



Advanced Wet-Cleaning Tools for Leading Edge IC Fabs

December 2020



Market Data. Information presented below under “Who is ACM Research?,” “ACM is Growing at a Rapid Pace” and “Investment Highlights” concerning ACM Research’s total addressable market presents a forecast based on information provided by Gartner, Inc. in its report “Forecast: Semiconductor Wafer Fab Manufacturing Equipment (Including Wafer-Level Packaging), Worldwide, 4Q19 Update” (December 2019). You are cautioned not to rely on or give undue weight to this information. The Gartner report represents research opinions or viewpoints that are published, as part of a syndicated subscription service, by Gartner and are not representations of fact. The Gartner report speaks as of its original publication date (and not as of the date of this presentation), and the opinions expressed in the Gartner report are subject to change without notice. While ACM Research is not aware of any misstatements regarding the information provided in the Gartner report, it has not independently verified the accuracy or completeness of that information, which involves numerous assumptions and is subject to risks and uncertainties, as well as change based on various factors, that could cause results to differ materially from the forecast presented. The industry in which ACM Research operates is subject to a high degree of uncertainty and risk due to variety of factors, including those described in ACM Research’s public filings with the Securities and Exchange Commission, as described above.

Note Regarding Presentation of Non-GAAP Financial Measures. Information presented below under “ACM is Growing at a Rapid Pace,” “Q3 2020 Highlights,” “Q3 2020 Financial Results” and “GAAP to Non-GAAP Reconciliation” includes certain “non-GAAP financial measures” as defined in Regulation G under the Securities Exchange Act of 1934, including non-GAAP adjusted gross profit, adjusted gross margin, adjusted operating income, adjusted operating margin, adjusted net income and adjusted EBITDA. These supplemental measures exclude the impact of stock-based compensation and change in fair value of financial liability, which ACM Research does not believe are indicative of its core operating results. A reconciliation of each non-GAAP financial measure to the most directly comparable GAAP financial measure is included under “GAAP to Non-GAAP Reconciliation.”

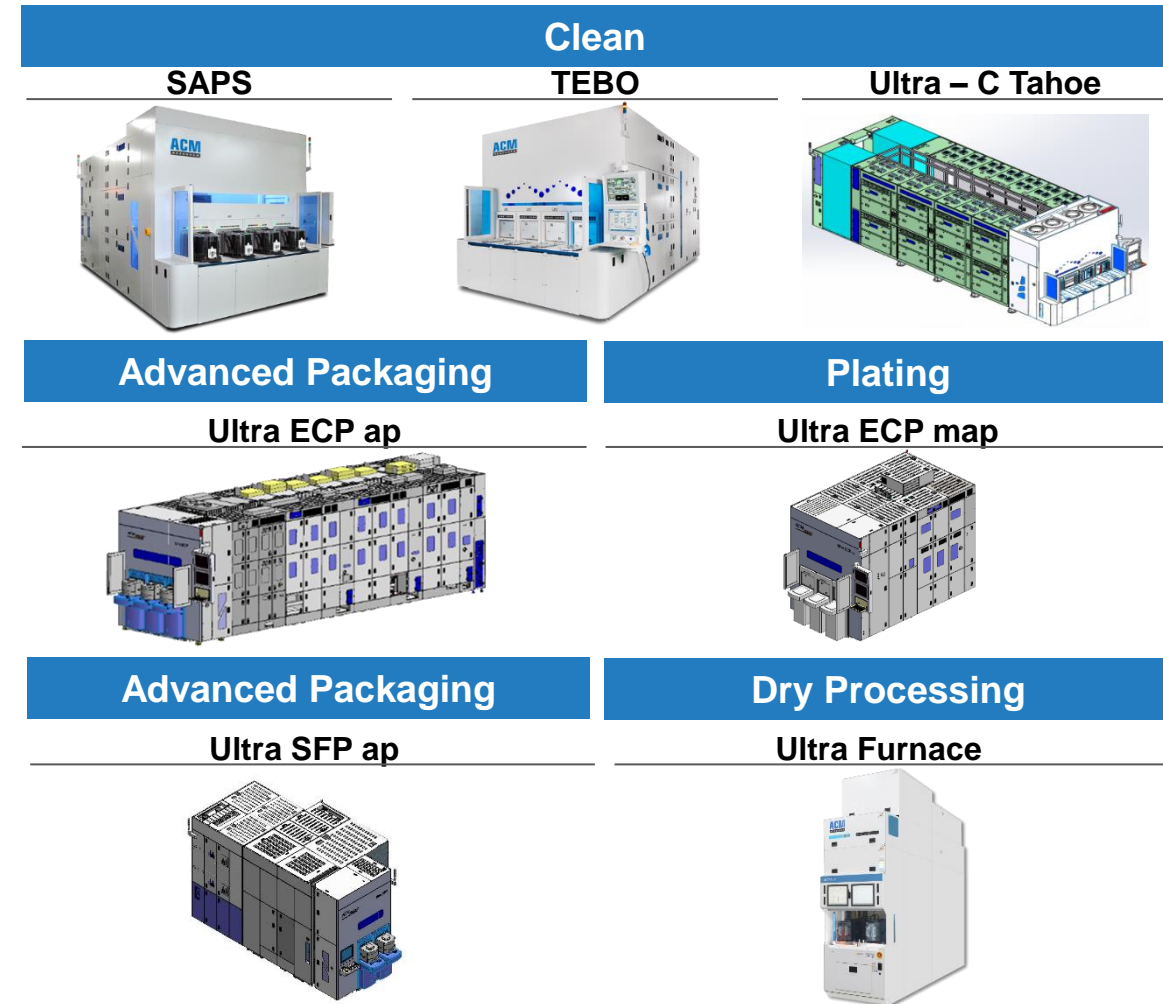
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Who is ACM Research?

