

Alchip Technologies (3661.TW/3661 TT)

Our view unaffected by market concerns

Outperform · Maintained

Price as of September 27 (NT\$)	2,020
12M target price (NT\$)	3,950
Previous target price (NT\$)	3,950
Unchanged (%)	0.0
Upside (%)	95.5

Key message

1. Alchip Technologies' (Alchip) stock price saw a pullback of 13.1% this week. We have summarized market concerns.
2. Intact CoWoS capacity from foundry partner.
3. End customers for US IDM's mass production project not primarily hyperscalers or Chinese firms.

Trading data

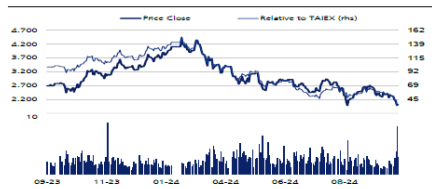
Mkt cap (NT\$/bn/US\$/mn)	161.4 / 5,075
Outstanding shares (mn)	79.88
Foreign ownership (mn)	42.31
3M avg. daily trading (mn)	1.90
52-week trading range (NT\$)	1,980 -4,430

Performance	3M	6M	12M
Absolute (%)	-17.6	-35.9	-23.3
Relative (%)	-17.2	-48.9	-63.2

Quarterly EPS

NT\$	1Q	2Q	3Q	4Q
2023	8.09A	10.16A	12.03A	15.31A
2024	15.83A	20.05A	22.08F	20.74F
2025	23.19F	23.42F	24.68F	27.57F

Share price chart



Source: TEJ

Event

Alchip Technologies' (Alchip) stock price saw a pullback of 13.1% this week (September 20 closing price vs. September 27). We have summarized market concerns as follows: (1) a more conservative outlook for 2025F revenue growth; (2) potentially weak demand next year from a mass production project of a US IDM customer, with a risk of near-term downward earnings revisions for Alchip; and (3) the initial ramp-up of a US IDM customer's mass production project is not going smoothly, with end customers being uncertain.

Impact

Intact CoWoS capacity from foundry partner. The mass production project of a US IDM customer (mainly in 5nm AI ASIC) would support 2025F revenue growth for Alchip and that it had secured approximately 3x the CoWoS capacity for this customer next year (around 25k wafers). At present, we have not observed any downward revision of this CoWoS capacity and reiterate our forecast that, considering production and shipments timelines with foundry partners, that mass production revenue from this customer will grow in 2025F to US\$650-700mn.

End customers for US IDM's mass production project not primarily hyperscalers or Chinese firms. The market is concerned that the end customers of the US IDM's mass production project are uncertain. We emphasized that key end customers include Naver (KR), Bharti Airtel (IN), Bosch (DE), and Infosys (IN), with demand coming from multiple clients. We also noted that the US IDM has repeatedly stated that its 5nm AI ASIC is superior to Nvidia's (US) H100 AI GPU in terms of performance and power consumption, which is why we believe it is unlikely that its 5nm AI ASIC will be directly shipped to China.

Valuation & Action

We maintain our revenue and gross margin forecasts, estimating that revenue will grow by 66.0% and 14.2% in 2024-25F to NT\$50.6bn and NT\$57.8bn, respectively, and that revenue will return to hypergrowth levels in 2026F. We also reiterate that quarterly revenue YoY growth decline will accelerate between 2H24-1H25F and will only regain growth momentum from 2H25F. We maintain 2024-25F EPS at NT\$78.77 and NT\$98.85, respectively. Our target price is unchanged at NT\$3,950, on an unchanged 40x 2025F EPS (cycle average plus 1x standard deviation). Shares are currently trading at 26x and 20x 2024-25F EPS. We remain positive on Alchip's position in the IC design service sector, given that its revenue mainly comes from advanced process AI, HPC, and automotive markets. Maintain Outperform.

Risks

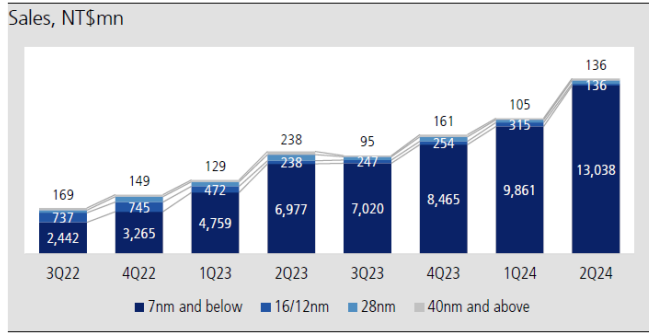
Intensifying competition & Sino-US trade restrictions; weakening demand.

