

Andes Technology Corporation 2017 Q2/H1 Report

Driving Innovations™



Stock #: 6533
2017/08/10

Safe Harbor Notice



Except for the historical information contained herein, the matters addressed in this presentation are forward-looking statements that involve certain risks and uncertainties that could cause actual results to differ materially, including but not limited to weather, impact of competitive products and pricing, industry-wide shifts in the supply and demand for semiconductor products, rapid technology change, semiconductor industry cycle, and general economic conditions.

Except as required by law, Andes undertake no obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

Agenda

- **Operating Results**
- **Product Application**
- **New Products and Ecosystems**
- **Concluding Remarks**

Operating Results

Business Status Overview

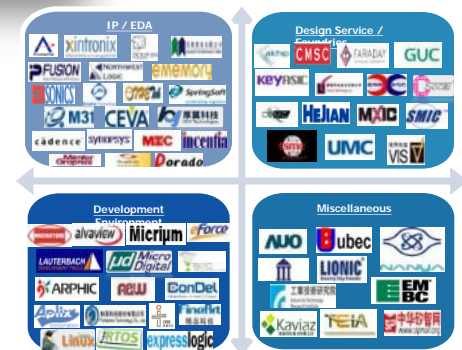
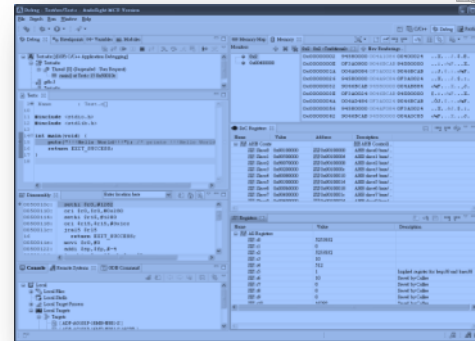


- **>130** commercial licensees
 - Geographically distributed in Taiwan, China, Korea, Japan, Europe, and USA.
 - **>185** license agreements signed

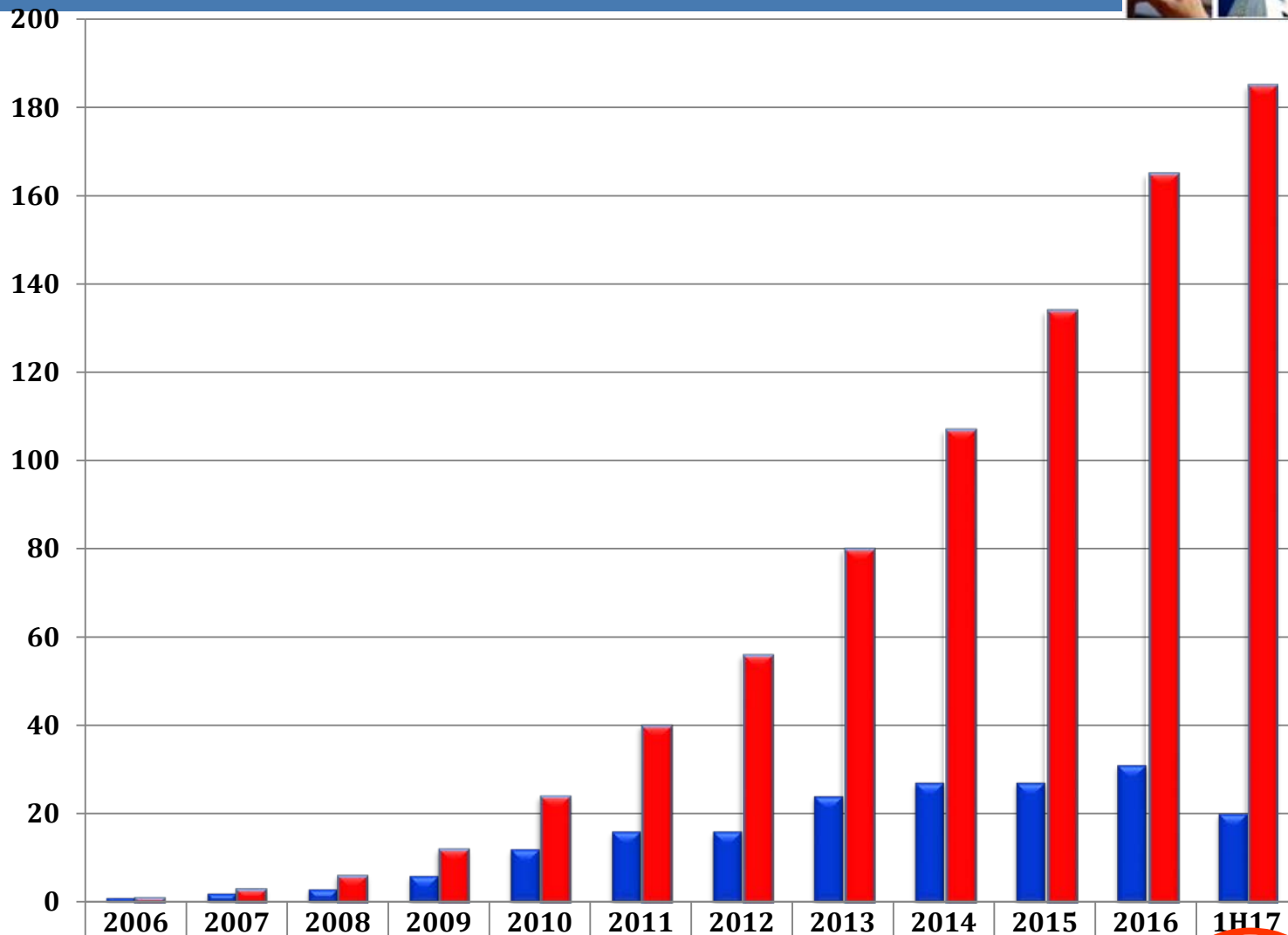
- AndeSight™ IDE:
 - **>10,000** installations

- Eco-system:
 - **>100** partners

- **>2.0B** Accumulative SoC Shipped:
 - (by 2017 Q1 end)



Agreement Growth Analysis

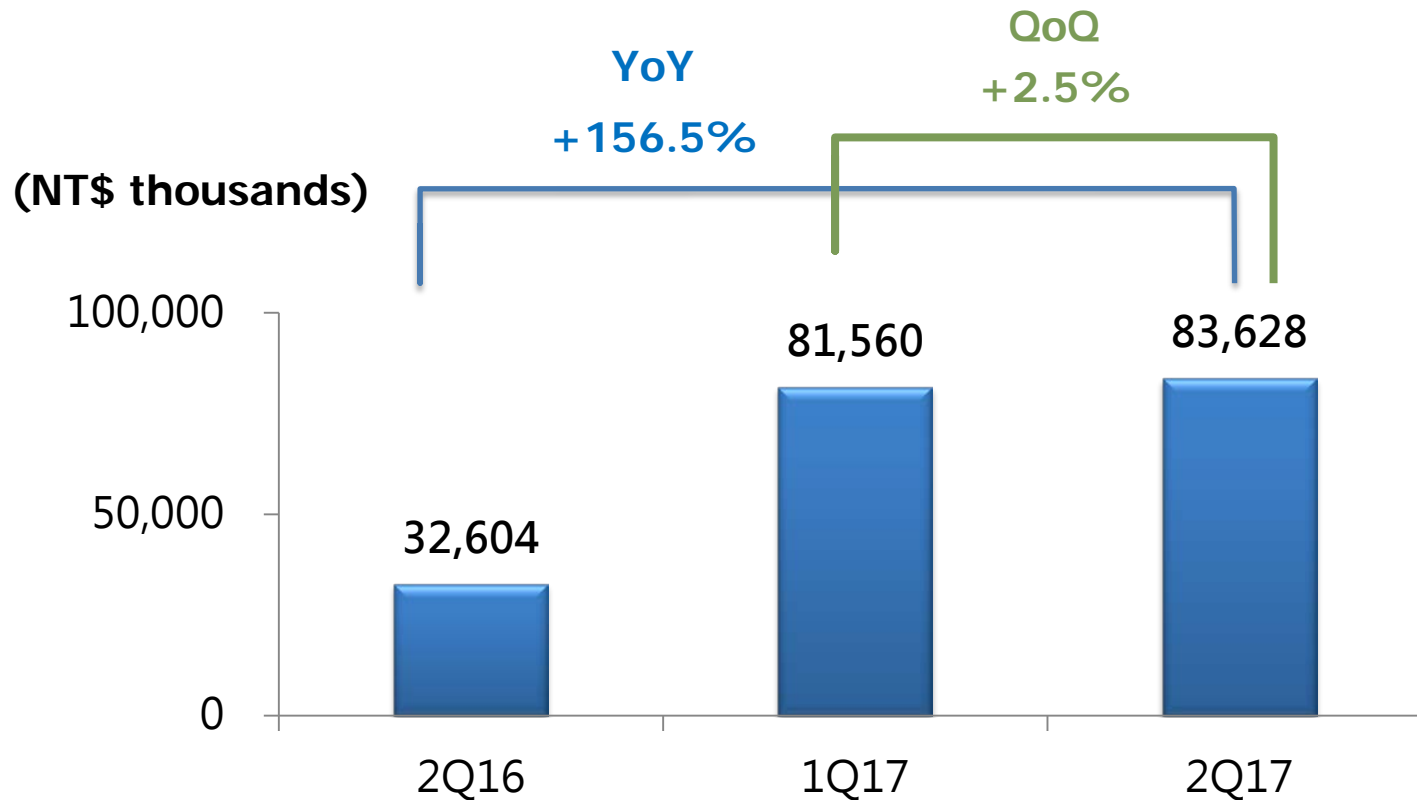


■ IP Agreements	1	2	3	6	12	16	16	24	27	27	31	20
■ Accumulated IP Agreements	1	3	6	12	24	40	56	80	107	134	165	185

