

ams

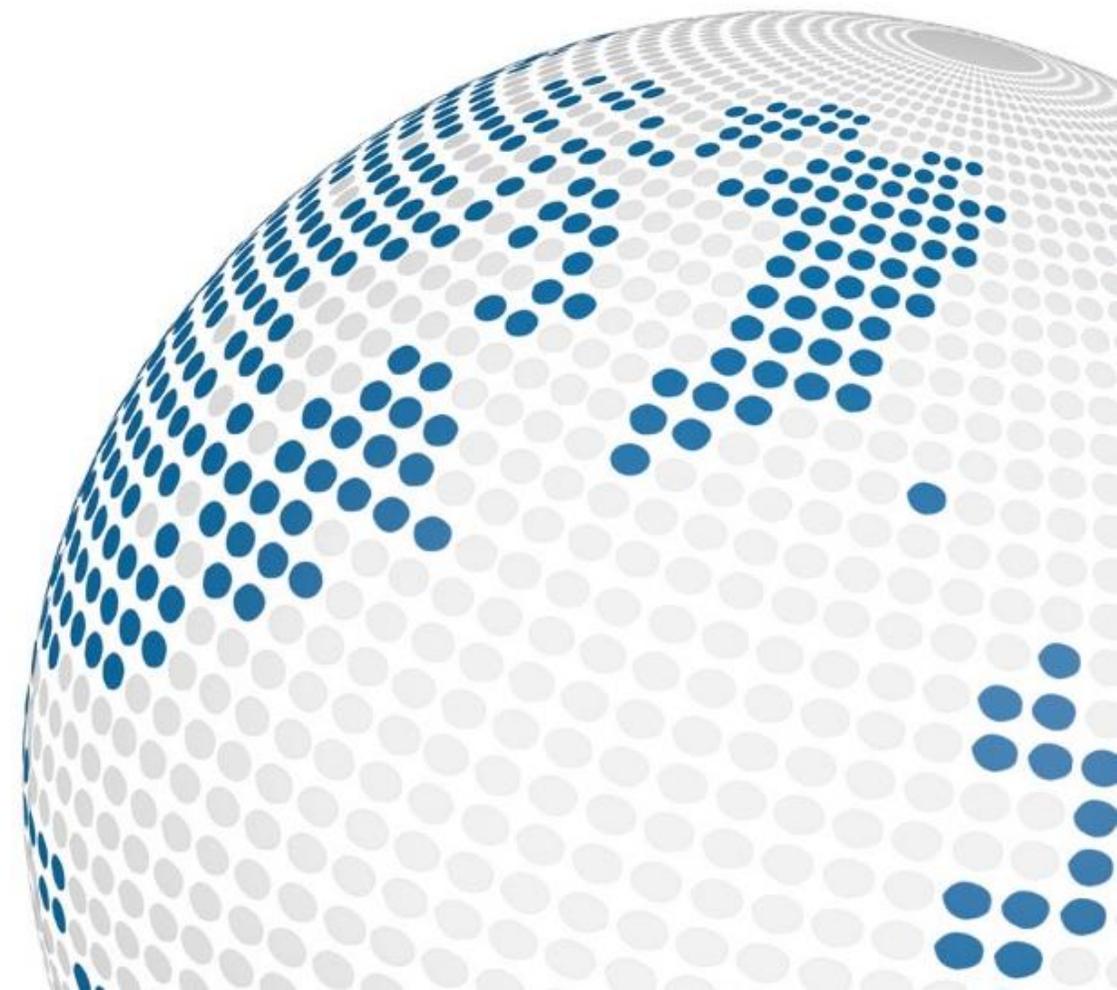
Full year + fourth quarter results 2018

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February 2019



ams at a glance

Sensing is life.



Our business

- Focused on high performance sensor solutions
- Sensor solutions, sensor ICs/sensor interfaces, related algorithms and software
- Small scale, low-power, highest sensitivity, tight integration
- Best-in-class solutions for leading OEMs



Our end markets

- Consumer (C) – FY 2018 76% of revenues
- Automotive, Industrial, Medical (AIM) – FY 2018 24% of revenues



By the numbers

- More than 1,200 engineers
- Around 10,000 employees worldwide
- 21 design centers, 3 manufacturing locations
- More than 35 years of design and manufacturing know-how
- Over 8,000 customers

Sensing enables life

Sensors – an integral part of the digital transformation



Updated strategic approach: stronger focus

Driving clear leadership in three sensing areas



Optical sensing

- 3D sensing incl. VCSEL illumination
- Light analysis/proximity
- Spectral sensing
- New optical technologies



Image sensing

- High performance imaging
- Medical imaging
- Micro cameras



Audio sensing

- MEMS microphone ICs
- ANC noise cancelling

Other lines



Other sensing

- Position sensors
- Gas/pressure/temperature/rel. humidity
- Flow metering

Environmental sensing de-emphasized and stronger focus on optical sensing technologies offering higher growth potential

Building the global leader in sensor solutions

True leadership in three sensor areas

- Optical
- Imaging
- Audio

Best-in-class performance per sensor area and in sensor system solutions

- Miniaturization and integration
 - 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/AIM
- Build broader customer base in each application
- Establish strong distribution channel

Financial model enabling long-term growth

- Focus on profitable growth
- Build strong margin profile across end markets

2018: strong growth, more volatile end markets



Significant revenue growth, again driven by large smartphone ramps in second half

- Record FY 2018 revenues USD 1,627m (34% growth year-on-year), EBIT (adj.) USD 146m

End market volatility increasing through 2018, impact from weaker smartphone demand in H2/Q4

- Consumer market/OEM performance more volatile, H2 smartphone demand below expectations leading to Q4 update

Non-consumer markets showing good performance, macro-economic uncertainties increasing towards year-end

- Automotive/industrial/medical successful, strong traction in imaging, trade dispute/macro trends clouding end markets

More focused strategy around leadership in optical, imaging, audio sensing

- Differentiation drives leadership, clear #1 in optical sensing, high but focused R&D in three sensing areas

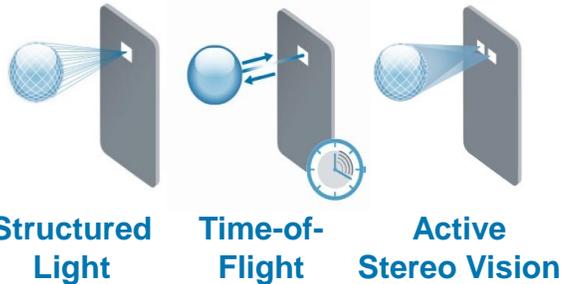
Leading position in long-term growth market 3D sensing

- Recognized solution expertise, successful illumination focus drives wins, Android adoption started, automotive visible

Major capex investment cycle for optical manufacturing completed

- Expansion to support customer 3D/optical sensing plans, advances in manufacturing, lower capex needs from 2019E

3D sensing leader: recognized solution expertise



Leading player across 3D sensing technologies

- Unmatched portfolio of optical technologies, elements and IP
 - Highly differentiated VCSEL/VCSEL array illumination
 - System and solution design + architecting
 - Leading in WLO capabilities, DOE design, optical path
 - Advanced eye safety features
 - Algorithm + software layer proprietary IP
- Covering structured light (SL), time-of-flight (ToF), active stereo vision (ASV) 3D sensing, ongoing coexistence of approaches

**High volume ramp
H2 2018,
Android wins in
SL, TOF, ASV**

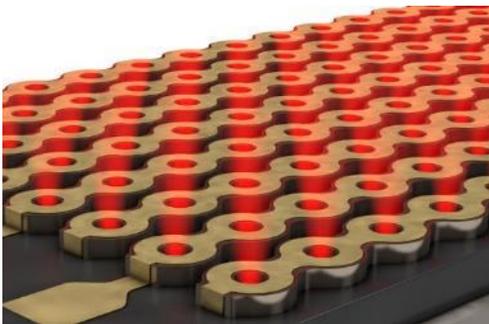
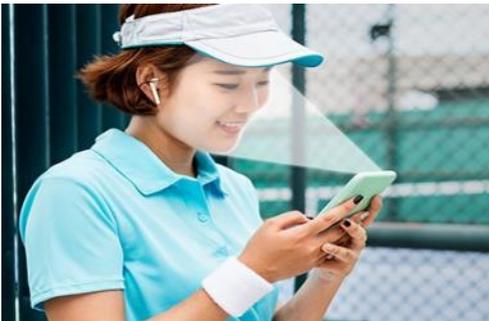
Recognized industry-leading solution expertise, successful in all three 3D approaches

- Leadership in end-to-end system know-how, front-facing + world-facing expertise
- Illumination focus drives success in all 3D approaches: high volume deployment presence, significant ramp in H2 2018, several Android wins and ramps 2019E
- Android ASV and ToF system solutions shown at CES, fast time-to-market and optimized performance through partnerships with Face++, Qualcomm, others

Major position in 3D sensing market

- Key player in consumer market as adoption momentum for SL, TOF, ASV strengthens
- Strong position for large automotive market, supporting Level 2+, mid-term growth driver

3D sensing: winning designs, VCSEL leader



Design-win momentum in Android consumer 3D, growing 3D portfolio, automotive traction

- VCSEL-based illumination solutions for SL, TOF, ASV
- Android SL wins at Xiaomi + major Chinese smartphone OEM, launched
- Android TOF wins at different Asian OEMs, launching 2019E
- Android ASV solution incl. ams VCSEL illumination and ASV win, launching 2019E
- Industry's smallest 1D TOF proximity sensor (with lens) for 3D systems
- Major automotive solid-state LIDAR illumination win for leading OEM, additional opportunities
- First in-cabin 3D sensing development progressing, increasing OEM interest

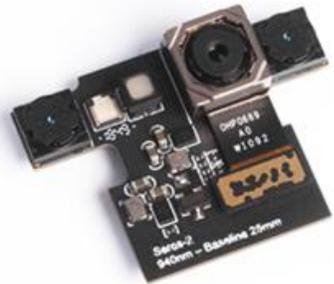
Superior VCSEL technology: high differentiation drives market success and design wins

- Broad VCSEL portfolio for illumination needs in all 3D technologies:
SL aux. and TOF flood illumination, dot projection, 1D TOF proximity, ASV pattern projection
- Best-in-class high power VCSEL/high count VCSEL arrays for 3D
 - Smallest pitch higher resolution, lower system cost
 - Leading power efficiency up to >60% (lab) vs. typical 45-50% quantum efficiency
 - Best beam quality very narrow beam divergence
 - True high power from mW to W to 100+W
- External supply chain covers current needs, upcoming internal VCSEL line adds differentiation

3D sensing: ASV showcase



**Active
Stereo Vision**



ASV system solution shown at CES: high quality face-recognition 3D system

- Possible use cases: face-based unlock, secure mobile payment, portrait photo, avatars
- Full application processor software integration
- Compact thin form factor, stable operation, high illumination efficiency
- High quality 3D depth map, excellent performance in full daylight
- Ease of integration, cost-efficient solution
- Collaboration with Face++, Qualcomm Technologies, Bellus3D and OmniVision



