

ams Q1 2018 results

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ams at a glance

Sensing is life.









Our business

- Focused on high-performance sensor solutions
- Sensor solutions, sensor ICs, 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) FY 2017 69% of revenues
- Automotive, Industrial, Medical (AIM) FY 2017 31% of revenues

By the numbers

- 1,000+ engineers
- 22 design centers, 3 manufacturing locations
- 35+ years of design and manufacturing know-how
- 11,000 employees worldwide
- 8,000+ customers

Sensing enables life

Sensors – an integral part of the digital transformation





ams strategy



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 and sensor fusion software
- Application software for differentiating end-user experiences

Diversified business with balanced application and customer portfolio

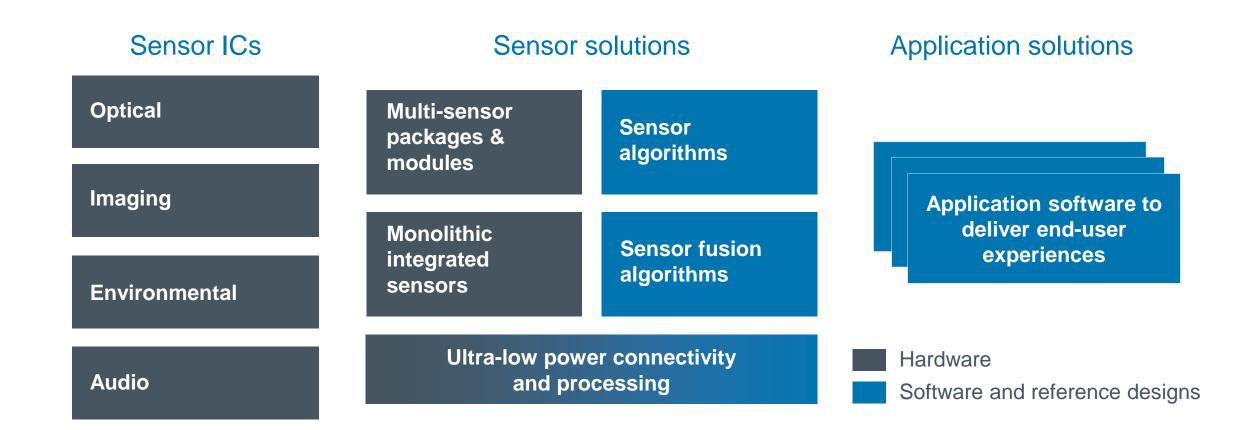
- Long-term target mix of 60/40 split C&C/AIM
- Build broader customer base in each application
- Establish strong distribution channel

Clear financial target model for profitable growth

- Revenue growth target (CAGR) 2016-2019 of 60%
- EBIT margin target (adjusted) of 30% from 2019 onwards

ams strategic value chain





Winning portfolio from focused strategy



Goal: True leadership in four sensing areas









Other lines



Optical sensors

- 3D sensing incl. VCSEL
- Light analysis/prox.
- Spectral sensing

Imaging sensors

- High perf. imaging
- Micro cameras

CMOSIS

Heptagon

Medical imaging

Environment. sensors

- Gas / particle
- Temp./rel. humidity
- Pressure
- Multi-sensor

Audio sensors

- MEMS microph. ICs
- ANC noise canceling

Other sensors

- Position sensors
- Flow metering
- Ultra-low power wireless sensors

M&A accelerating strategy implementation

- Heptagon
- Princeton Optronics
- KeyLemon
- MAZeT

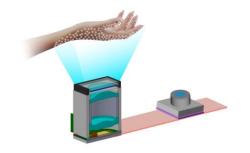
- CCMOSS
 - NXP sensors

Incus

3D sensing leadership – expertise meets growth









Leading solution expertise across 3D sensing technologies

- Unmatched portfolio of optical technologies + solution elements:
 - Highly differentiated VCSEL/VCSEL arrays
 - Leading WLO capabilities, high quality DOE, optical path
 - Algorithms and software layers
 - System and volume manufacturing expertise
- End-to-end system-level integration know-how: from components to algorithms and optimized applications
- Structured Light (SL) and Time-of-flight (ToF) for broad 3D market play
- Optimizing user experience, BOM, geometry and software integration simultaneously
- Software focus + partnerships (Sunny Opotech) for tailored ecosystem coverage
- Leading experience in high volume 3D sensing deployment in consumer