Consolidated Revenue



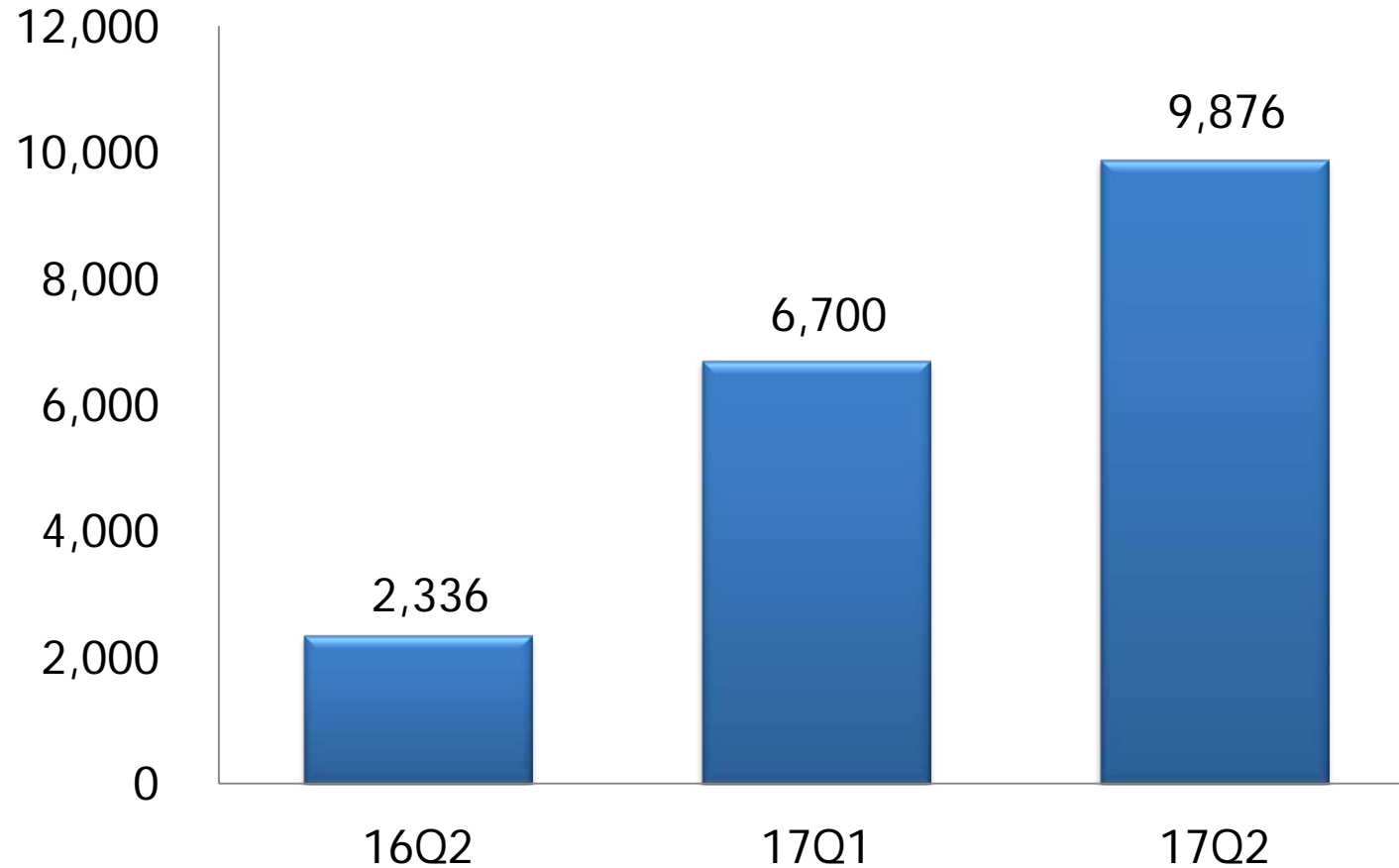
- 2Q17 Revenue: NT\$ 83.6M
- YoY : grew up 156.5%
- QoQ : grew up 2.5%



Consolidated Royalty



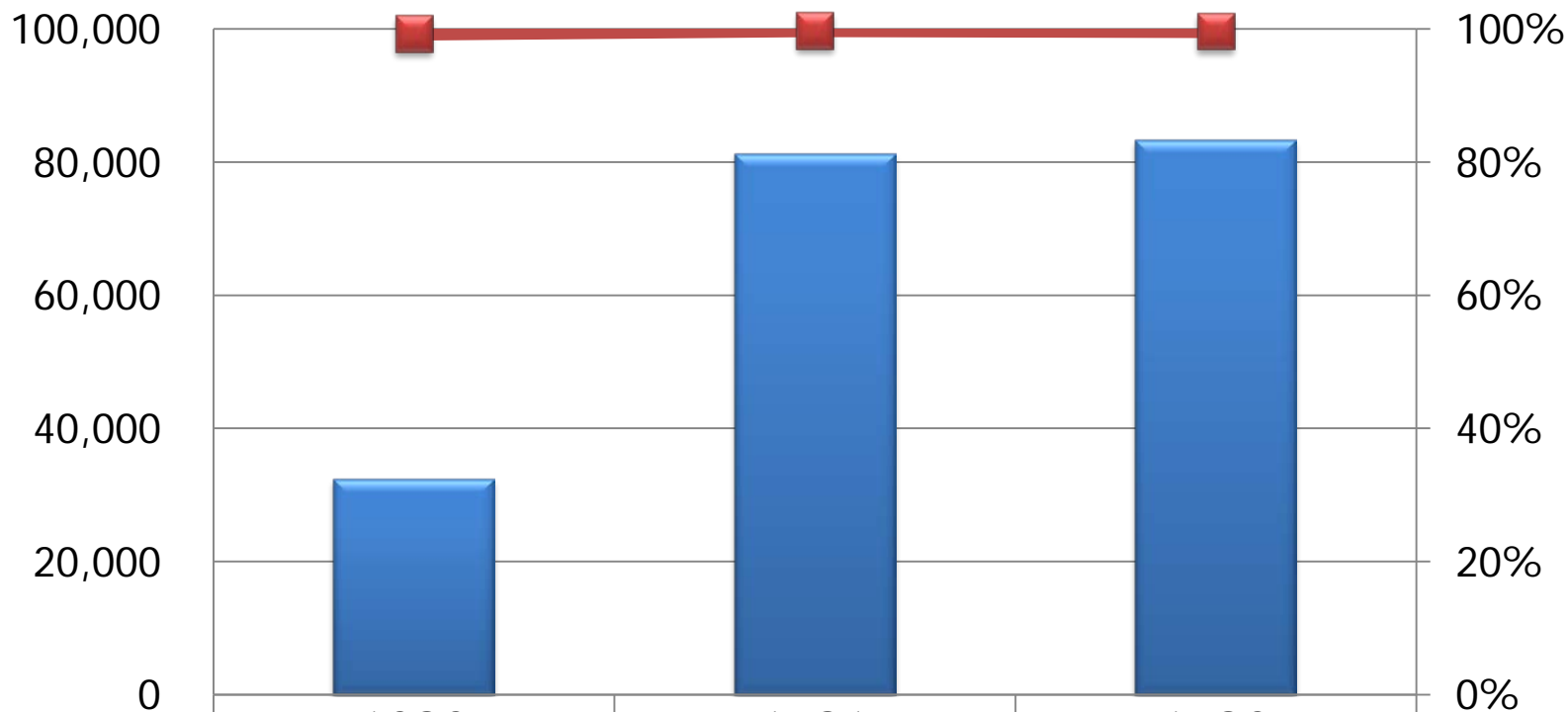
(NT\$ thousands)