Optical sensing



Worldwide leader in light sensing solutions

- Clear #1 in optical sensing
- Leading in sensors, high performance optical systems, illumination solutions
- High quality optical sensing at Top 15 smartphone OEMs
- Emerging growth markets in automotive + industrial

**Leadership position,
expanding
optical sensing
applications**



Broad portfolio: 3D sensing incl. VCSEL, display management, other applications

- 3D sensing expert: recognized for HW, SW and system know-how, attractive partnerships
- High performance 3D/optical sensing VCSELs: consumer wins, automotive mid-term wins
- TrueColor display management: superior user experience
- Innovative behind-OLED light/proximity sensing, color ALS + proximity modules
- Ultra-small proximity sensing for wireless earbuds



New applications emerging, strong growth potential in optical technologies

- Mobile spectral sensing as new content opportunity: high quality color matching (online shopping, cosmetics), food quality (ripeness), finalizing first consumer solution for 2019
- Optical technologies enable broader growth opportunities across sensing applications

Optical sensing: Innovation showcase



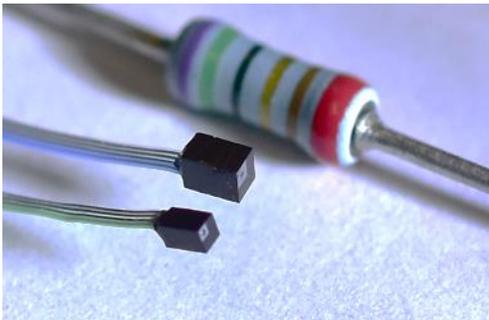
Behind-OLED light and proximity sensing solution

- Innovation in display management
- Behind-OLED sensing places optical sensor unit behind the OLED display
- Enables industry trend for maximum screen-to-body ratio and bezel-less phone designs
- Supports foldable displays and flicker detection for better pictures
- Captures very low levels of light transmitted through OLED, combination of high sensitivity sensing and high performance algorithms
- First wins in H2 2018, first volume shipments recently started
- Significant OEM interest, new growth opportunity in display management

**Innovative solution
for new phone
designs, first
shipments started**



Image sensing



True leader in advanced image sensing for industrial + medical

- **Industrial** – Leading provider of global shutter technology for advanced industrial applications worldwide
- High value global shutter CMOS imaging solutions for high speed machine vision, inspection, factory automation
- **Medical** – Global leader in medical imaging sensor solutions
- High performance, cost-optimized systems for computed tomography (CT) and digital X-ray, growing market position in Asia
- Clearer images at lower radiation dose for better diagnostics in 3D-CT and digital X-ray
- NanEye miniature camera technology for medical endoscopy and industrial

Attractive growth trends in high performance imaging continue

Strong market traction and attractive growth opportunities

- Market success with leading-edge 50MP image sensor for highly advanced industrial cameras
- Very good momentum in NanEye camera solutions
 - world's smallest endoscopy cameras ($\leq 1\text{mm}^2$)
 - increasing market traction for disposable medical endoscopes
 - new application: eye tracking in glasses
- Imaging roadmap enables innovation for future industrial sensing applications

Audio sensing



ANC (active noise cancellation)

- Best-in-class high performance noise reduction (>40dB)
- Clear leader in wired/wireless accessory market
 - portfolio of ANC solutions incl. hybrid ANC
 - significantly better audio experience
 - very low power, very small form factor
- Augmented hearing: higher transparency for speech and music
- Single wire power + communication interface for mobile audio charging POW:COM: Higher design flexibility for wireless earbud cradles reducing pins from multiple to 2
- Continuing ANC market growth, adding wins in earphones and headphones

**Robust growth
in MEMS mic ICs
and noise canceling,
market growth
continuing**

MEMS microphone interface ICs

- Market leader in expanding high volume market
- Leading position and broad portfolio, low noise solutions and tight integration
- Ongoing growth in home assistant market continues to drive demand: expanding range of multi-microphone devices, up to 8 microphones
- Strong customer partnership focused on attractive segments

Hybrid volume manufacturing model



Internal: Differentiated manufacturing
Outsourced/external: Standard process manufacturing

Internal front-end wafer manufacturing, Austria

- 8" CMOS/specialty analog to 180nm, 190+k wafers p.a.
- Optical filter production

Major capex cycle completed, very strong capex decline expected for 2019



Internal optical manufacturing and backend + future VCSEL manufacturing, Singapore

- Leader in high-end optical system technologies
- WLO/optical filter production, advanced optical assembly/backend
- Major investment cycle for high volume optical/3D sensing production completed in 2018
- Internal VCSEL capacity investment: 6" 2,000 wspm line for highly differentiated products, completion in 2019E, expected mass production ramp around year-end 2019



External manufacturing partnerships for scalability and flexibility

- High volume wafer suppliers (TSMC, UMC), standard and semi-custom packaging
- Outsourced VCSEL supply chain: Partnerships for volume manufacturing including HLJ Technology, supports upcoming VCSEL volume needs

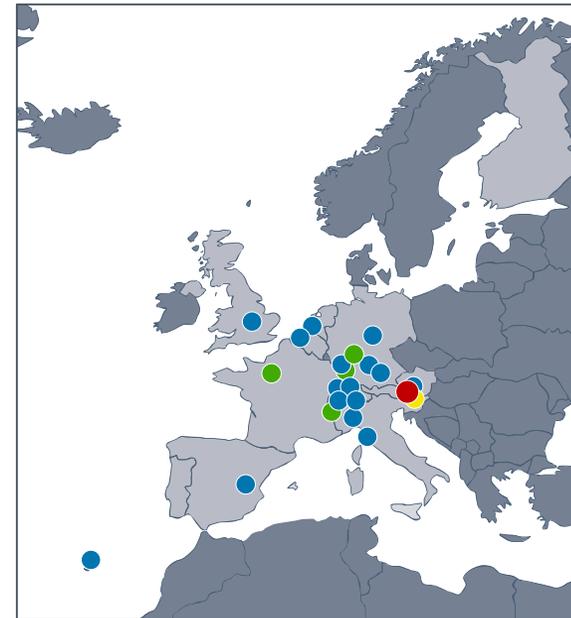
In-house test, Philippines/Austria

Global network

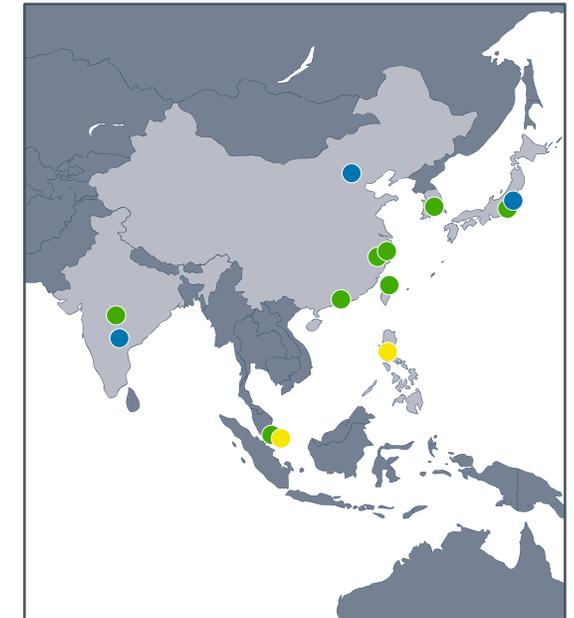
- Headquarters
- Design centers
- Manufacturing/Test
- Sales/customer support locations



Americas



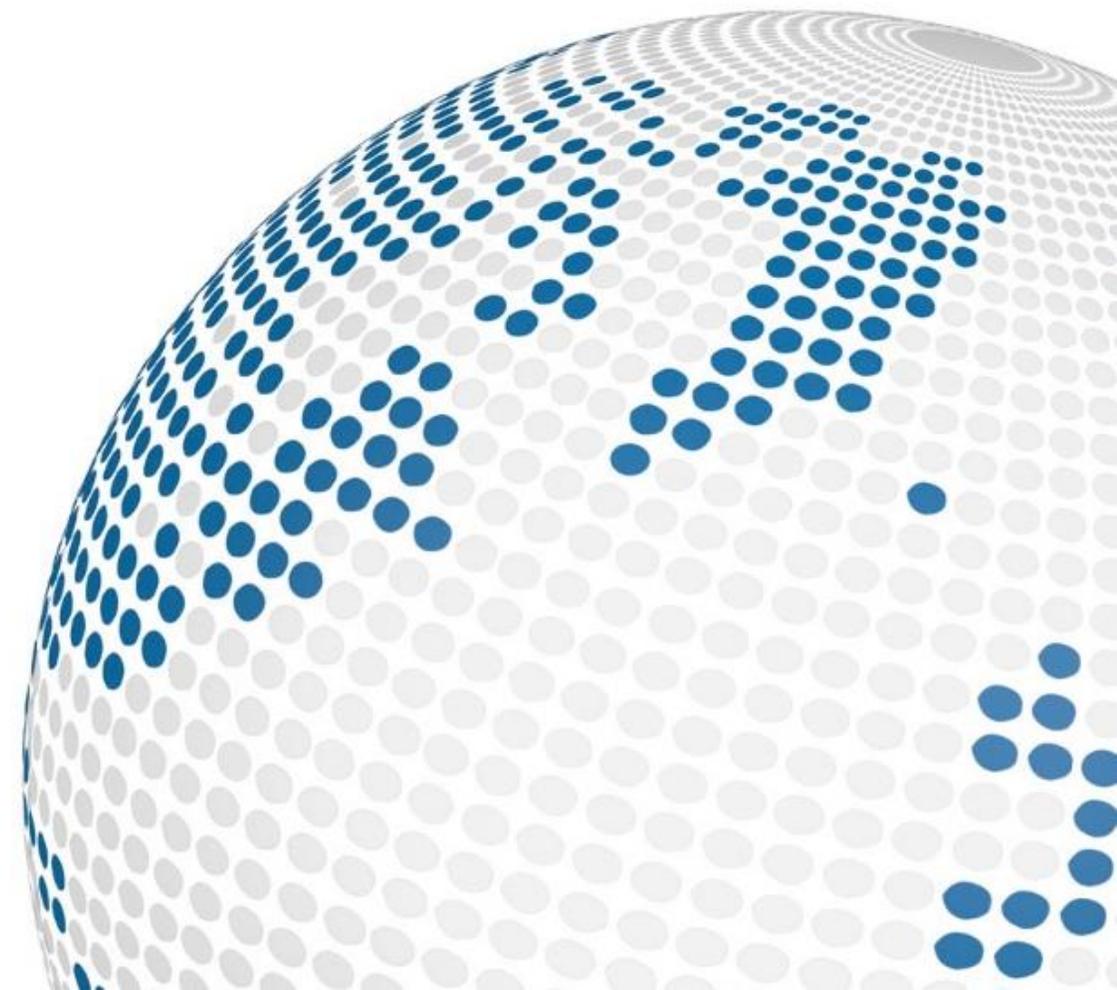
Europe



Asia

- **21 design centers**
Austria, Belgium, China, Germany (4), Italy (2), India, Japan, Netherlands, Portugal, Spain, Switzerland (3), UK, USA (3)
- **Manufacturing locations**
Austria, Singapore
- **Test center**
Philippines