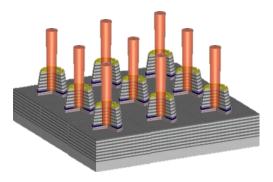
Megatrend offers multiple enormous market opportunities

- Mobile and consumer market adopting rapidly, very strong multi-year growth cycle: Facial identification/authentication, personalization, augmented reality (AR)
- Very large automotive market gaining traction, large scale Industrial opportunity emerging
 - Autonomous driving/3D LIDAR, driver recognition major 3D LIDAR illumination win
 - Machine vision/inspection, automation, robots, drones

Recent consumer win. high value automotive LIDAR win, multiple active engagements

3D sensing leadership – differentiating portfolio









Superior VCSEL technology as key differentiator

Leadership position 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 SL + ToF 3D illumination needs, strong design activities

Automotive LIDAR opportunities expanding given outstanding VCSEL performance

• Internal VCSEL manufacturing drives further differentiation: capacity investment for 6" (2,000 wspm) in volume 2019E, further increase under evaluation

Strong software capabilities, facial recognition leader KeyLemon adds best-in-class IP

- Focus on broad software coverage accelerated through KeyLemon acquisition
- KeyLemon: Leading IP portfolio for 3D face recognition, strong industry reputation
- Leveraging robust + secure implementation of smartphone 3D face recognition
- Integrating IP into 3D solutions for consumer + other applications, first solutions in 2018E
- Accelerating time-to-market for OEMs to add high quality 3D face recognition into devices

Optical sensing









Worldwide leader in light sensing solutions

- Clear #1 in optical sensing
- Leadership in sensors, optical path, illumination
- High performance optical solutions for Top 15 smartphone OEMs
- Industry-leading 3D sensing expertise
- Power-efficient VCSEL technology for 3D and optical sensing
- True Color spectral sensing for highest performance display management: "paper-like" viewing experience
- Color ALS, ultra-small proximity modules

New optical applications in spectral sensing

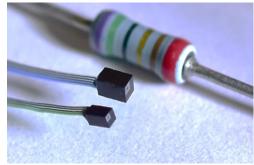
- Emerging growth market for new device sensing applications, active customer engagements
- Color matching for online shopping/cosmetics, skin-tone measuring
- Food sensing for quality analysis, e.g. fruit ripeness/quality
- Color/spectral sensing for Industrial IoT, smart LED lighting

Leadership and innovation in 3D, optical and spectral sensing

Image sensing









True leader in specific industrial applications + medical imaging

- High value global shutter CMOS imaging solutions for industrial market: high speed machine vision, inspection
- NanEye miniature camera technology for medical (endoscopy) and industrial markets
- New generation NanEye solution: 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 optical system simplification
- Highest level of opto-electrical performance for micro-camera modules
- Excellently positioned to capture the optical-imaging convergence,
 e.g. 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
- Continuing market momentum in earphones and headphones
- Specialty interface for portable audio device charging

Growth in MEMS mic ICs, expanding ANC accessory business

MEMS microphone interface ICs

- Market leader in growing high volume market
- Growth in home assistants (multi-microphone devices) adding significant demand
- Leading position and broad portfolio for low noise solutions and tight integration
- Strong customer partnership focused on attractive segments
- Increased content value microphone and pressure/temperature sensing integration in development

Environmental (including gas) sensing









Technology leader in environmental / gas sensing

- Unique CMOS-based portfolio for low power, high volume, small form factor
 - MOX and infrared gas / presence detection
 - Relative humidity, pressure, temperature
- Broad range of emerging applications in mobile, home/building automation (HABA), Industrial IoT and other AIM markets

HABA and Industrial IoT growth markets, consumer opportunities

Uniquely positioned for multi-sensor modules and monolithic multi-sensor integration

