ams at a glance

Sensing is life.

Our business

- Leading provider of sensor solutions globally
- Focused on high-performance sensor solutions, sensor interfaces, related software
- Small, low-power, highest sensitivity, multi-sensor integration
- Best-in-class solutions for leading OEMs

Our end markets

- Consumer & Communications (C&C) – 69% of revenues (FY 2017)
- Automotive, Industrial, Medical (AIM) – 31% of revenues

By the numbers

- 2017 revenues EUR 1,064m (+93% year-on-year)
- 1,000+ engineers, 11,000+ total employees worldwide
- 21 design centers, 3 manufacturing locations – strong presence in Asia/Pacific
- 35+ years of design and manufacturing know-how
- 8,000+ customers
Sensing enables life
Sensors – an integral part of the digital transformation
Build the global leader in sensor solutions

True leadership in four sensor areas

- Optical
- Imaging
- Environmental
- Audio

Best-in-class performance per sensor area and in multi-sensor application solutions

- Miniaturization & integration
  - Multi-sensor modules
  - Monolithic integration
- Sensor algorithms / sensor fusion software
- Application software for differentiating end-user experiences

Diversified business with balanced application and customer portfolio

- Long-term target mix of 60/40 split C&C/AIM
- Build broader customer base in each application
- Establish strong distribution channel

Clear financial target model for profitable growth

- Revenue growth target (CAGR) 2016-2019 of now 60%
- EBIT margin target (adjusted) of 30% from 2019 onwards
ams strategic value chain

Sensor ICs
- Optical
- Imaging
- Environmental
- Audio

Sensor solutions
- Multi-sensor packages & modules
- Monolithic integrated sensors
- Ultra-low power connectivity and processing
- Sensor algorithms
- Sensor fusion algorithms

Application solutions
- Application software to deliver end-user experiences

Hardware
Software and reference designs
Winning portfolio from focused strategy

<table>
<thead>
<tr>
<th>Goal: True leadership in four sensing areas</th>
<th>Other lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Eye icon] Optical sensors</td>
<td>![Position icon] Position sensors</td>
</tr>
<tr>
<td>• 3D sensing incl. VCSEL</td>
<td>• Flow metering</td>
</tr>
<tr>
<td>• Light analysis/prox.</td>
<td>• Ultra-low power wireless sensors</td>
</tr>
</tbody>
</table>
| • Spectral sensing                         | \[ Other sensors \]
| ![Camera icon] Imaging sensors             | ![Flow icon] Flow sensors |
| • High perf. imaging                       | ![Wireless icon] Wireless sensors |
| • Micro cameras                           | \[ Other lines \]
| • Medical imaging                         | \[ Other lines \]
| ![Fan icon] Environment. sensors           | \[ Other lines \]
| • Gas / particle                           | \[ Other lines \]
| • Temp./rel. humidity                      | \[ Other lines \]
| • Pressure                                 | \[ Other lines \]
| • Multi-sensor                             | \[ Other lines \]
| ![Headphones icon] Audio sensors          | \[ Other lines \]
| • MEMS microph. ICs                       | \[ Other lines \]
| • ANC noise canceling                      | \[ Other lines \]
| • ACI                                      | \[ Other lines \]
| ![Microphone icon] Other sensors          | \[ Other lines \]
| • Position sensors                         | \[ Other lines \]
| • Flow metering                            | \[ Other lines \]
| • Ultra-low power wireless sensors         | \[ Other lines \]

M&A accelerating strategy implementation

- Heptagon
- Princeton Optronics
- KeyLemon
- MAZeT

- CMOSIS
- Heptagon

- CCMOSS
- NXP sensors

- Incus

© ams AG
Page 6
3D sensing leadership – expertise meets growth

Leading solution expertise across 3D sensing
• Outstanding portfolio of optical technologies + solution elements:
  - Highly differentiated VCSEL/VCSEL arrays
  - WLO leadership, high quality DOE, optical path
  - Algorithms + software layers
  - System + volume manufacturing expertise
• Unmatched end-to-end system know-how
• Optimizing performance, BOM, form factor and software integration
• Broad coverage for Structured Light (SL) and Time-of-flight (ToF) systems
• Tailored ecosystem approach via software focus + partnerships (Sunny Opotech)
• ams enabled high volume 3D sensing in global smartphone platform in 2017

Megatrend offers multiple enormous market opportunities
• Smartphone and consumer market adoption, very strong multi-year growth cycle:
  Facial identification/authentication, personalization, augmented reality (AR)
• Very large automotive market building, large scale Industrial opportunity emerging:
  - Autonomous driving / 3D LIDAR, driver recognition – major 3D LIDAR illumination win
  - Machine vision, automation, warehousing, robots
3D sensing leadership – VCSEL, KeyLemon

Superior VCSEL technology as key differentiator

- Leadership in high power VCSEL / high count VCSEL arrays for 3D
  - Smallest pitch: higher resolution, lower system cost
  - Leading power efficiency: up to 63% vs. typical 45-50% quantum efficiency
  - Best beam quality: very narrow beam divergence
  - High power: from mW to W to 100+W
- Full portfolio of tailored solutions for 3D illumination
- Leading in automotive LIDAR given outstanding VCSEL performance
- Internal VCSEL manufacturing drives further differentiation:
  6” (2,000 wspm) capacity available 2019E, further increase expected

