ACM RESEARCH

Advanced Wet-Cleaning Tools for Leading Edge IC Fabs

September 2020

Forward-Looking Statements. Information presented below under “2020 Outlook” with respect to revenue projected to be generated in 2020 is a forward-looking statement for purposes of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Actual results may vary significantly from ACM Research’s expectations based on a number of risks and uncertainties, including but not limited to the following, any of which could be exacerbated even further by the continuing COVID-19 outbreak in China and globally: anticipated customer orders or identified market opportunities may not grow or develop as anticipated; customer orders already received may be postponed or canceled; suppliers may not be able to meet ACM Research’s demands on a timely basis; volatile global economic, market, industry and other conditions could result in sharply lower demand for products containing semiconductors and for ACM Research's products and in disruption of capital and credit markets; ACM Research’s failure to successfully manage its operations; and trade regulations, currency fluctuations, political instability and war may materially adversely affect ACM Research due to its substantial non-U.S. customer and supplier base and its substantial non-U.S. manufacturing operations. ACM Research cannot guarantee any future results, levels of activity, performance or achievements. 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, including its Annual Report on Form 10-K for the fiscal year ended December 31, 2019 for a more complete discussion of these factors and other risks, particularly under the heading “Risk Factors.” ACM Research expressly disclaims any obligation to update forward-looking statements after the date of this presentation.

Market Data. Information presented below under “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, 2Q19 Update” (July 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 “Q2 2020 Highlights” and “Q2 2020 Financial Results” includes certain “non-GAAP financial measures” as defined in Regulation G under the Securities Exchange Act of 1934, including non-GAAP gross margin, non-GAAP operating margin, non-GAAP gross profit and non-GAAP operating profit. These supplemental measures exclude the impact of stock-based compensation, which ACM Research does not believe is indicative of its core operating results. A reconciliation of each non-GAAP financial measure to the most directly comparable GAAP financial measure is included in ACM Research’s second quarter 2020 earnings release dated August 5, 2020, which (a) has been filed with the Securities and Exchange Commission and can be viewed at https://www.sec.gov/Archives/edgar/data/1680062/000114036120017586/brhc10014127_ex99-01.htm and (b) has been posted at, and can be downloaded from, the “Investors” content area at ACM Research’s website, http://ir.acmrcsh.com/news-releases/news-release-details/acm-research-reports-second-quarter-2020-results.

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)
- **~$3B single-wafer wet cleaning TAM**(1), an estimated 50% of which is addressed by current products with future expansion from new products
- **More than 285 patents** issued in the U.S., China, Japan, Korea, Singapore and Taiwan as of 12/31/2019
- 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

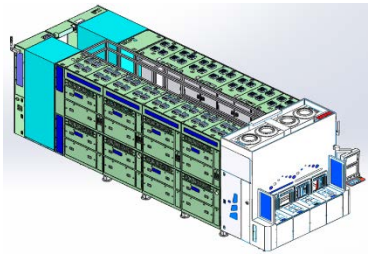
(1) Source: Gartner. See “Market Data” on page 2.

Clean

SAPS

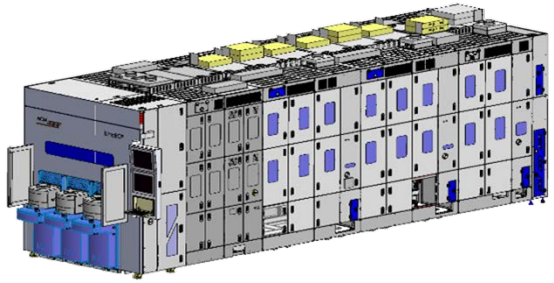
TEBO

Ultra – C Tahoe



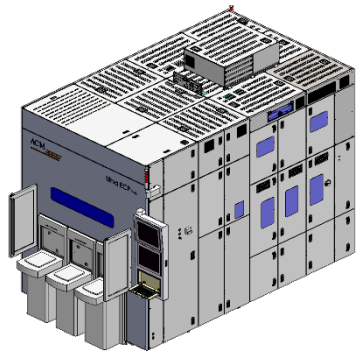
Advanced Packaging

Ultra Electrochemical Plating AP



Plating

Ultra Electrochemical Plating MAP



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)

- 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 significant shipment of first tools during 2H' 2020.

