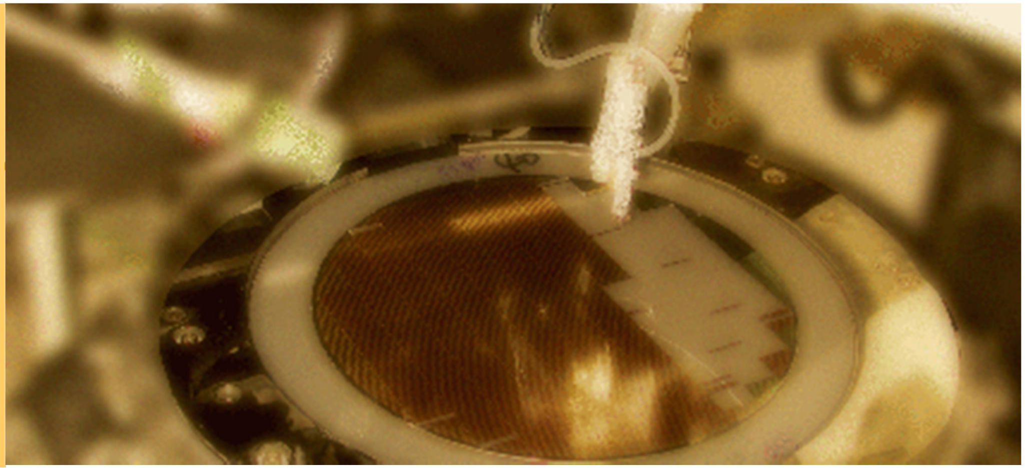
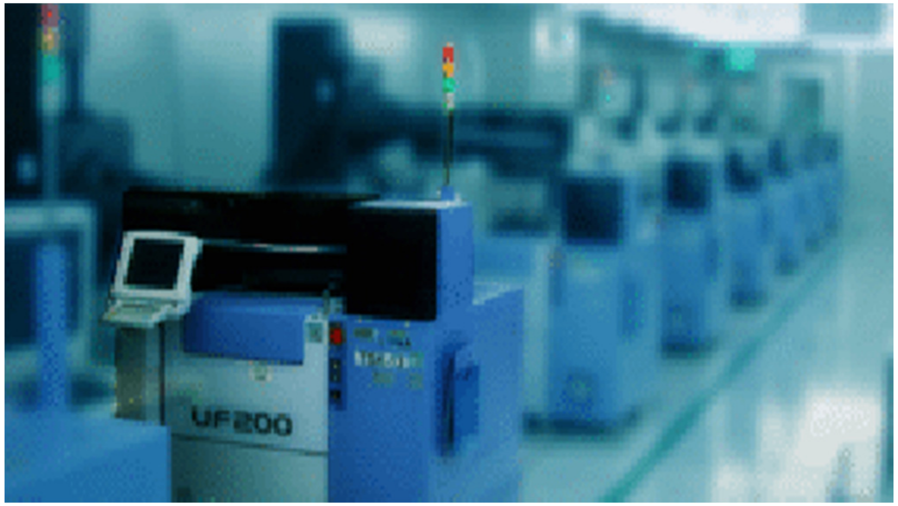
Benchmark of The Testing Industry





King Yuan Electronic Corp., Ltd.

京元電子股份有限公司

[TWSE: 2449]

May, 2019

- Wafer Test Service
- Assembly Service
- Burn-In Service
- IC Test Service
- Backend Support
- Turnkey Operation

Safe Harbor Notice

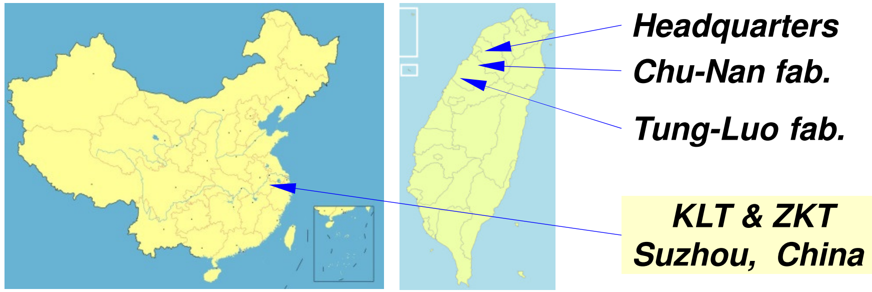
- Forward-looking statements involve known and unknown risks, uncertainties and other factors, which may cause the actual performance, financial condition or results of operations of the Company to be materially different from any future performance, financial condition or results of operations implied by such forward - looking statements. Further information regarding these risks, uncertainties and other factors is included in the Company most recent Annual Report on Taiwan Stock Exchange (Market Observation Post System).