Key financials and valuations

	Dec-21A	Dec-22A	Dec-23A	Dec-24F	Dec-25F
Revenue (NT\$/mn)	10,428	13,725	30,482	50,587	57,774
Gross profit (NT\$/mn)	3,563	4,430	6,794	10,101	12,348
Operating profit (NT\$/mn)	1,828	2,311	3,761	6,431	8,072
Net profit (NT\$/mn)	1,490	1,834	3,325	6,206	7,823
EPS (NT\$)	21.34	25.69	45.47	78.77	98.85
Cash DPS (NT\$)	11.14	12.92	22.71	39.39	49.43
EPS growth (%)	56.8	20.4	77.0	73.2	25.5
PE (x)	94.7	78.6	44.4	25.6	20.4
PB (x)	13.8	11.2	8.3	4.5	4.0
EV/EBITDA (x)	39.5	31.1	23.0	15.4	12.5
Net debt to equity (%)	Net cash	Net cash	Net cash	Net cash	Net cash
Dividend yield (%)	0.6	0.6	1.1	1.9	2.4
Return on average equity (%)	20.9	15.7	21.4	23.1	20.5

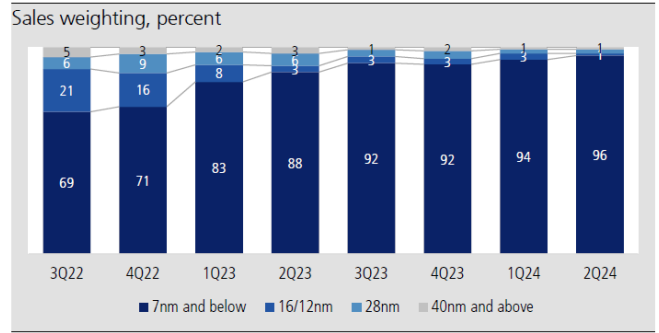
Source: Company data, KGI Research estimates