Financial results



Key figures

USDm

			2018	2017	Q4 2018	Q4 2017
Total revenues			1,627.4 +34.1%	1,213.8	491.4 -8.4%	536.6
Gross margin	(adjusted) ¹⁾		32%	43%	35%	44%
	(IFRS reported)		27%	39%	28%	40%
Result from operations (EBIT)	(adjusted) ¹⁾		145.6	192.5	61.9	146.6
	(IFRS reported)		14.7	86.7	8.9	114.9
Net result	(adjusted) ³⁾		12.1	145.5	1.7	161.3
	(IFRS reported)		106.6	101.3	1.4	117.0
EPS (basic/diluted)	(adjusted) ³⁾	CHF ²⁾	0.15 / 0.14	1.74 / 1.63	0.02 / 0.02	2.00 / 1.87
		USD ²⁾	0.15 / 0.13	1.78 / 1.67	0.02 / 0.02	1.96 / 1.83
EPS (basic/diluted)	(IFRS reported)	CHF ²⁾	1.34 / 0.72	1.21 / 1.12	0.01 / 0.01	1.45 / 1.34
		USD ²⁾	1.30 / 0.70	1.24 / 1.15	0.01 / 0.01	1.42 / 1.31

¹⁾ Excl. acquisition-related, one-time restructuring and share-based compensation costs

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

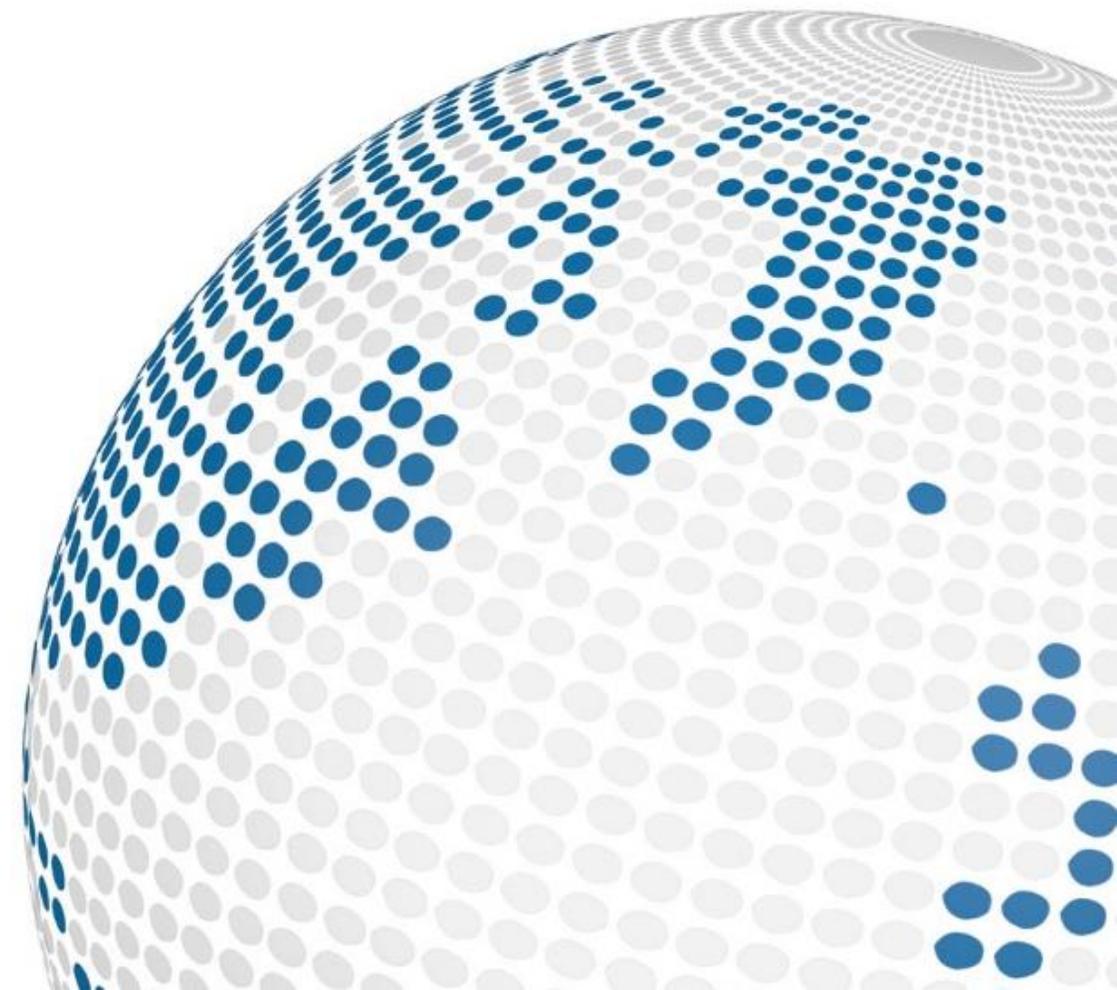
³⁾ Net result and earnings per share excluding valuation effect of the option element of the issued USD convertible bond

Financial results

P&L

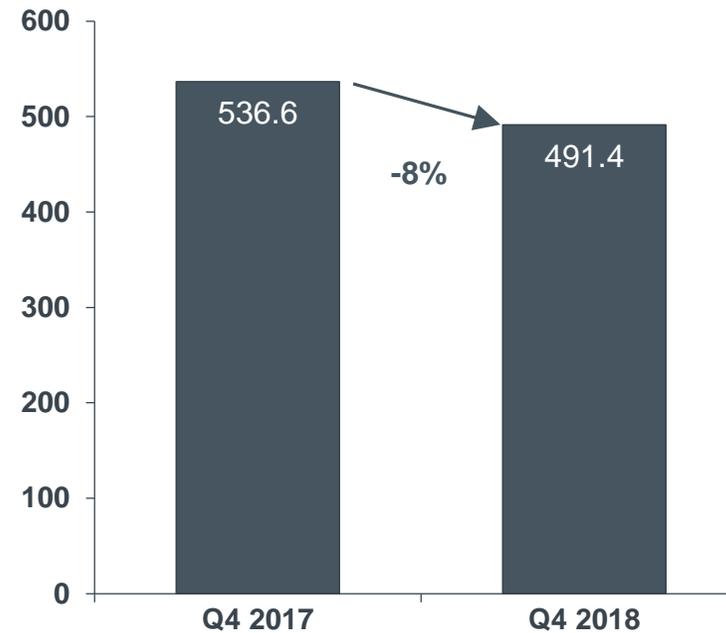
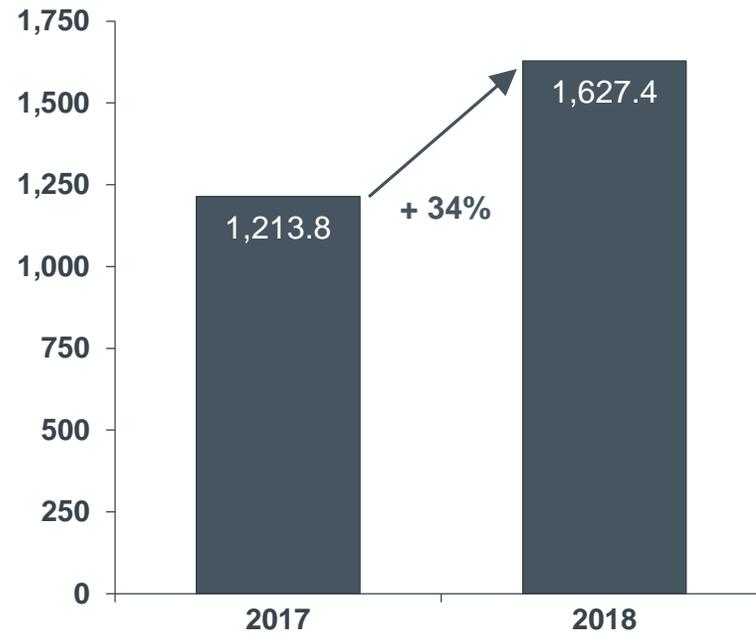
Balance sheet

Cash flow



Total revenues

USDm

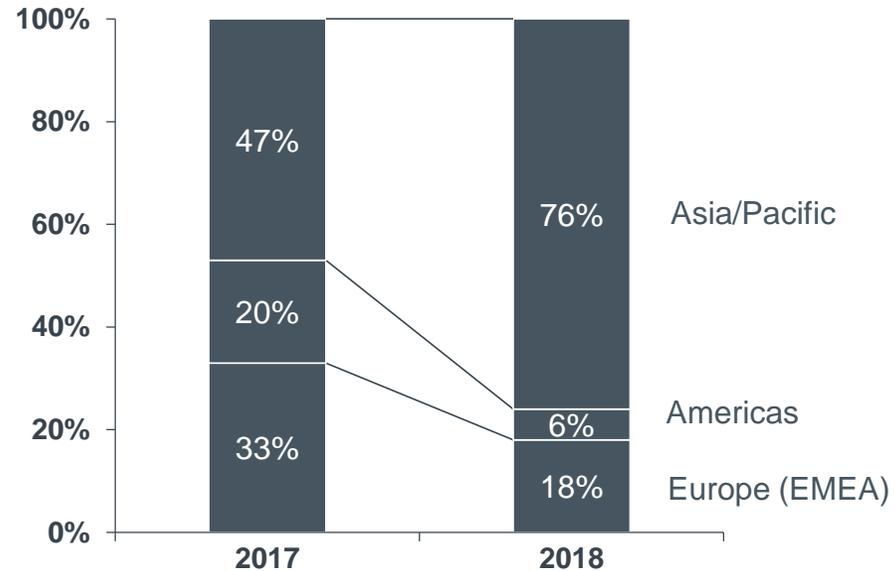


- Strong revenue growth for full year 2018 even with Q4 2018 lower than originally expected
- Q4 2018 reflects unfavorable consumer market environment and subdued smartphone demand