Consolidated Gross Margin

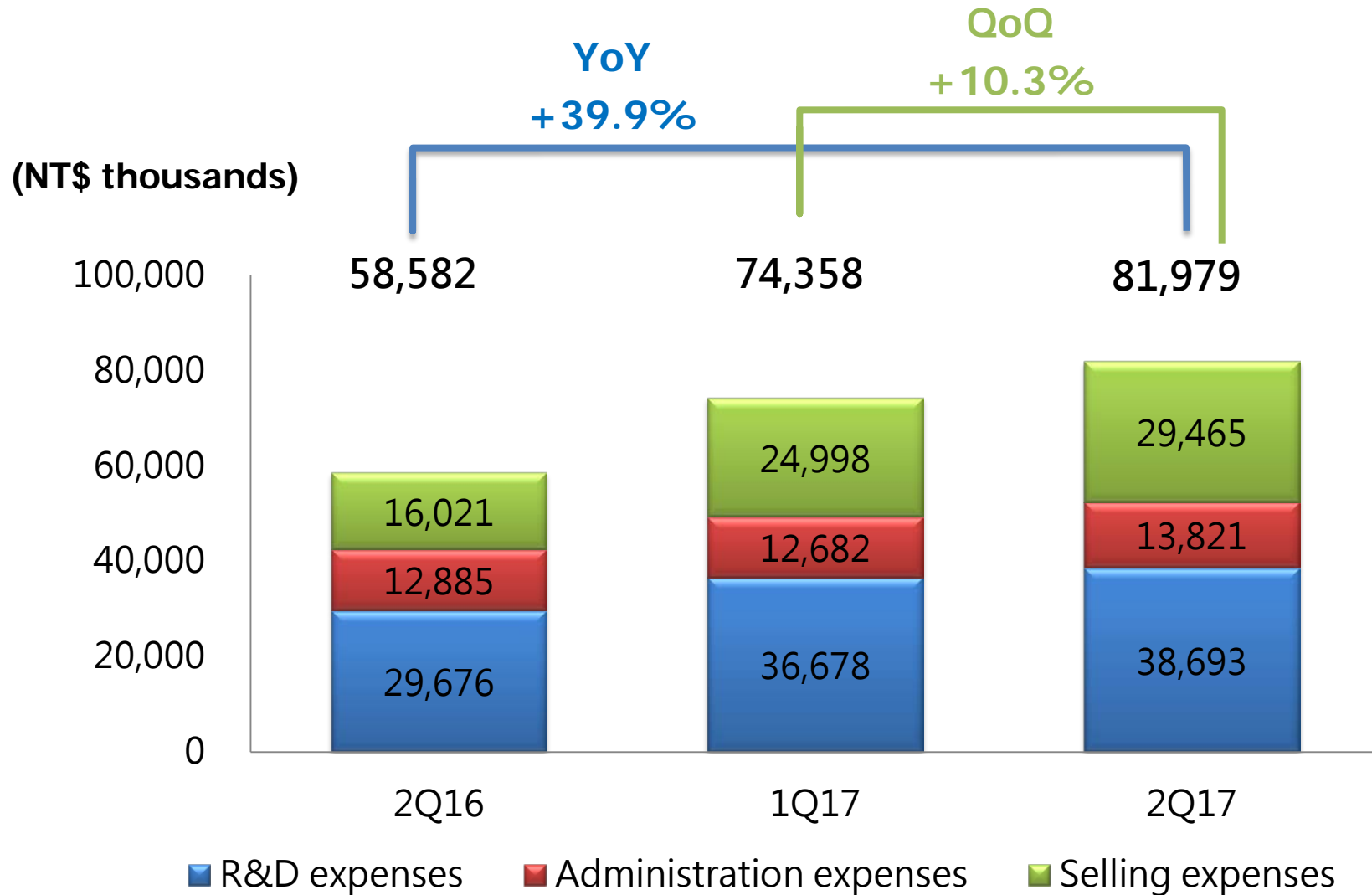


(NT\$ thousands)