Figure 1: Alchip's sales by node



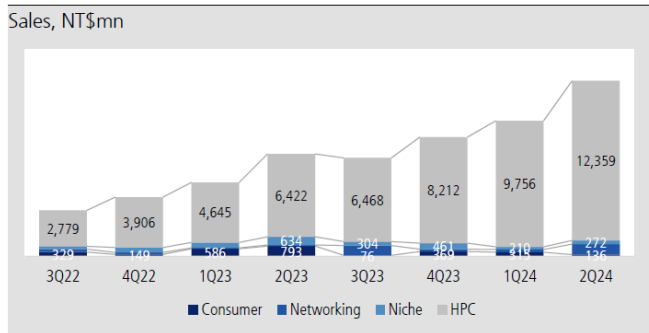
Source: Company data, KGI Research

Figure 2: Alchip's sales weighting by node



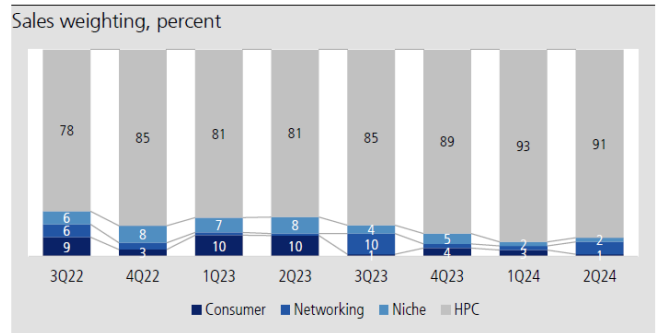
Source: Company data, KGI Research

Figure 3: Alchip's sales by application



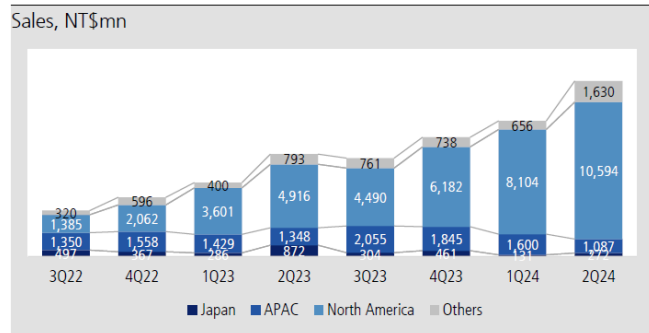
Source: Company data, KGI Research

Figure 4: Alchip's sales weighting by application



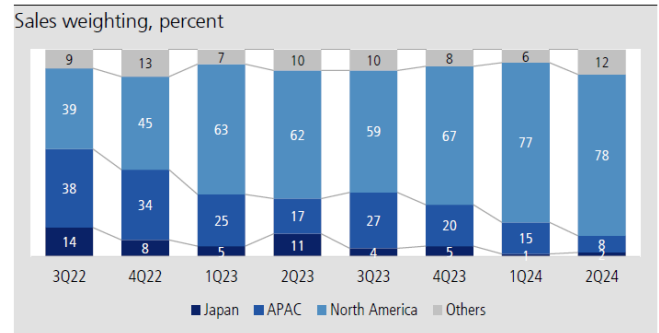
Source: Company data, KGI Research

Figure 5: Alchip's sales by region



Source: Company data, KGI Research

Figure 6: Alchip's sales weighting by region



Source: Company data, KGI Research

Figure 7: Breakdown of 3Q-4Q24 forecast revisions vs. consensus

NT\$m	3Q24F							4Q24F						
	Revision	Previous	Chg. (%)	QoQ (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	QoQ (%)	YoY (%)	Consensus	Diff. (%)
Revenue	13,748	13,748	0.0	1.2	80.7	14,250	(3.5)	12,767	12,767	0.0	(7.1)	38.4	13,594	(6.1)
Gross profit	2,827	2,827	0.0	9.8	56.8	2,888	(2.1)	2,727	2,727	0.0	(3.6)	29.8	2,954	(7.7)
Operating profit	1,865	1,865	0.0	13.1	85.1	1,920	(2.9)	1,705	1,705	0.0	(8.6)	36.8	1,998	(14.7)
Net profit	1,747	1,747	0.0	10.1	96.7	1,656	5.5	1,642	1,642	0.0	(6.0)	46.6	1,718	(4.5)
EPS (NT\$)	22.08	22.08	(0.0)	10.1	83.6	21.40	3.2	20.74	20.75	(0.0)	(6.0)	35.5	22.04	(5.9)
Gross margin (%)	20.6	20.6	0.0 ppts	1.6 ppts	(3.1)ppts	20.3	0.3 ppts	21.4	21.4	0.0 ppts	0.8 ppts	(1.4)ppts	21.7	(0.4)ppts
OP margin (%)	13.6	13.6	0.0 ppts	1.4 ppts	0.3 ppts	13.5	0.1 ppts	13.4	13.4	0.0 ppts	(0.2)ppts	(0.2)ppts	14.7	(1.3)ppts
Net margin (%)	12.7	12.7	0.0 ppts	1.0 ppts	1.0 ppts	11.6	1.1 ppts	12.9	12.9	0.0 ppts	0.2 ppts	0.7 ppts	12.6	0.2 ppts

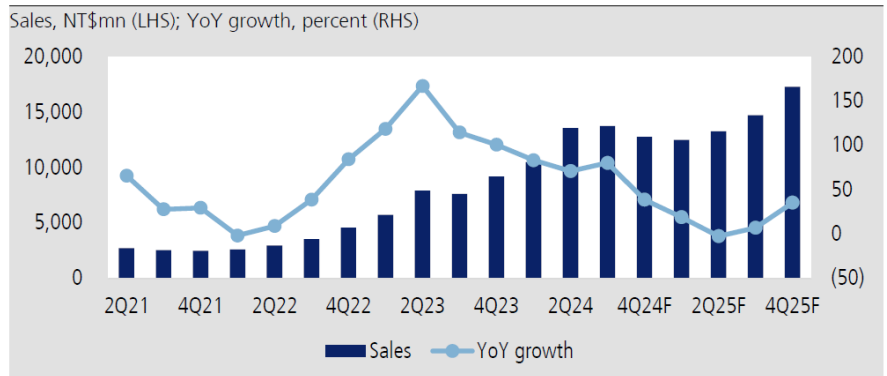
Source: Bloomberg, KGI Research estimates