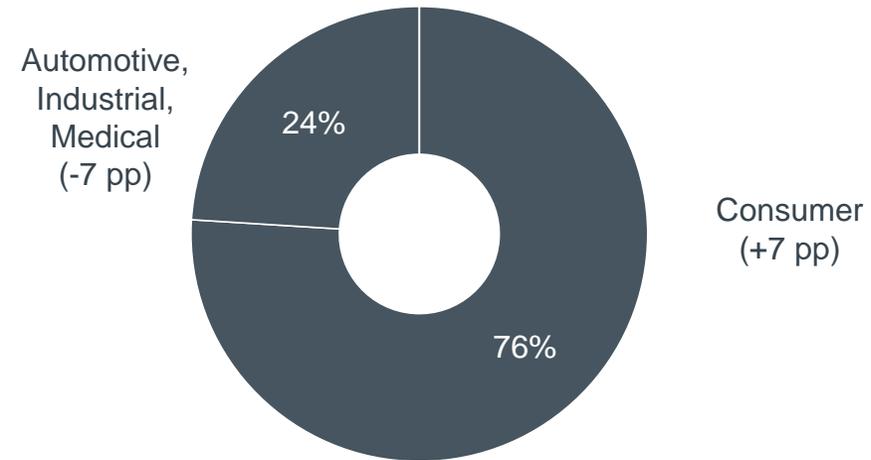
Revenue distribution

% of revenues

Total revenues by region 2018



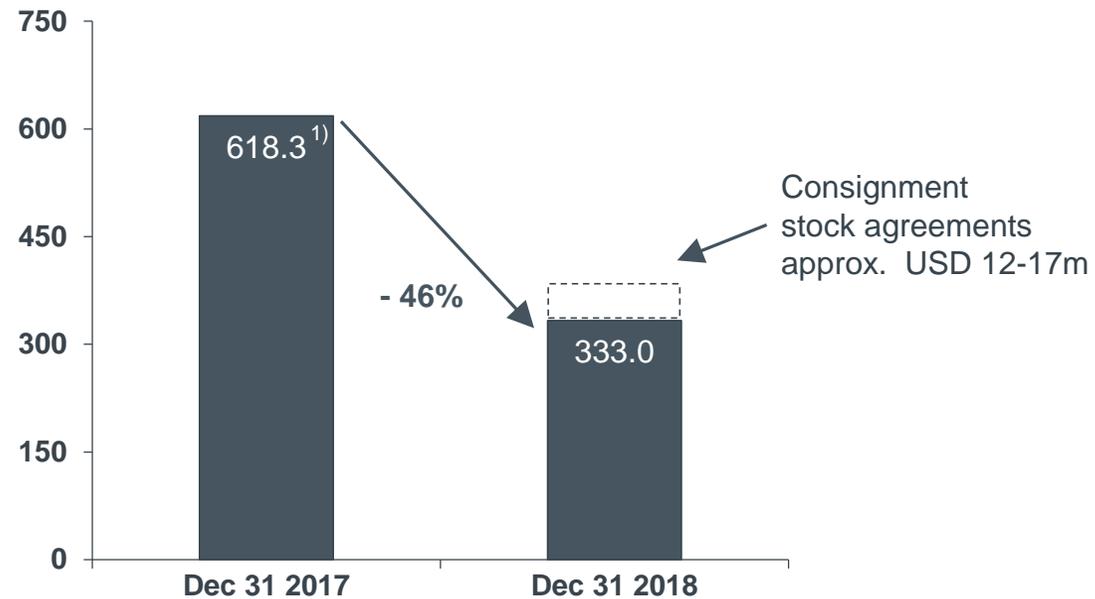
Total revenues by market 2018



- Change in regional split mostly due to customer-side changes in billing structure (billing location)
- Consumer market increase driven by broader deployment of optical sensing products

Total backlog

USDm

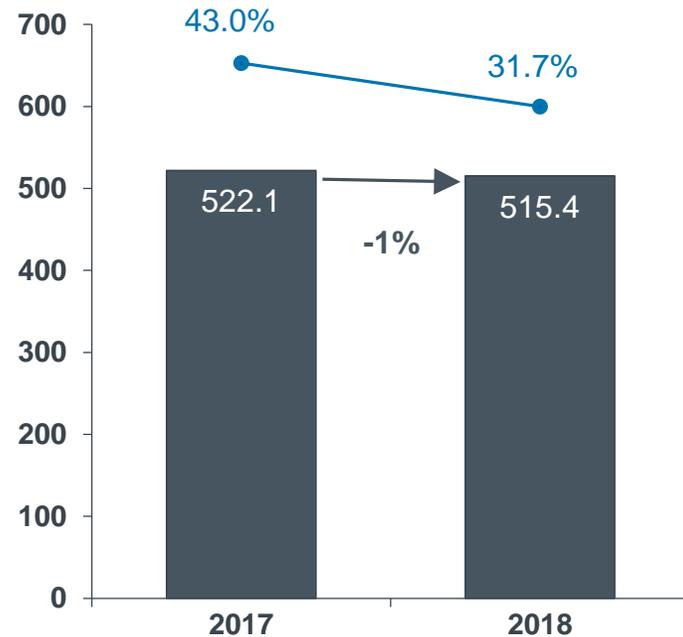


- Backlog at year-end 2018 reflects unfavorable market environment, lower smartphone demand, typical seasonality

¹⁾ incl. certain forecasted commitments

Gross profit / gross profit margin

USDm, % of revenues, adjusted¹⁾

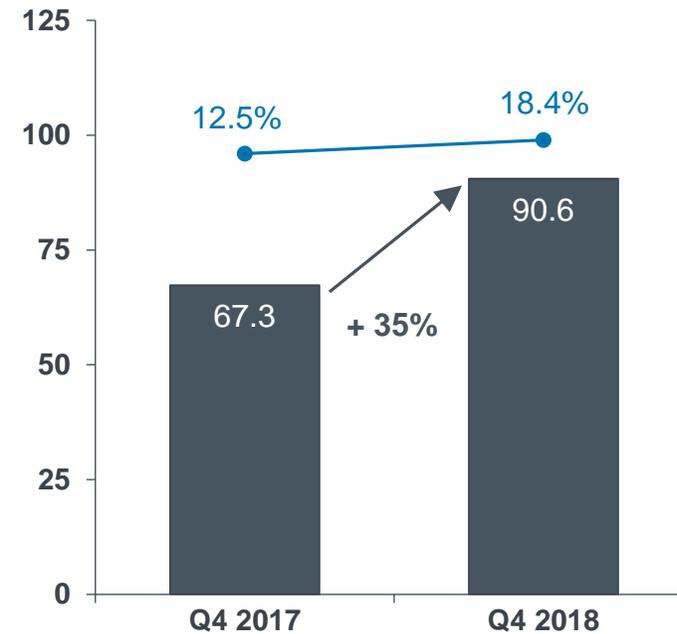
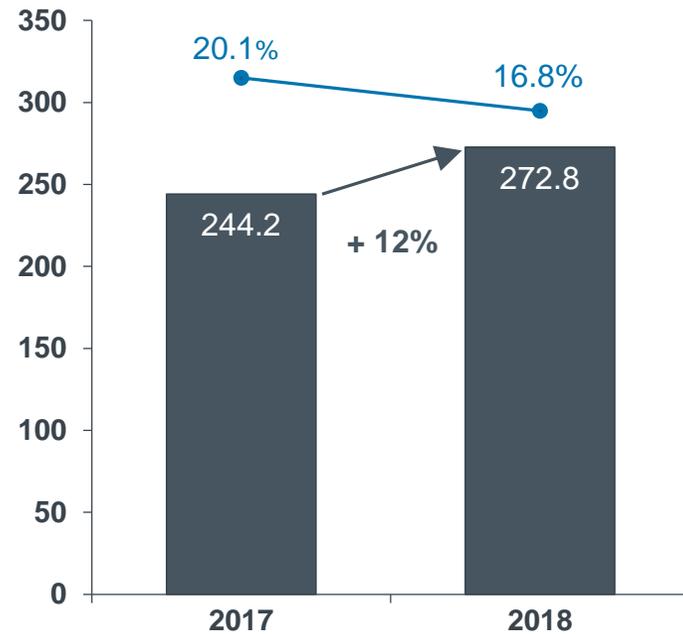


- Gross profit margin development reflects product mix, strong underutilization of Singapore production in H1 2018
- Gross profit margin IFRS: 2018: 27.2%, Q4 2018: 28.2%

¹⁾ excl. acquisition-related, one-time restructuring, share-based compensation costs / one-time Q4 2018 restructuring cost regarding customer-related equipment (USD 24.6m)

R&D expenses

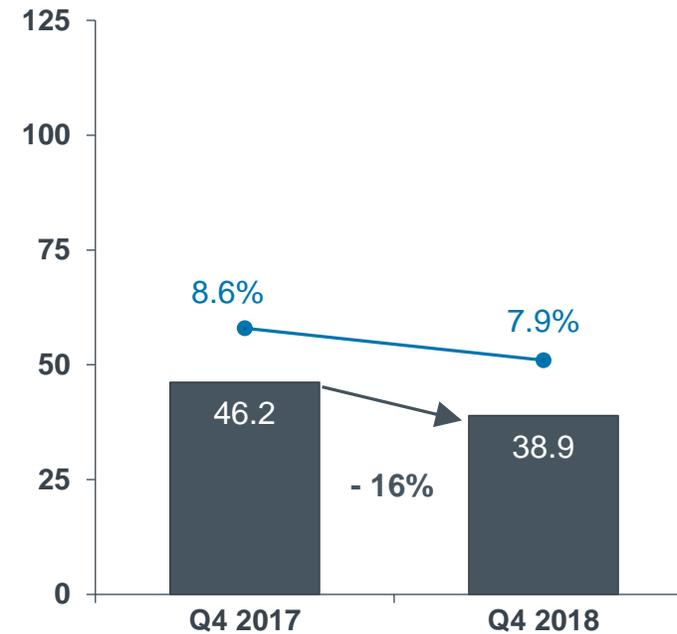
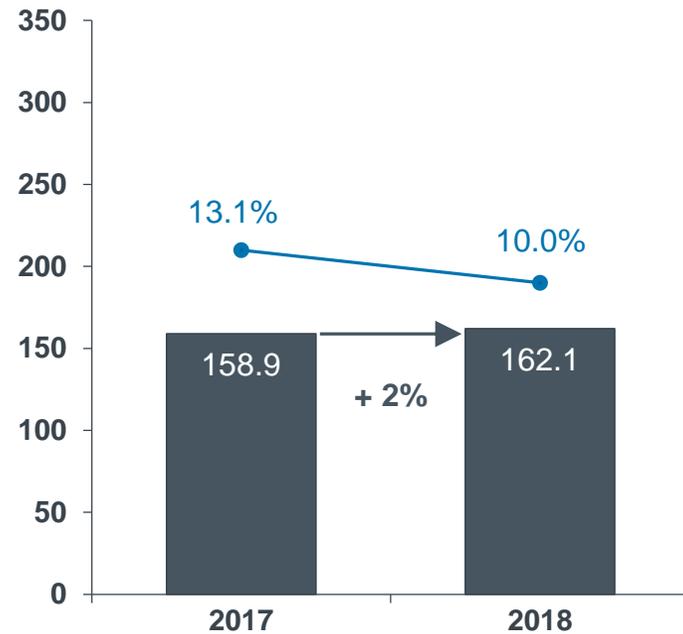
USDm, % of revenues



- High R&D investments continued through 2018 for large projects in consumer and non-consumer markets
- Substantial decrease in 2018 relative R&D spending, Q4 2018 shows year-end effects

