ALPHA & OMEGA SEMICONDUCTOR

Alpha and Omega Semiconductor (Nasdaq: AOSL)
11th Annual CEO Summit 2019

July 10, 2019

Safe Harbor Statement

This presentation contains forward-looking statements that are based on current expectations, estimates, forecasts and projections of future performance based on management's judgment, beliefs, current trends, and anticipated product performance. These forward looking statements include, without limitation, statements relating to projected amount of revenues, gross margin, operating income, statements regarding market segments, diversification of products and new customers; the expected trend on revenue and sales for each segment of our serviceable market; the progress of construction of manufacturing facility in our joint venture with Chongqing funds; our ability and strategy to develop new products in DMOS. PIC and Digital Power Controller, expand our sales, revenue and profitability; expectation with respect to our license agreement with STMicroelectronics; our ability to manage supply constraints and the expectation with respect to capacity limitation; the execution of our business plan; and other information regarding the future development of our business. Forward-looking statements involve risks and uncertainties that may cause actual results to differ materially from those contained in this presentation. Additional information concerning these and other risk factors is contained in the Risk Factors sections of our most recently filed Forms 10-K and 10-Q. AOS undertakes no obligation and does not intend to update these forward-looking statements to reflect events or circumstances occurring after this presentation.

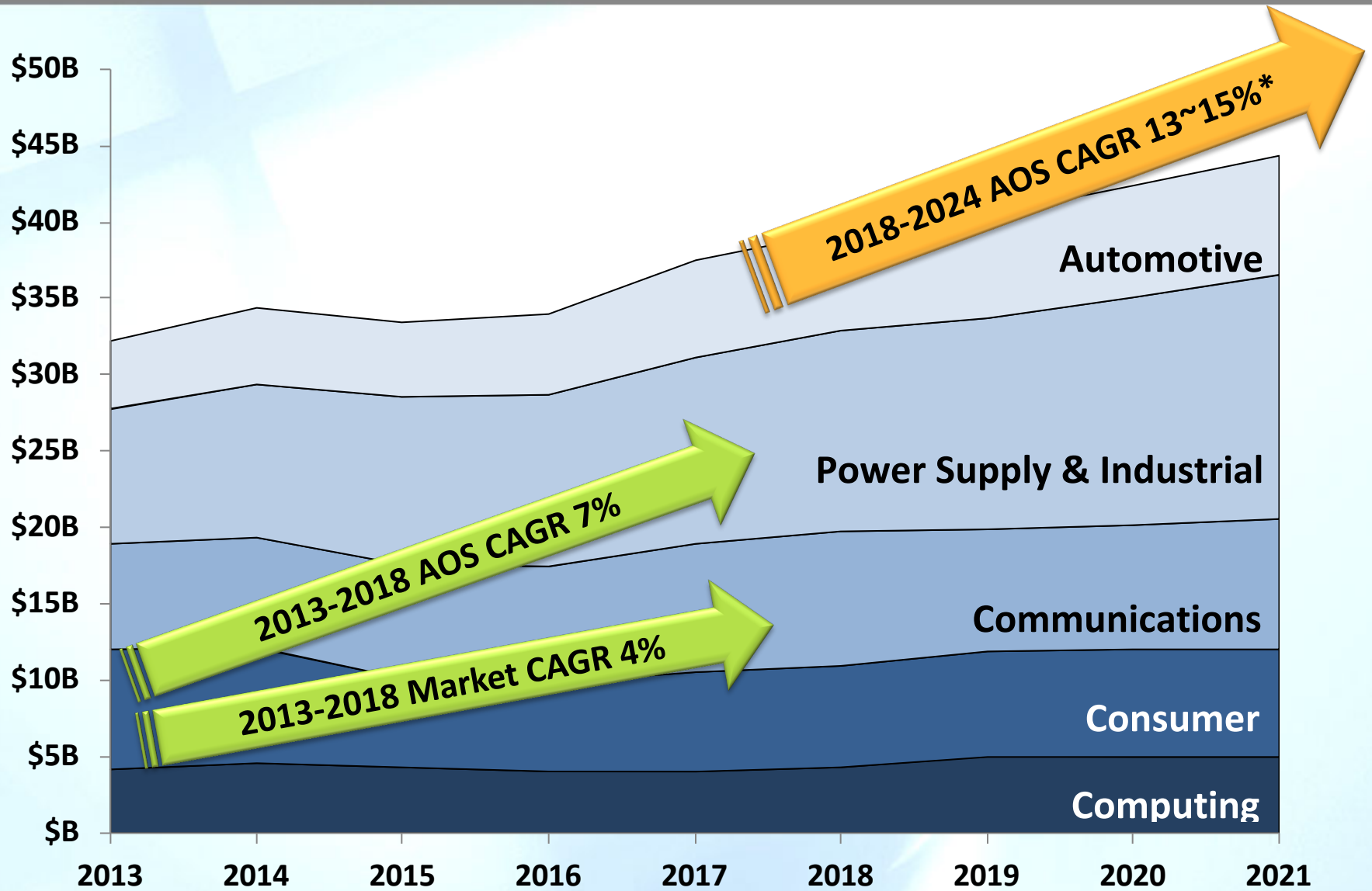
Non-GAAP Results

Non-GAAP results referenced in this presentation contain non-GAAP financial measures because the financial community uses non-GAAP results in its analysis and comparison of historical results and projections of the Company's future operating results. These non- GAAP results exclude share-based compensation expense, Chongqing pre-production expenses and certain other expenses and benefits. Management uses these non-GAAP measures to manage and assess the profitability of the business. These non-GAAP results are also consistent with another way management internally analyzes the company’s results and may be useful.