Mission Statement: To Become a Leading Global Provider of Semiconductor Capital Equipment

- **Best-in-class semiconductor wafer cleaning tools** providing higher yields and better efficiency at advanced fabs than conventional wafer cleaning tools
- **Differentiated megasonic technology** delivers highly effective single-wafer wet cleaning for flat and patterned wafer surfaces (SAPS) and damage-free cleaning for 2D and advanced 3D patterned wafers (TEBO)
- **ACM estimates full product line addresses \$5 billion market opportunity**, including cleaning products, ECP, SFP, and Furnace ⁽¹⁾
- **More than 285 patents** issued in the U.S., China, Japan, Korea, Singapore and Taiwan as of 09/30/20
- 136,000 sq. ft. across **two production facilities in Shanghai and long-term plans for Lingang Facility** offers significant capacity for growth
- **Headquartered in Fremont, CA** with more than 360 employees globally.

(1) Source: Gartner. See "Market Data" on page 2, Wall Street Analyst Reports, ACM Estimates.



Tier One Customer Base

Front-End Customers



- Major new entrant into NAND flash and DRAM industry
- Expanding capacity with construction of \$24B production facility in Wuhan⁽¹⁾
- Proprietary Xtacking architecture used to produce 3D NAND products⁽²⁾
- ACM 2019 Revenue %: 28% (primarily 3D NAND)



- Leading advanced foundry in China
- Manages first fully automated 300mm wafer production line in mainland China⁽³⁾
- Production capacity for 35,000 wafers per month⁽³⁾
- ACM 2019 Revenue %: 27% (primarily Foundry / Logic)



- Global market leader in memory (DRAM & NAND) semiconductor products
- ACM's first major customer
- Expected to spend \$107B in the coming years to build four new memory chip plants⁽⁴⁾
- ACM 2019 Revenue %: 20% (primarily DRAM)

Back-End Customers



- Largest bumping house in China and leading WLCSP production base
- Subsidiary of OSAT company JCET
- Owns one of the most advanced packaging technology R&D service platforms⁽⁶⁾
- Global customer base with exposure to the U.S., Western Europe and Asia



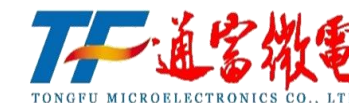
- Mainland China's largest foundry
- Tier one customer base including Qualcomm, Broadcom and Texas Instruments
- Six strategically located fabs in China and Western Europe
- Building \$10B fab to produce 14nm, 10nm and 7nm chips⁽⁵⁾



- New China-based entrant to DRAM industry
- Ordered 12-Chamber SAPS-V tool for evaluation
- ACM delivered first tool in Q4 2019

Two New Analog/Power IC Manufacturing Customers

- Ordered a range of semi-critical tools including the scrubber, wet etch, and backside wafer etching tool, auto wet bench, SAPS-II cleaning tool and Cu interconnect ECP map tool.
- ACM expects **shipment of majority of first tools during 2H 2020.**



- Leading OSAT provider – #7 globally⁽⁷⁾ and top 3 in China⁽⁸⁾
- Fastest growing OSAT provider globally with 32% year-over-year revenue growth⁽⁷⁾
- Six production facilities serving more than half of the top ten global semiconductor manufacturers⁽⁸⁾

(1) Source: Nikkei Asian Review. (2) Source: YMTC Press Release. (3) Source: HLMC Press Release. (4) Source: Reuters. (5) Source: AnandTech. (6) Source: JCAP Company Profile. (7) Source: Electronics Weekly. (8) Source: TFME website.

ACM Flagship Cleaning Products

Innovative, patent-protected tools address critical challenges in leading edge IC manufacturing

SAPS



Megasonic Cleaning for Flat and Patterned Wafer Surfaces

- ✓ High efficiency with enhanced process flexibility
- ✓ Uniform and consistent results
- ✓ Customizable specifications

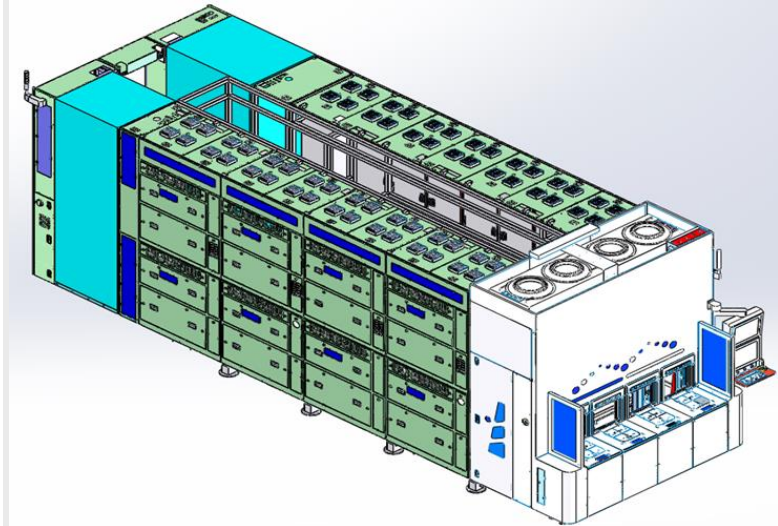
TEBO



Bubble Oscillation Cleaning for Patterned Wafers at Advanced Process Nodes

- ✓ Highly effective, damage-free solution for small and fragile features
- ✓ Multi-parameter bubble cavitation control