SG&A expenses

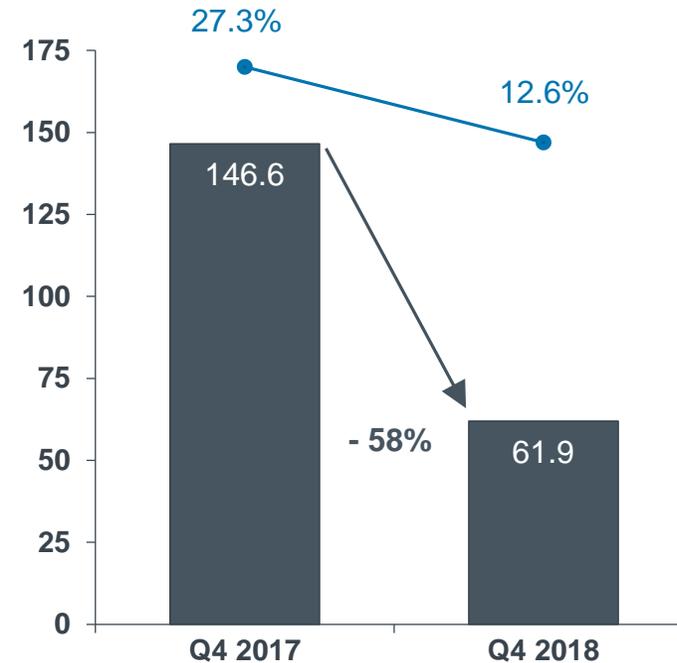
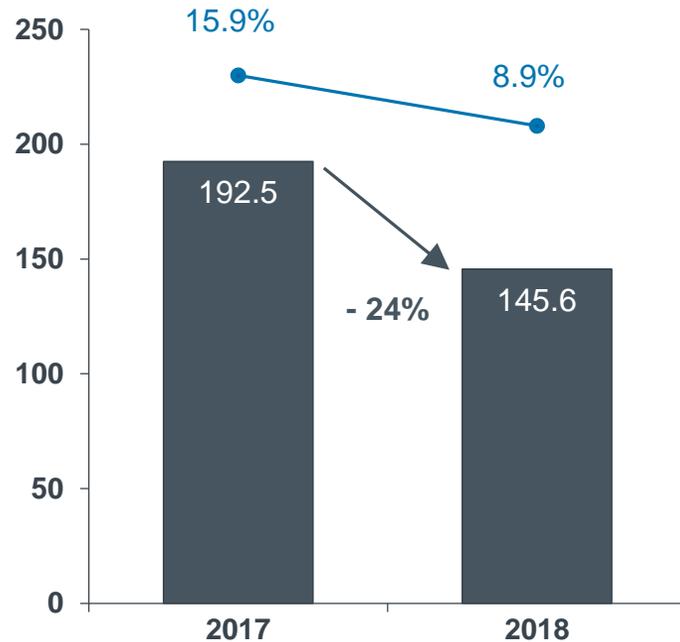
USDm, % of revenues



- SG&A spending includes very selective improvements of organizational structure and global sales team
- Significant decrease in relative SG&A spending showing cost discipline

Results from operations (EBIT)

USDm, % of revenues, adjusted¹⁾

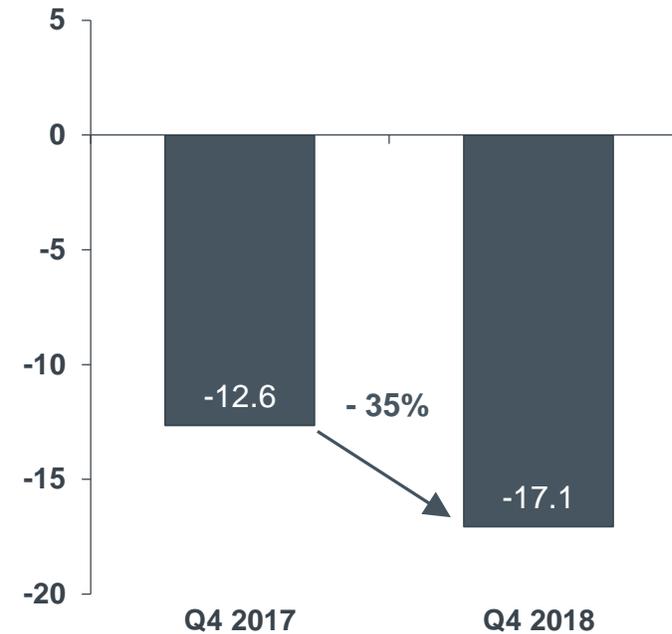
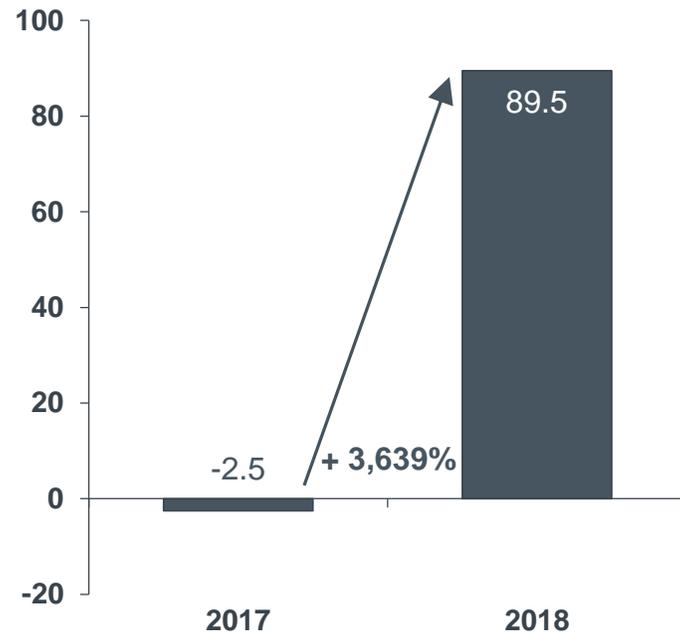


- EBIT reflects gross profitability given H1 2018 underutilization and Q4 2018 lower demand plus Q4 2018 R&D effect
- EBIT (EBIT margin) IFRS: 2018 USD 14.7m (0.9%), Q4 2018 USD 8.9m (1.8%)

¹⁾ excl. acquisition-related, one-time restructuring, share-based compensation costs / one-time Q4 2018 restructuring cost regarding customer-related equipment and reorganization of the environmental sensing business (total USD 29.6m)

Net financial result

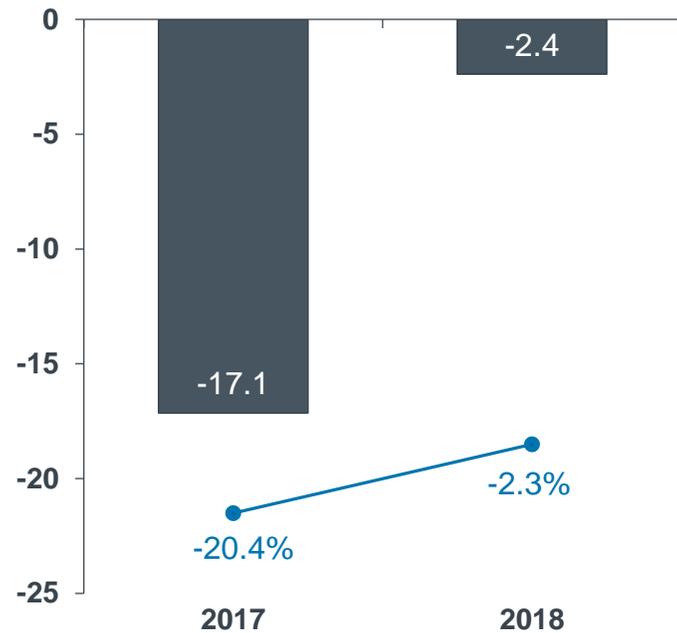
USDm



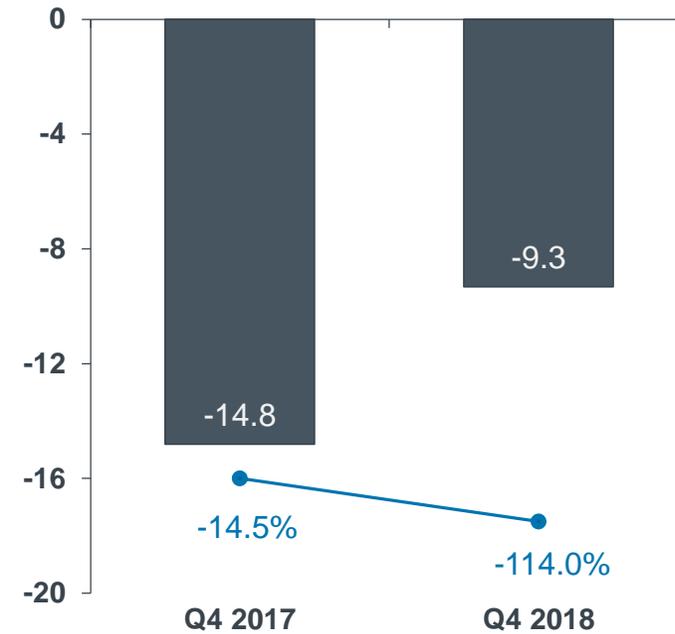
- FY 2018 result due to major impact of USD convertible bond option component valuation effects
- Q4 2018 reflects increased debt and balance sheet revaluation effects

Tax expense

USDm, tax rate: % of result before tax (PBT)