Alpha and Omega Semiconductor (Nasdaq: AOSL)

- Emerging total solution provider in >$40B market
- Solid foundation enabling accelerated growth
- Strong pipeline with major growth drivers
- Consistent execution approaching target model

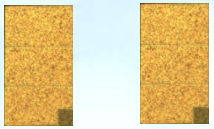
Immense Market for Power



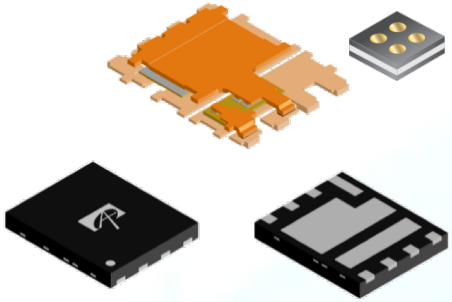
Source: IHS 2018

* Calendar year base, Company estimates

Rapid Growth with Total Power Solution

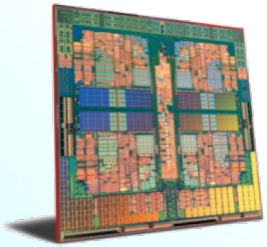


Power Discretes
MOSFETs, IGBT, GaN



Advanced Packaging

System Applications
Know-How



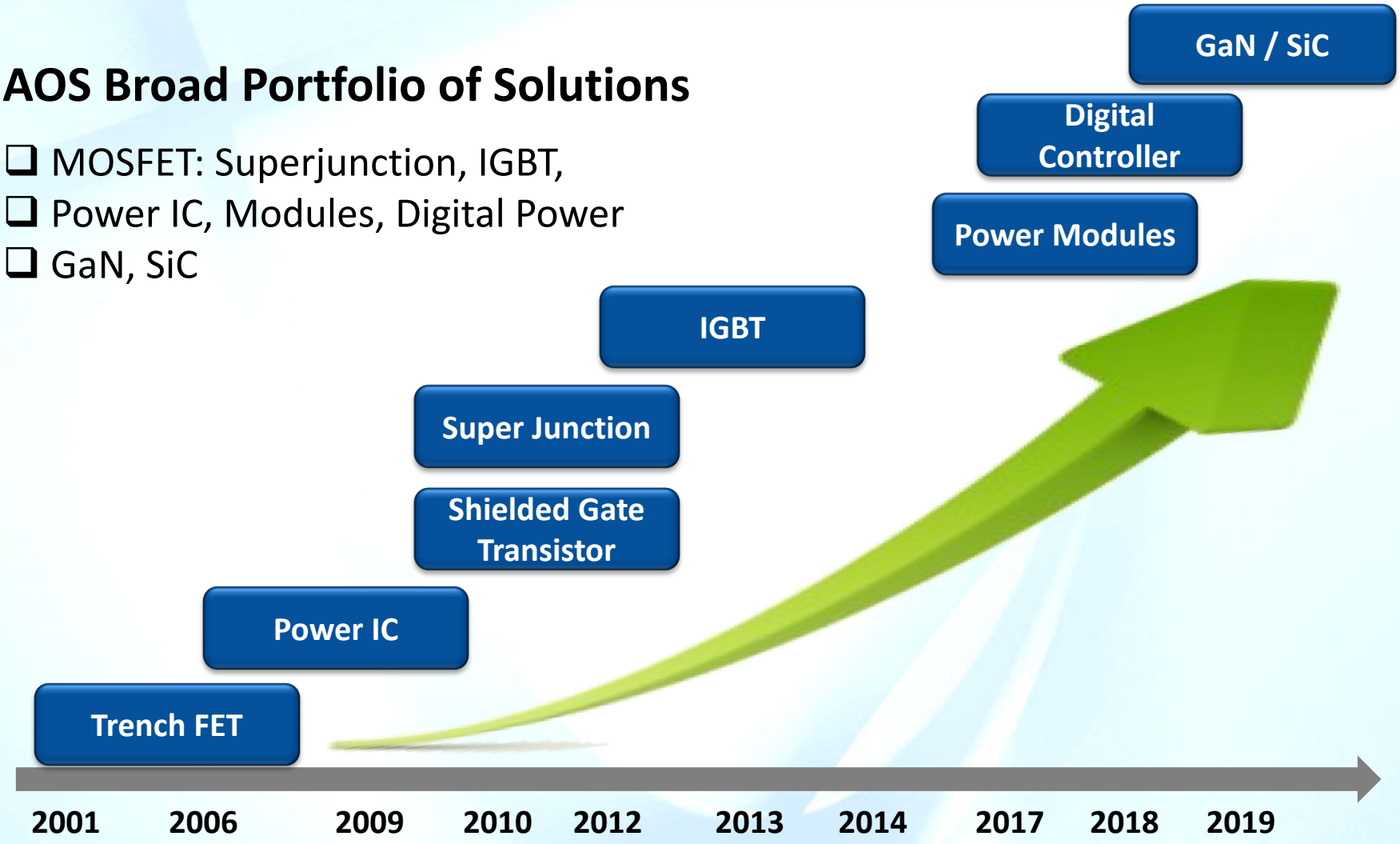
IC Design

Silicon Technology

Technology Investments Driving Diversification

AOS Broad Portfolio of Solutions

- ❑ MOSFET: Superjunction, IGBT,
- ❑ Power IC, Modules, Digital Power
- ❑ GaN, SiC



Major Growth Drivers for Multiple Years

Computing

PC leader

SAM: $400M