Figure 8: Breakdown of 2024-25 forecast revisions vs. consensus

NT\$m	2024F						2025F					
	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)
Revenue	50,587	50,587	0.0	66.0	51,695	(2.1)	57,774	57,774	0.0	14.2	60,816	(5.0)
Gross profit	10,101	10,101	0.0	48.7	10,305	(2.0)	12,348	12,348	0.0	22.2	13,409	(7.9)
Operating profit	6,431	6,431	0.0	71.0	6,712	(4.2)	8,072	8,072	0.0	25.5	9,365	(13.8)
Net profit	6,206	6,206	0.0	86.6	6,187	0.3	7,823	7,823	0.0	26.1	8,055	(2.9)
EPS (NT\$)	78.77	78.78	(0.0)	73.2	79.84	(1.3)	98.85	98.86	(0.0)	25.5	102.00	(3.1)
Gross margin (%)	20.0	20.0	0.0 ppts	(2.3)ppts	19.9	0.0 ppts	21.4	21.4	0.0 ppts	1.4 ppts	22.0	(0.7)ppts
OP margin (%)	12.7	12.7	0.0 ppts	0.4 ppts	13.0	(0.3)ppts	14.0	14.0	0.0 ppts	1.3 ppts	15.4	(1.4)ppts
Net margin (%)	12.3	12.3	0.0 ppts	1.4 ppts	12.0	0.3 ppts	13.5	13.5	0.0 ppts	1.3 ppts	13.2	0.3 ppts

Source: Bloomberg, KGI Research estimates

Figure 9: YoY sales growth decline will accelerate in 2H24-1H25F



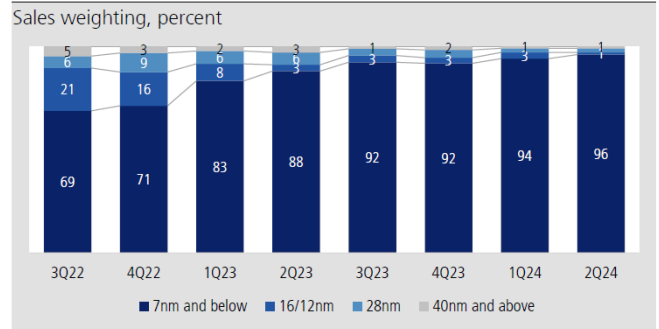
Source: Company data, KGI Research estimates

Figure 10: Company profile

Founded in 2003, Alchip specializes in providing high-complexity ASIC/SoC design (especially back-end design) and manufacturing services. The firm has been a major player in the IC design service arena for years, with a team mainly composed of IC design experts from the Silicon Valley in the US and Japan. Alchip is headquartered in Taipei, with an ASIC manufacturing center in Hsinchu. In light of its global deployment strategy, the company has established subsidiaries in China, Japan, and the US.