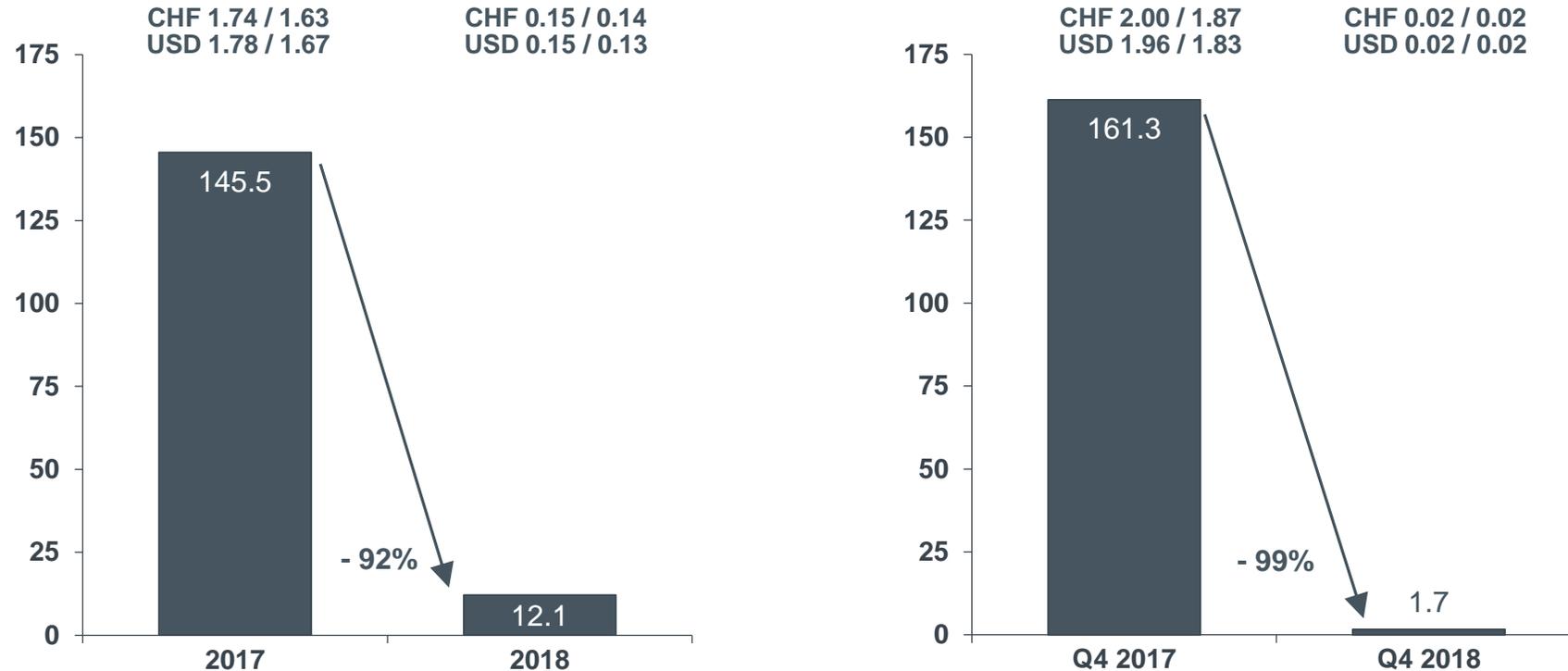
Tax rate



- Negative tax expense 2018 predominantly due to unwinding of historic tax structure and released tax provisions

Net income / earnings per share

USDm, earnings per share (EPS) in CHF and USD (basic/diluted), adjusted¹⁾



- Adjusted net income significantly impacted by considerable valuation effect of option element of USD convertible
- Net income reported: FY 2018 USD 106.6m, Q4 2018 USD 1.1m
- EPS reported (basic/diluted): 2018 CHF 1.34/0.72, USD 1.14/0.61, Q4 2018 CHF 0.01/0.01, USD 0.01/0.01

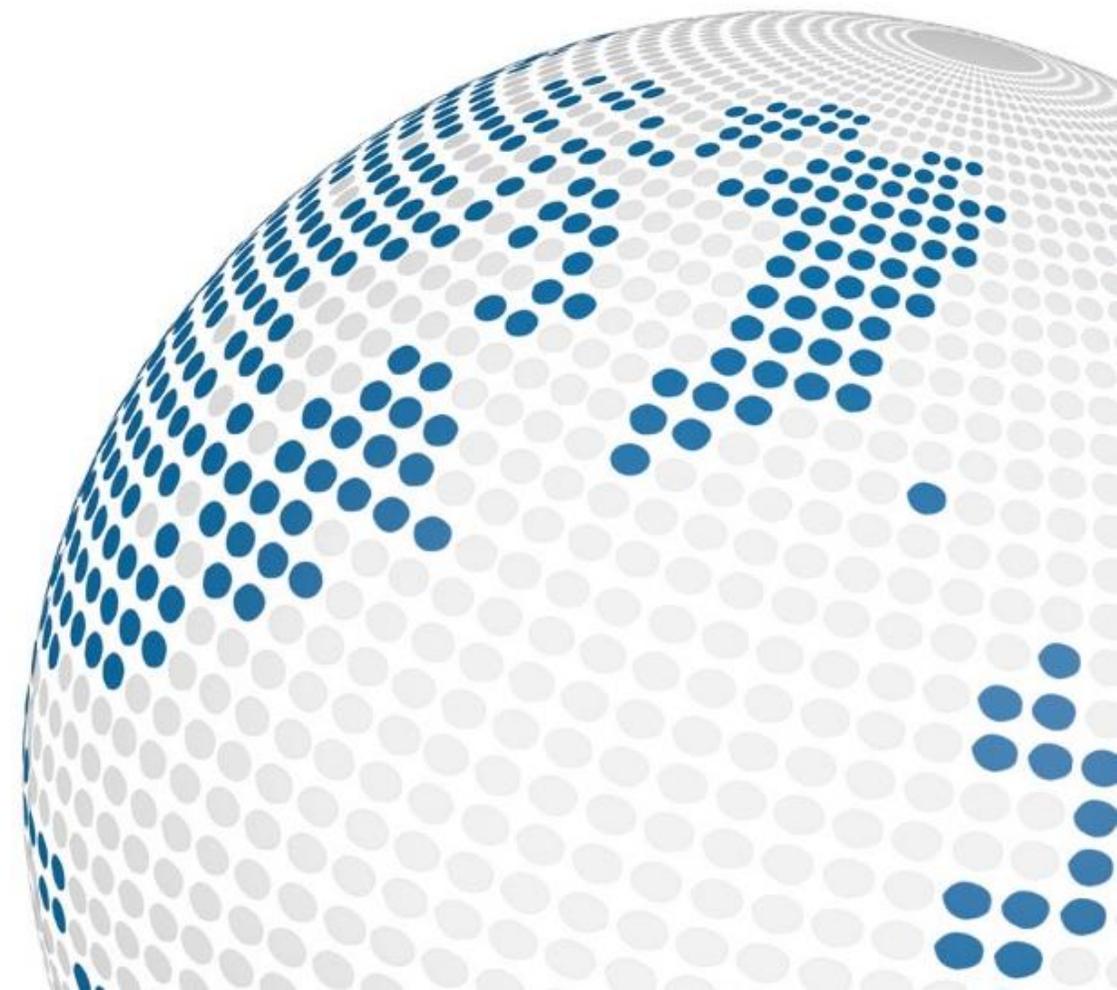
¹⁾ Excl. valuation effect of the option element of the issued USD convertible bond

Financial results

P&L

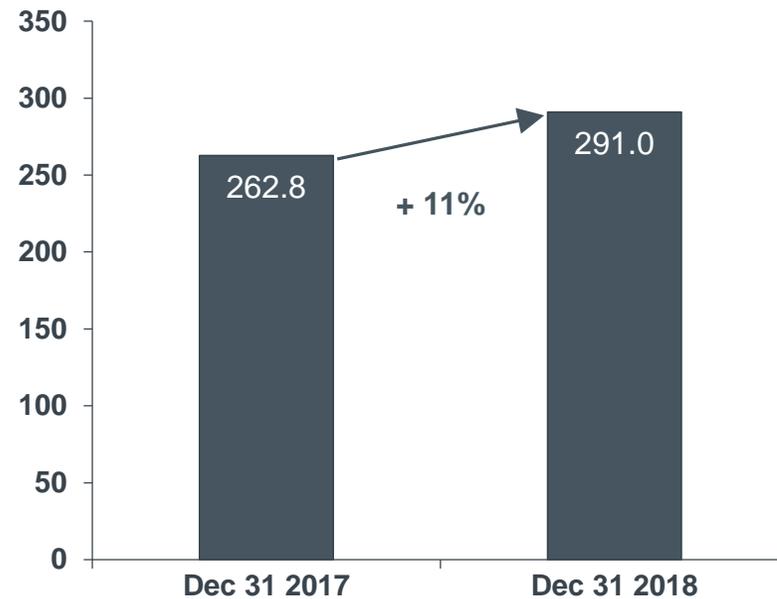
Balance sheet

Cash flow



Working capital

USDm



Working capital at year-end

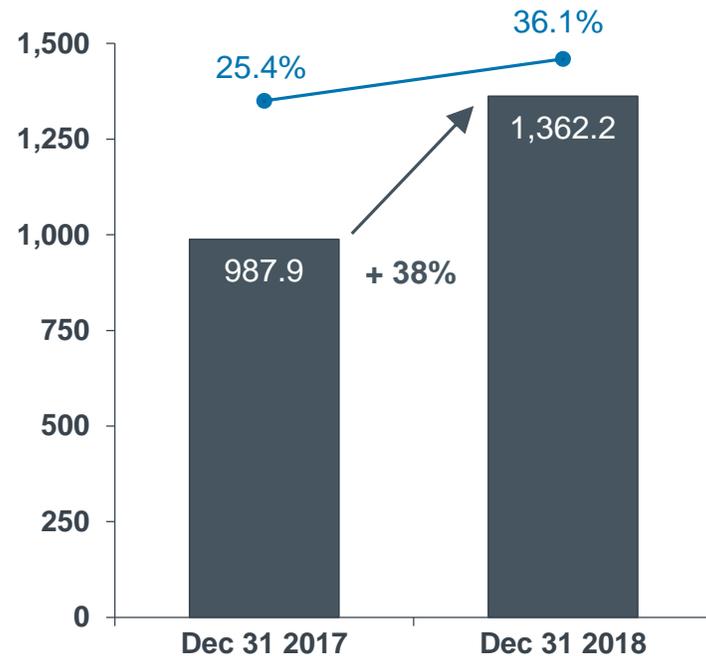
	2018	2017
Trade receivables	138.1	325.0
+ Inventories	353.6	289.7
- Trade liabilities	200.7	351.8
Working capital	291.0	262.8
in % of revenues	18%	22%

- Positive working capital management in light of strong business growth
- Inventories includes year-end 2018 effects from current demand environment

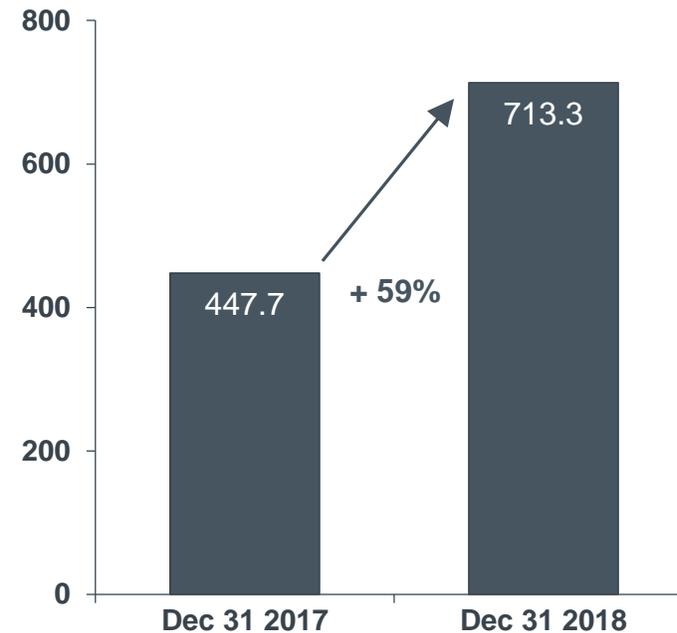
Net debt, cash and short-term investments