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

- 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.

Single-Wafer Wet Cleaning Products

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

SAPS

Megasonic Cleaning for Flat and Patterned Wafer Surfaces

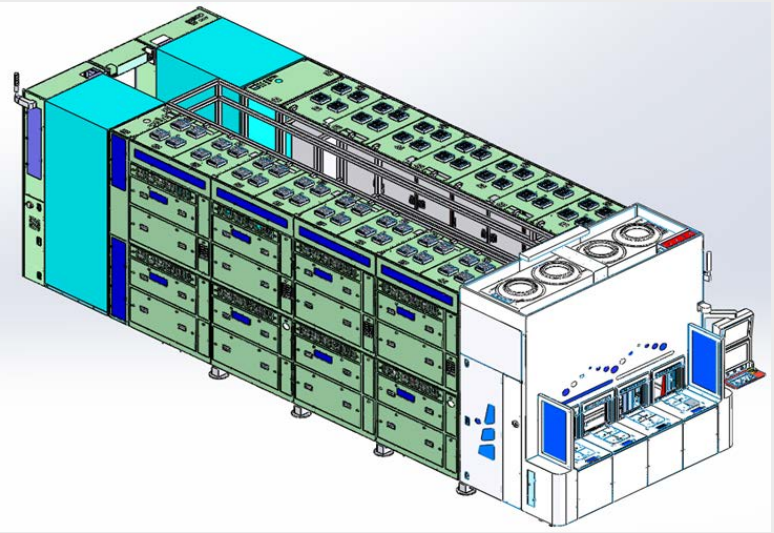
- ✓ High efficiency with enhanced process flexibility
- ✓ Uniform and consistent results
- ✓ Customizable specifications