KYEC group snapshot

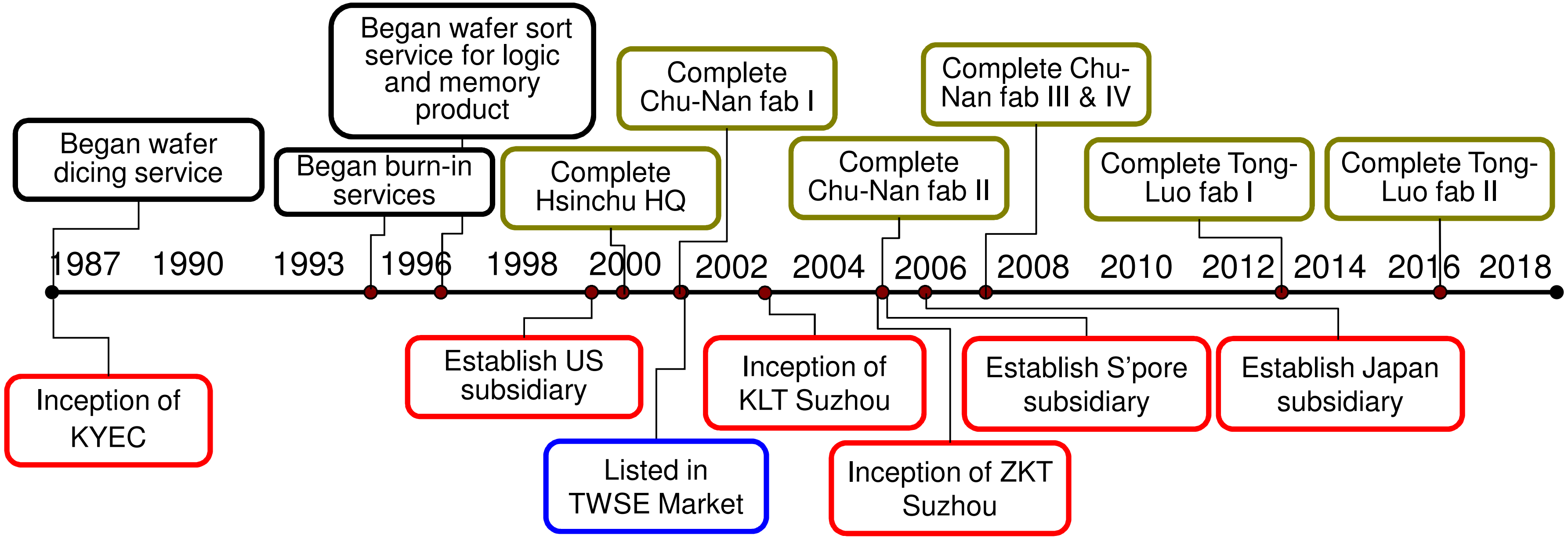
Overview

- **Established In: May 1987**
- **Headquarters: Hsinchu, Taiwan**
- **TWSE Listed: 2449.TW**
- **Market Cap.(1): NT$32,097.1 million**
- **Cash and Cash Equivalents(1): NT$4,494.3 million**
- **Employees(1): 8,198**

Manufacturing footprint in Taiwan & China



Key milestones



KYEC is the benchmark of semi testing industry

KYEC is uniquely positioned, locally and globally, as a pure-play testing house and aiming to take advantages of the ever-growing outsourced semi testing business.

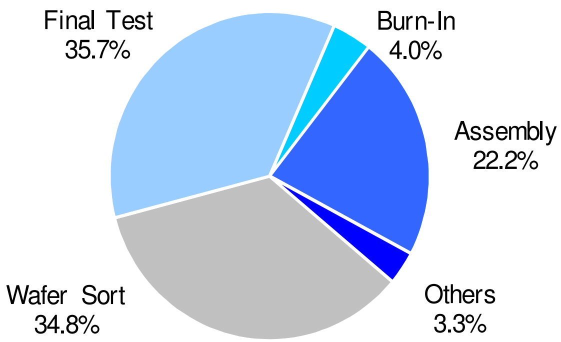
1. **4,000+ sets of installed test system, including both commercial and in-house developed testers, providing testing services for various end applications**
2. **Optimal customer structure and balanced business exposure to maintain strong margin growth during the volatile semiconductor market environment**
3. **In-house test system developing and manufacturing capability as a core competence differentiate KYEC from its OSAT peers**
4. **Seasoned management team with broad and deep industry experiences**
5. **Healthy financial structure and strong EBITDA profit to support CapEx**
6. **Corporate strategies dedicated to enhance shareholder's interests**

Diversified product mix for stable, long-term growth

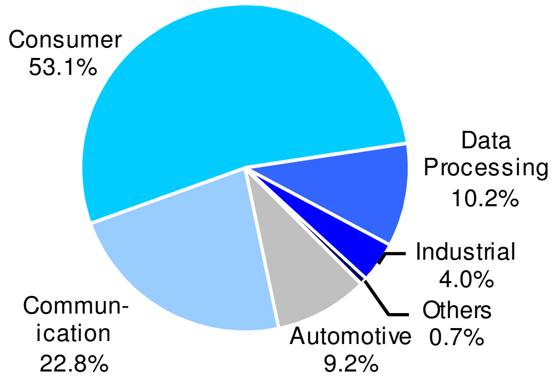
- In general, test services contributed ~ 80% of company's total revenue. The decline of revenue from test services in 2019 is due to the DLT merger.
- Devices tested by KYEC have been widely used in various applications, including consumer, communication, automotive, data computing and industrial … etc.
- Revenue recorded in Others included sale of equipment and tooling, lease income, and miscellaneous items.