USDm, % of total liabilities

Net debt, equity ratio



Cash and short-term investments



Equity ratio

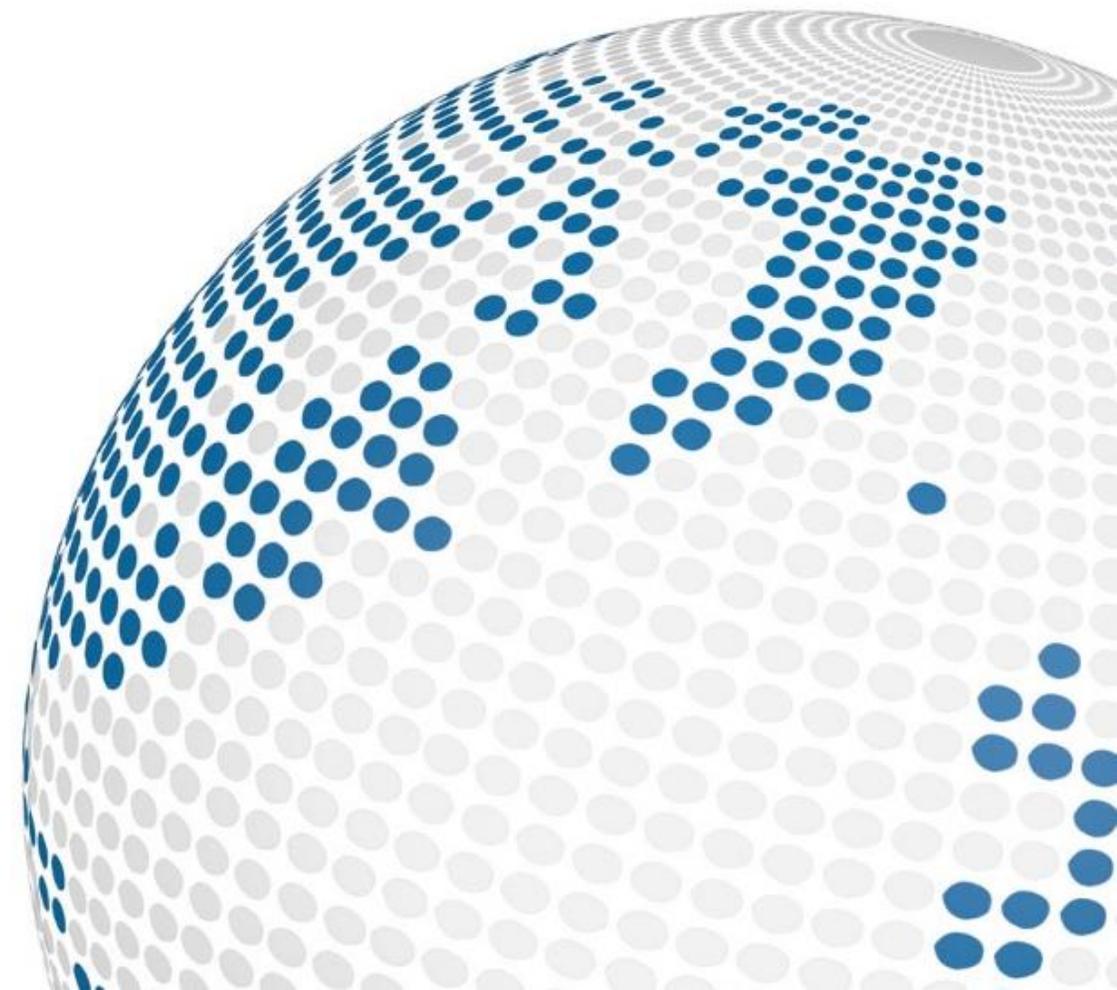
- Net debt increase in 2018 largely driven by convertible bond and further capacity investments in Singapore
- Increase in cash and cash equivalents reflects strong H2 cash generation and lower H2 CAPEX

Financial results

P&L

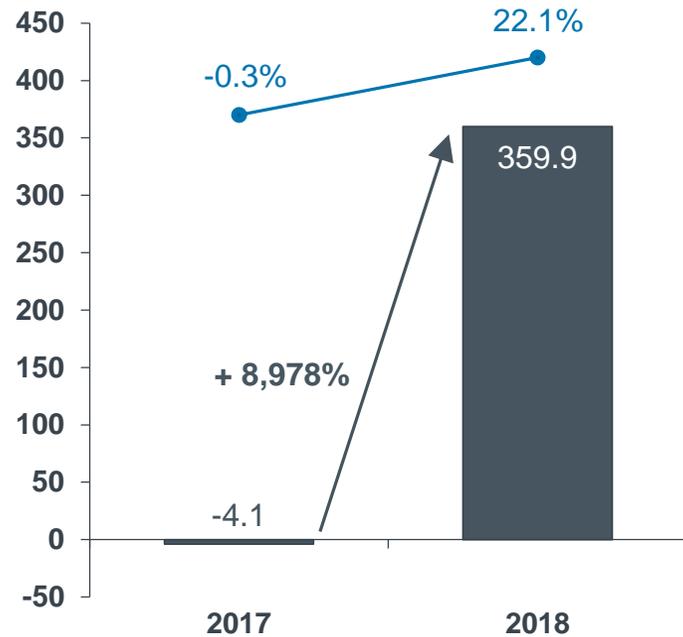
Balance sheet

Cash flow

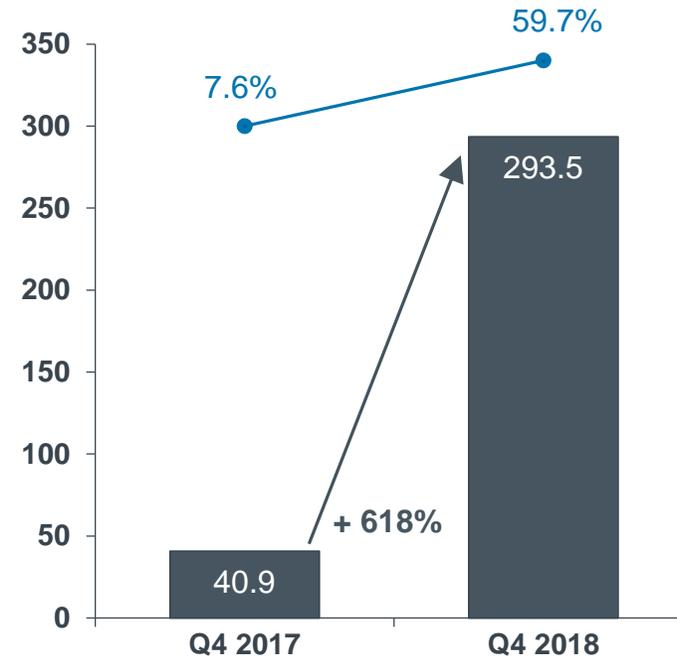


Cash flow from operations

USDm, % of revenues



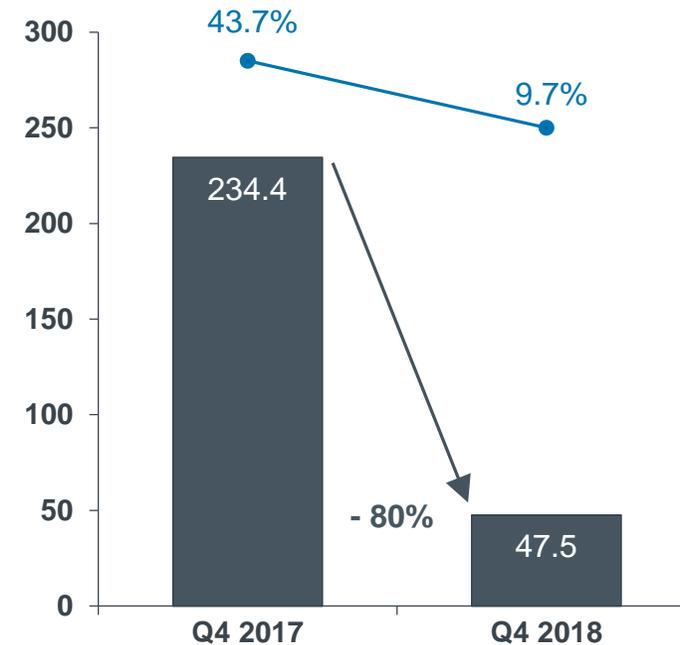
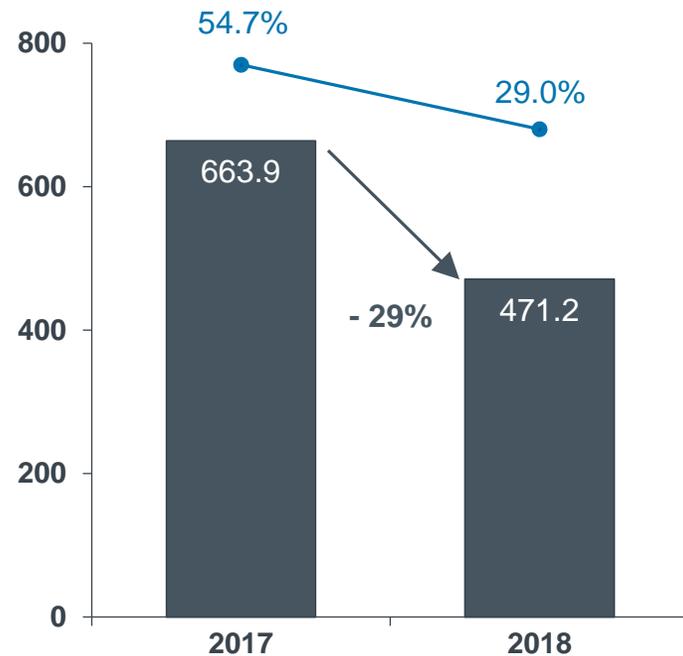
Cash flow as % of revenues



- Positive cash flow development for FY 2018
- Strong Q4 2018 cash flow helped by lower CAPEX, high Q4 2018 free cash flow of USD 226m