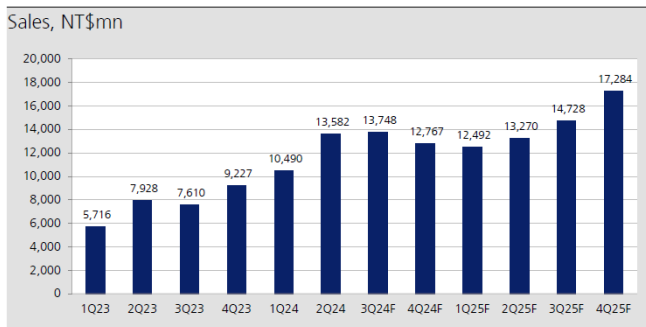
Source: Company data, KGI Research

Figure 11: Sales by node



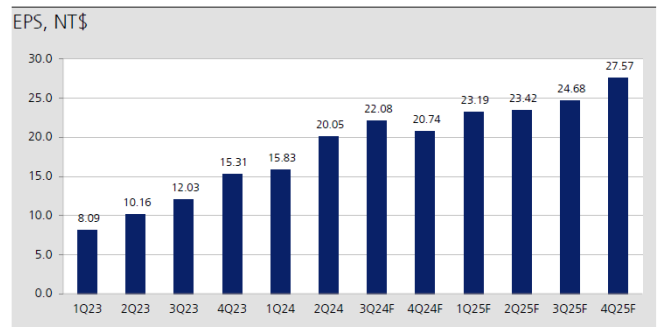
Source: Company data, KGI Research

Figure 12: Sales



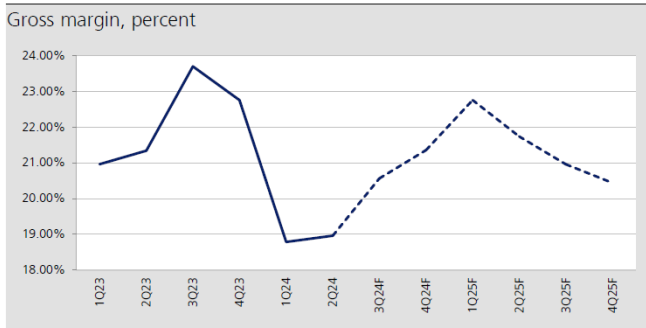
Source: KGI Research

Figure 13: EPS



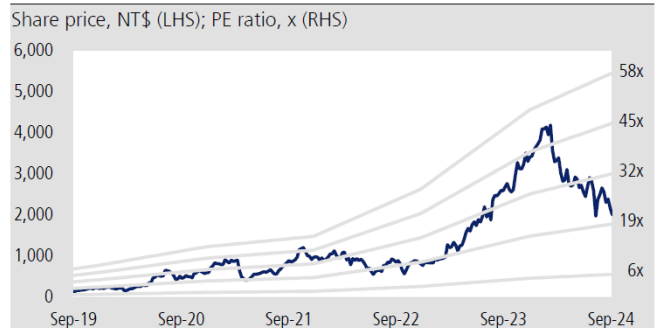
Source: KGI Research

Figure 14: Gross Margin



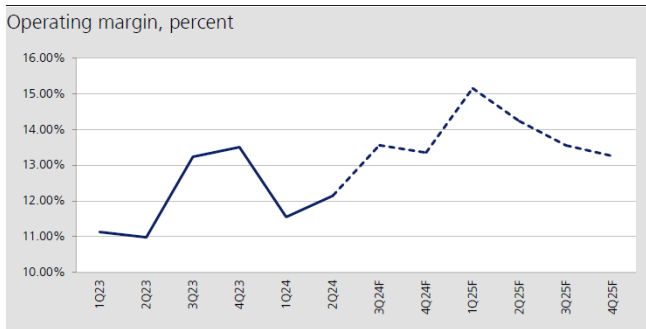
Source: KGI Research

Figure 15: 12M forward PE band



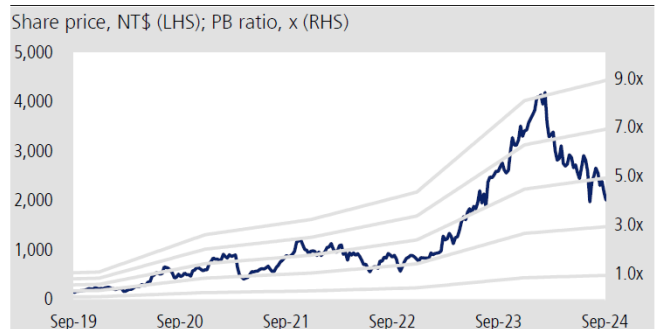
Source: TEJ, KGI Research estimates

Figure 16: Operating Margin



Source: KGI Research

Figure 17: 12M forward PB band



Source: TEJ, KGI Research estimates

Income statement

	Quarterly								Annually		
	Mar-24A	Jun-24A	Sep-24F	Dec-24F	Mar-25F	Jun-25F	Sep-25F	Dec-25F	Dec-23A	Dec-24F	Dec-25F
Income statement (NT\$mn)											
Revenue	10,490	13,582	13,748	12,767	12,492	13,270	14,728	17,284	30,482	50,587	57,774
Cost of goods sold	(8,519)	(11,006)	(10,921)	(10,040)	(9,649)	(10,385)	(11,641)	(13,751)	(23,687)	(40,486)	(45,426)
Gross profit	1,971	2,576	2,827	2,727	2,843	2,885	3,087	3,533	6,794	10,101	12,348
Operating expenses	(759)	(926)	(962)	(1,022)	(949)	(995)	(1,090)	(1,241)	(3,033)	(3,670)	(4,275)
Operating profit	1,212	1,650	1,865	1,705	1,894	1,890	1,997	2,292	3,761	6,431	8,072
Depreciation of fixed assets	(261)	(391)	(373)	(467)	(562)	(562)	(562)	(562)	(1,356)	(1,492)	(2,247)
Amortisation of intangible assets	(146)	(151)	(105)	(18)	(63)	(63)	(63)	(63)	(666)	(421)	(251)
EBITDA	1,619	2,192	2,343	2,190	2,518	2,514	2,622	2,916	5,783	8,344	10,570
Interest income	278	318	358	388	388	423	433	429	353	1,343	1,674
Investment income	-	-	-	-	-	-	-	-	-	-	-
Other non-op income	54	24	10	10	10	10	10	10	80	98	40
Non-operating income	332	342	368	398	398	433	443	439	433	1,440	1,714
Interest expense	(2)	(2)	(3)	(3)	(3)	(3)	(3)	(3)	(6)	(12)	(14)
Investment loss	(24)	4	-	-	-	-	-	-	(15)	(20)	-