Ultra – C Tahoe

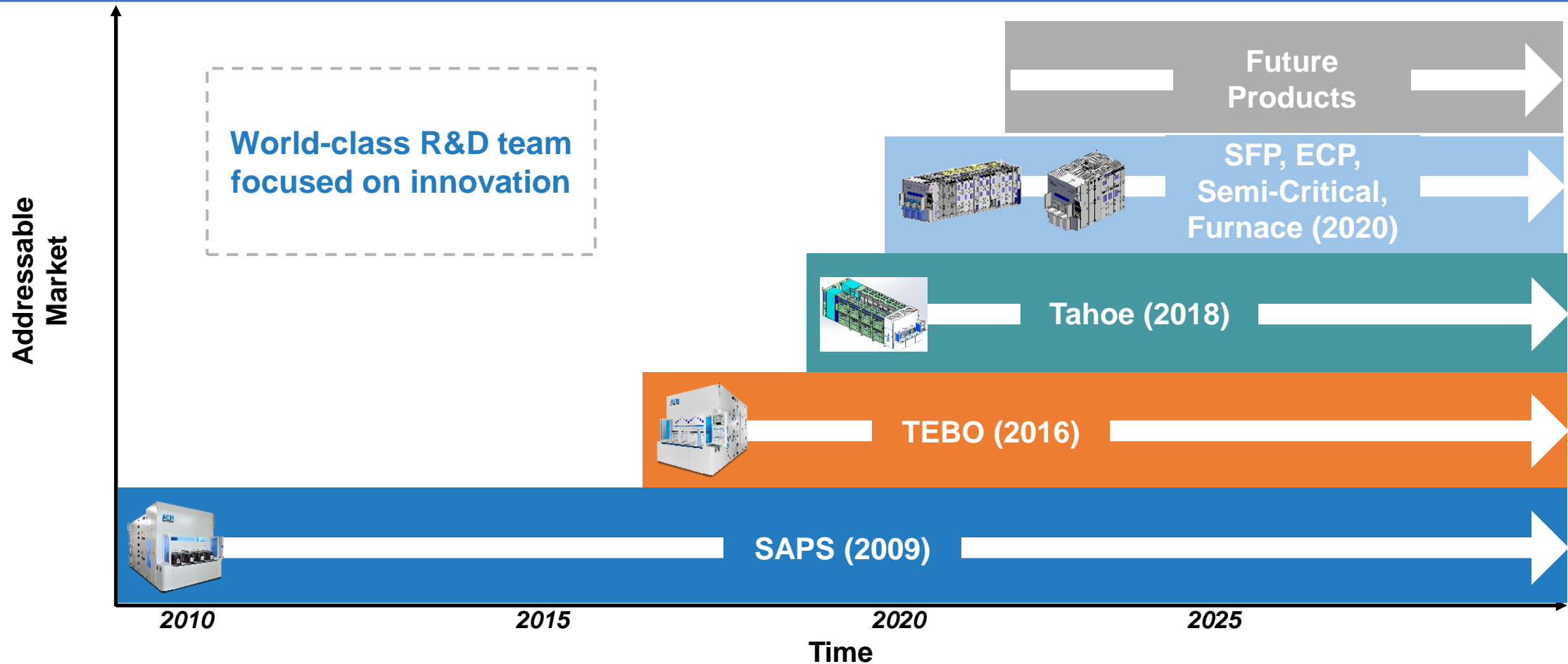


Hybrid Wafer Cleaning With Significant Cost & Environmental Benefits

- ✓ Environmentally friendly – uses 10% of the sulfuric acid used than conventional tools
- ✓ High cleaning performance at low cost

Innovation and Product Introductions Expanding Addressable Market

ACM estimates that SAPS, TEBO, Tahoe and Semi-Critical tools address more than 80% of the wet cleaning market
SFP, ECP and Furnace further expand ACM's market opportunity



Shanghai Manufacturing Facilities – Existing and Planned

Factory #1 (Shanghai HQ)



- Original ACM factory
- 36,000 sq. ft. facility
- 8,000 sq. ft. of class 10,000 clean room space for product assembly and testing
- 800 sq. ft. of class 1 clean room space for product demonstration purposes
- Co-located with ACM Shanghai Headquarters and China R&D Center

Facility #2



- Second factory; opened in September 2018
- 100,000 sq. ft. facility
- Shifting large portion of future production to this facility
- Additional dedicated space for product sub-assembly, component inventory and manufacturing related offices
- Added 2nd floor production in Q2 2020

Lingang Under Construction



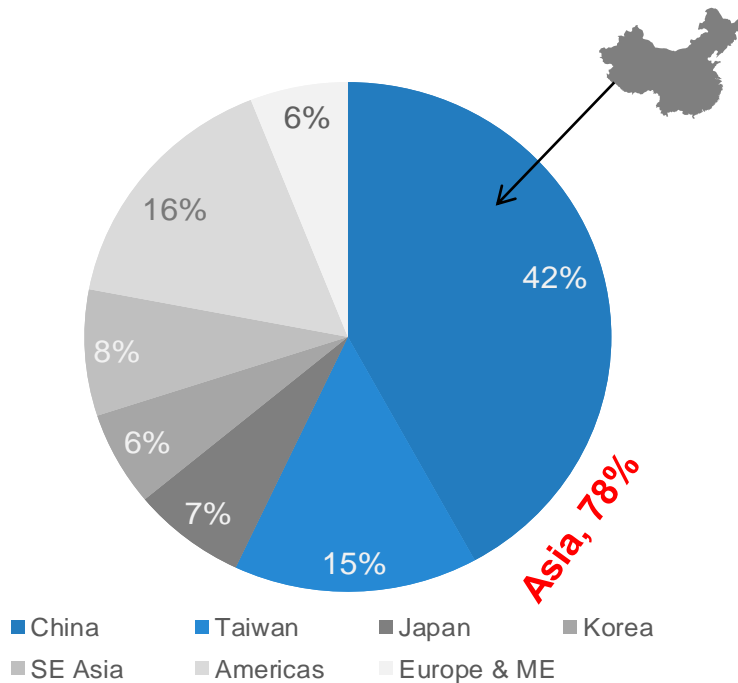
- Broke ground on the new R&D and production facilities in Lingang region of Shanghai in July 2020
- The site is approximately 30 miles from ACM Shanghai's HQ in Zhangjiang.
- 1 million square feet
- Expects initial production activities to commence in late 2022.