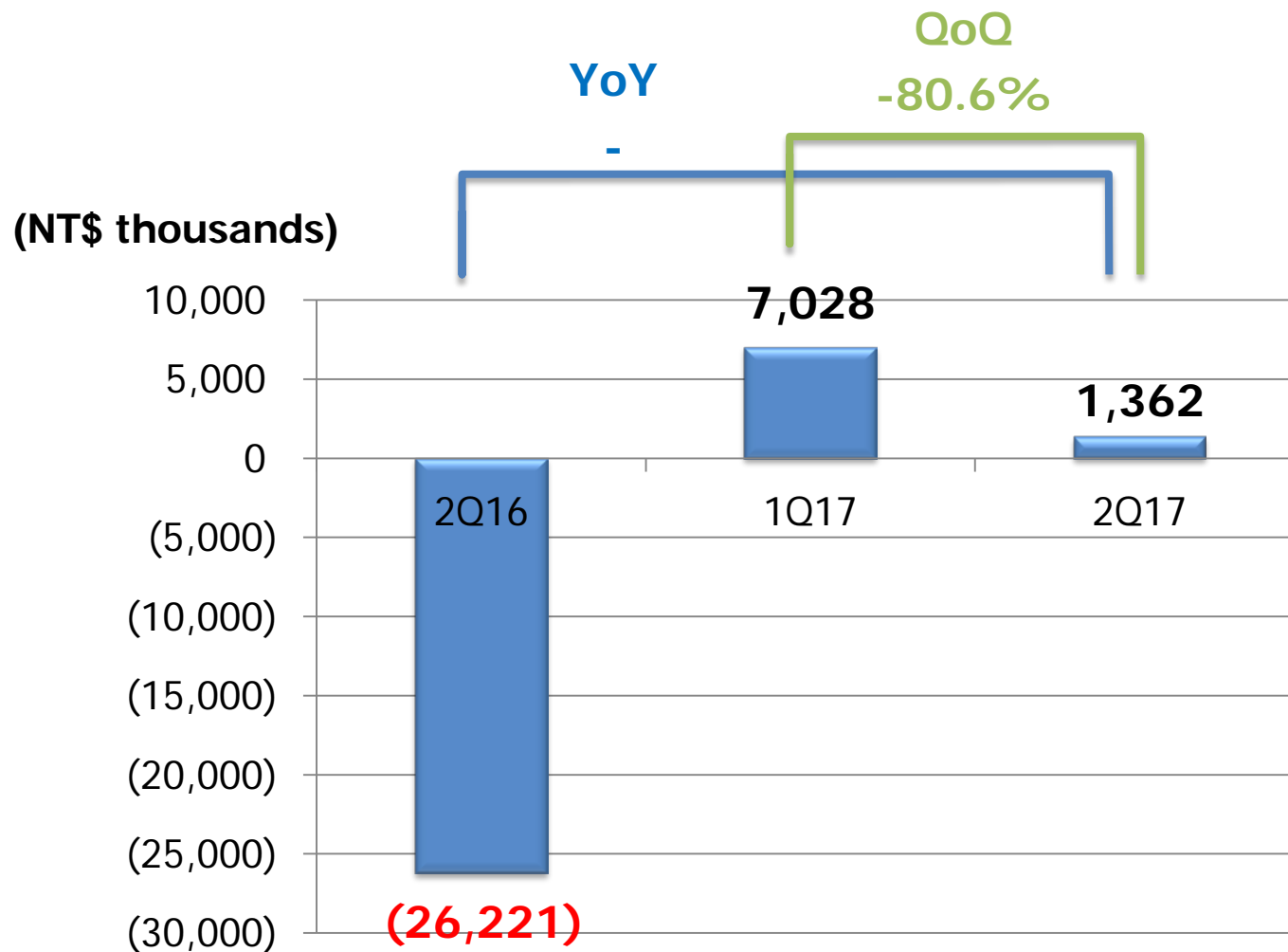


 Gross Profit	32,361	81,386	83,341
 Gross Margin	99.3%	99.8%	99.7%

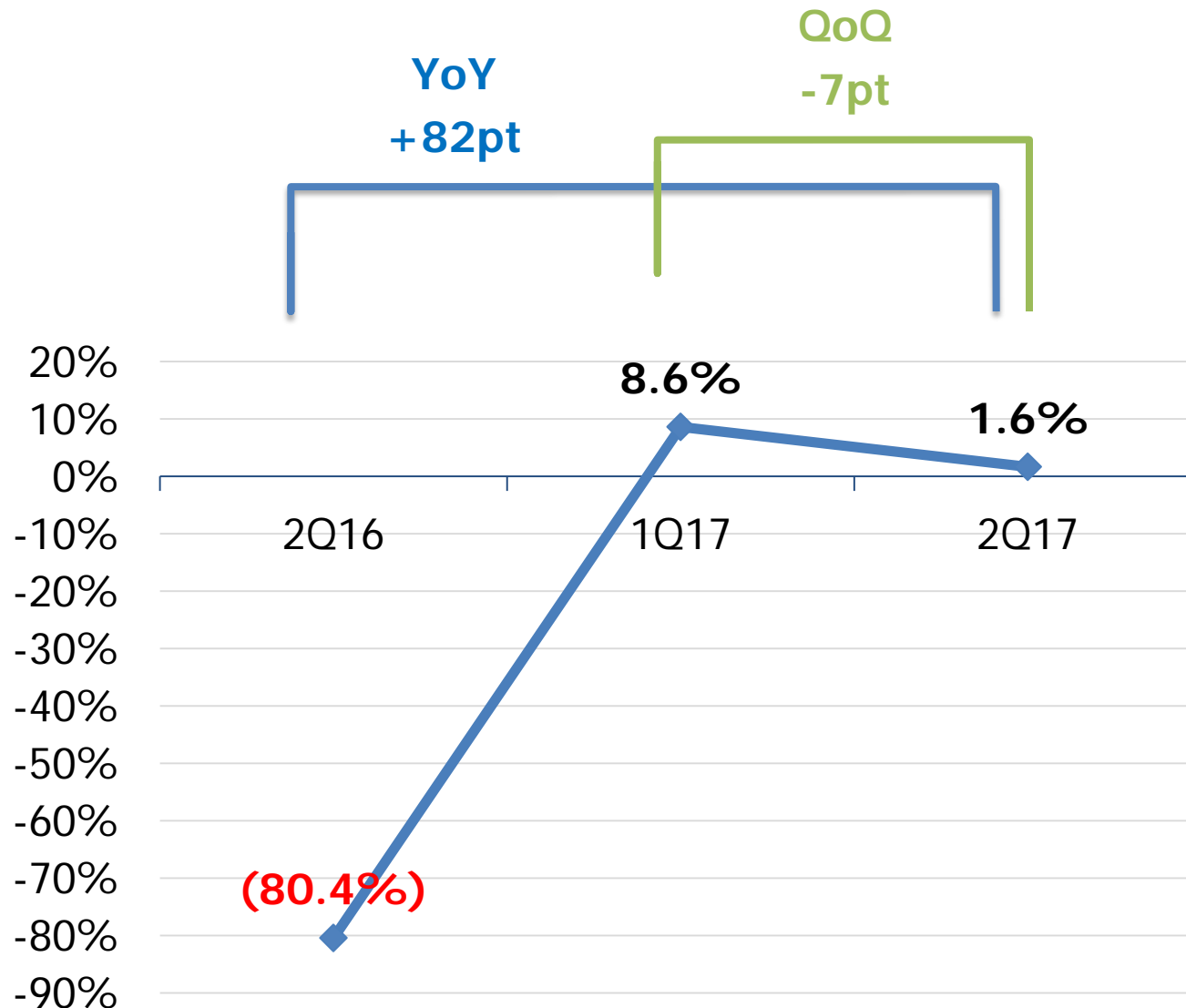
Consolidated Operating Expenses



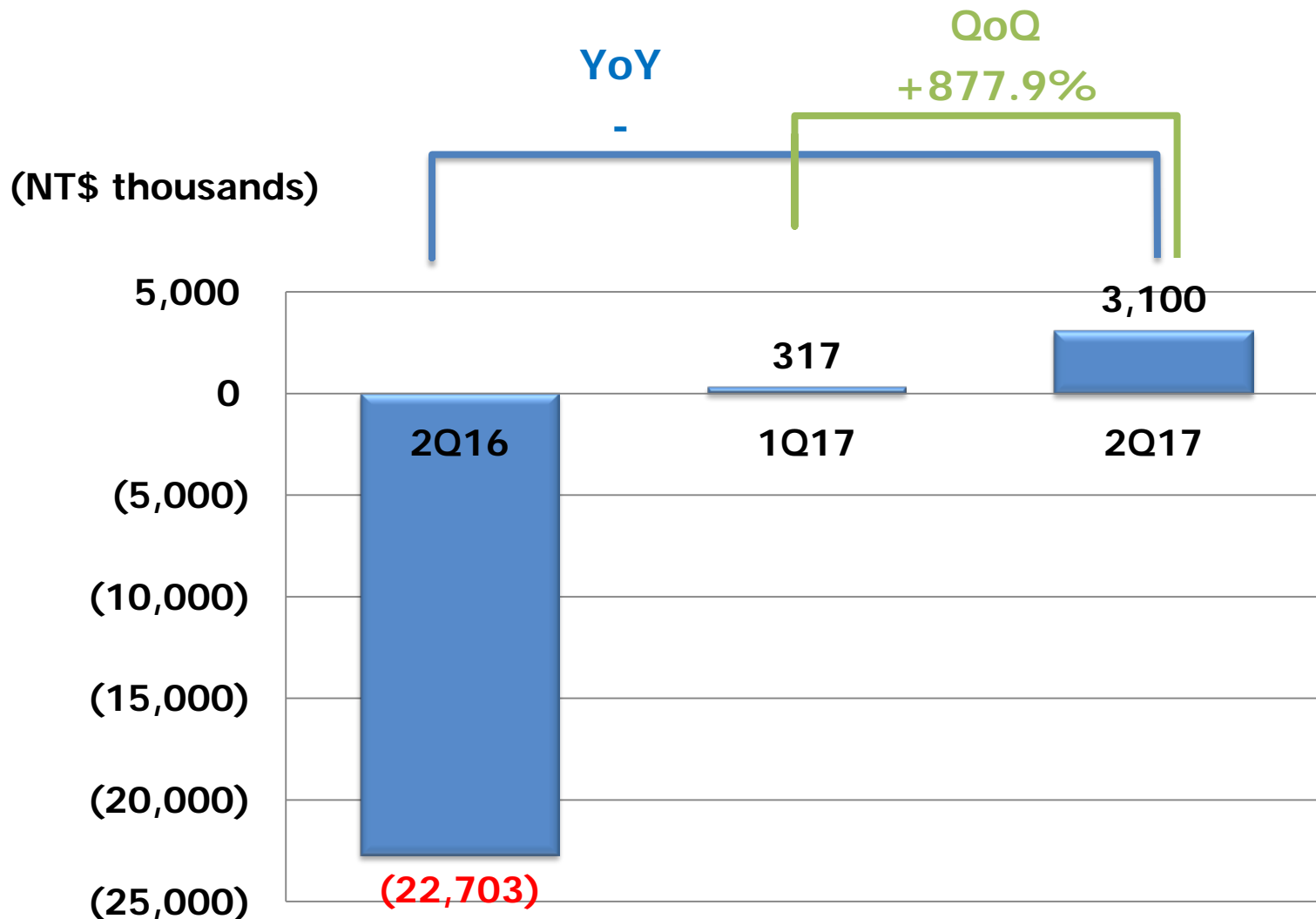
Consolidated Operating Income



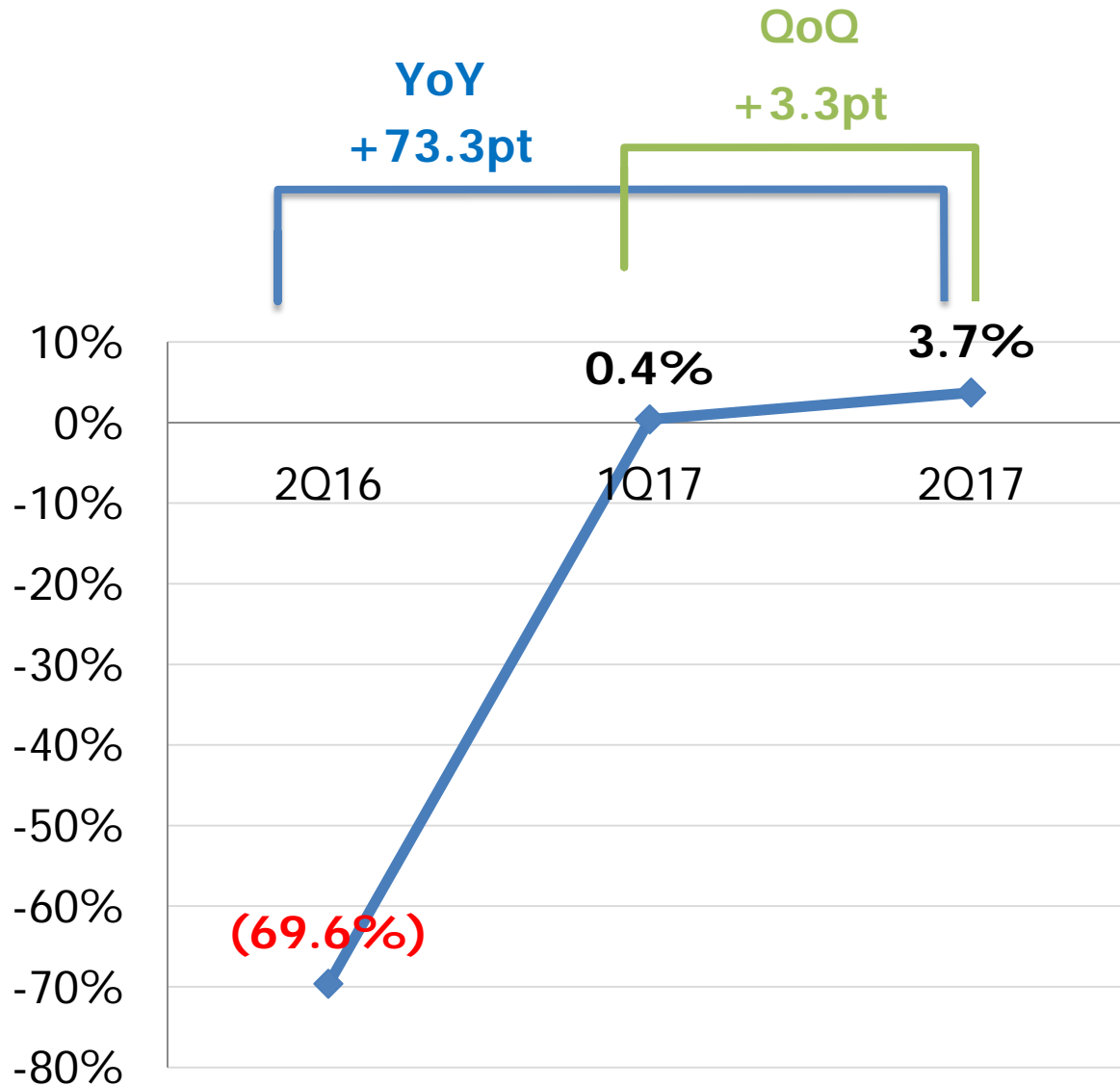
Consolidated Operating Margin



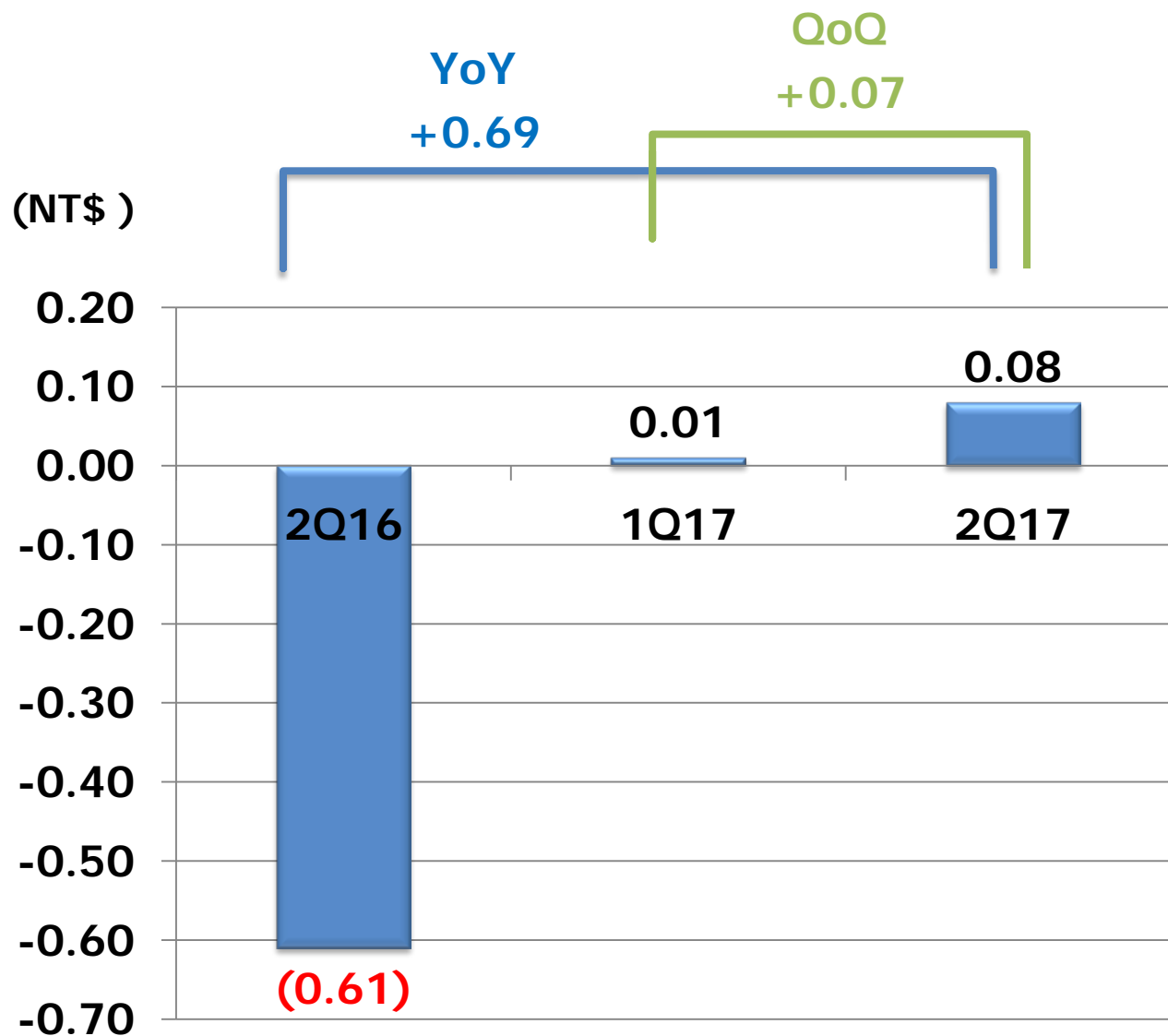
Consolidated Net Income



Consolidated Net Profit Margin



Consolidated Earnings Per Share



Consolidated Income Statement



(In NT\$ thousands, except EPS)	2Q17	1Q17	2Q16	Q-Q	Y-Y
Net Sales	83,628	81,560	32,604	2.5%	156.5%
Operating costs	(287)	(174)	(243)		
Gross Profit	83,341	81,386	32,361	2.4%	157.5%
Selling expenses	(29,465)	(24,998)	(16,021)		
Administration expenses	(13,821)	(12,682)	(12,885)		
R&D expenses	(38,693)	(36,678)	(29,676)		
Operating Expenses	(81,979)	(74,358)	(58,582)		
Operating Income (Loss)	1,362	7,028	(26,221)	(80.6%)	-
Net Non-operating Income	2,281	(5,977)	4,121		
Net Income Before Income Tax	3,643	1,051	(22,100)		
Income tax expense	(543)	(734)	(603)		
Net Income (Loss)	3,100	317	(22,703)	877.9%	-
EPS (NT\$)	0.08	0.01	(0.61)		

Supplemental Information: Percentage of Revenue



	2Q17	1Q17	2Q16
Gross profit	99.66%	99.79%	99.26%
Selling expenses	(35.23%)	(30.65%)	(49.14%)
Administration expenses	(16.53%)	(15.55%)	(39.52%)
