4th Annual ROTH Technology Corporate Access Day
Alpha and Omega Semiconductor (Nasdaq: AOSL)
November 14, 2018
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.
AOSL Transformation Well Underway

- **Accelerating Target Business Model**
  - Demand outstrips capacity
  - Expect 10% revenue growth in FY2019*
  - Targeting $600 million annual revenue within 2-3 years

- **Breath and Depth of Portfolio**
  - New platforms in full spectrum of DMOS and PIC technology
  - $400M SAM Digital Power Controller market entry in FY2020

- **Stronger Customer Relationships**
  - Now considered a strategic partner
  - Sizable customer wins including global high-end smartphone brand name

*Dollars in millions, Source: Gartner
*June fiscal year
Reigniting Next Phase of Growth

Target $600 million within 3 years

Revenues in $ Million

FY 02 FY 03 FY 04 FY 05 FY 06 FY 07 FY 08 FY 09 FY 10 FY 11 FY 12 FY 13 FY 14 FY 15 FY 16 FY 17 FY 18 FY 19 Q1

$1 $12 $47 $98 $154 $202 $274 $302 $361 $342 $337 $318 $328 $336 $383 $422 $115

Unaudited

AOS Confidential
Healthy Growth Momentum

- Non-GAAP gross margin excludes share-based compensation expenses and production ramp up costs related to joint venture.
- Non-GAAP EPS excludes share-based compensation expenses, production ramp up costs and pre-production costs related to joint venture.
New Growth Drivers Expanding SAM

- **PC**
  - 300MU

- **TV**
  - 200MU

- **Mobile**
  - 1.4BU

**Advanced Computing**
- >11MU Server
  - Digital Power Controller
  - Total Power Solution
License Agreement with STMicroelectronics enables Digital Power Controller Products and $400M New Markets

**AOSL**
- Highly efficient discrete and Power IC
- Differentiated packaging capability
- Strong customer relationship

**STMicro IP**
- Digital power controller
- Optimal performance and programmability
- Ease-of-use

**Advanced PIC**
- Total power solution
- Diversify into new markets and customers
- Shift to higher value products

Acquired IP Enables Advanced Computing
Digital Controller
+ Co-packaged Power IC and Modules

Low Voltage

Mid Voltage

High Voltage & IGBT

Voltage

40V

400V

1350V
Everyone Needs Power

World Class OEMs / ODMs

Key Distributors

(a member of)

FRONTek Technology Corporation

PROMATE
Focused Market Segments

Computing
- Notebook PC
- Desktop PC
- Graphic Cards
- Servers

Consumer
- UHD TVs
- Set Top Boxes
- Gaming
- White Goods

Power Supply/Industrial
- Quick Charger
- Motion Control
- Power Tools
- Welding

Communications
- Smart Phones
- Battery Packs
- Infrastructure
- Networking
Computing: 44% (Q1 FY2019)

Market Leader in Discrete MOSFET PC Power

AOS Advantage
- New LV platform, cost-performance
- Power IC DrMOS with high efficiency

Strategy
- Grow share in high-value sockets
- Expand BOM content

Efficiency Comparison of AOZ5038 and Competitor
$V_{IN}=19V$, $V_{OUT}=1V$, $F_{SW}=300KHz$
IGBT Gaining Traction

AOS Advantage

- High Efficiency solutions for chipset power and for TV backlighting

Strategy

- SAM expansion with IGBT products
- Geographic diversification of customer base
- Higher BOM with Smart TV trend

Efficiency vs. Output Current

EzBuck with I2C enables Dynamic voltage scaling for power savings in UHD TV market

New Market: Home Appliance
Total MOSFET Solutions for High Efficiency

AOS Advantage

- High efficiency High Voltage αMOS5 solutions

Better efficiency and lower thermals

Server Power Supply Thermal Performance

- Comp A: 93.6%, 93.2%, 91.9%, 90.2%
- aMOS5: 93.5%, 93.2%, 91.8%, 90.0%

Strategy

- Expand SAM with new high voltage and quick charging solutions
- Broaden customer base in power tools and motion control

Output (W)

<table>
<thead>
<tr>
<th></th>
<th>175</th>
<th>350</th>
<th>525</th>
<th>700</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comp A</td>
<td>93.6%</td>
<td>93.2%</td>
<td>91.9%</td>
<td>90.2%</td>
</tr>
<tr>
<td>aMOS5</td>
<td>93.5%</td>
<td>93.2%</td>
<td>91.8%</td>
<td>90.0%</td>
</tr>
</tbody>
</table>

Quick Chargers
Arc Welders
AC/DC Adapter
Power Tools
Communications: 16% (Q1 FY2019)

Alpha DFN production ramp in 2H CY2018

AOS Advantage

- Small package solution with better protection LV MOSFETs
- Leading efficiency MV MOSFETs

Chip Scale Package Thickness

<table>
<thead>
<tr>
<th>Competitor CSP (with solder balls)</th>
<th>AlphaDFN (no solder balls needed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.48mm</td>
<td>0.3mm</td>
</tr>
</tbody>
</table>

Thermal Measurement on 1/8 Brick Datacom Power Supply

- Competitor MOSFETs 85°C
- AOS MOSFETs 73°C

Strategy

- Strategic alliance with global brand high-end smart phone customers
- Further penetrate telecom networking and surge protection applications
JV on Track to Alleviate Capacity Constraints

Chongqing JV ($355mil)

- AOS (54%)  
  - $35 mil cash contribution  
  - Existing equipment + Certain Mfg. IP
- Chongqing (46%)  
  - $162 mil cash contribution

- Support growing demand and efficient CapEx
- Better access to diverse customers in China
- Phase 1 JV supports ~ $150 mil of additional revenue

Chongqing JV Buildings and Cleanrooms
- Construction of JV buildings and cleanrooms completed
- Assembly/Test mass production to ramp up in the next two quarters
- 12” fab trial production in the December quarter and ramp up in CY2019
Approaching Business Model Target

Revenue

Gross Margin

Operating Expense *

FY19

10% Growth

Mid-High 20%

~22%

Mid-Term

~$600 mil

>30%

~20%

* Non-GAAP measures exclude share-based compensation expenses and CQJV pre-production costs.
Healthy EBITDAS

($Millions)

*Non-GAAP Net Income and EBITDAS excludes share-based compensation expenses, production ramp up costs and pre-production costs related to joint venture.