Revenue breakdown for Q1'19

By Manufacturing Process



By Application



KYEC services global top tier customers

- 60% of global top 50 semi companies use KYEC's test services
- Top 10 customers contributed 49.3% of revenue in Q1'19

(US$ Millions)

2018	Company	2017	2018	change
1	Samsung Electronics	61,158	73,649	20.42%
2	Intel	58,725	66,290	12.88%
3	SK hynix	26,370	36,240	37.43%
4	Micron Technology	22,895	29,742	29.91%
5	Broadcom	15,405	16,261	5.56%
6	Qualcomm	16,099	15,375	-4.50%
7	Texas Instruments	13,651	14,593	6.90%
8	STMicroelectronics	8,021	9,213	14.86%
9	Western Digital	9,159	9,078	-0.88%
10	NXP	8,746	9,022	3.16%
11	Infineon Technologies	7,799	8,755	12.26%
12	Toshiba Memory	0	8,533	NM
13	nVIDIA	6,537	8,073	23.50%
14	MediaTek	7,837	7,889	0.66%
15	Apple	7,862	7,739	-1.56%
16	Renesas Electronics	6,914	6,710	-2.95%
17	Sony	6,424	6,465	0.64%
18	AMD	5,085	6,295	23.80%
19	Analog Devices	5,707	6,213	8.87%
20	HiSilicon Technologies	4,480	6,035	34.71%
21	ON Semiconductor	5,189	5,688	9.62%
22	Toshiba	12,455	5,614	-54.93%
23	Microchip Technology	3,766	5,155	36.88%
24	Skyworks Solutions	3,319	3,277	-1.27%
25	Rohm	2,857	3,025	5.88%

2018	Company	2017	2018	change
26	Xilinx	2,476	2,904	17.29%
27	Nanya Technology	1,808	2,808	55.31%
28	Marvell Technology Group	2,393	2,800	17.01%
29	Maxim Integrated	2,380	2,497	4.92%
30	Robert Bosch	2,256	2,456	8.87%
31	Cypress Semiconductor	2,242	2,453	9.41%
32	Qorvo	2,267	2,334	2.96%
33	Osram	1,928	1,970	2.18%
34	Novatek	1,548	1,815	17.25%
35	Mitsubishi	1,654	1,686	1.93%
36	Nichia	1,504	1,665	10.70%
37	Vishay	1,374	1,550	12.81%
38	Realtek Semiconductor	1,369	1,516	10.74%
39	Nexperia	1,313	1,496	13.94%
40	Dialog Semiconductor	1,346	1,442	7.13%
41	Synaptics	1,593	1,437	-9.79%
42	Omnivision	1,342	1,369	2.01%
43	Winbond Electronics	1,254	1,352	7.81%
44	Sanken	1,276	1,333	4.47%
45	UniSoC Technologies	1590	1,286	-19.12%
46	Cirrus Logic	1,555	1,248	-19.74%
47	Diodes	1054	1,214	15.18%
48	MLS	963	1,198	24.40%
49	Macronix International	1048	1,140	8.78%
50	Denso	990	1123	13.43%

Note: company's names in blue are KYEC's customers

Source: Gartner 2018

KYEC retains flexible and cost effective test solutions

- Current semi testing service provider is demanding on flexibility, cost effective and various platform/capacity for servicing the small-volume business trend.
- KYEC is standing to take advantage of this market trend for its flexible in test platform choices, capacity and in-house capability.
- KYEC currently installed 4,000+ test systems on its shop floor.

	Memory	Logic / Mixed-Signal	CIS/CCD	LCD Driver	RF / Wireless	SOC
Advantest	T5571P / T5581H / T5585 / T5588 T5371 / T5372 / T5377S T5382A / T5771 T5335 / T5365 / T5334 / T5335P	T6672 / T6673 T6575 / T6577 T6683		T6331 T6371 T6372 T6373	T2000-RF	T2000
Agilent (Verigy)	V1200 / V2000 V3000 / V4400	HP93K / HP94K / HP83K	HP93KIP / 94KIP		HP93KPSRF	HP93KPS / PS1600
LTX-Credence	Kalos / XW Kalos II / HEX Pkalos / Pkalos II	Duo / Quartet SCX12 / ITS9KEXA / CV ITS3KEXA / ASL1K / ASL3K-MS Sapphire / D10			ASL3K-RF Fusion-CX Fusion-MX	Sapphire / D10 Fusion-MX DiamondX
Teradyne		Catalyst / J750 J750EX / iFlex Ultra Flex	IP750 IP750EMP		Flex-RF Catalyst-RF Ultra Flex-RF	J750EX / J750 / J750HD / ETS-364 iFlex / Ultra Flex Catalyst
Yokogawa				TS6700 ST6730		
KYEC	M-series tester	E-series tester	I-series tester	D-series tester	E-series tester	E-series tester