R&D expenses	(46.27%)	(44.97%)	(91.02%)
Operating profit	1.63%	8.62%	(80.42%)
Non-operating income	2.73%	(7.33%)	12.64%
Income tax expense	(0.65%)	(0.90%)	(1.85%)
Net profit	3.71%	0.39%	(69.63%)

Balance Sheet Summary



(In NT\$ thousands)	2017/6/30	2017/3/31	2016/6/30
Cash & Financial assets-current	1,102,512	1,068,507	773,128
Accounts & Notes receivable	63,650	84,879	32,091
Inventories	1,388	1,334	1,213
Other current assets	3,728	7,351	4,202
Property, plant and equipment	2,765	1,801	618
Intangible assets	141	160	568
Other non-current assets	1,135	1,379	1,062
Total assets	1,175,319	1,165,411	812,882
Accounts & Notes payable	115	164	627
Other current liabilities	39,355	32,181	23,002
Total equity	1,135,849	1,133,066	789,253

Note: Numbers do not add up due to rounding.

Cash Flow Statement

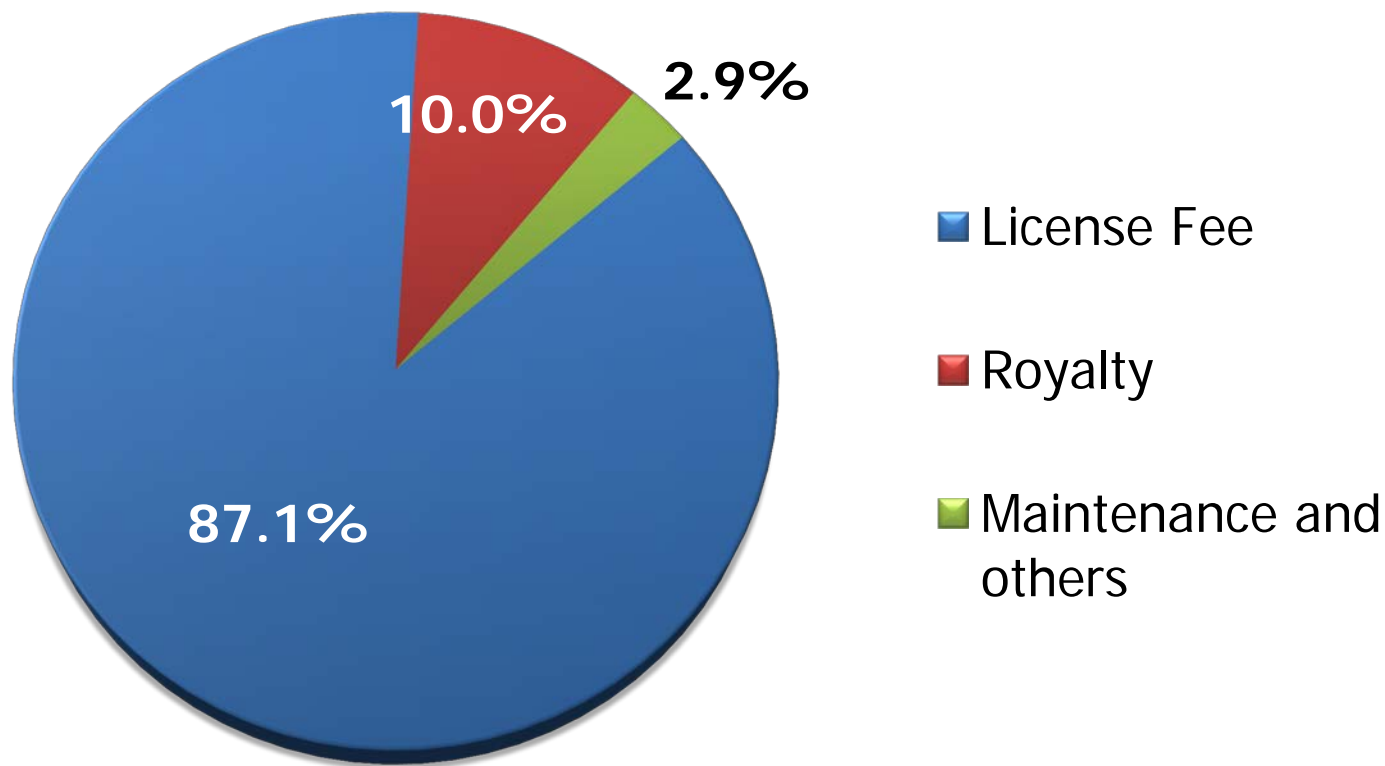


(In NT\$ thousands)	2Q17	1Q17	2Q16
Net cash provided by (used in) operating activities	18,573	(15,500)	(28,294)
Net cash used in investing activities	(550,845)	(280,753)	(309)
Net cash provided by financing activities	329,912	329,912	1,351
Effect of changes in exchange rate on cash and cash equivalents	(1,066)	(1,090)	(300)
Net increase (decrease) in cash and cash equivalents	(203,426)	32,569	(27,552)
Cash and cash equivalents at the end of the period	552,512	788,507	773,128