Well-Positioned to Participate in Asia Fab Investments

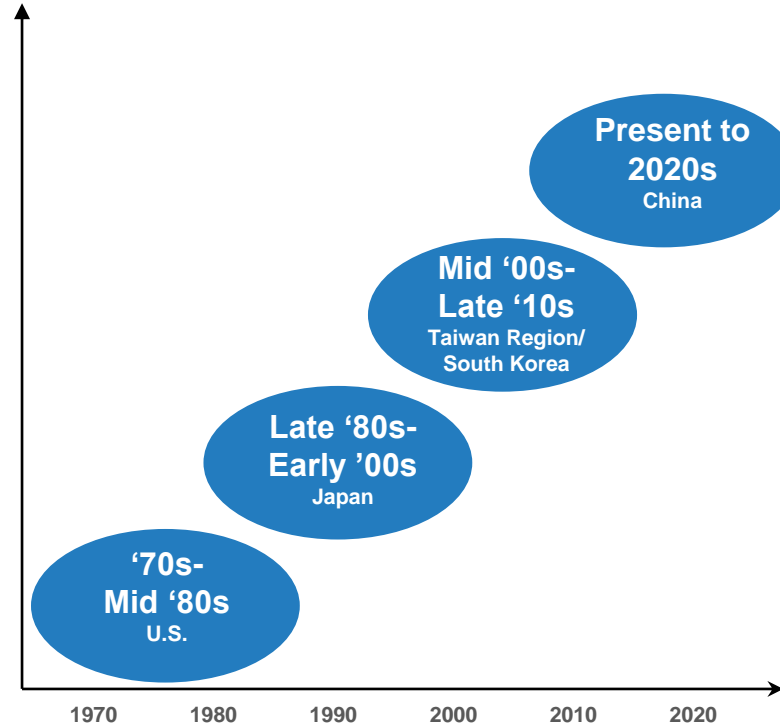
Semiconductor Industry Development

(\$ in billions)

New Facilities and Production Lines Starting Operation (2017-2020)⁽¹⁾



Industry Center Shifts Through the Decades⁽¹⁾



China is the Fastest Growing Geography⁽²⁾

Rank	Country or Region	2020 Size	16-'20 CAGR
1	Taiwan Region	\$14.1	4%
2	China	\$13.1	19%
3	South Korea	\$11.9	11%
4	North America	\$7.7	15%
5	Japan	\$6.6	9%
	Rest of World	\$6.5	3%



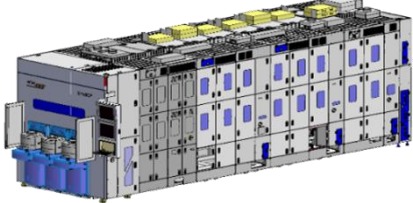
Strong presence in Asia and close proximity to Chinese customers add to key competitive advantages.

(1) Source: SEMI – World Fab Forecast Report. (2) Source: SEMI – 12/11/2019 Global Semiconductor Equipment Sales Forecast.

Growth Strategy

New Product Introductions Increasing TAM

- Next generation TEBO and Tahoe products expand SAM in wafer clean
- Front- and back-end plating and semi-critical tools offer growth opportunities in adjacent process steps



Continue to Build Scale in Asia

- Gain meaningful share by offering differentiated, leading edge technology and localized service with fast-growing Asian-based customers



Add New Customers

- Megasonic approaches SAPS, TEBO, Tahoe and ECP a driving meaningful engagement with Global Tier 1 foundry, logic and memory companies