Acquisition of KeyLemon, leader in facial recognition software

- Well-known in industry, best-in-class IP for 3D face recognition
- Robust + secure implementation of smartphone 3D face recognition already available
- Leveraging IP into 3D consumer + other solutions, first solutions in 2018E
- Accelerating time-to-market for OEMs to offer high-quality 3D face recognition
Optical sensing

Worldwide leader in light sensing solutions
- Clear #1 in optical sensing
- Leadership in illumination, optical path, sensors
- Industry leader in 3D sensing
- Superior VCSEL technology for 3D and optical sensing
- True Color sensing for highest performance display management
- Other light sensing: color ALS, ultra-small proximity modules
- High performance solutions for Top 15 smartphone OEMs

New optical applications in spectral sensing
- Emerging growth market besides 3D for new sensing applications
- Color matching for cosmetics, skin-tone measuring
- Food quality analysis, e.g. fruit ripeness/quality
Image sensing

True leader in specific industrial applications + medical imaging
- High-value global shutter CMOS imaging for industrial market: high-speed machine vision, inspection
- NanEye miniature camera technology for medical endoscopy and industrial markets: low cost, high performance, ultra-small footprint
- Global leadership position in medical imaging sensor solutions
- High-performance, cost optimized systems for computed tomography (CT) and digital X-ray
- Clearer images at lower radiation dose in 3D-CT and digital X-ray

Driving innovation in new areas
- Curved sensors for improved image quality and simpler optical systems
- Highest opto-electrical performance for micro-camera modules
- Excellently positioned to capture optical-imaging convergence: near IR (NIR), hyper-spectral imaging (HSI)

Leadership and innovation in new industrial applications and medical imaging
Audio sensing

ANC (active noise cancellation)
- Best-in-class high performance analog noise reduction
- Clear leader in wired / wireless accessory market
- Low power, small footprint, significantly higher audio quality
- Exclusive low-power ACI interface enables battery-less designs
- Strong market momentum: Nuheara wireless earphones, Korean smartphone OEM accessory earphones

MEMS microphone interface ICs
- Market leader in growing high volume market
- Significant demand growth from home assistants (high microphone count)
- Leading position for low noise solutions and tight integration
- Strong customer partnership focused on attractive segments
- Microphone + pressure/temperature sensing integration in development

Strong growth in MEMS mic ICs, growing ANC earphones business
Environmental (including gas) sensing

Technology leader in environmental / gas sensing
- Unique CMOS portfolio for low power + small form factor
  - MOX and IR gas / presence detection
  - Relative humidity, pressure, temperature
- Broad range of emerging applications in mobile, home/building automation (HABA), Industrial IoT and other markets

Uniquely positioned for multi-sensor modules / monolithic integration
- Integration roadmap for related sensor modalities
- Broad portfolio of sensor technologies, algorithms and application software
- Highly differentiated new pressure sensor
- Multi-sensor technology gas and particle sensor roadmap for fast-growing HABA, industrial and infrastructure markets

Growth markets in HABA and Industrial IoT, adding consumer opportunities
Scalable manufacturing model

Differentiating manufacturing in-house, outsourcing standard processes

Internal front-end wafer manufacturing, Austria
- 200mm, 190+k wafers p.a.
- CMOS / specialty analog down to 180nm
- High volume optical filter deposition line

Internal optical production and packaging + future VCSEL manufacturing, Singapore
- Technology leader in high end optical systems
- WLO and optical filter production, optical packaging
- Investment for internal VCSEL manufacturing line:
  High differentiation, on track for mass production availability 2019

Manufacturing partnerships for scalability and flexibility
- High volume wafer production (TSMC, UMC), standard and semi-custom packaging
- Partnerships with key equipment suppliers

In-house test, Austria / Philippines

Further expansion in Singapore for 2018/19 needs, VCSEL investment on track
Global network

- Headquarters
- Design centers
- Manufacturing/Test
- Sales/customer support locations

- **21 design centers**
  Austria, Switzerland (2), Italy (2), Spain, Germany (4), Belgium, UK (2), Netherlands, Portugal, Finland, USA (3), India, Japan

- **Manufacturing locations**
  Austria, Singapore

- **Test center**
  Philippines
Key financials FY/Q4 2017

EURm, % of revenues

**Total revenues**

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>Q4 2016</th>
<th>Q4 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>549.9</td>
<td></td>
<td>133.6</td>
<td>470.3</td>
</tr>
<tr>
<td>2017</td>
<td>1,063.8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

+93.5% +252.0%

**Total revenues by market 2017**

- Automotive, Industrial, Medical: 31%
- Consumer & Communications: 69%

**EBIT (IFRS), EBIT margin (adj.)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>Q4 2016</th>
<th>Q4 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>93.3</td>
<td></td>
<td>7.1</td>
<td>100.7</td>
</tr>
<tr>
<td>2017</td>
<td>75.9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17.7%1) 15.9%1) 12.3%1) 27.3%1)

**Net result, EPS (basic/diluted) (adjusted)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>Q4 2016</th>
<th>Q4 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>102.9</td>
<td></td>
<td>13.7</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>127.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>0</td>
<td></td>
<td>141.4</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) Excluding acquisition-related and share based compensation costs

2) Net result and earnings per share excluding valuation effect of the option element of the issued convertible bond

© ams AG
Page 15
ams
Shaping the world with sensor solutions