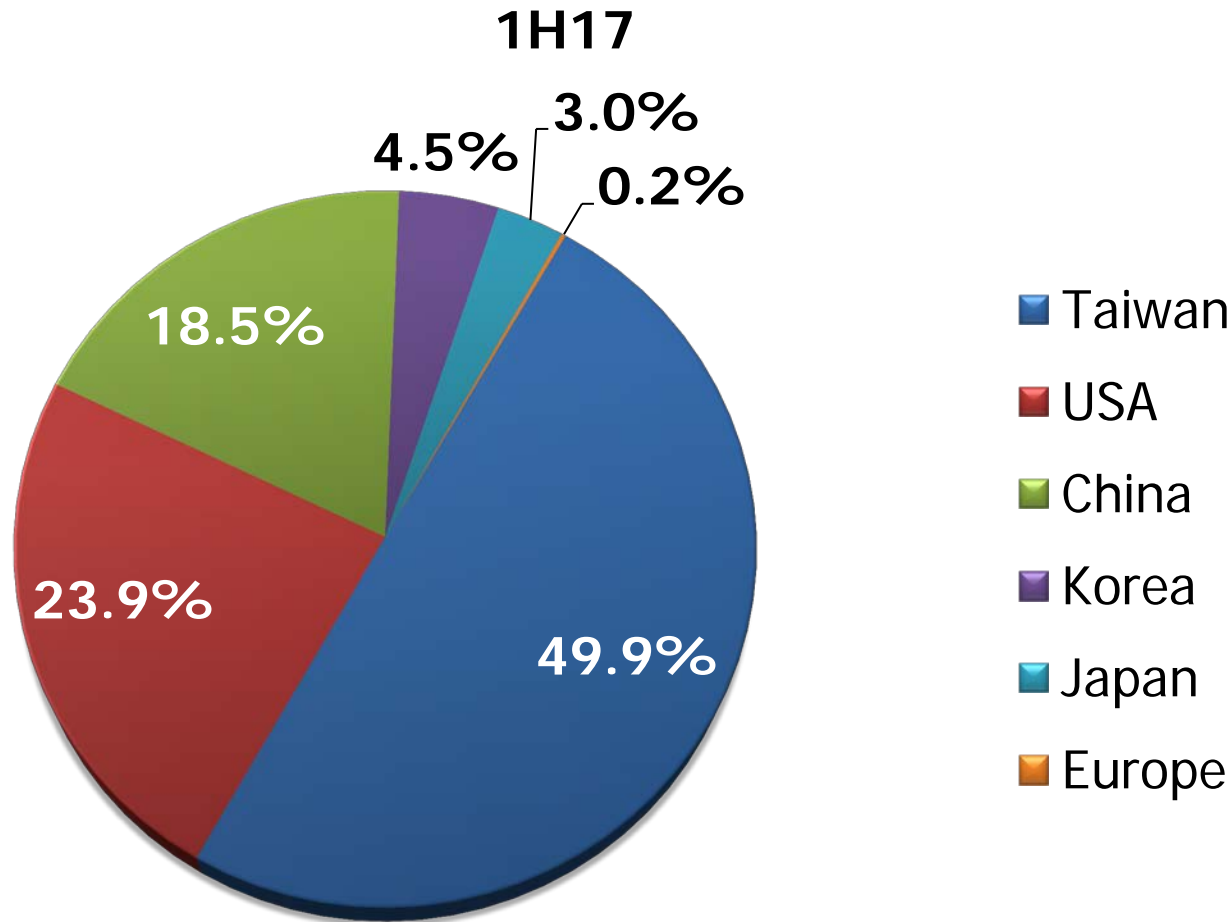
Revenue Analysis by Payment Model



1H17



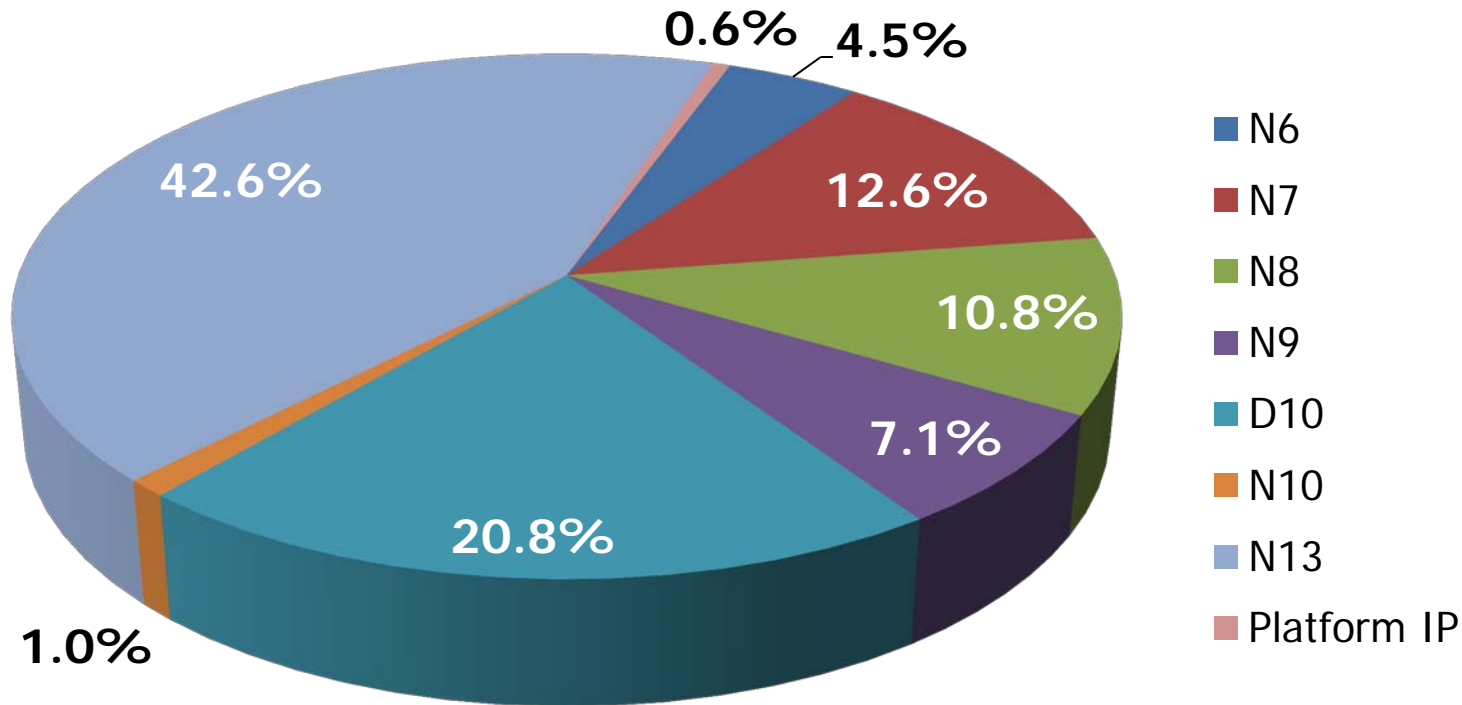
Revenue Analysis by Region



Revenue Analysis by Product

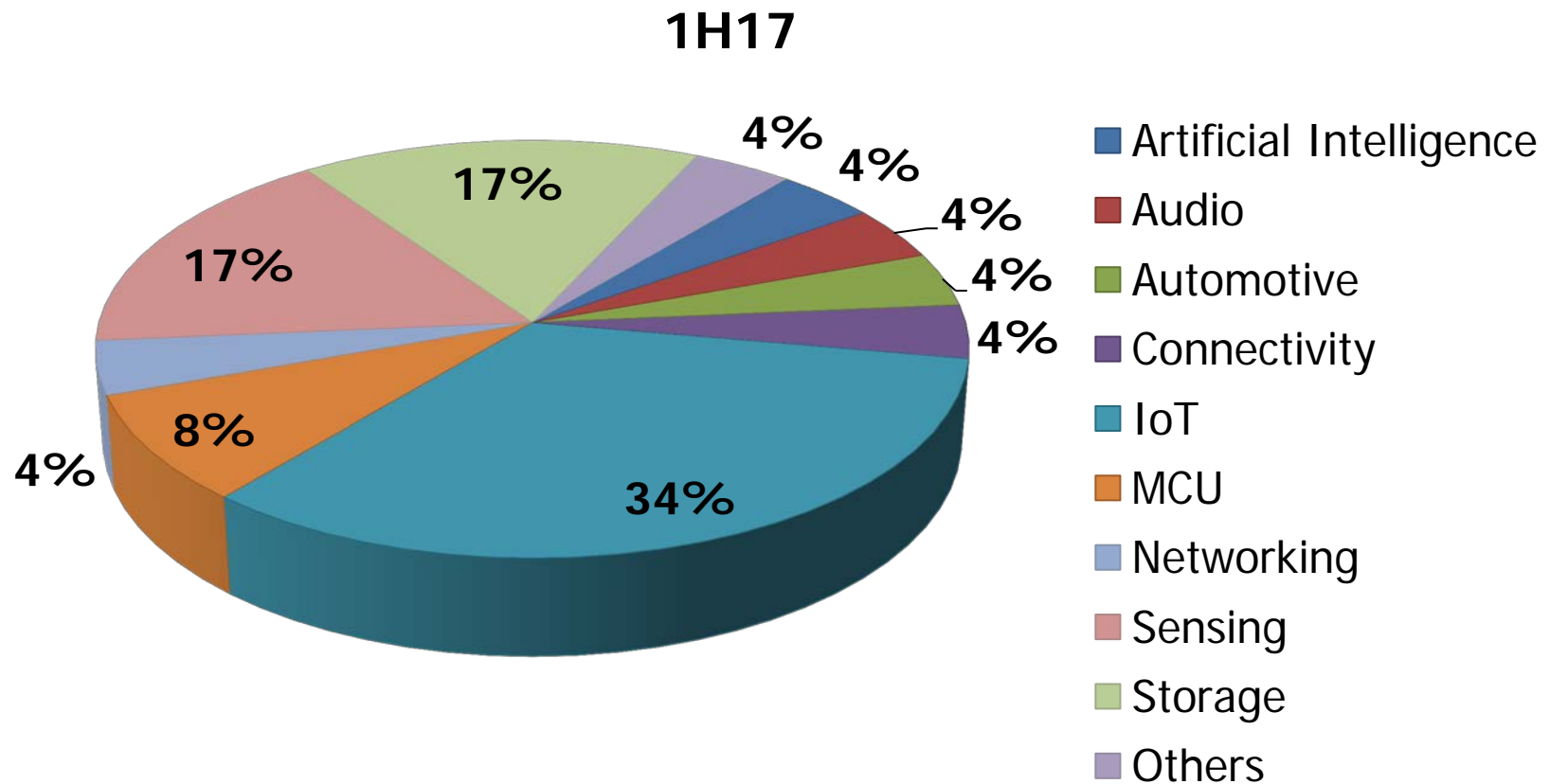


1H17



*Based on revenue

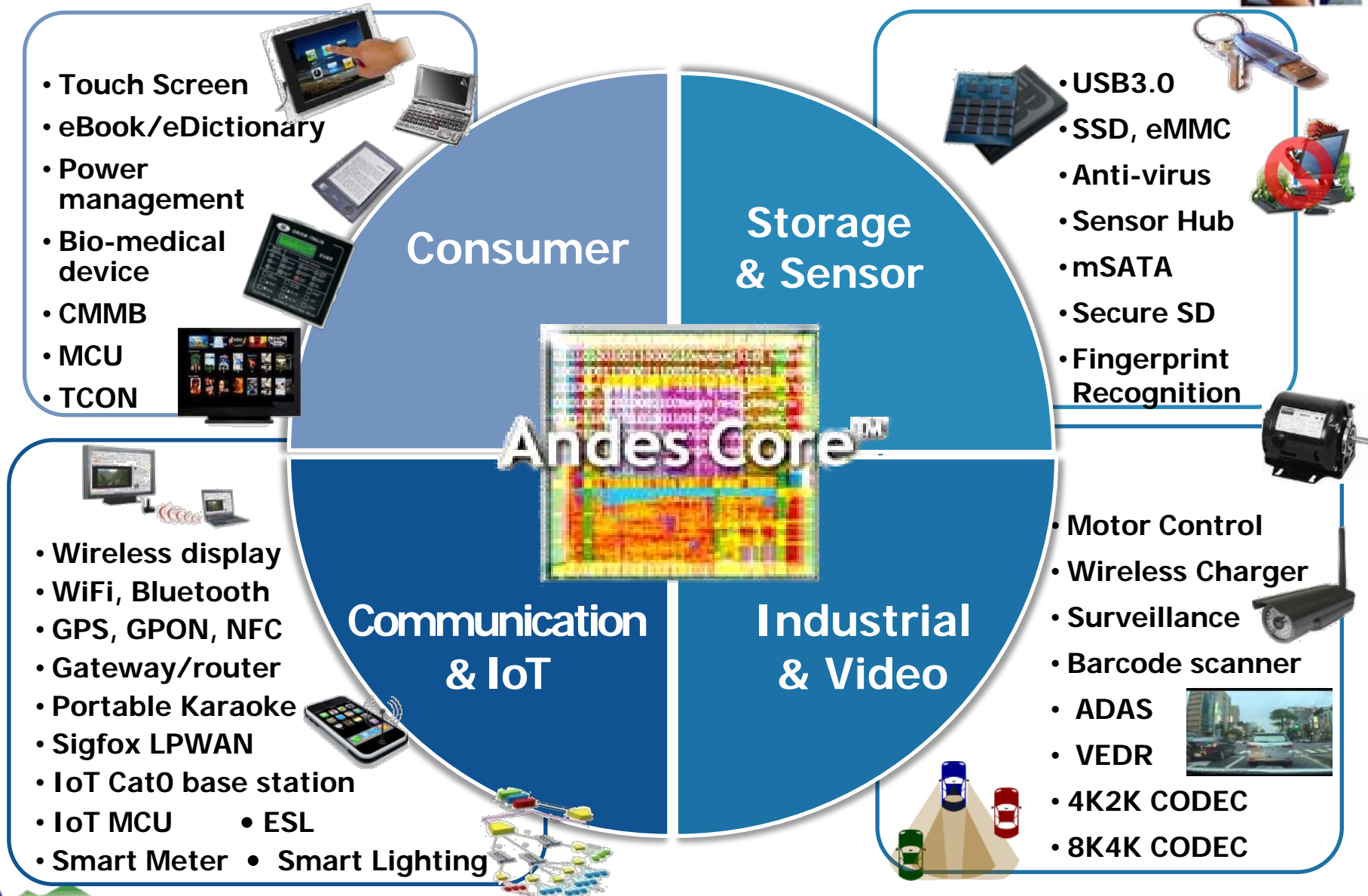
Application Analysis



*Based on agreement number

Product Application

Rich Customers' Applications



IoT Application -1



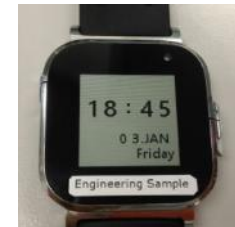
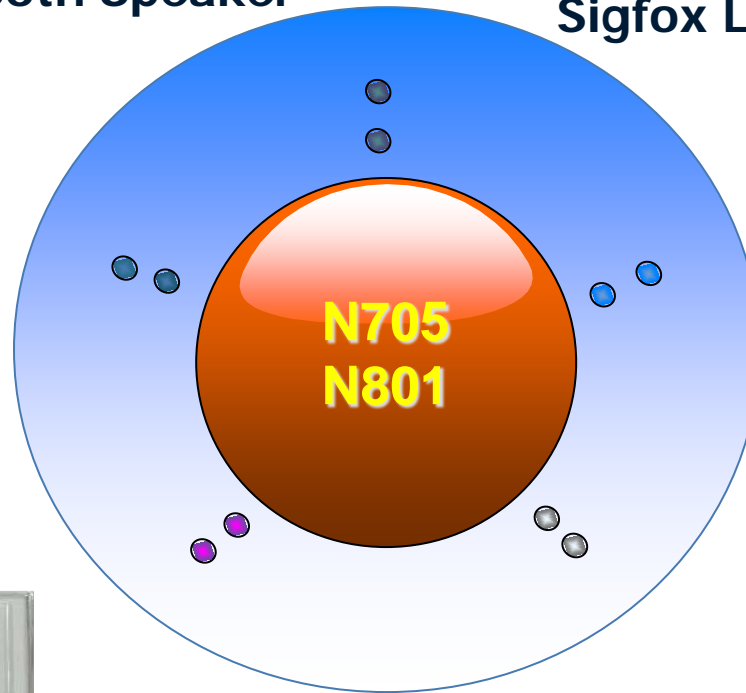
Bluetooth Speaker



Sigfox LPWAN



Healthcare device



Wearable device



Electronic price tags



Sensor Hub

IoT Application -2



Automotive Applications



◆ N1337

- ◆ Calibration of AVM (Around View Monitoring) in NISSAN New X-Trial