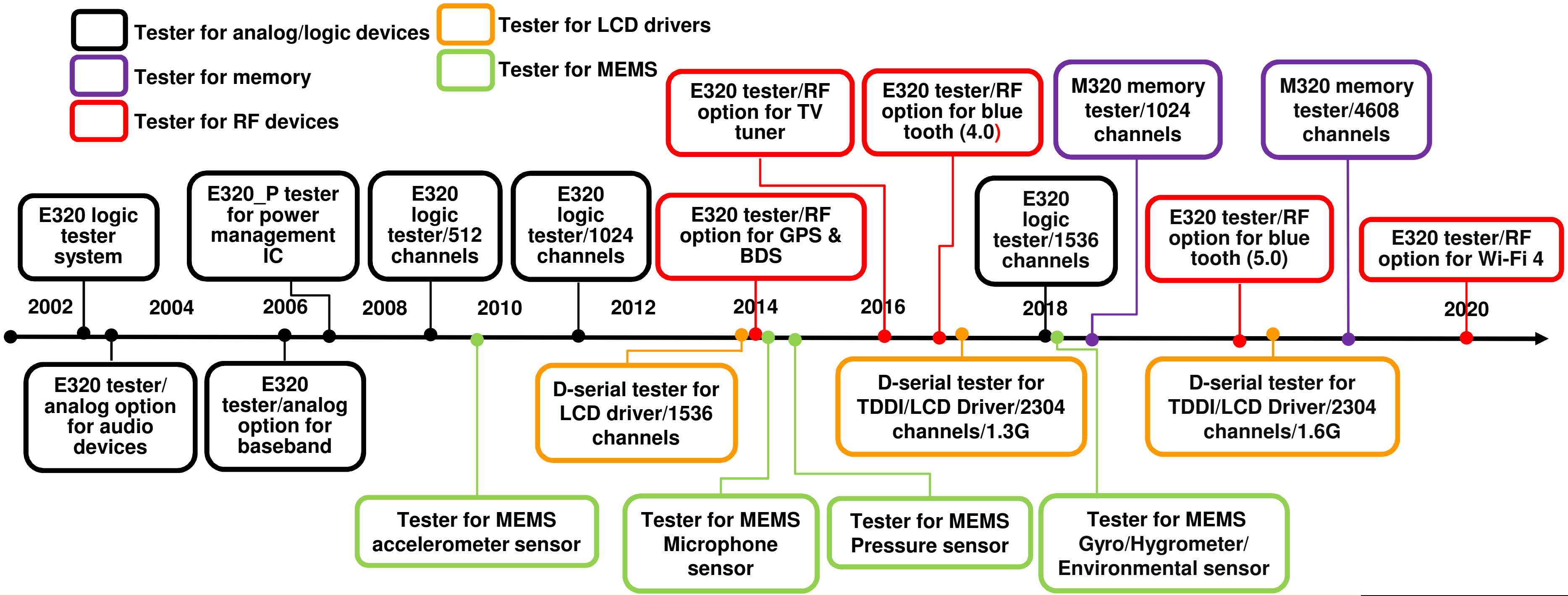
In-house test systems widely use in mass production

- In general, in-house test system provide a custom-tailored solution flexible in test configuration and programming for device used in various applications.
- In addition, KYEC designs and manufactures test tooling and probe card in-house.

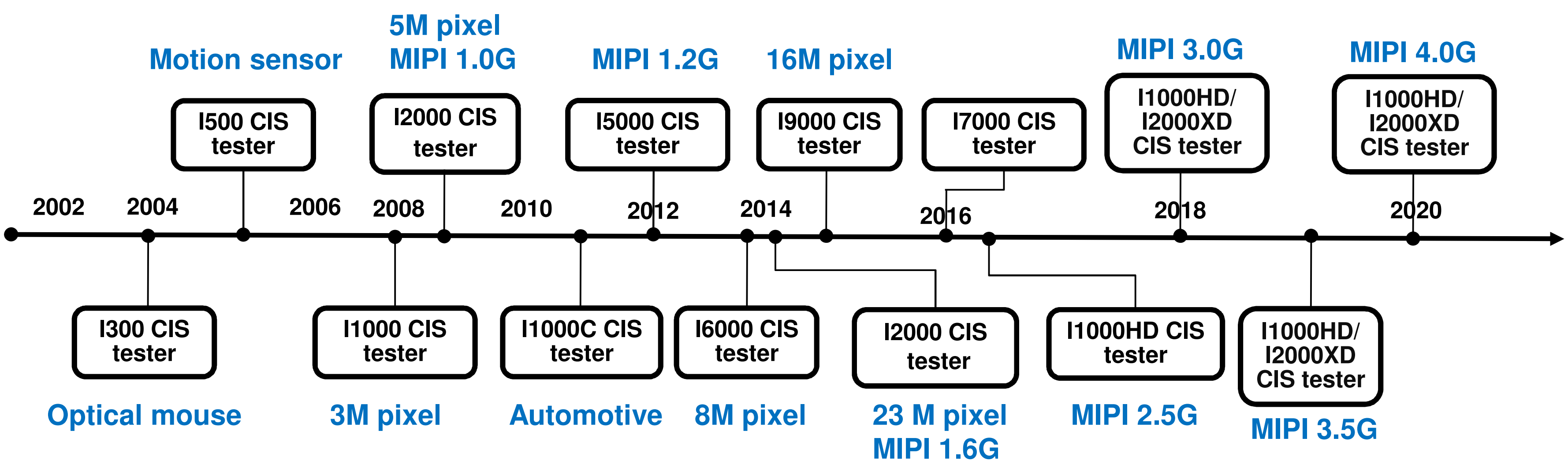
Application of in-house tester

KYEC has long history on in-house tester manufacturing

- KYEC has long history in test system and tooling development and manufacturing independently since 1998.
- KYEC retains 400+ of professional experts in its R&D team working on technology development for advanced semiconductor testing and relevant tooling manufacturing.
- Numerous test systems developed and introduced into mass production for key customer's wafer and final testing on SoC, CIS, LCD driver, memory and MEMS products.