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

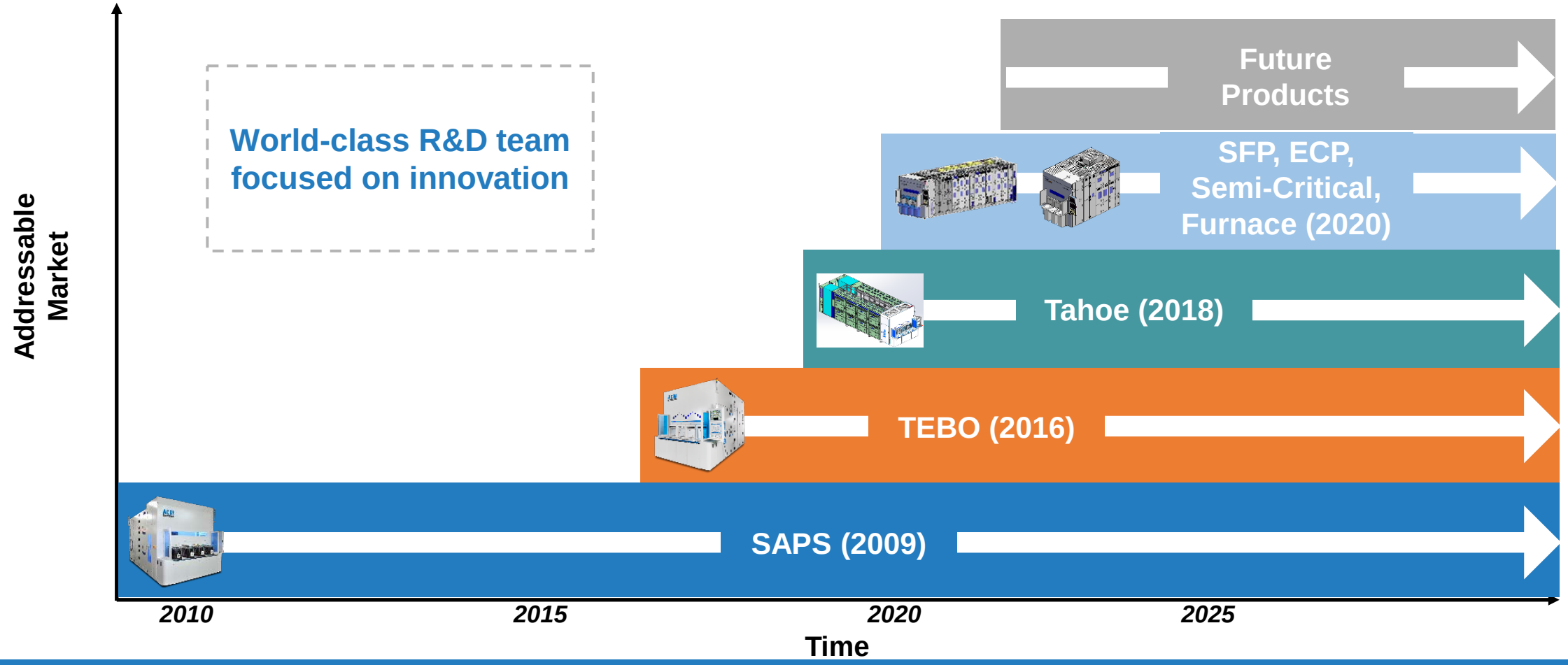


Hybrid Wafer Cleaning With Significant Cost & Environmental Benefits

- ✓ 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 forecasts 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

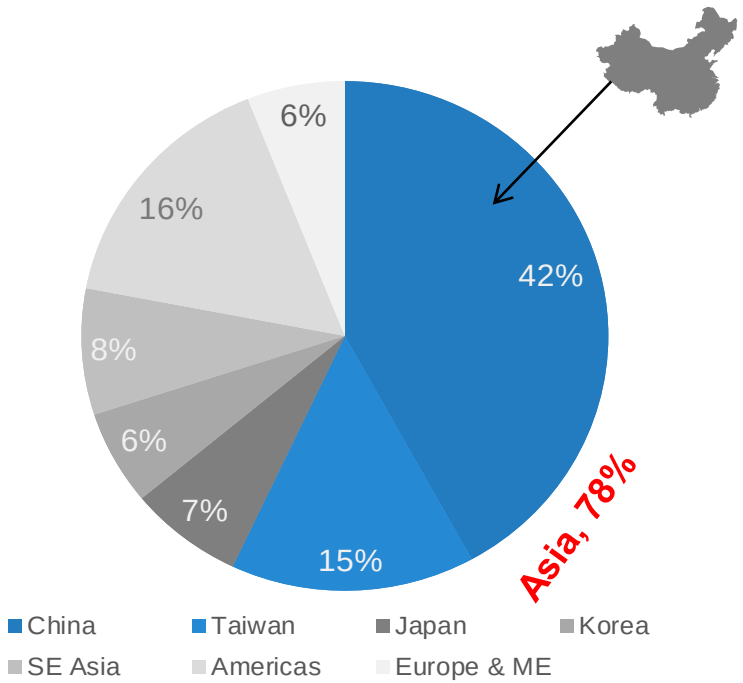
- Broke ground on the new R&D and production facilities in Lingang region of Shanghai in July 2020
- The site is approximately 30 miles from ACM Shanghai's HQ in Zhangjiang.
- 1 million square feet
- Expects initial production activities to commence in late 2022.