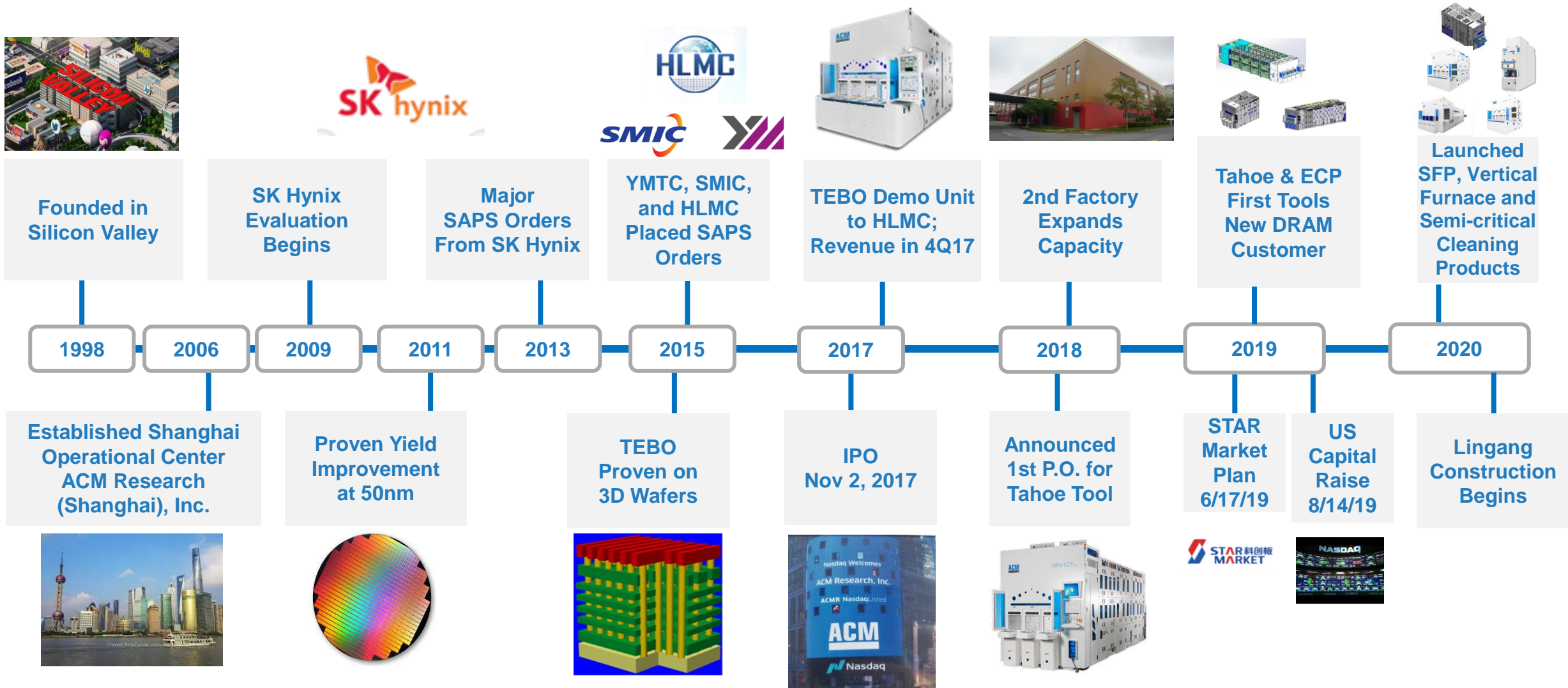


Selective Acquisitions

- Use M&A to broaden product portfolio, add complementary technologies and increase access to the global market



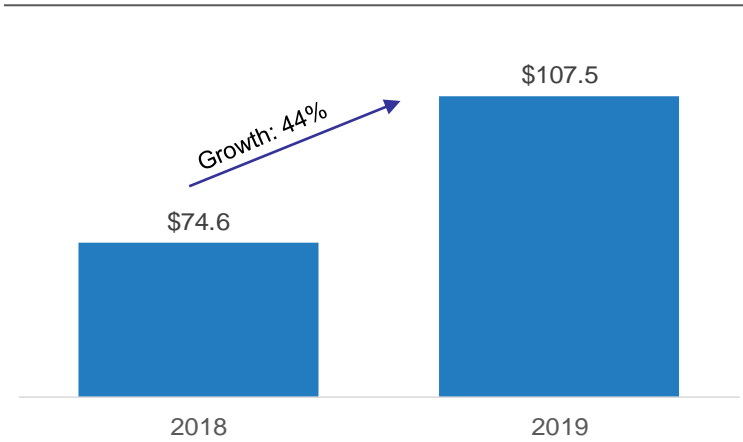
History of Innovation & Customer Adoption



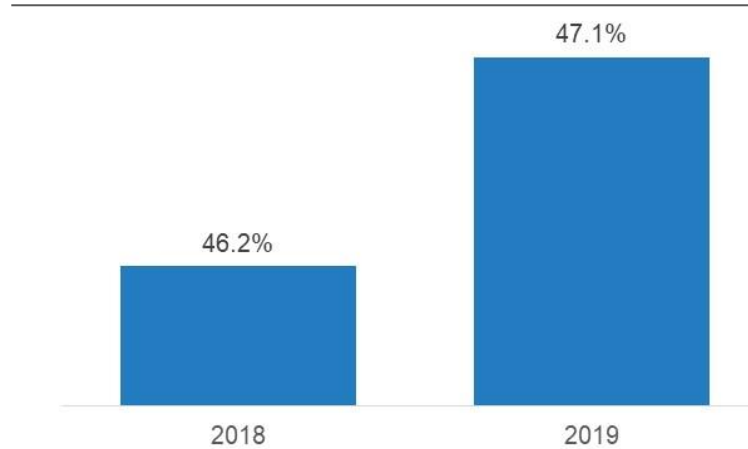
ACM is Growing at a Rapid Pace

(\$ in millions)