Andes Core™

◆ N1068A

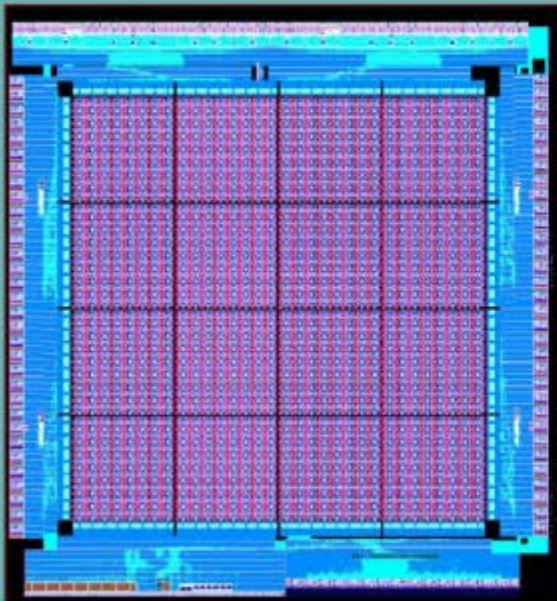
- ◆ CAR Event Recorder
- ◆ ADAS



AI Application 1: DPU



Dataflow Processing Unit (DPU) Architecture



16ff CMOS Process Node	16K Processors, 8192 DPU Arithmetic Units	Self-timed, MPP Synchronization
181 Peak Tera-Ops	16 MB Distributed Data Memory	8 MB Distributed Instruction Memory
1.71 TB/s I/O Bandwidth	270 GB/s Peak Memory Bandwidth	2048 Outstanding Memory Requests
4 Billion 16-Byte Random Access Transfers/s	4 Hybrid Memory Cube Interfaces	2 DDR4 Interfaces
PCIe Gen3 16-lane Host interface	32-b Andes N9 MCU	1 MB program store for paging
Hardware engine for fast loading of AES encrypted programs	32 Dynamic Reconfiguration Zones	Variable fabric dimensions (user programmable at boot)