Well-Positioned to Participate in Asia Fab Investments

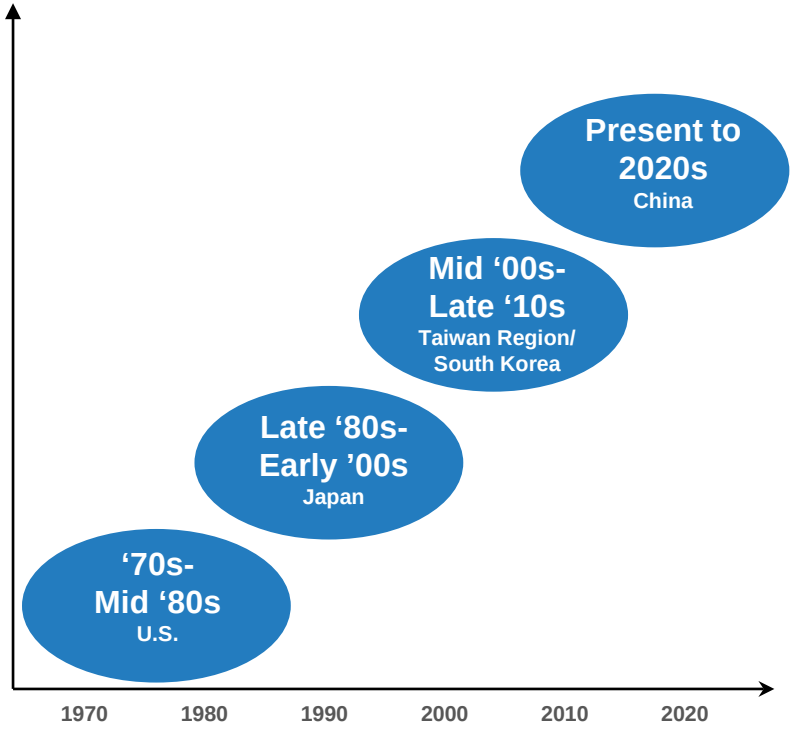
Semiconductor Industry Development

($ 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%

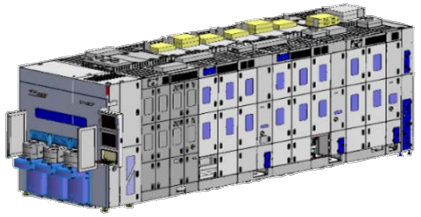
Strong presence **in Asia and** ***close proximity*** **to Chinese customers add to key competitive advantages.**

(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

1998 — Founded in Silicon Valley

2006 — Established Shanghai Operational Center ACM Research (Shanghai), Inc.

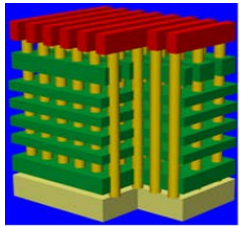
2009 — SK Hynix Evaluation Begins

2011 — Proven Yield Improvement at 50nm

2013 — Major SAPS Orders From SK Hynix

2015 — YMTC, SMIC, and HLMC Placed SAPS Orders

TEBO Proven on 3D Wafers



2017 — TEBO Demo Unit to HLMC; Revenue in 4Q17

IPO Nov 2, 2017

2018 — 2nd Factory Expands Capacity

Announced 1st P.O. for Tahoe Tool

2019 — Tahoe & ECP First Tools New DRAM Customer

STAR Market Plan 6/17/19

US Capital Raise 8/14/19

2020 — Launched SFP, Vertical Furnace and Semi-critical Cleaning Products

Lingang Construction Begins

Q2 2020 Highlights

- **Strong Q2 Results:**
  - $39.0 million revenue, up 35% from Q2 2019; total shipments of $45 million
  - 49.6% GAAP gross margin and 18.8% GAAP operating margin
  - 49.7% non-GAAP gross margin and 21.0% non-GAAP operating margin
  - Ended Q2 with $86 million of cash

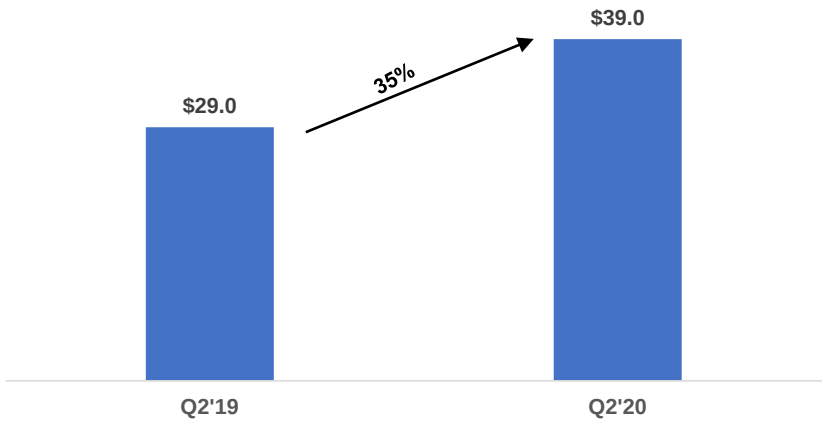
- **Key Operational Progress:**
  - Repeat Tahoe shipment in Q2; multiple tools planned for 2H'2020
  - "First tool" acceptance for ECP map Q2; additional tool delivered to another China foundry customer in July
  - Purchase order for SAPS-VI to support production ramp at a key memory customer
  - Purchase orders and final stage bidding total of $36 million in from two new customers for semi-critical & SAPS-II tools
  - SAPS II tool for R&D delivered to US demo lab of leading OEM