Mobile Power

Global OEM customers

SAM: $320M

AC/DC for PD

PD Total Chipset Solution

SAM: $270M

Home Appliance

Expand IGBT and Modules

SAM: $430M

Server / Telecom

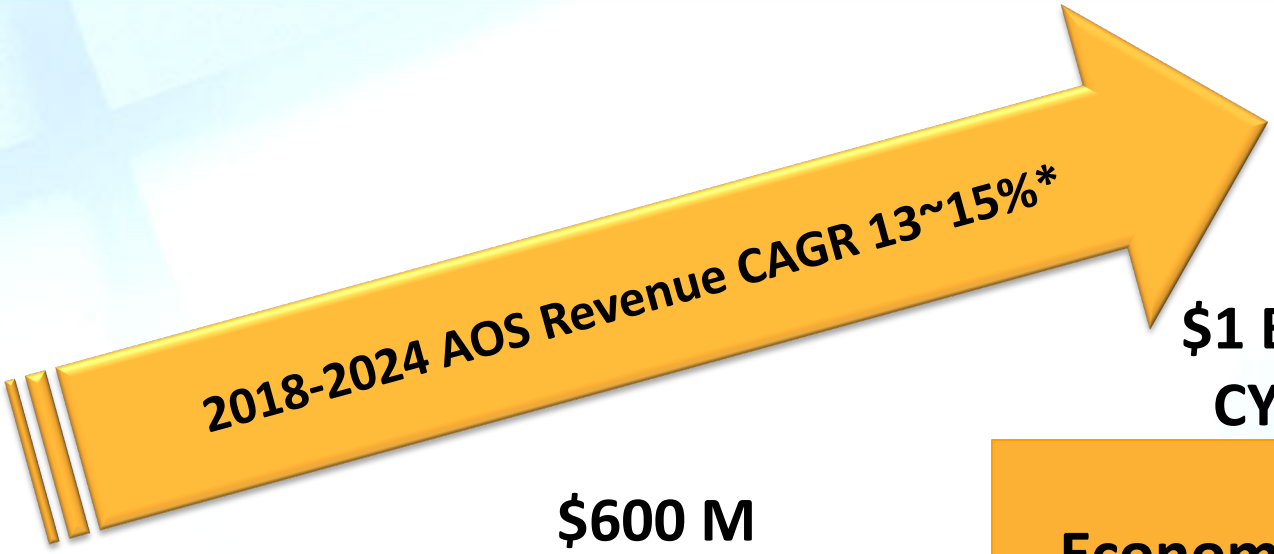
New market entrance with Digital Controller

SAM: $1B

*Calendar year base, Company estimates

Built for Scale

Accelerating Growth



$443 M CY2018

Built Infrastructure

- Computing Power market leader

$600 M CY2021

Reach Critical Mass

- Mobile Power market leader

$1 Billion CY2024

Economy of Scale

- Server and Industrial market leader with Digital Power and IGBT

*Calendar year base, Company estimates

PC: Share Gains, High Value Migration

$400M SAM

- Market leader in Notebooks and Motherboards
- High performance MOSFET and PIC
- Expanding BOM in PD, Type C and Graphics Cards

Expanding BOM

- CPU Vcore
- DDR Memory
- System Power
- Battery Protection
- PD Adapter
- Type C