- Integration roadmap for related sensor modalities driving low power + smallest size
- Broad portfolio of relevant sensor technologies, algorithms and application software
- Highly differentiated new pressure sensor opens up new application markets
- Multi-sensor technology gas and particle sensor roadmap,
 targeting early stage, fast-growing HABA, industrial and infrastructure markets

Scalable manufacturing model

Differentiating manufacturing in-house, outsourcing of 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

Internal optical production and packaging + future VCSEL manufacturing, Singapore

- Technology leader in high-end optical systems
- WLO and optical filter production, optical packaging
- Further expansion investments in 2018 to support expected volume needs
- Internal VCSEL manufacturing line investment:
 Highly differentiated products, 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

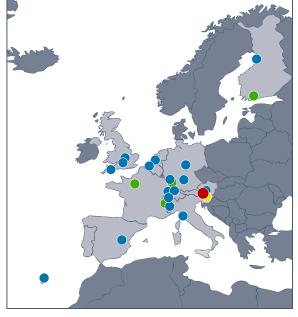
VCSEL line investment on track for 2019, further Singapore investments

Global network



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







- Americas Europe
- 22 design centers
 Austria, Switzerland (3), Italy (2), Spain, Germany (4), Belgium,
 UK (2), Netherlands, Portugal, Finland, USA (3), India, Japan
- Manufacturing locations
 Austria, Singapore
- Test center Philippines

Key figures

USDm



| | | 2017 | 2016 | Q1 2018 | Q1 2017 |
|-------------------------------|------------------------------|-------------------|-------------|------------------|---------------|
| Total revenues | | 1,307.6 +93.4% | 676.0 | 452.7 +146.6% | 183.5 |
| Gross margin | (adjusted) ¹⁾ | 43% | 55% | 36% | 46% |
| | (IFRS reported) | 39% | 52% | 33% | 40% |
| Result from operations (EBIT) | (adjusted) ¹⁾ | 207.4 | 119.3 | 77.3 | 5.0 |
| | (IFRS reported) | 93.3 | 114.6 | 46.5 | -16.9 |
| Net result | (adjusted) ³⁾ | 156.8 +23.9% | 126.5 | 99.9 +601.2% | -19.9 |
| EPS (basic/diluted) 2) | (adjusted) ³⁾ CHF | 1.74 / 1.63 | 1.67 / 1.62 | 1.20 / 1.12 | -0.23 / -0.23 |
| | USD | 1.92 / 1.79 | 1.88 / 1.82 | 1.25 / 1.17 | -0.27 / -0.26 |

¹⁾ Excl. acquisition-related and share-based compensation costs

²⁾ Earnings per share in CHF were converted using the average currency exchange rate for the respective periods

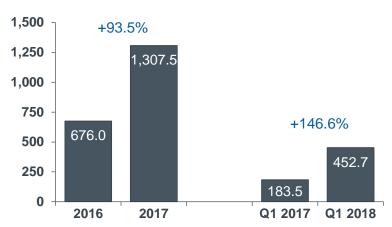
³⁾ Net result and earnings per share excluding valuation effect of the option element of the issued convertible bond

