05/04/2023)	NT$1,485.00
Bizlink (3665.TW)	O (03/10/2025)	NT$2,145.00
BOE Technology (000725.SZ)	O (09/06/2019)	Rmb5.61
Chenbro (8210.TW)	O (07/23/2025)	NT$986.00
Chroma Ate Inc. (2360.TW)	O (10/05/2021)	NT$2,030.00
Delta Electronics Inc. (2308.TW)	O (07/13/2017)	NT$1,825.00
E Ink Holdings Inc. (8069.TWO)	E (08/10/2026)	NT$148.50
Ennostar Inc (3714.TW)	U (09/23/2022)	NT$66.80
Fositek Corp (6805.TW)	O (06/25/2025)	NT$2,200.00
Hiwin Technologies Corp. (2049.TW)	O (03/30/2026)	NT$363.00
Innolux (3481.TW)	E (04/07/2025)	NT$48.50
King Slide Works Co. Ltd. (2059.TW)	O (11/08/2023)	NT$13,860.00
Lens Technology (300433.SZ)	E (07/22/2020)	Rmb35.14
Lite-On Technology (2301.TW)	E (01/15/2025)	NT$308.00

TCL Corp. (000100.SZ)	E (04/07/2025)	Rmb4.80
Tianma Microelectronics (000050.SZ)	U (01/24/2018)	Rmb6.59
Wuhan Jingce Electronic Group Co Ltd (300567.SZ)	E (11/26/2021)	Rmb187.66
Howard Kao		
Acer Inc. (2353.TW)	U (04/23/2025)	NT$32.70
Asustek Computer Inc. (2357.TW)	U (11/16/2025)	NT$1,025.00
Catcher Technology (2474.TW)	U (11/17/2025)	NT$209.50
Compal Electronics (2324.TW)	U (04/23/2025)	NT$41.60
FIT Hon Teng Ltd (6088.HK)	O (11/03/2025)	HK$5.31
Foxconn Industrial Internet Co. Ltd. (601138.SS)	O (07/10/2019)	Rmb63.69
Giga-Byte Technology Co. Ltd. (2376.TW)	E (11/16/2025)	NT$361.00
Gold Circuit Electronics Ltd. (2368.TW)	O (10/06/2022)	NT$1,045.00
Hon Hai Precision (2317.TW)	O (03/15/2024)	NT$256.00
Inspur Electronic Information (000977.SZ)	E (08/28/2023)	Rmb77.72
LandMark Optoelectronics Corporation (3081.TWO)	E (03/26/2026)	NT$3,170.00
Lenovo (0992.HK)	O (07/10/2026)	HK$32.40
Lotes Co. Ltd. (3533.TW)	E (05/12/2025)	NT$1,685.00
Nan Ya PCB (8046.TW)	O (02/23/2026)	NT$1,055.00
Pegatron Corporation (4938.TW)	E (03/25/2026)	NT$95.40
Quanta Computer Inc. (2382.TW)	O (05/01/2023)	NT$345.00
Shengyi Technology Co Ltd. (600183.SS)	E (05/26/2022)	Rmb137.50
Shennan Circuits Co Ltd (002916.SZ)	E (08/24/2023)	Rmb331.80
Unimicron (3037.TW)	O (02/23/2026)	NT$902.00
Visual Photonics Epitaxy Co Ltd (2455.TW)	E (09/11/2023)	NT$528.00
Wistron Corporation (3231.TW)	O (07/12/2023)	NT$198.00
Wiwynn Corp (6669.TW)	O (11/10/2025)	NT$2,565.00
Yageo Corp. (2327.TW)	O (10/28/2025)	NT$562.00
Zhen Ding (4958.TW)	++	NT$463.00

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