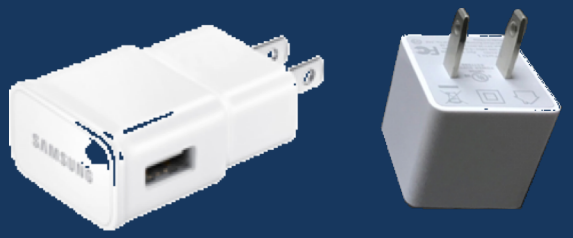
Graphic Cards

Strategic Alignment with Global OEMs

$320M SAM

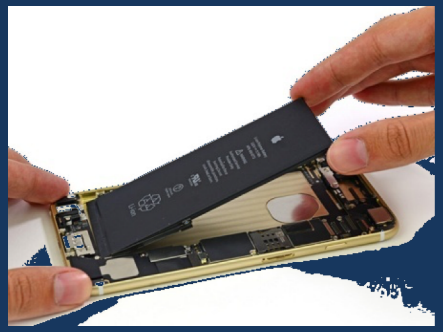
Supply all major smartphone vendors

Quick Charger



1) AOS 1st to support QC
2) 10W → 18W+
3) High performance MV FET

Battery Protection



1) Safe operation
2) Longer battery life
3) Robust performance

Intelligent Modules for Home Appliance

$430M SAM

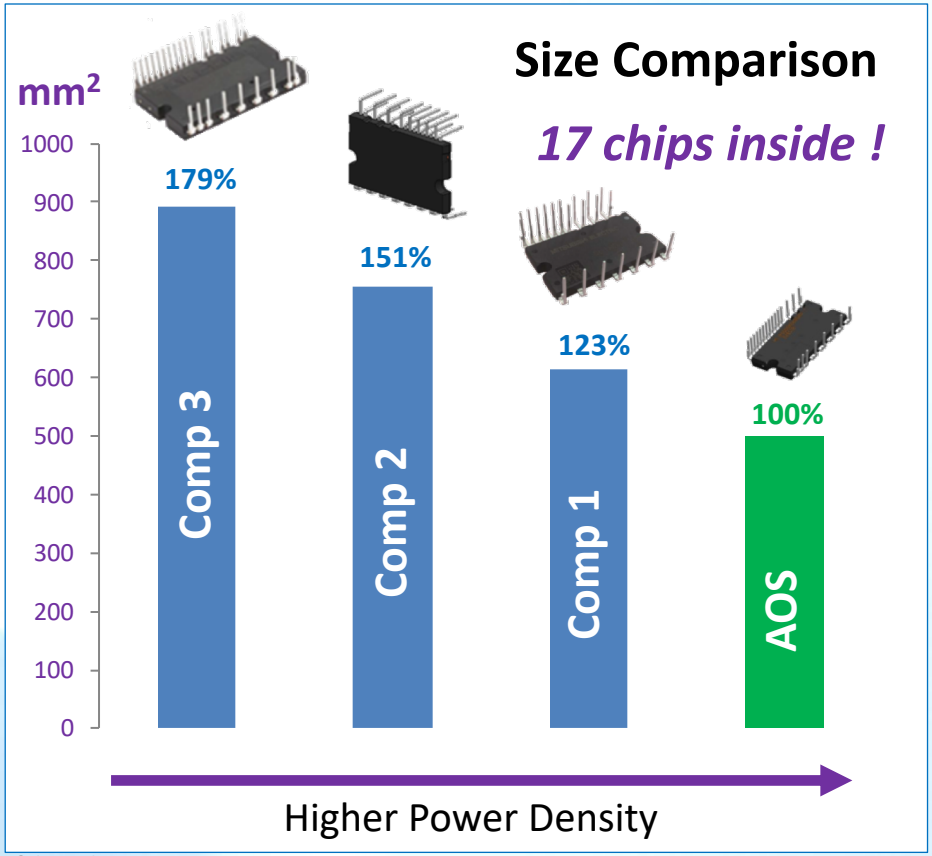
Refrigerators

Washers
Dryers

Air-con
Fans

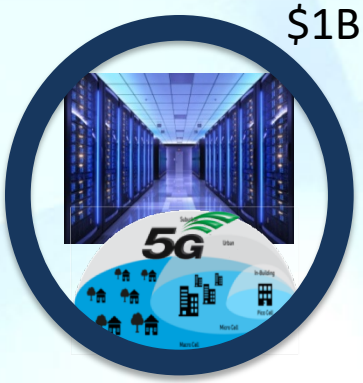
AOS IPM Solution with **IGBT** offers:

- "**Smaller** Footprint"
- "**Better** Efficiency"
- "**Higher** ESD and Reliability"