- **Update on Strategic Initiatives:**
  - Began construction for 1 million square foot of R&D and production facilities in Lingang
  - Submitted application in May for STAR Market IPO
  - Invested RMB 100 million ($14.2 million) to a special fund for investment in SMIC's Shanghai STAR Market IPO

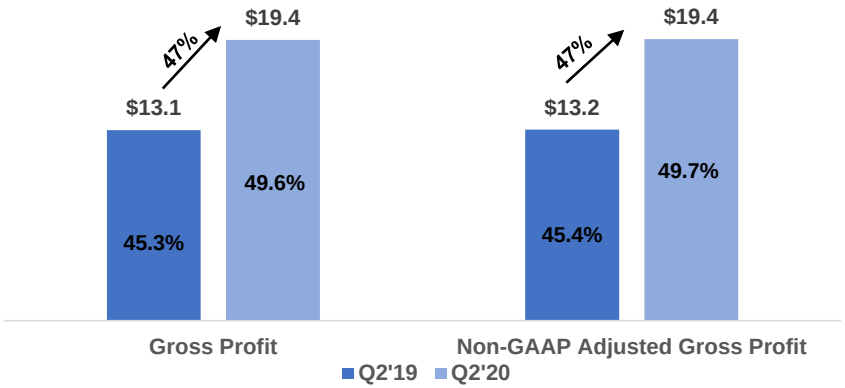
Q2 2020 Financial Results

$ Millions

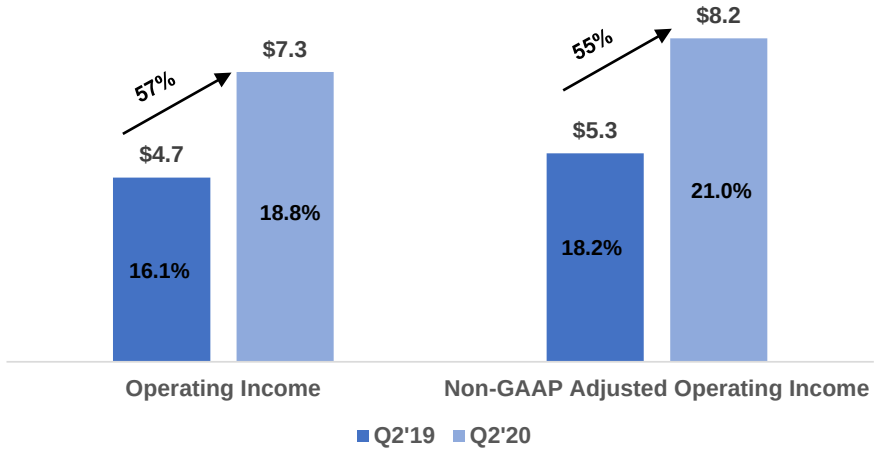
Revenue



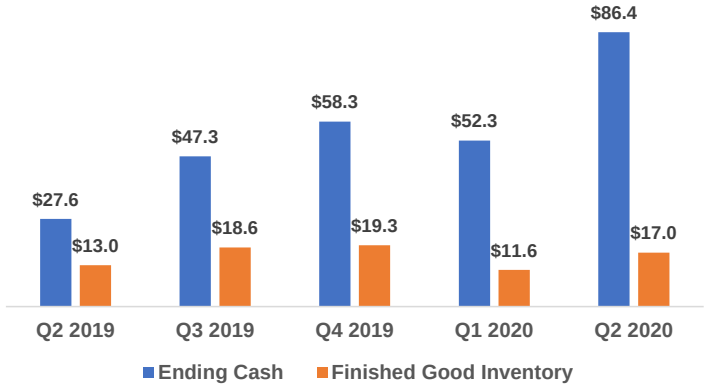
Gross Profit



Operating Income



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

- Gaining share in the ~$3B wafer cleaning market (1)
- Innovative, patent-protected tools address critical challenges in leading-edge IC manufacturing
- Tier 1 global customer base in DRAM, NAND and foundry / logic
- New product introductions in 2020 have more than doubled SAM
- China-based production with U.S. headquarters and Korean R&D offers significant competitive advantage
- Expanding margins and healthy balance sheet

(1) Source: Gartner – "Forecast: Semiconductor Wafer Fab Manufacturing Equipment (Including Wafer-Level Packaging), Worldwide, 2Q19 Update" (July 2019). See "Market Data" on page 2.