Other non-op expenses	16	(9)	-	-	-	-	-	-	24	7	-
Non-operating expenses	(11)	(7)	(3)	(3)	(3)	(3)	(3)	(3)	3	(25)	(14)
Pre-tax profit	1,533	1,984	2,230	2,100	2,288	2,319	2,437	2,728	4,198	7,847	9,773
Current taxation	(307)	(395)	(486)	(458)	(458)	(464)	(487)	(546)	(877)	(1,645)	(1,955)
Minorities	4	(2)	3	(1)	4	(2)	3	(1)	5	4	4
Normalised net profit	1,230	1,587	1,747	1,642	1,835	1,853	1,953	2,182	3,325	6,206	7,823
Extraordinary items	0	(0)	0	0	0	0	0	0	-	(0)	0
Net profit	1,230	1,587	1,747	1,642	1,835	1,853	1,953	2,182	3,325	6,206	7,823
EPS (NT\$)	15.83	20.05	22.08	20.74	23.19	23.42	24.68	27.57	45.47	78.77	98.85
Margins (%)											
Gross profit margin	18.8	19.0	20.6	21.4	22.8	21.7	21.0	20.4	22.3	20.0	21.4
Operating margin	11.6	12.1	13.6	13.4	15.2	14.2	13.6	13.3	12.3	12.7	14.0
EBITDA margin	15.4	16.1	17.0	17.2	20.2	18.9	17.8	16.9	19.0	16.5	18.3
Pretax profit margin	14.6	14.6	16.2	16.4	18.3	17.5	16.5	15.8	13.8	15.5	16.9
Net profit margin	11.7	11.7	12.7	12.9	14.7	14.0	13.3	12.6	10.9	12.3	13.5
Sequential growth (%)											
Revenue growth	13.7	29.5	1.2	(7.1)	(2.2)	6.2	11.0	17.4			
Gross profit growth	(6.1)	30.7	9.8	(3.6)	4.3	1.5	7.0	14.4			
Operating profit growth	(2.8)	36.1	13.1	(8.6)	11.1	(0.2)	5.7	14.8			
EBITDA growth	(23.6)	35.4	6.9	(6.5)	15.0	(0.2)	4.3	11.2			
Pretax profit growth	8.6	29.4	12.4	(5.8)	9.0	1.3	5.1	11.9			
Net profit growth	9.9	29.0	10.1	(6.0)	11.8	1.0	5.4	11.7			
YoY growth (%)											
Revenue growth	83.5	71.3	80.7	38.4	19.1	(2.3)	7.1	35.4	122.1	66.0	14.2
Gross profit growth	64.5	52.2	56.8	29.8	44.2	12.0	9.2	29.6	53.4	48.7	22.2
Operating profit growth	90.4	89.4	85.1	36.8	56.3	14.6	7.1	34.4	62.8	71.0	25.5
EBITDA growth	74.8	72.5	59.8	3.3	55.6	14.7	11.9	33.2	32.3	44.3	26.7
Pretax profit growth	110.2	115.3	96.5	48.7	49.3	16.9	9.3	29.9	76.1	86.9	24.5
Net profit growth	111.2	115.9	96.7	46.6	49.1	16.8	11.8	32.9	81.3	86.6	26.1