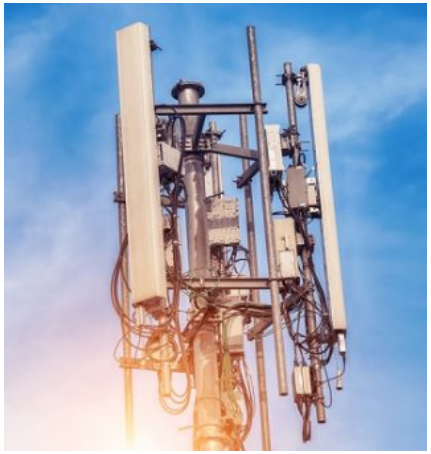


>$1 Billion New SAM with Digital Power

$1B SAM



5G Base Station



Server

Digital Power Total Solution

Digital PWM Controller

2-7 per system

Power Stage

- DrMOS
- MOSFET

11-21 per system

- Processors
- FPGA
- Graphics
- DDR Memory
- System Voltage Rails

Everyone Needs Power

World Class OEMs / ODMs

Key Distributors

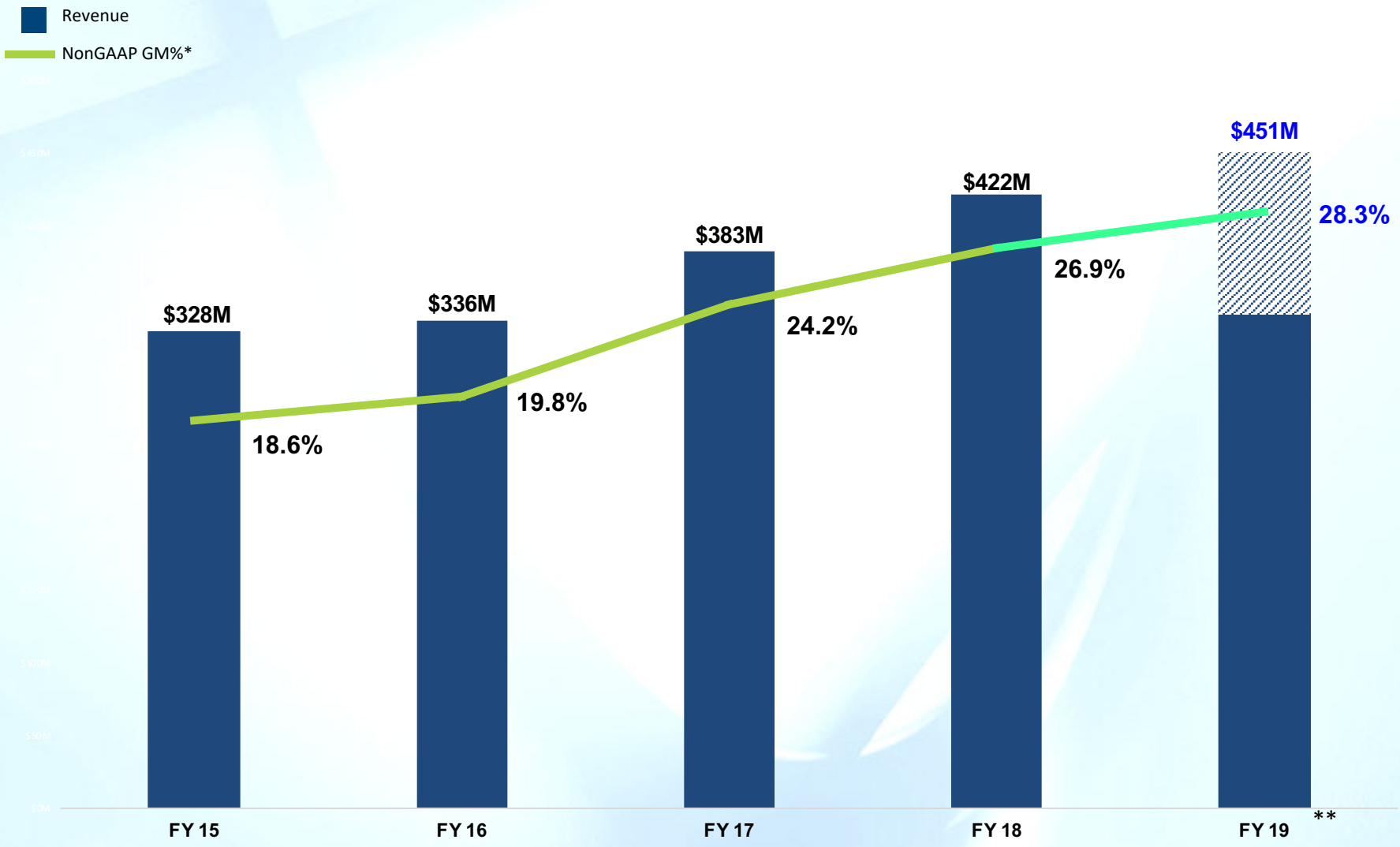
FRONTEK Technology Corporation

(a member of)