AOS Confidential
Strategic Capital Allocation Plan

- **AOS-Only**
  - Invest in Digital Power Controller product line
  - AOS CapEx to reduce to 6% - 8% of FY2019 revenue
  - Positive cash flow to increase net cash position

- **Chongqing JV**
  - AOS contribution is completed
  - Utilize JV’s borrowing capacity to ramp up the production
## Key Balance Sheet Metrics

($Millions, except for ratios)

<table>
<thead>
<tr>
<th></th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
<th>FY2019Q1</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cash</strong></td>
<td>$87.8</td>
<td>$115.7</td>
<td>$131.5</td>
<td>$113.2</td>
<td>AOS: $81.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CQJV: $32.0</td>
</tr>
<tr>
<td><strong>Debt</strong></td>
<td>$0.0</td>
<td>$0.0</td>
<td>$91.3</td>
<td>$105.5</td>
<td>AOS: $47.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CQJV: $58.2</td>
</tr>
<tr>
<td><strong>Trade Receivable</strong></td>
<td>$26.6</td>
<td>$28.4</td>
<td>$33.8</td>
<td>$37.1</td>
<td>27 days DSO</td>
</tr>
<tr>
<td><strong>Inventory</strong></td>
<td>$68.8</td>
<td>$76.3</td>
<td>$90.2</td>
<td>$98.0</td>
<td>103 days in INV</td>
</tr>
<tr>
<td><strong>Fixed Assets, Net</strong></td>
<td>$116.1</td>
<td>$148.2</td>
<td>$331.7</td>
<td>$368.5</td>
<td>AOS: $148.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CQJV: $219.8</td>
</tr>
<tr>
<td><strong>Total Equity</strong></td>
<td>$242.1</td>
<td>$298.5</td>
<td>$426.2</td>
<td>$421.7</td>
<td>AOS: $299.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CQJV: $121.8</td>
</tr>
</tbody>
</table>
Alpha and Omega Semiconductor Limited
Reconciliation of Condensed Consolidated GAAP Measures to Non-GAAP
(in thousands, except percentages and per share data)
(unaudited)

<table>
<thead>
<tr>
<th></th>
<th>September 30, 2018</th>
<th>June 30, 2018</th>
<th>September 30, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GAAP gross profit</strong></td>
<td>$32,611</td>
<td>$29,183</td>
<td>$27,530</td>
</tr>
<tr>
<td><strong>Share-based compensation</strong></td>
<td>497</td>
<td>461</td>
<td>316</td>
</tr>
<tr>
<td><strong>Production ramp up costs related to joint venture</strong></td>
<td>1,117</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Non-GAAP gross profit</strong></td>
<td>$34,225</td>
<td>$29,644</td>
<td>$27,846</td>
</tr>
<tr>
<td><strong>Non-GAAP gross margin</strong></td>
<td>29.7%</td>
<td>27.0%</td>
<td>26.6%</td>
</tr>
<tr>
<td><strong>GAAP net income attributable to AOS</strong></td>
<td>$2,416</td>
<td>$1,021</td>
<td>$4,800</td>
</tr>
<tr>
<td><strong>Share-based compensation</strong></td>
<td>3,129</td>
<td>2,935</td>
<td>2,008</td>
</tr>
<tr>
<td><strong>Pre-production expenses related to joint venture</strong></td>
<td>2,662</td>
<td>3,643</td>
<td></td>
</tr>
<tr>
<td><strong>Production ramp up costs related to joint venture</strong></td>
<td>582</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Non-GAAP net income attributable to AOS</strong></td>
<td>$8,789</td>
<td>$7,599</td>
<td>$6,808</td>
</tr>
<tr>
<td><strong>Non-GAAP net margin attributable to AOS</strong></td>
<td>7.6%</td>
<td>6.9%</td>
<td>6.5%</td>
</tr>
<tr>
<td><strong>GAAP diluted net income per share attributable to AOS</strong></td>
<td>$0.10</td>
<td>$0.04</td>
<td>$0.19</td>
</tr>
<tr>
<td><strong>Share-based compensation</strong></td>
<td>0.13</td>
<td>0.12</td>
<td>0.08</td>
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<tr>
<td><strong>Pre-production expenses related to joint venture</strong></td>
<td>0.11</td>
<td>0.15</td>
<td></td>
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<tr>
<td><strong>Production ramp up costs related to joint venture</strong></td>
<td>0.02</td>
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<td></td>
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<tr>
<td><strong>Non-GAAP diluted net income per share attributable to AOS</strong></td>
<td>$0.36</td>
<td>$0.31</td>
<td>$0.27</td>
</tr>
</tbody>
</table>

**Shares used to compute diluted net income per share**

<table>
<thead>
<tr>
<th></th>
<th>September 30, 2018</th>
<th>June 30, 2018</th>
<th>September 30, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24,594</td>
<td>24,628</td>
<td>24,960</td>
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