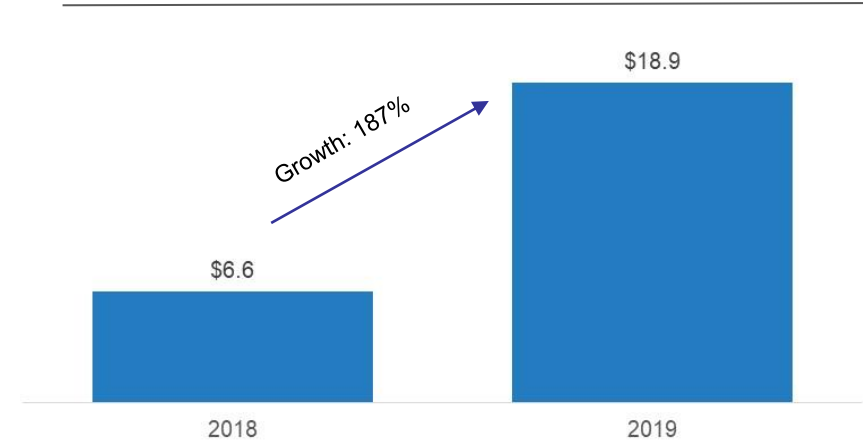
Revenue



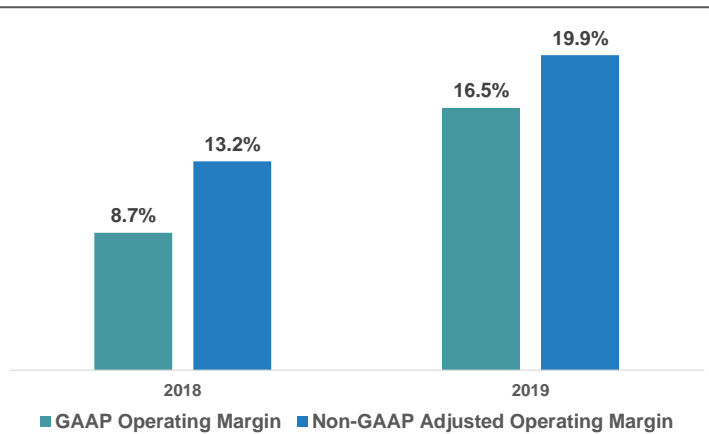
Gross Margin⁽¹⁾



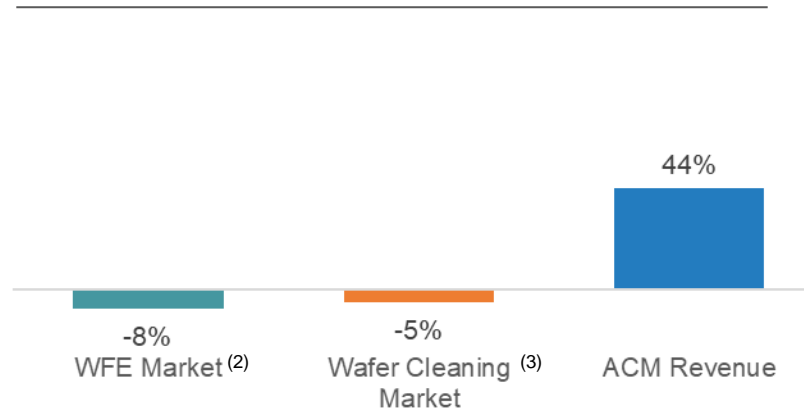
Net Income Attributable to ACM Research⁽¹⁾



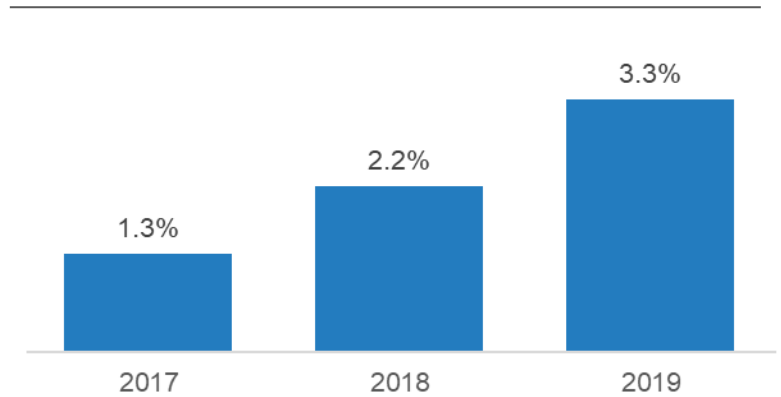
Operating Margin



2018 – 2019 Growth



ACM Wafer Cleaning Market Share⁽⁴⁾



(1) Based on GAAP financial statistics. (2) Source: Gartner – Global Wafer Fab Equipment Market (Including Wafer-Level Packaging). (3) Source: Gartner – Auto Wet Stations, Single-Wafer Processors and Other Clean Process markets. (4) Calculated as ACM Research wafer cleaning revenue / Wafer Cleaning Market size in each respective year.

Q3 2020 Highlights

- **Strong Q3 Results:**

- \$47.7 million revenue, up 43% from Q3 2019; total shipments of \$59 million
- 42.7% GAAP gross margin and 15.7% GAAP operating margin
- 42.8% non-GAAP adjusted gross margin and 21.6% non-GAAP adjusted operating margin
- Ended Q3 with \$92 million of cash, and an additional \$24 million reflecting the value of strategic security investment

- **Key Operational Progress:**

- Continued Traction with Tahoe; delivered another Tahoe tool to our lead customer and recognized revenue
- Ultra ECP Gaining Momentum; delivered two ECP ap (back-end) tools and one ECP 3D (front-end) first tool
- Launched Thin Wafer Backside Cleaning System, a high-throughput, four-chamber tool designed for single-wafer backside wet processing
- Shipped multiple semi-critical first tools to a China-based manufacturer of analog and power IC devices in Q3
- TEBO Patent Approved by USPTO; delivered a second generation TEBO tool to the existing lead customer

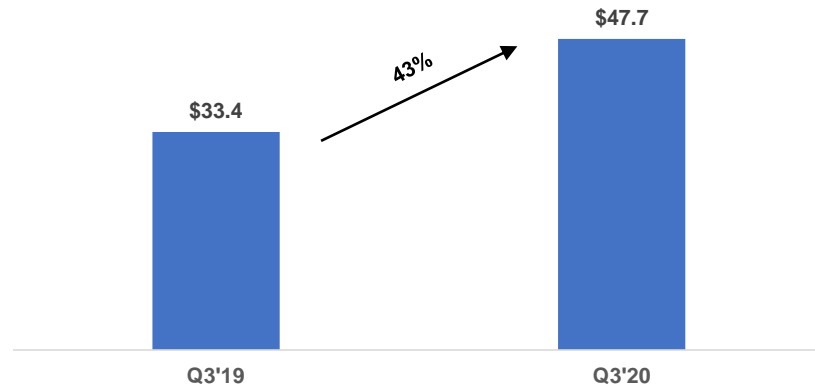
- **Update on Strategic Initiatives:**

- Listing Committee of the STAR Market approved application for STAR Market IPO
- Increased investment in US and Europe Sales & Services Team