wpg

PROMATE

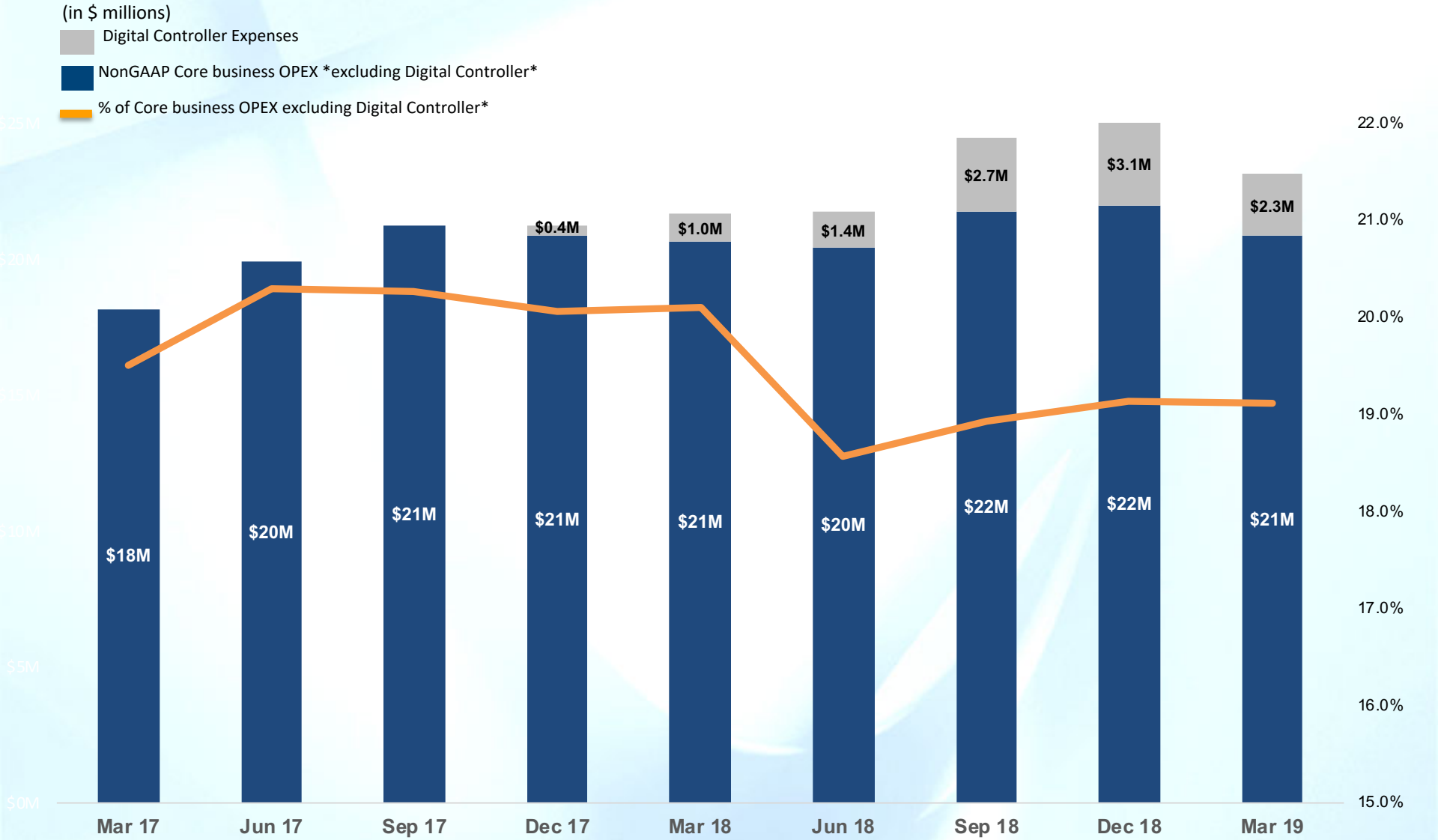
Solid Growth in Revenue and GM



* NonGAAP gross margin excludes share-based compensation expenses and production ramp-up costs related to joint venture.

** FY19 revenue includes mid point of FQ4 guidance.

Disciplined Operating Expenses



* NonGAAP Operating Expense excludes share-based compensation expenses and pre-production costs related to joint venture.

Healthy EBITDAS

* Excludes share-based compensation expenses, production ramp up costs and pre-production costs related to joint venture.

JV on Track to Alleviate Capacity Constraints

Chongqing JV
$379mil Total Capitalization

AOS (51%)

$35 mil cash + Existing equipment + Certain Mfg IP

Chongqing (49%)

$186 mil cash contribution

- 12” fab ramp up in 2H CY 2019
- Completed 20 customer audits
- Phase 1 supports ~ $150 mil additional AOS revenue