Financial results

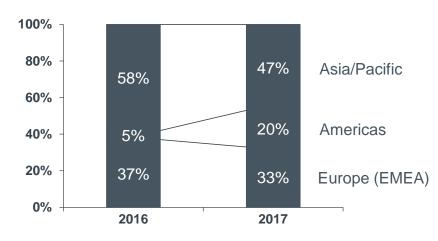
USDm



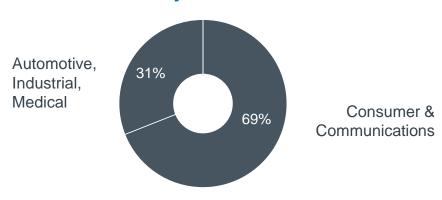
Total revenues



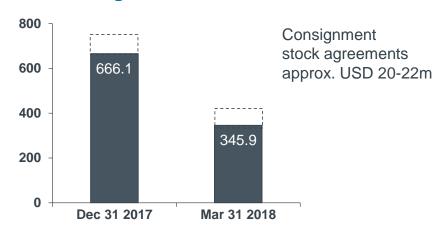
Total revenues by region 2017



Total revenues by market 2017



Total backlog

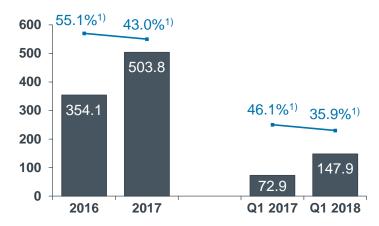


Financial results

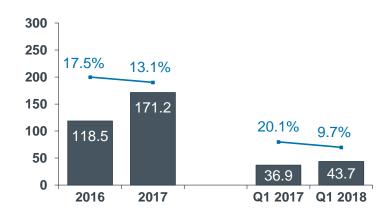
USDm, % of revenues



Gross profit (IFRS), gross margin (adj.)



SG&A



R&D 25.2% 20.1% 300 250 263.0 200 150 170.4 31.2% 13.6% 100 50 61.5 2017 Q1 2017 Q1 2018 2016

EBIT (IFRS), EBIT margin (adj.)



¹⁾ Excluding acquisition-related and share based compensation costs

Financial results

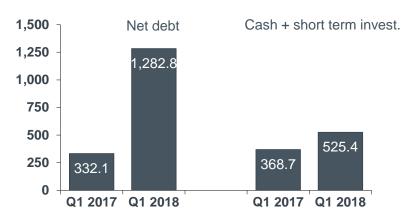
USDm, % of revenues



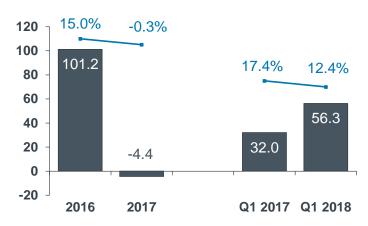
Net result, EPS (basic/diluted) (adjusted) 1)



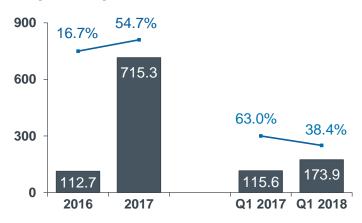
Net debt, cash + short term investments



Operating cash flow



Capital expenditures

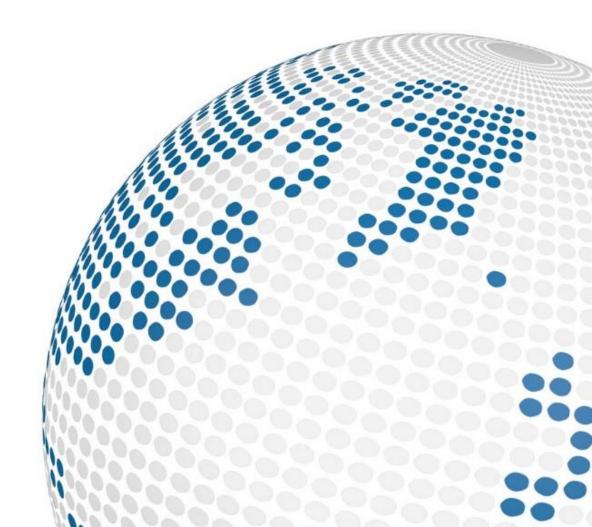


¹⁾ Net result and earnings per share excluding valuation effect of the option element of the issued convertible bond



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Shaping the world with sensor solutions