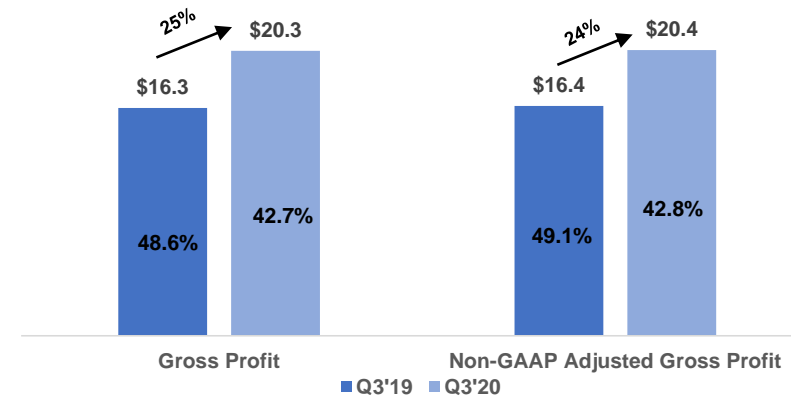
Q3 2020 Financial Results

\$ Millions

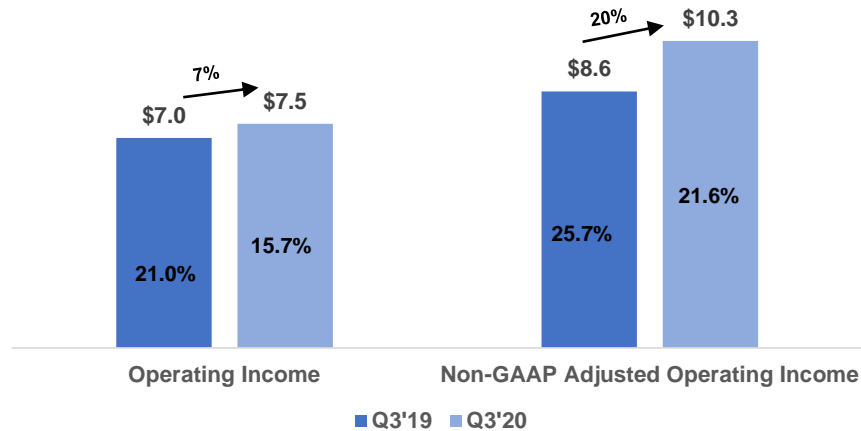
Revenue



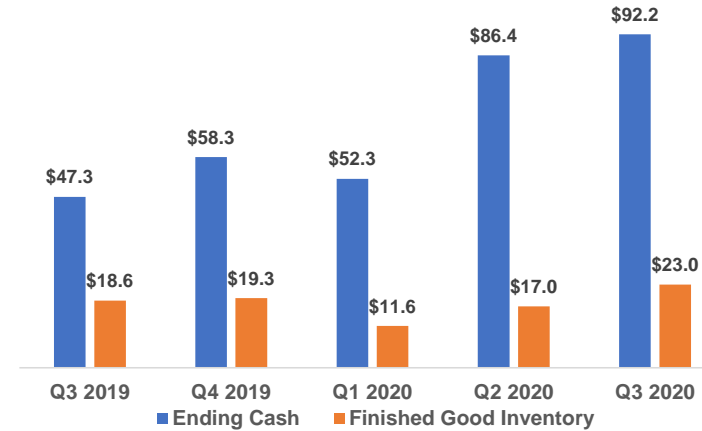
Gross Profit



Operating Profit

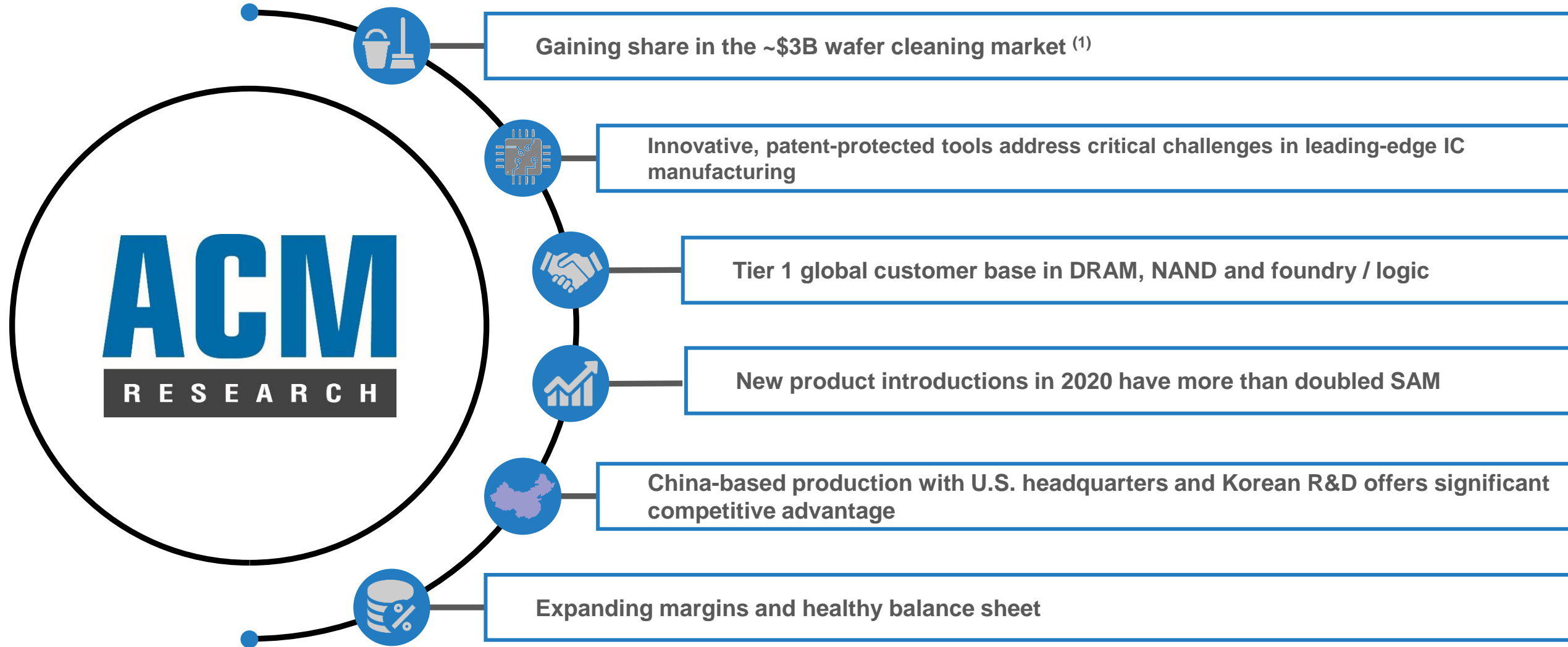


Balance Sheet Data*



* Finished goods inventory represents 'demo-to-sales' product which have been delivered to customers for evaluation. These products are carried at cost until ownership is transferred.