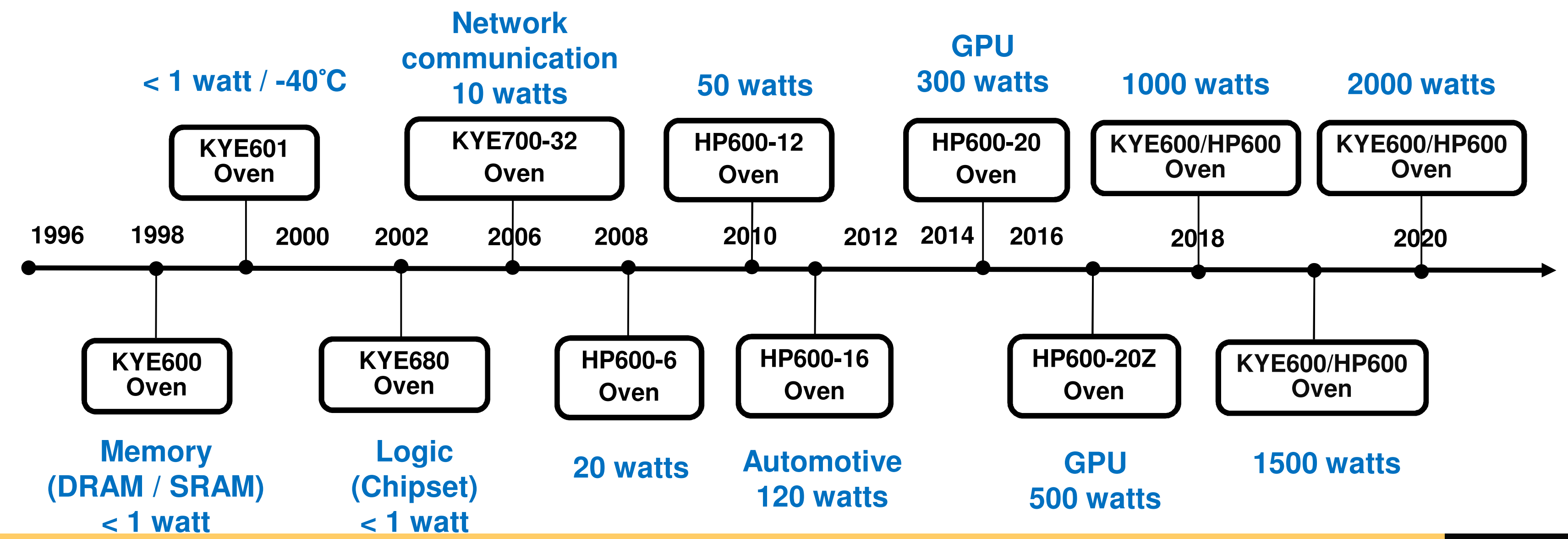


KYEC developed I-series testers for CMOS image sensor



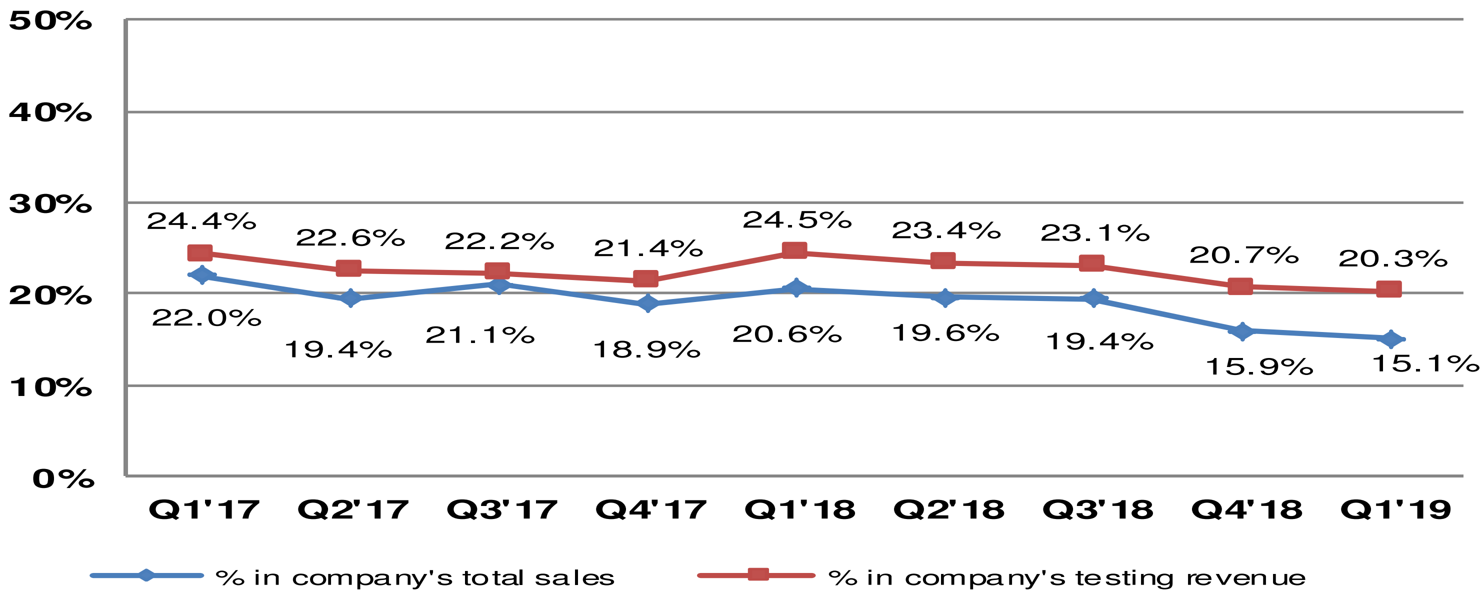
KYEC developed ovens for burn-in test services

- In-house burn-in ovens provide flexibility, custom tailored test services.
- Our burn-in oven is able to offer testing under wide range of power/watts for products after one single test setup.
- Our high-power burn-in oven employs the air-cooling technologies instead of the water-cooling used in the market available ovens, providing advantages of cost saving and easy maintenance.