Profit and loss statement





| (IFRS) | 2017 | 2016 | Q1 2018 | Q1 2017 |
|---|---------|--------|---------|---------|
| Total revenuesProductsFoundry | 1,307.6 | 676.0 | 452.7 | 183.5 |
| | 1,244.2 | 608.9 | 440.8 | 168.1 |
| | 63.4 | 67.0 | 11.8 | 15.4 |
| Gross profit Gross margin (adjusted ¹⁾) Gross margin (IFRS reported) | 503.8 | 354.1 | 147.9 | 72.9 |
| | 43.0% | 55.1% | 35.9% | 46.1% |
| | 38.5% | 52.4% | 32.7% | 39.7% |
| Research and development Selling, general and administrative Other operating income/expenses | -263.0 | -170.4 | -61.5 | -57.2 |
| | -171.2 | -118.5 | -43.7 | -36.8 |
| | 24.0 | 47.2 | 3.9 | 4.4 |
| Result from operations (EBIT) • EBIT margin (adjusted 1)) • EBIT margin (IFRS reported) | 93.3 | 114.6 | 46.5 | -16.9 |
| | 15.9% | 17.7% | 17.1% | 2.7% |
| | 7.1% | 17.0% | 10.3% | -9.2% |
| Net financing costs | -2.7 | 4.9 | 32.1 | -3.2 |
| Result before tax Income tax result | 90.6 | 119.5 | 78.6 | -20.1 |
| | 18.5 | 6.9 | -1.6 | 0.2 |
| Net result (adjusted ²⁾) Net result (IFRS reported) | 156.8 | 126.5 | 99.9 | -19.9 |
| | 109.1 | 126.5 | 77.1 | -19.9 |

¹⁾ Excl. acquisition-related and share-based compensation costs

²⁾ Net result excluding valuation effect of the option element of the issued convertible bond

Balance sheet

USDm



| Assets (IFRS) | Mar 31, 2018 | Dec 31, 2017 | Liabilities and equity | Mar 31, 2018 | Dec 31, 2017 |
|--|---|---|--|--|---|
| Cash and short term invest. Trade receivables Inventories Other current assets | 525.4 315.5 300.7 52.7 | 482.3 350.1 312.1 94.8 | Interest-bearing debt Trade liabilities Tax liabilities Provisions Other liabilities | 428.2 244.6 33.3 34.8 82.6 | 720.8 379.1 34.6 54.6 672.2 |
| Total current assets | 1,194.2 | 1,239.3 | Total current liabilities | 823.4 | 1,861.2 |
| Fixed assets Intangible assets Investments in associates Deferred tax asset Other non-current assets | 1,256.8 1,453.3 4.0 31.9 78.3 | 1,225.4 1,453.1 2.3 32.0 56.8 | Interest-bearing debt Employee benefits Deferred tax liabilities Other liabilities | 1,380.0 50.5 82.3 192.1 | 825.8 49.4 82.5 171.4 |
| Total non-current assets | 2,824.5 | 2,769.6 | Total non-current liabilities Shareholders' equity | 1,704.9 1,490.4 | 1,129.0 1,018.6 |
| Total assets | 4,018.7 | 4,008.8 | Total liabil. and equity | 4,018.7 | 4,008.8 |

Cash flow statement





| (IFRS) | 2017 | 2016 | Q1 2018 | Q1 2017 |
|---|--|--|--------------------------------------|------------------------------------|
| Income before tax Depreciation | 90.6 182.5 | 119.5 76.6 | 78.6 59.2 | -20.1 36.2 |
| Cash flow from operations | -4.4 | 101.2 | 56.3 | 32.0 |
| Capital expenditures | -715.3 | -112.7 | -173.9 | -115.6 |
| Cash flow from investing activities | -632.8 | -87.3 | -204.1 | -12.5 |
| Proceeds from borrowings Proceeds from issue of convertible bond Repayment of borrowings Dividends paid Changes resulting from capital increase | 845.7 366.2 -185.3 -30.8 0.0 | 340.7 0.0 -104.4 -42.5 0.0 | 0.0 752.0 -371.4 0.0 0.0 | 124.1 0.0 -3.0 0.0 0.0 |
| Cash flow from financing activities | 845.3 | 72.0 | 255.6 | 128.7 |
| Change in cash and cash equivalents (incl. effects of changes in foreign exchange rates) | 179.4 | 93.4 | 102.7 | 149.0 |
| Cash and cash equivalents at end of period | 354.4 | 220.7 | 496.4 | 324.0 |