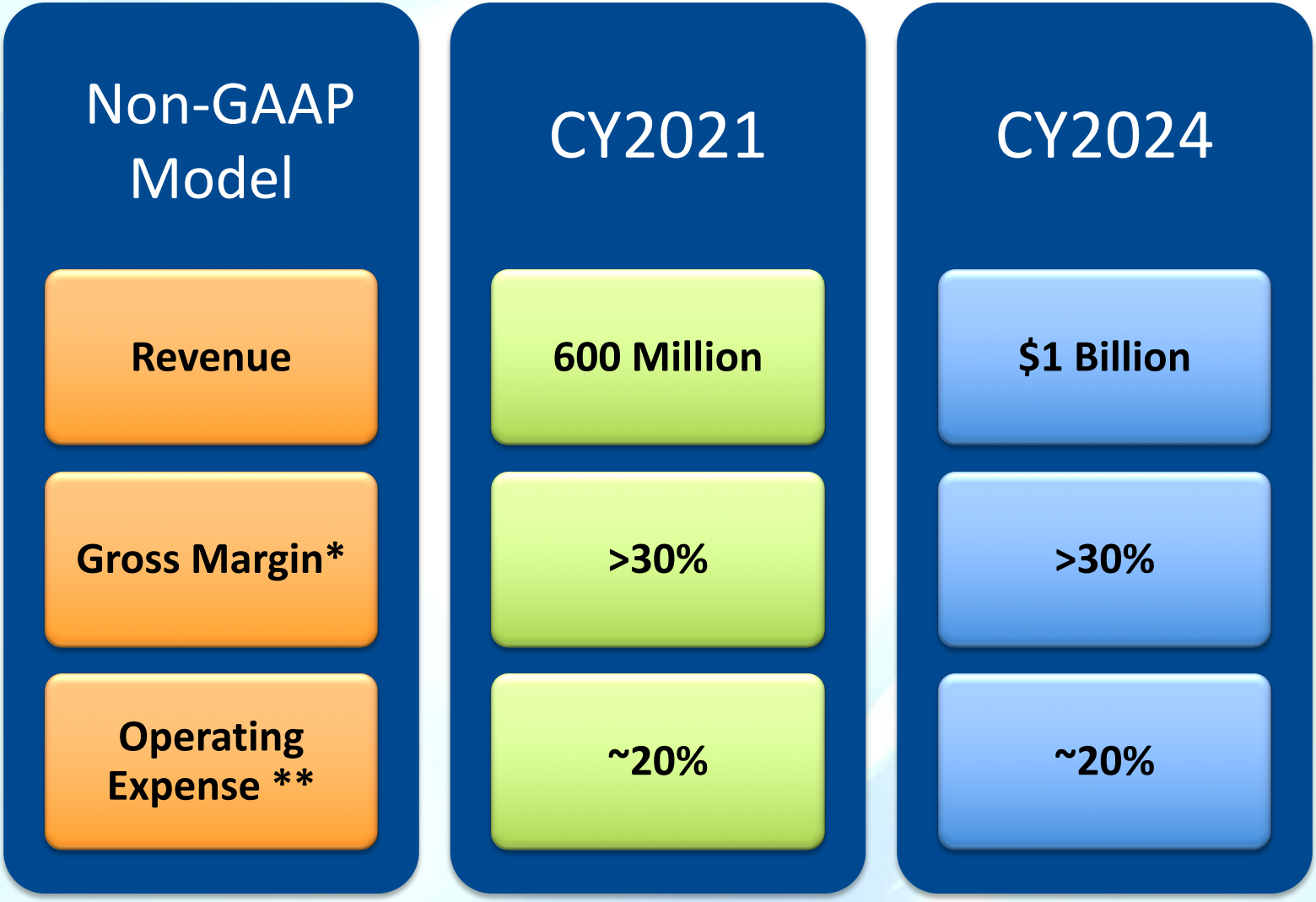
Key Balance Sheet Metrics

(in $ millions)

	Mar 2019			Dec 2018			Jun 2018		
	AOS	*CQJV*	Consolidated	*AOS*	*CQJV*	Consolidated	*AOS*	*CQJV*	Consolidated
Cash	*90.9*	*48.2*	**139.1**	*93.6*	*53.0*	**146.6**	*88.3*	*43.2*	**131.5**
Debt	*43.1*	*103.9**	**147.0**	*45.2*	*72.7**	**117.9**	*30.9*	*60.4**	**91.3**
Fixed Assets	*145.8*	*245.8*	**391.6**	*149.3*	*231.5*	**380.8**	*141.6*	*190.1*	**331.7**
Total Assets	*371.5*	*369.2*	**740.7**	*394.4*	*339.8*	**734.2**	*384.4*	*282.7*	**667.0**
Total Equity	*313.9*	*131.6*	**445.5**	*306.7*	*137.8*	**444.5**	*293.6*	*132.6*	**426.2**
Operating Cash Flow	*9.5*	*-17.5*	**-8.0**	*22.1*	*-9.1*	**13.1**	*8.7*	*-19.5*	**-10.8**
CapEx Paid	*8.2*	*15.8*	**24.0**	*8.0*	*8.5*	**16.5**	*13.8*	*41.3*	**55.1**

* AOS is not a guarantor of CQJV's debt.

Approaching Target Model



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** NonGAAP Operating Expense excludes share-based compensation expenses and pre-production costs related to joint venture.