KYEC expects to grow revenue from in-house test system

- In general, 20 - 25% of KYEC's revenue was generated by 1,200+ sets[(1)] of in-house test systems and 270+ sets[(1)] of burn-in ovens installed on its shop floor. The decline of revenue from in-house tester in Q4'18 and Q1'19 is due to the DLT merger.
- We expects to grow in-house tester revenue by lateral deploying the test solution to various end applications with our customers.
- Given its uniqueness in technical services and cost effective structure to customer, we plan to take advantages from this leading in-house capability against our peers at the market place.



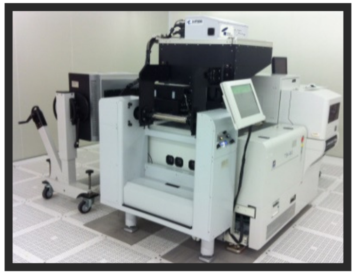
Note: (1) As of March 31, 2019

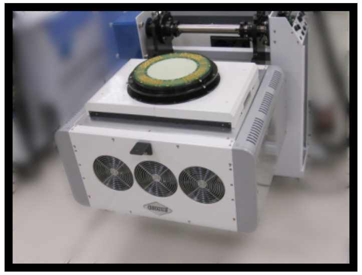
KYEC provides turnkey WLCSP services as well

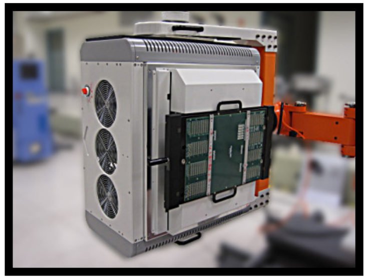
<u>KYEC's WLCSP process flow</u>

Wafer incoming inspection
↓
Wafer Test
↓
Wafer grinding
↓
Laser mark
↓
Die saw (Laser grooving)
↓
AOI
↓
T & R Waffle pack
↓
Ship

- **In addition to wafer testing, KYEC provides wafer grinding, die sawing/laser grooving, AOI and packing services for Wafer Level Chip Scale Package (WLCSP) as well.**
- **WLCSP is primarily for applications as: e-compass, accelerometer, gyroscope, pressure, humidity, microphone, power management and memory products.**
- **WLCSP revenue in KYEC has increased significantly over last couple years. We expects this trend to continue in the future.**







KYEC group management team with deep industry experience

C.K. LEE - Chairman & CEO

- Over 30 Years of semiconductor industry experience
- Chairman of KLT (Suzhou) and ZKT (Suzhou)
- Former Manager of Manufacturing, United Microelectronics Corporation
- Bachelor of Department of Shipping &Transportation Management, National Taiwan Ocean University.

Dr. Shou-Kang CHEN - CFO

- Over 20 Years of semiconductor industry experience
- Special Assistant to Chairman, KYEC
- Former CFO of ChipMOS TECHNOLOGIES INC. & ChipMOS TECHNOLOGIES (Bermuda) LTD.
- M.Sc. and Ph.D. from the Graduate School of Mining, Metallurgy and Material Science, National Cheng Kung University

Dr. A.H. LIU - General Manager

- Over 20 Years of semiconductor industry experience
- Former Vice President of EverLight Electronics
- Former General Manager of Intematix Company.
- Ph.D. from Graduate School of Mechanical Engineering, North Carolina State University, USA.

Gauss CHANG - Executive VP

- 30 Years of semiconductor industry experience
- Former Manager of foundry business, Winbond Electronics Corp.
- MBA. from Saginaw Valley State University, Michigan, USA.

Andy LIANG - Vice President

- Over 20 Years of semiconductor industry experience
- Former manager of equipment engineering, UTAC/Taiwan
- Bachelor of Department of Electronic Engineering, Minghsin University of Science and Technology. MBA from Minghsin University of Science and Technology

K.K. LEE - Senior VP

- Over 30 Years of semiconductor industry experience
- Former vice director of material procurement and management, United Microelectronics Corporation
- Bachelor of Department of Industrial Engineering and Enterprise Information, Tunghai University.