GAAP to Non-GAAP Reconciliation (1)

($ in millions)

	2017	2018	2019	6 months Ended 6/30/2020	6 months Ended 6/30/2019
GAAP Income from Operations	$0.7	$6.5	$17.8	$8.6	$6.9
Plus: Stock-based Compensation	$1.6	$3.4	$3.6	$1.5	$1.4
Adjusted Income from Operations	**$2.3**	**$9.8**	**$21.4**	**$10.1**	**$8.3**
GAAP Net Income (Loss)	($0.3)	$6.6	$19.5	$2.5	$6.2
Plus: Interest Expense (Income), Net	$0.3	$0.5	$0.4	($0.3)	$0.3
Plus: Income Tax Expense	$0.5	$0.8	($0.5)	$2.2	$1.0
Plus: Depreciation and Amortization	$0.3	$0.4	$0.8	$0.4	$0.4
Plus: Stock-based Compensation	$1.6	$3.4	$3.6	$1.5	$1.4
Plus: Change in fair value of financial liability	-	-	-	$5.4	-
Adjusted EBITDA	**$2.4**	**$11.6**	**$23.7**	**$11.7**	**$9.2**
GAAP Net Income (Loss)	($0.3)	$6.6	$19.5	$2.5	$6.2
Plus: Change in fair value of financial liability	-	-	-	$5.4	-
Plus: Stock-based Compensation	$1.6	$3.4	$3.6	$1.5	$1.4
Adjusted Net Income	**$1.3**	**$9.9**	**$23.0**	**$9.4**	**$7.5**

GAAP to Non-GAAP Reconciliation (2)

($ in millions)

	Three Months Ended June 30,			
	GAAP		Non-GAAP(1)	
	2020	2019	2020	2019
	(dollars in thousands)			
Revenue	$ 39,049	$ 29,010	$ 39,049	$ 29,010
Gross margin	49.6%	45.3%	49.7%	45.4%
Income from operations	$ 7,336	$ 4,661	$ 8,191	$ 5,279
Net income attributable to ACM Research, Inc.	$ (81)	$ 4,311	$ 6,205	$ 4,929
Basic EPS	$ (0.00)	$ 0.27	$ 0.34	$ 0.31
Diluted EPS	$ (0.00)	$ 0.23	$ 0.29	$ 0.26
Shares included in the basic EPS	18,051	16,091	18,051	16,091
Shares included in the diluted EPS	21,516	18,604	21,516	18,604

(1) Non-GAAP financial measures exclude stock-based compensation.

GAAP to Non-GAAP Reconciliation (3)

	Three Months Ended June 30,							
	2020				2019			
	Actual (GAAP)	SBC	Change in fair value of financial liability	Adjusted (Non-GAAP)	Actual (GAAP)	SBC		Adjusted (Non-GAAP)
	(In thousands)							
Revenue	$ 39,049	$ -	$ -	$ 39,049	$ 29,010	$ -	$	29,010
Cost of revenue	(19,693)	(43)	-	(19,650)	(15,879)	(29)		(15,850)
Gross profit	19,356	(43)	-	19,399	13,131	(29)		13,160
Operating expenses:								
Sales and marketing	(4,595)	(164)	-	(4,431)	(2,924)	(46)		(2,878)
Research and development	(5,221)	(188)	-	(5,033)	(3,341)	(94)		(3,247)
General and administrative	(2,204)	(460)	-	(1,744)	(2,205)	(449)		(1,756)
Income from operations	$ 7,336	$ (855)	$ -	$ 8,191	$ 4,661	$ (618)	$	5,279
Change in fair value of financial liability	(5,431)	-	(5,431)	-	-	-		-
Net income (loss) attributable to ACM Research, Inc.	$ (81)	$ (855)	$ (5,431)	$ 6,205	$ 4,311	$ (618)	$	4,929