Investment Highlights



(1) Source: Gartner. See "Market Data" on page 2.

GAAP to Non-GAAP Reconciliation (1)

(\$ in millions)

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>9 months Ended 9/30/2020</u>	<u>9 months Ended 9/30/2019</u>
GAAP Income from Operations	\$0.7	\$6.5	\$17.8	\$16.1	\$13.9
Plus: Stock-based Compensation	\$1.6	\$3.4	\$3.6	\$4.3	\$2.9
Adjusted Income from Operations	\$2.3	\$9.8	\$21.4	\$20.4	\$16.9
GAAP Net Income (Loss)	(\$0.3)	\$6.6	\$19.5	\$12.5	\$15.3
Plus: Interest Expense (Income), Net	\$0.3	\$0.5	\$0.4	(\$0.2)	\$0.4
Plus: Income Tax Expense	\$0.5	\$0.8	(\$0.5)	\$0.4	\$0.7
Plus: Depreciation and Amortization	\$0.3	\$0.4	\$0.8	\$0.8	\$0.6
Plus: Stock-based Compensation	\$1.6	\$3.4	\$3.6	\$4.3	\$2.9
Plus: Change in fair value of financial liability	-	-	-	\$12.0	-
Plus: Unrealized gain on trade securities	-	-	-	(\$9.0)	-
Adjusted EBITDA	\$2.4	\$11.6	\$23.7	\$20.8	\$19.8
GAAP Net Income (Loss)	(\$0.3)	\$6.6	\$19.5	\$12.5	\$15.3
Plus: Change in fair value of financial liability	-	-	-	\$12.0	-
Plus: Stock-based Compensation	\$1.6	\$3.4	\$3.6	\$4.3	\$2.9
Plus: Unrealized gain on trade securities	-	-	-	(\$9.0)	-
Adjusted Net Income	\$1.3	\$9.9	\$23.0	\$19.8	\$18.2

GAAP to Non-GAAP Reconciliation (2)

	Three Months Ended September 30,						
	2020			2019			
	Actual (GAAP)	SBC	Other non- operating adjustments	Adjusted (Non-GAAP)	Actual (GAAP)	SBC	Adjusted (Non-GAAP)
	<i>(In thousands)</i>						
Revenue	\$ 47,665	\$ -	\$ -	\$ 47,665	\$ 33,427	\$ -	\$ 33,427
Cost of revenue	(27,324)	(44)	-	(27,280)	(17,173)	(154)	(17,019)
Gross profit	20,341	(44)	-	20,385	16,254	(154)	16,408
Gross margin %	42.7%	-0.1%		42.8%	48.6%	-0.5%	49.1%
Operating expenses:							
Sales and marketing	(3,924)	(237)	-	(3,687)	(3,886)	(172)	(3,714)
Research and development	(4,343)	(193)	-	(4,150)	(3,492)	(759)	(2,733)
General and administrative	(4,568)	(2,305)	-	(2,263)	(1,846)	(472)	(1,374)
Income from operations	\$ 7,506	\$ (2,779)	\$ -	\$ 10,285	\$ 7,030	\$ (1,557)	\$ 8,587
Operating margin %	15.7%	-5.8%		21.6%	21.0%	-4.7%	25.7%
Change in fair value of financial liability	(6,533)	-	(6,533)	-	-	-	-
Unrealized gain on trading securities	8,970	-	8,970	-	-	-	-
Net income (loss) attributable to ACM Research, Inc.	\$ 8,627	\$ (2,779)	\$ 2,437	\$ 8,969	\$ 8,782	\$ (1,557)	\$ 10,339

GAAP to Non-GAAP Reconciliation (3)

	Year Ended December 31,					
	2019			2018		
	Actual (GAAP)	SBC	Adjusted (Non-GAAP)	Actual (GAAP)	SBC	Adjusted (Non-GAAP)
	<i>(In thousands)</i>					
Revenue	\$ 107,524	\$ -	\$ 107,524	\$ 74,643	\$ 74,643	\$ 74,643
Cost of revenue	(56,870)	(250)	(56,620)	(40,194)	(71)	(40,123)
Gross profit	50,654	(250)	50,904	34,449	(71)	34,520
Gross margin %	47.1%	-0.2%	47.3%	46.2%	-0.1%	46.2%
Operating expenses:						
Sales and marketing	(11,902)	(328)	(11,574)	(9,611)	(120)	(9,491)
Research and development	(12,900)	(1,093)	(11,807)	(10,380)	(255)	(10,125)
General and administrative	(8,061)	(1,901)	(6,160)	(7,987)	(2,917)	(5,070)
Income from operations	\$ 17,791	\$ (3,572)	\$ 21,363	\$ 6,471	\$ (3,363)	\$ 9,834
Operating margin %	16.5%	-3.3%	19.9%	8.7%	-4.5%	13.2%
Net income attributable to ACM Research, Inc.	\$ 18,894	\$ (3,572)	\$ 22,466	\$ 6,574	\$ (3,363)	\$ 9,937