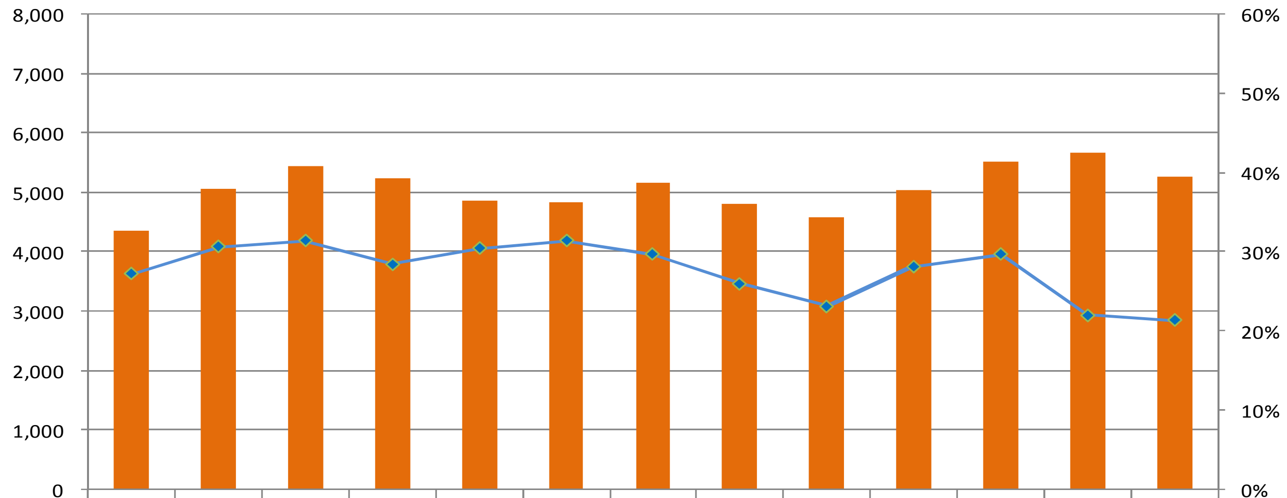
Steven CHANG - Senior VP

- Over 20 Years of semiconductor industry experience
- Former Manager of quality assurance, Macronix International Co., LTD.
- Bachelor of Department of Electrical Engineering, Chung Yuan Christian University. M.Sc. from Graduate School of Electrical Engineering, National Central University.

Financial highlights

Financial Snapshot

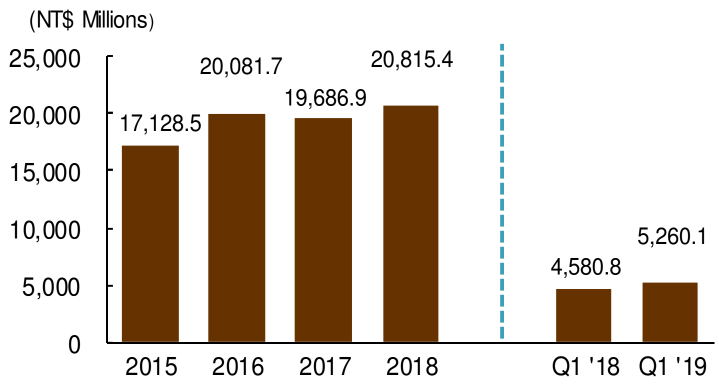
(NT$ Millions)	Q4’18	Q1’19
Net Revenue	$5,673.8	$5,260.1
Gross Margin (%)	22.0%	21.3%
Expenses		
SG&A	$498.1	$444.9
R&D	$245.2	$219.7
EBITDA	$2,375.5	$2,152.7
EPS – diluted (NT$)	$0.34	$0.31
EPS – basic (NT$)	$0.35	$0.31



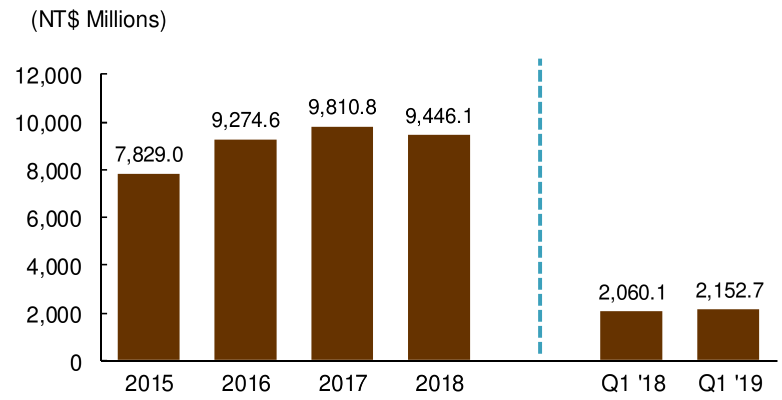
(NT$ Millions)	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19
Revenue	4,358	5,057	5,431	5,235	4,869	4,843	5,173	4,803	4,581	5,040	5,521	5,674	5,260
Gross margin	27.2%	30.6%	31.4%	28.4%	30.4%	31.4%	29.7%	26.0%	23.1%	28.1%	29.7%	22.0%	21.3%