ANDES
TECHNOLOGY

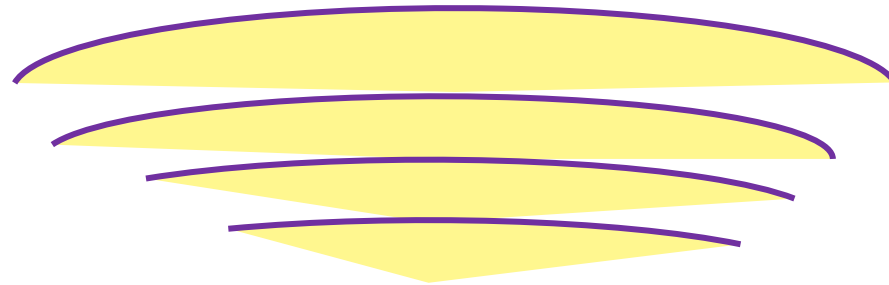
N9 Based AI SoC

AI Application 2: Intelligent Assistant



World tier one on-line retailer
deployed AI edge device (home
entertainment assistant) 2nd
generation with N9 embedded

N9 Based SoC

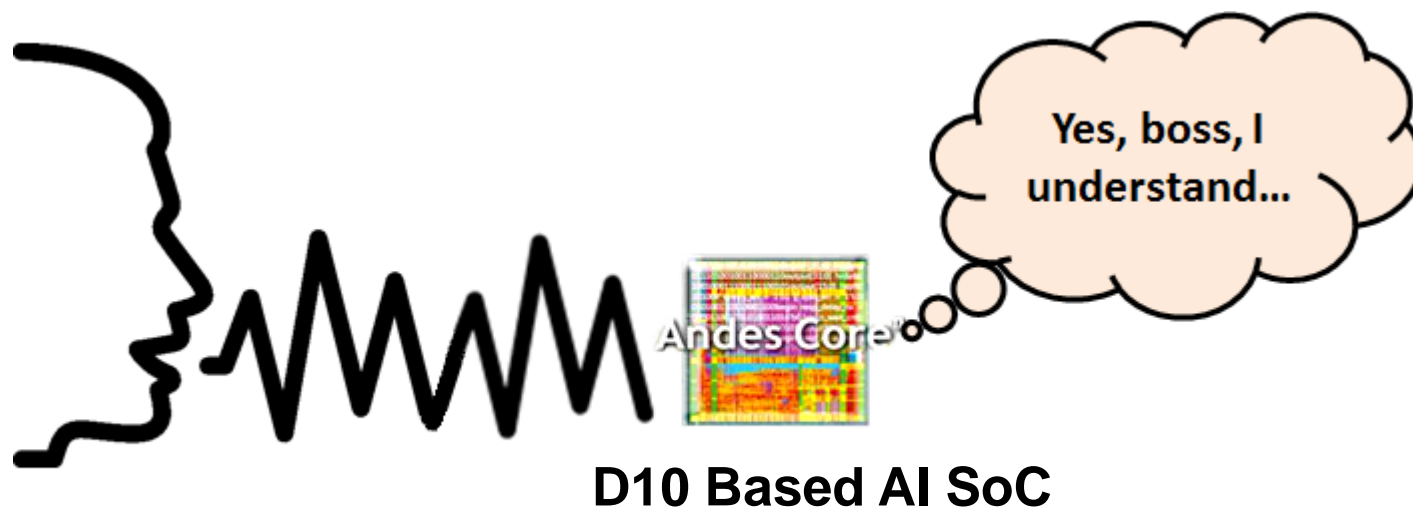


SoC for WiFi
in AI edge
device

Ai Application 3: Voice Recognition



- ❖ Example of AI SoC Andes customer is designing



Emerging Applications



❖ AI

- Deep Learning

❖ Next generation TV

❖ Network Engine

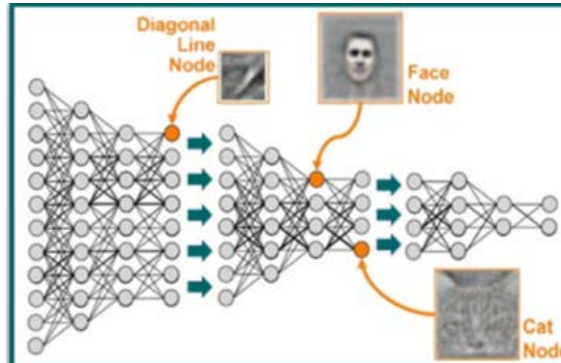
- Router

❖ Drone

❖ Robot

❖ ...

❖ Many new applications are emerging



16K Processors,
8192 DPU Arithmetic Units

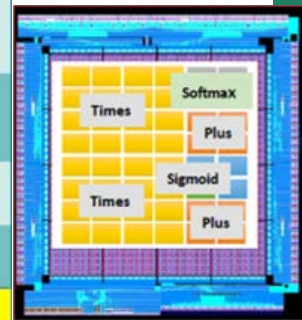
16 MB Distributed
Data Memory

270 GB/s Peak
Memory Bandwidth

4 Hybrid Memory
Cube Interfaces

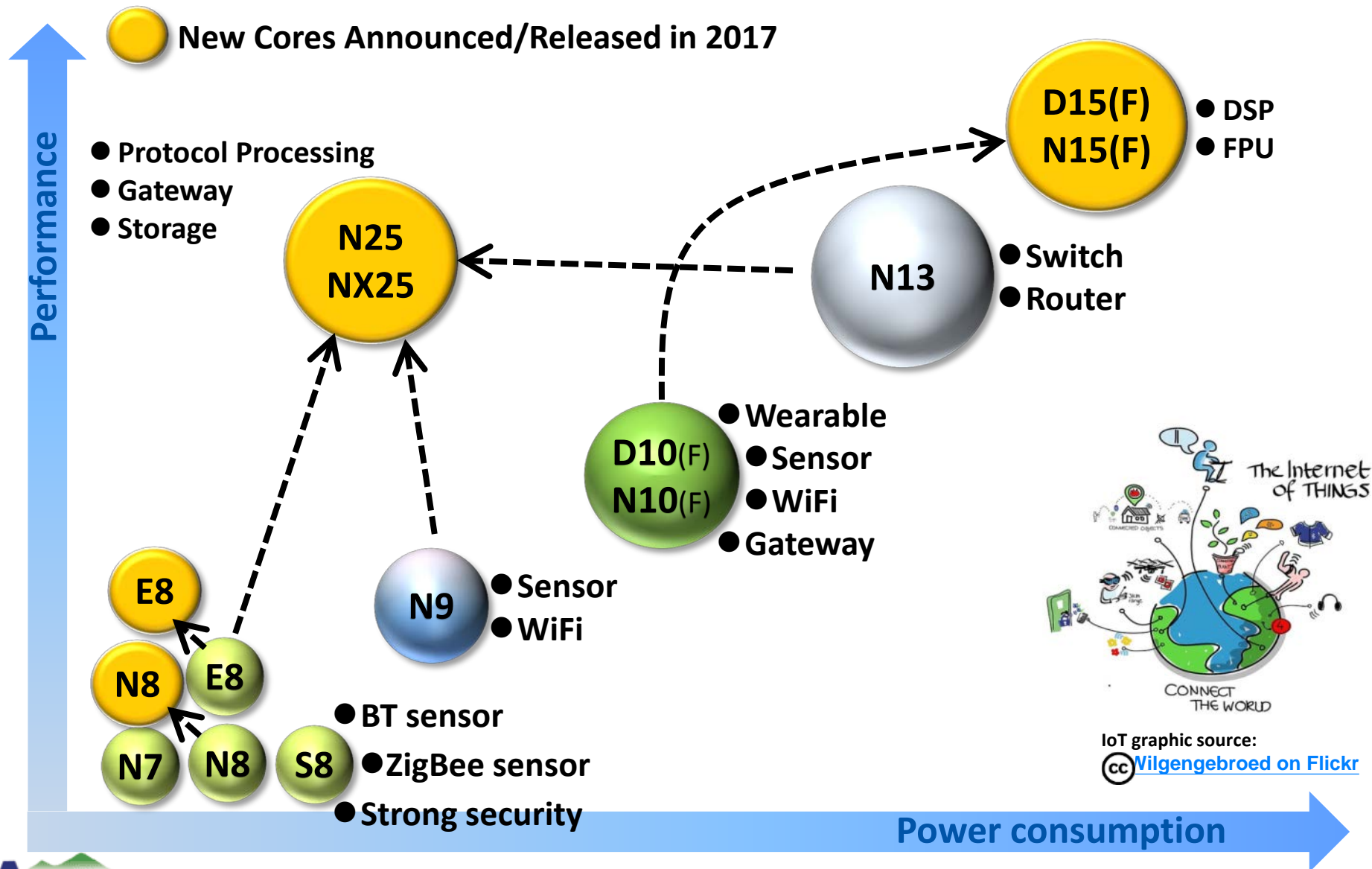
32-b Andes N9 MCU

32 Dynamic Reconfiguration
Zones



New Products and Ecosystems

New AndesCore™ Revealed in 2017



- 
- knectme™**



Concluding Remarks

There Are Much Andes Could Do

- ▶ Andes kept growth in 2017 H1
- ▶ Andes effort in providing products and ecosystem for IoT application has been recognized
- ▶ Three Factors AI Technology Evolve so Fast
 - Deep Learning Algorithm
 - Data Amount (Big data)
 - Accelerator (GPU, DSP, CPU, AIPU)

Deep Learning + Accelerator => AI Processor

Thank You!



Andes Core™

www.andestech.com

Q&A