Capital expenditures

USDm, % of revenues – Acquisition of intangibles, property, plant and equipment

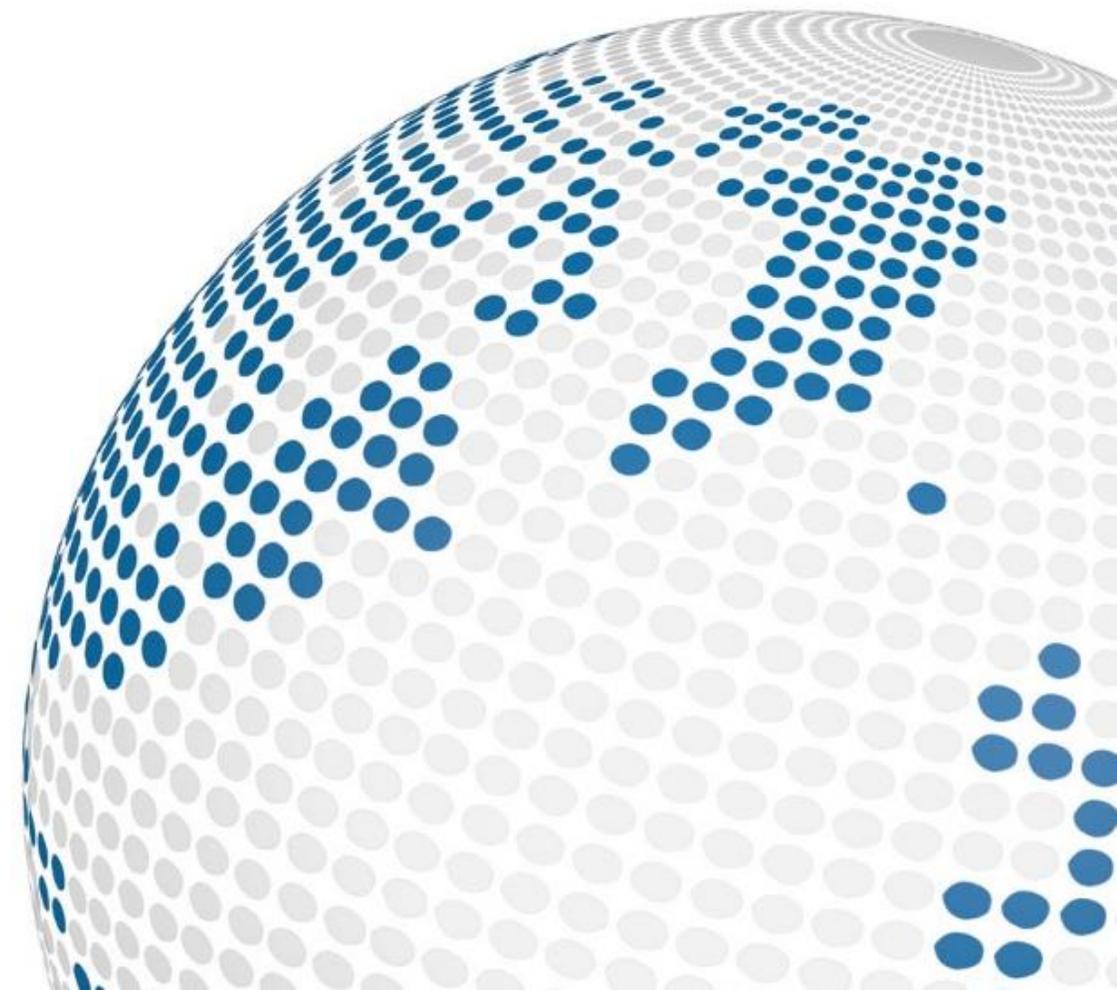


Capital expenditures as % of revenues

- High 2018 capital expenditures to expand production capacity predominantly at Singapore sites
- Q4 2018 reflects expected slowdown of CAPEX as significant investment cycle is completed

Company highlights

Shaping the world with sensor solutions



Outlook

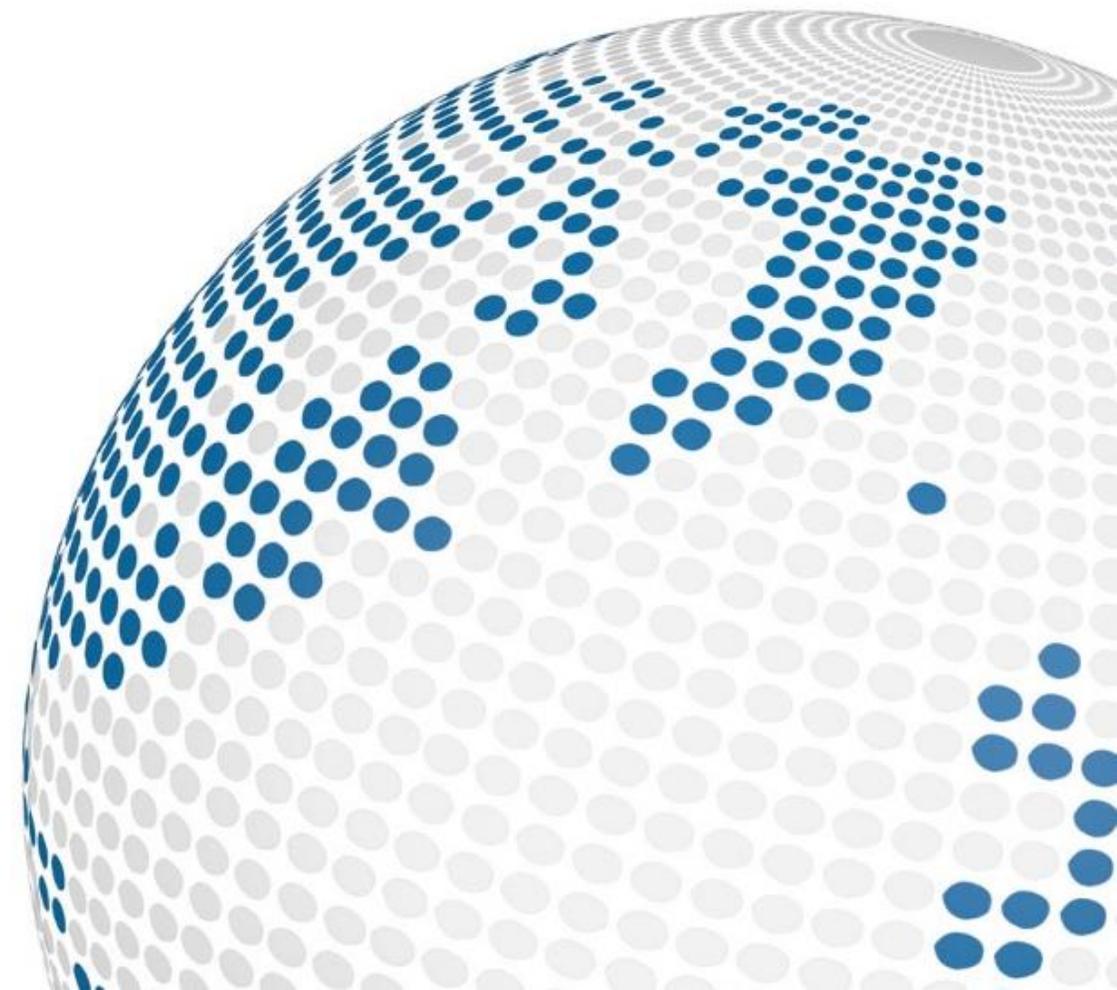
Q1 2019 outlook

- Revenues expected to reflect the current more unfavorable end market environment and subdued smartphone demand in addition to characteristic first quarter consumer market seasonality
- Expected first quarter revenues of USD 350-390 million based on available information
- Driven by lower expected production volumes in the consumer business in the first quarter, adjusted operating (EBIT) margin expected in the low single-digit percentage range
- Experiencing growing end market volatility, customer performance that is becoming more difficult to anticipate, and ongoing uncertainty regarding end market demand trends, industry development, and the macro-economic environment
- Decision to continue to provide detailed guidance for the relevant upcoming quarter going forward and discontinue other numerical guidance

ams highlights

- Successful strategy to drive clear leadership in three strategic sensing areas: optical, imaging, audio
- Addressing sensing megatrends through ongoing R&D investments as basis for longer-term growth
- Key success factors: differentiation, innovation, high performance and “solution play” capabilities
- Focused on building diversified business in consumer and non-consumer markets
- Major investment cycle completed in 2018, significantly lower capex expected for 2019 and going forward
- Focus on solid financial base and improving balance sheet
- Strongly positioned for long-term profitable growth opportunities in exciting area of technology sector

Appendix



Profit and loss statement

USDm

(IFRS)	2018	2017	Q4 2018	Q4 2017
Total revenues	1,627.4	1,213.7	491.4	536.6
• Products	1,575.4	1,154.9	476.3	522.8
• Foundry	52.0	58.9	15.1	13.9
Gross profit	442.6	467.6	138.3	217.3
• Gross margin (adjusted ¹⁾)	31.7%	43.0%	35.4%	43.5%
• Gross margin (IFRS reported)	27.2%	38.5%	28.2%	40.5%
Research and development	-272.8	- 244.2	-90.6	- 67.3
Selling, general and administrative	-162.1	- 158.9	-38.9	- 46.2
Other operating income/expenses	7.6	22.2	0.2	11.2
Result from operations (EBIT)	14.7	86.6	8.9	114.9
• EBIT margin (adjusted ¹⁾)	8.9%	15.9%	12.6%	27.3%
• EBIT margin (IFRS reported)	0.9%	7.1%	1.8%	21.4%
Net financing costs	89.5	-2.5	-17.1	-12.6
Result before tax	104.2	84.1	-8.2	102.2
Income tax result	2.4	17.1	9.3	14.8
Net result (adjusted ²⁾)	12.1	145.5	1.7	161.3
Net result (IFRS reported)	106.6	101.3	1.1	117.0

¹⁾ Excl. acquisition-related, one-time restructuring 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)	Dec 31, 2018	Dec 31, 2017	Liabilities and equity	Dec 31, 2018	Dec 31, 2017
Cash and short term invest.	713.3	447.7	Interest-bearing debt	251.0	669.1
Trade receivables	138.1	325.0	Trade liabilities	200.7	351.9
Inventories	353.6	289.7	Tax liabilities	18.8	32.1
Other current assets	43.4	88.0	Provisions	92.0	50.7
			Other liabilities	63.4	624.0
Total current assets	1,248.4	1,150.3	Total current liabilities	625.9	1,727.7
Fixed assets	1,376.6	1,137.4	Interest-bearing debt	1,824.5	766.5
Intangible assets	1,393.9	1,348.8	Employee benefits	46.0	45.9
Investments in associates	3.4	2.2	Deferred tax liabilities	74.9	76.5
Deferred tax asset	18.6	29.7	Other liabilities	42.4	159.1
Other non-current assets	8.4	52.7			
Long-term financial assets	40.7	0.0			
Total non-current assets	2,841.6	2,570.8	Total non-current liabilities	1,987.8	1,048.0
			Shareholders' equity	1,476.2	945.5
Total assets	4,090.0	3,721.2	Total liabil. and equity	4,090.0	3,721.2

Cash flow statement

USDm

(IFRS)	2018	2017	Q4 2018	Q4 2017
Result before tax	104.2	84.1	-8.2	102.2
Depreciation	242.6	169.4	68.0	53.1
Cash flow from operations	359.9	-4.1	293.5	40.9
Capital expenditures	-471.2	-663.9	-47.5	-234.4
Cash flow from investing activities	-473.1	-587.4	-46.1	-223.2
Proceeds from borrowings	375.9	785.0	132.5	114.7
Proceeds from issue of convertible bond	698.3	339.9	0.0	0.0
Repayment of debt	-361.6	-172.0	-12.8	0.0
Dividends paid	-31.5	-28.6	0.0	0.0
Changes resulting from capital increase	0.0	0.0	0.0	0.0
Cash flow from financing activities	463.8	784.7	95.2	48.8
Change in cash and cash equivalents (incl. effects of changes in foreign exchange rates)	347.8	166.6	342.1	-136.2
Cash and cash equivalents at end of period	713.3	329.0	713.3	329.0