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NASDAQ: AOSL Q&A

www.aosmd.com

APPENDIX

Alpha and Omega Semiconductor Limited
Reconciliation of Condensed Consolidated GAAP Measures to Non-GAAP

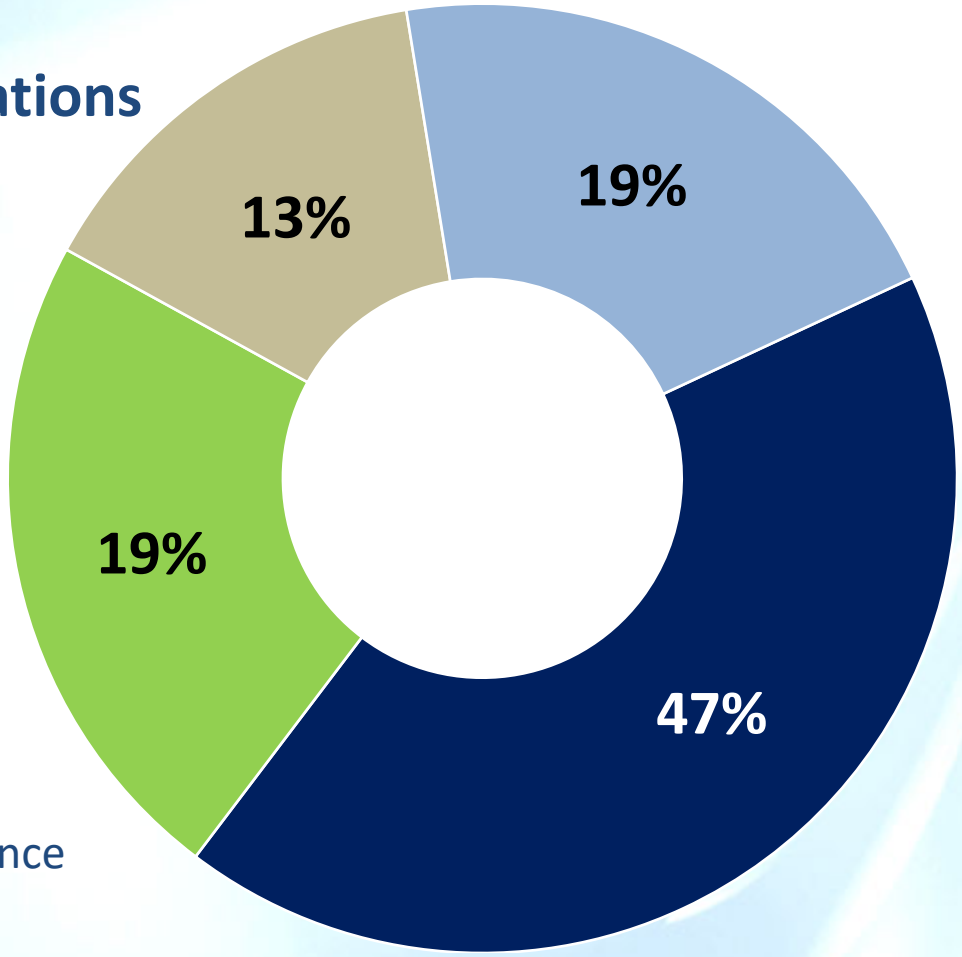
(in thousands, except percentages and per share data)
(unaudited)

	Three Months Ended		
	March 31, 2019	December 31, 2018	March 31, 2018
GAAP gross profit	$ 25,629	$ 29,502	$ 27,133
Share-based compensation	494	541	449
Production ramp up costs related to joint venture	3,350	3,516	—
Non-GAAP gross profit	$ 29,473	$ 33,559	$ 27,582
Non-GAAP gross margin as a % of revenue	27.0 %	29.2 %	26.8 %
GAAP net income (loss) attributable to AOS	$ (1,555)	$ (1,545)	$ 1,651
Share-based compensation	3,112	4,418	2,460
Pre-production expenses related to joint venture	2,215	2,458	1,615
Production ramp up costs related to joint venture	1,705	1,912	—
Income tax benefit from tax reform	—	—	—
Non-GAAP net income attributable to AOS	$ 5,477	$ 7,243	$ 5,726
Non-GAAP net margin attributable to AOS as a % of revenue	5.0 %	6.3 %	5.6 %
GAAP diluted net income (loss) per share attributable to AOS	$ (0.06)	$ (0.06)	$ 0.07
Share-based compensation	0.12	0.18	0.1
Pre-production expenses related to joint venture	0.09	0.1	0.06
Production ramp up costs related to joint venture	0.07	0.08	—
Income tax benefit from tax reform	—	—	—
Non-GAAP diluted net income per share attributable to AOS	$ 0.22	$ 0.3	$ 0.23
Shares used to compute GAAP diluted net income (loss) per share	24,084	23,887	24,755
Shares used to compute Non-GAAP diluted net income per share	24,769	24,432	24,755

Focused Markets (As of Q3 FY2019)

Communications
- Smartphone
- Telecom

Power Supply / Industrial
- Quick Chargers / PD
- Power Tools, Welding



Consumer
- High-end TV
- Home Appliance

Computing
- Notebook / PC
- Server / AI

Chart excludes 'Service and Others' of 2%