Source: Company data, KGI Research estimates

Balance sheet

NTSmn	Dec-21A	Dec-22A	Dec-23A	Dec-24F	Dec-25F
Total assets	13,258	19,738	32,458	54,105	60,476
Current assets	11,558	18,240	29,416	49,244	54,575
Cash & ST securities	8,300	6,806	14,136	26,687	24,268
Inventory	1,057	9,125	11,614	16,063	22,002
Accounts receivable	970	1,413	2,437	4,523	6,335
Other current assets	1,230	897	1,229	1,970	1,970
Non-current assets	1,700	1,498	3,042	4,862	5,902
LT investments	335	340	580	1,315	1,315
Net fixed assets	884	710	1,160	2,696	3,737
Other assets	481	447	1,302	850	850
Total liabilities	2,909	6,736	14,424	18,346	20,016
Current liabilities	2,839	6,608	14,246	18,157	19,827
Accounts payable	394	1,938	1,925	3,791	5,460
Interest bearing ST liabilities	-	-	-	-	-
Other current liabilities	2,445	4,670	12,320	14,366	14,366
Non-current liabilities	70	128	178	189	189
Long-term debt	-	-	-	-	-
Other L-T liabilities	20	58	28	26	26
Total equity	10,348	13,002	18,034	35,759	40,461
Share capital	707	719	743	797	797
Retained earnings reserve	2,495	3,388	6,057	8,641	13,346
Minority interests	-	9	20	16	12
Preferred shareholders funds	-	-	-	-	-

Key ratios

	Dec-21A	Dec-22A	Dec-23A	Dec-24F	Dec-25F
Growth					
Revenue growth	47.3%	31.6%	122.1%	66.0%	14.2%
Operating profit growth	85.2%	26.4%	62.8%	71.0%	25.5%
EBITDA growth	61.5%	30.1%	32.3%	44.3%	26.7%
Net profit growth	78.4%	23.1%	81.3%	86.6%	26.1%
EPS growth	56.8%	20.4%	77.0%	73.2%	25.5%
Profitability					
Gross profit margin	34.2%	32.3%	22.3%	20.0%	21.4%
Operating margin	17.5%	16.8%	12.3%	12.7%	14.0%
EBITDA margin	32.2%	31.8%	19.0%	16.5%	18.3%
Net profit margin	14.3%	13.4%	10.9%	12.3%	13.5%
Return on average assets	13.3%	11.1%	12.7%	14.3%	13.7%
Return on average equity	20.9%	15.7%	21.4%	23.1%	20.5%
Stability					
Gross debt to equity	0.0%	0.0%	0.0%	0.0%	0.0%
Net debt to equity	Net cash	Net cash	Net cash	Net cash	Net cash
Interest coverage (x)	735.0	831.9	687.0	677.0	722.7
Interest & ST debt coverage (x)	1.0	1.0	1.0	1.0	1.0
Cash flow interest coverage(x)	133.4	(85.7)	1,520.8	249.6	312.7
Cash flow/int. & ST debt (x)	133.4	(85.7)	1,520.8	249.6	312.7
Current ratio (x)	4.1	2.8	2.1	2.7	2.8
Quick ratio (x)	3.7	1.4	1.2	1.8	1.6
Net debt (NT\$m)	(3,849)	(4,775)	(10,160)	(25,247)	(22,828)
Per share data					
EPS (NT\$)	21.34	25.69	45.47	78.77	98.85
CFPS (NT\$)	4.95	(3.44)	127.25	36.77	53.52
BVPS (NT\$)	146.39	180.65	242.39	448.39	507.42
Adj BVPS (NT\$)	148.22	182.00	246.32	453.71	511.15
SPS (NT\$)	149.37	192.25	416.80	642.13	730.08
EBITDA/share (NT\$)	48.12	61.20	79.07	105.92	133.57
Cash DPS (NT\$)	11.14	12.92	22.71	39.39	49.43
Activity					
Sales / avg assets	0.93	0.83	1.17	1.17	1.01
Days receivable	33.9	37.6	29.2	32.7	40.0
Days inventory	56.2	358.3	179.0	145.2	176.8
Days payable	21.0	76.1	29.7	34.3	43.9
Cash cycle	69.2	319.8	178.5	143.7	172.9

Source: Company data, KGI Research estimates

Profit & loss

NTSmn	Dec-21A	Dec-22A	Dec-23A	Dec-24F	Dec-25F
Revenue	10,428	13,725	30,482	50,587	57,774
Cost of goods sold	(6,866)	(9,296)	(23,687)	(40,486)	(45,426)
Gross profit	3,563	4,430	6,794	10,101	12,348
Operating expenses	(1,735)	(2,119)	(3,033)	(3,670)	(4,275)
Operating profit	1,828	2,311	3,761	6,431	8,072
Non-operating income	60	140	433	1,440	1,714
Interest income	36	88	353	1,343	1,674
Investment income	-	-	-	-	-
Other non-op income	25	53	80	98	40
Non-operating expenses	13	(68)	3	(25)	(14)
Interest expense	(3)	(3)	(6)	(12)	(14)
Investment loss	-	-	(15)	(20)	-
Other non-op expenses	15	(65)	24	7	-
Pre-tax profit	1,901	2,383	4,198	7,847	9,773
Current taxation	(411)	(550)	(877)	(1,645)	(1,955)
Minorities	-	1	5	4	4
Extraordinary items	-	0	0	(0)	0
Net profit	1,490	1,834	3,325	6,206	7,823
EBITDA	3,360	4,369	5,783	8,344	10,570
EPS (NT\$)	21.34	25.69	45.47	78.77	98.85