Healthy business trends and capacity investment

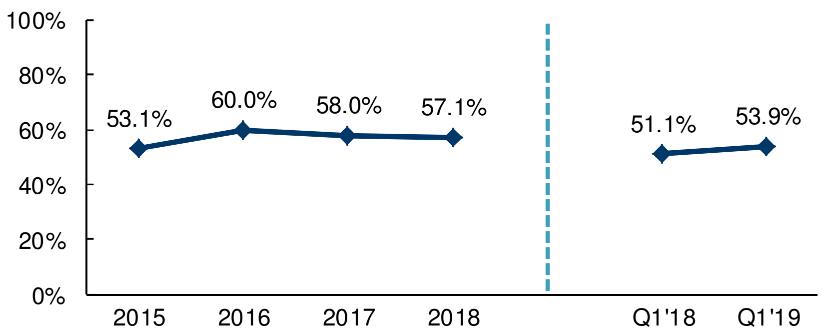
Revenue



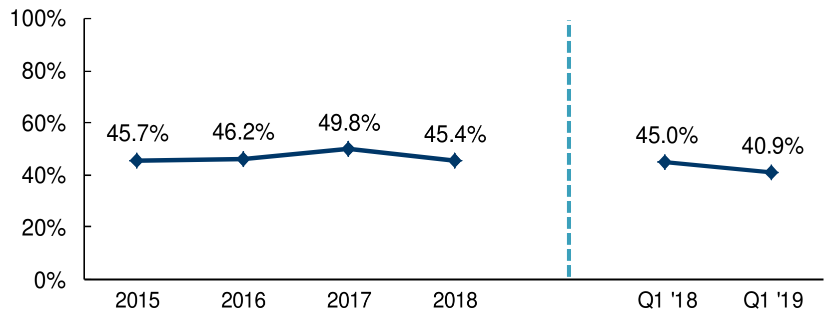
EBITDA



Utilization Rate

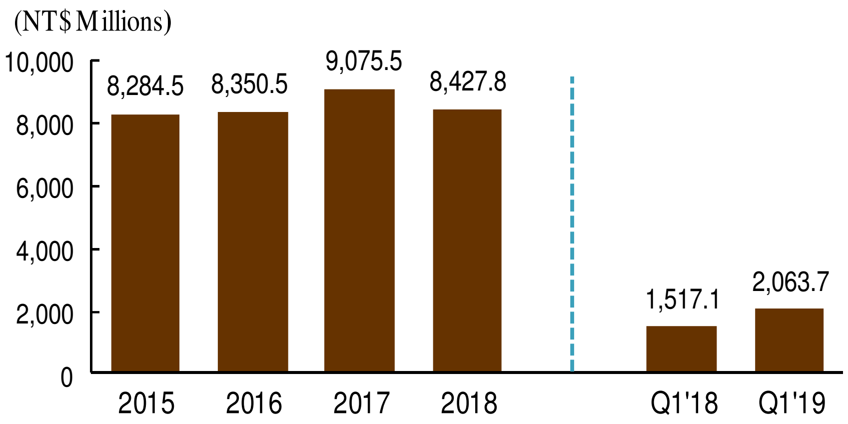


EBITDA Margin

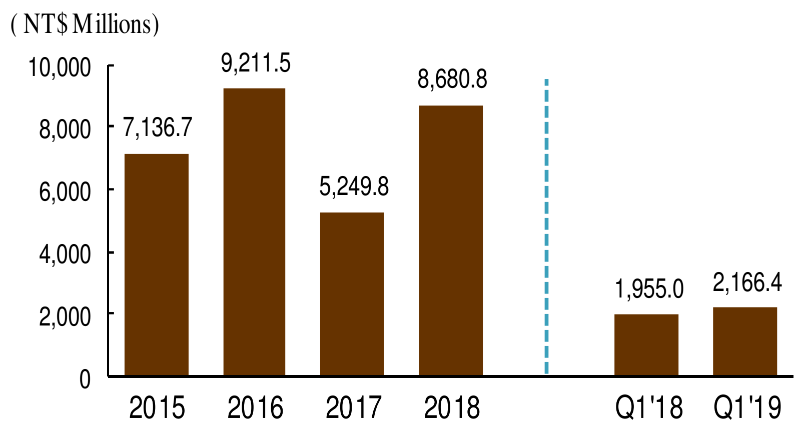


Optimal financial leverage enhances shareholder interest

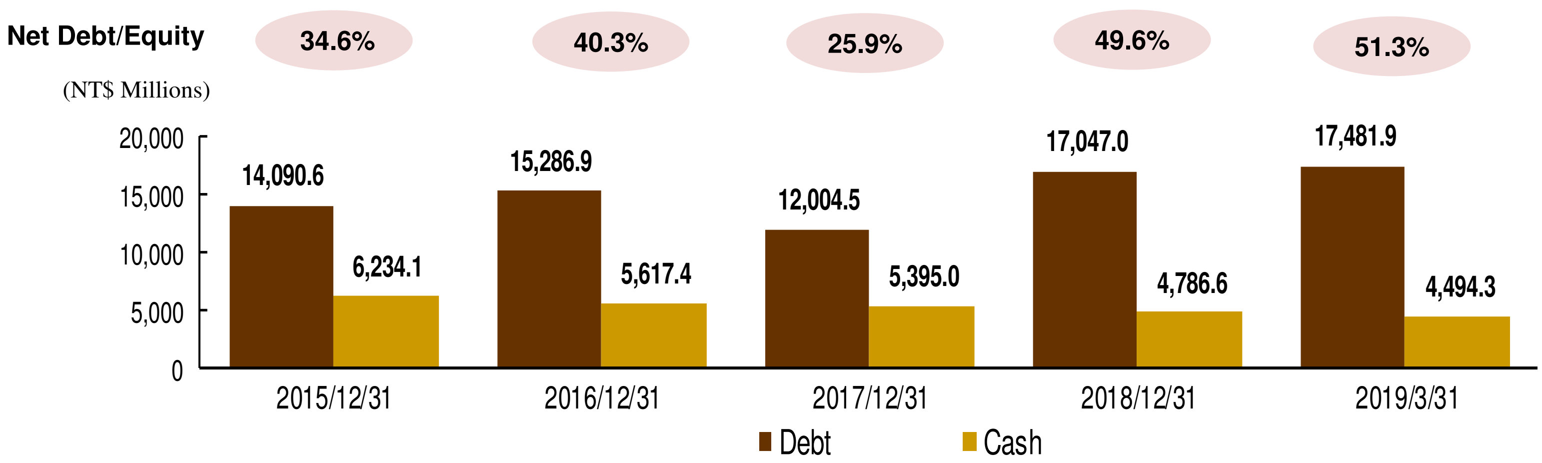
Cash Flow from Operations



CapEx



Debt / Cash



Company website

http://www.kyec.com.tw