Cash flow

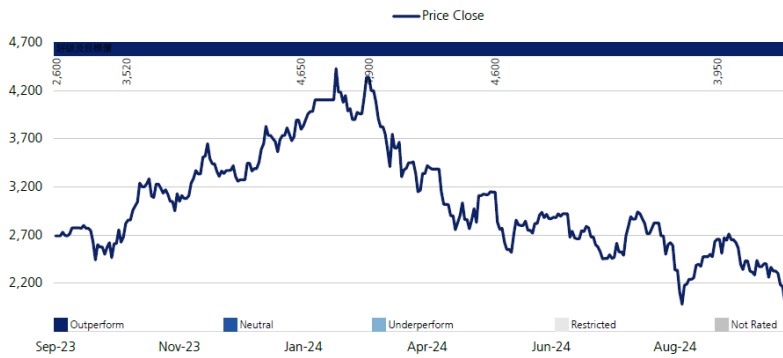
NTSmn	Dec-21A	Dec-22A	Dec-23A	Dec-24F	Dec-25F
Operations cash flow	345	(246)	9,306	2,897	4,235
Net profit	1,490	1,834	3,325	6,206	7,823
Depreciation & amortisation	1,532	2,058	2,021	1,913	2,498
Decrease in working capital	(604)	(6,750)	(3,996)	(4,670)	(6,081)
Other operating cash flow	(2,073)	2,611	7,955	(551)	(4)
Investing cash flow	(5,711)	1,476	(5,118)	(714)	(3,538)
Sale of ST investment	(3,969)	2,787	(2,101)	1,899	-
New investments	-	-	(70)	(67)	-
Capital expenditure	(1,342)	(1,027)	(2,321)	(2,773)	(3,287)
Others investing cashflow	(401)	(284)	(626)	227	(251)
Free cash flow	551	(4,238)	(1,986)	(868)	(663)
Financing cash flow	4,773	(766)	1,276	11,875	(3,117)
Increase in short term debt	-	-	-	-	-
Increase in long term loans	-	-	-	-	-
New ordinary shares issued	5,396	-	1,998	13,354	-
Ordinary dividends paid	(465)	(846)	(931)	(1,778)	(3,117)
Other financing cashflow	49	80	208	299	-
Forex effects	(147)	462	(79)	1,029	-
Total cash generated	(739)	927	5,384	15,087	(2,419)

ROIC

	Dec-21A	Dec-22A	Dec-23A	Dec-24F	Dec-25F
1 - COGS/revenue					
- Operating exp./revenue	16.6%	15.4%	10.0%	7.3%	7.4%
= Operating margin	17.5%	16.8%	12.3%	12.7%	14.0%
1 / (Working capital/revenue	0.0	0.4	0.0	0.1	0.2
+ Net PPE/revenue	0.1	0.1	0.0	0.1	0.1
+ Other assets/revenue)	0.0	0.0	0.0	0.0	0.0
= Capital turnover	6.5	2.4	11.3	6.7	3.9
Operating margin	17.5%	16.8%	12.3%	12.7%	14.0%
x Capital turnover	6.5	2.4	11.3	6.7	3.9
x (1 - tax rate)	78.4%	76.9%	79.1%	79.0%	80.0%
= After-tax ROIC	89.7%	31.1%	110.6%	67.0%	43.9%

Source: Company data, KGI Research estimates

Alchip Technologies – Recommendation & target price history



Date	Rating	Target	Price
2024-08-23	Outperform	3,950	2,655
2024-05-04	Outperform	4,600	3,145
2024-03-02	Outperform	4,900	4,340
2024-01-28	Outperform	4,650	3,895
2023-11-02	Outperform	3,520	2,820
2023-08-18	Outperform	2,600	1,970
2023-06-21	Outperform	2,400	1,810
2023-01-13	Outperform	1,110	837
2022-11-04	Outperform	1,070	725
2022-10-13	Outperform	1,070	681

Source: TEJ, KGI Research

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