

環宇  
芯系天下

**Q4 2018  
Quarterly  
Online Investor  
Conference  
(線上法說會)**

**March 15, 2019**



環宇通訊半導體  
Global Communication Semiconductors, LLC



"Enabling Today's Global  
Communications  
and Beyond"

# Disclaimer Statement



This presentation includes forward-looking statements. All statements, other than statements of historical facts, that address activities, events or developments that GCS Holdings, Inc. expects or anticipates will or may occur in the future (including but not limited to projections, targets, estimates and business plans) are forward-looking statements.

GCS's actual results or developments may differ materially from those indicated by these forward-looking statements as a result of various factors and uncertainties, including but not limited to price fluctuations, actual demand, exchange rate fluctuations, market share, competition, environmental risks, change in legal, financial and regulatory frameworks, government policies, international economic and financial market conditions, political risks, cost estimates and other risks and factors beyond our control.

GCS does not undertake any obligation to publicly update any forward-looking statement to reflect events or circumstances after the date on which any such statement is made or to reflect the occurrence of unanticipated events.

# Agenda



Opening:

Brian Ann, CEO & President

Financial Section:

Grace Li, Director & Special Assistant to CEO

Market Overview:

Simon Yu, Senior VP and General Manager,  
Worldwide Sales & Marketing and Component  
Business

Q&A: All

# FINANCIAL SECTION

# Statements of Comprehensive Income - QoQ



(in NT\$ thousands except EPS)

	4Q18	3Q18	4Q17	4Q18 Over 3Q18	4Q18 Over 4Q17
Net Operating Revenue	436,367	514,359	526,812	-15.2%	-17.2%
Gross Profit	179,877	247,314	236,957	-27.3%	-24.1%
Gross Margin	41.2%	48.1%	45.0%		
Operating Expenses	(121,545)	(129,046)	(104,199)	-5.8%	16.6%
Operating Expenses to Revenue %	27.9%	25.1%	19.8%		
Operating Income	58,332	118,268	132,758	-50.7%	-56.1%
Operating Margin	13.4%	23.0%	25.2%		
Non-operating Items	2,813	(335)	(22,950)	-939.7%	-112.3%
Income before Income Tax	61,145	117,933	109,808	-48.2%	-44.3%
Income Tax	(11,454)	(26,172)	(29,622)	-56.2%	-61.3%
Net Income	49,691	91,761	80,186	-45.8%	-38.0%
Net Income Attributable to owners of the Parent	52,404	91,761	80,186	-42.9%	-34.6%
Net Profit Margin	12.0%	17.8%	15.2%		
Basic EPS (NTD)	0.65	1.14	1.03		
Diluted EPS (NTD)	0.65	1.14	1.02		
R&D Expense % to Revenue	11.8%	9.0%	7.5%		

Note 1: 80,281,626 shares and 80,762,979 shares were used in basic EPS and diluted EPS calculation for 4Q18 respectively.

Note 2. Revenue supplemental information

	4Q18	3Q18	4Q17	4Q18 Over 3Q18	4Q18 Over 4Q17
Revenue in US\$ thousand	14,087	16,760	17,469	-15.95%	-19.4%
Exchange Rate	30.15	29.92	30.43		

# Non-operating Income and Expenses- QoQ



(in NT\$ thousands)

	4Q18	3Q18	4Q17	4Q18 Over 3Q18	4Q18 Over 4Q17
Other Income	2,642	1,173	1,257	125.2%	110.2%
Other Gains and Losses					
Net Gain or (losses) on financial liabilities at fair value through profit or loss	-	-	(19,196)	-	-100.0%
Net currency exchange gain or (loss)	1,981	290	(2,129)	583.1%	-193.0%
Gain on disposal of Investment	-	-	-	-	-
Gain on disposal of Property, plant and equipment	-	-	456	-	-
Others	(799)	48	(105)	-	-
Finance Cost					
Interest expense for convertible bonds (Note)	-	-	(1,496)	-	-100.0%
Other interest expense	(1,011)	(1,081)	(1,294)	-6.5%	-21.9%
Share of profit (loss) of equity-accounted investees	0	(765)	(443)		
<b>Total Non-operating Income and Expenses</b>	<b>2,813</b>	<b>(335)</b>	<b>(22,950)</b>	<b>-939.7%</b>	<b>-112.3%</b>

Note: Amortization of discount on convertible bonds

# Statements of Comprehensive Income - YoY



(in NT\$ thousands except EPS)

	2018	%	2017	%	Change (%)
Net Operating Revenue	1,952,411	100.0%	1,925,832	100.0%	1.4%
Operating Cost	(1,054,699)	-54.0%	(1,029,929)	-53.5%	2.4%
Gross Profit	897,712	46.0%	895,903	46.5%	0.2%
Operating Expenses	(510,472)	-26.1%	(446,320)	-23.2%	14.4%
Operating Income	387,240	19.8%	449,583	23.3%	-13.9%
Non-operating items	3,774	0.2%	(25,530)	-1.3%	-114.8%
Income before Income Tax	391,014	20.0%	424,053	22.0%	-7.8%
Income Tax	(73,425)	-3.8%	(67,006)	-3.5%	9.6%
Net Income	317,589	16.3%	357,047	18.5%	-11.1%
Net Income Attributable to Owners of the Parent	320,302	16.4%	357,047	18.5%	-10.3%
Basic EPS (NTD)	4.01		4.77		
Diluted EPS (NTD)	3.96		4.73		
Average Exchange Rate-USD/NTD	30.15		30.43		
R&D expense % to Revenue	9.7%		8.5%		
ROA (%)	10.2%		12.8%		
ROE (%)	11.6%		15.5%		

Note 1: 79,879,783 shares and 80,934,205 shares were used in basic EPS and diluted EPS calculation for 2018, respectively.

Note 2. Revenue supplemental information

	Y2018	Y2017	Change (%)
Revenue in US\$ thousand	64,757	63,284	2.3%
Exchange Rate	30.15	30.43	

# Non-operating Income and Expenses- YoY



(in NT\$ thousands)

	2018	2017	Change (%)
Other Income	7,571	4,202	80.2%
Other Gains and Losses			
Net Gain or (losses) on financial liabilities at fair value through profit or loss	2,322	(8,985)	-125.8%
Net currency exchange gain or (loss)	1,523	(28,043)	-105.4%
Gain on disposal of investment	-	29,276	-100.0%
Gain on disposal of Property, plant and equipment	-	456	-100.0%
Other loss	(1,749)	-	-
Finance Cost			
Interest expense for convertible bonds (Note)	(881)	(16,036)	-94.5%
Other interest expense	(4,256)	(5,654)	-24.7%
Share of profit (loss) of equity-accounted investees	(756)	(746)	1.3%
Total Non-operating Income and Expenses	3,774	(25,530)	-114.8%

Note: Amortization of discount on convertible bonds

# Balance Sheet Highlight & Key Indices



## *Selected Items from Balance Sheet*

(in NT\$ thousands)

	4Q18		3Q18		4Q17	
	Amount	%	Amount	%	Amount	%
Cash and Cash Equivalent	1,512,863	44%	1,392,649	42%	1,119,712	38%
Accounts Receivable and Notes Receivable	212,933	6%	282,434	9%	297,515	10%
Inventory	330,694	10%	327,667	10%	329,834	11%
Investments accounted for under the Equity Method	-	0%	-	0%	14,520	0%
Net Property, Plant and Equipment	723,641	21%	711,777	22%	700,655	24%
Deferred Tax Assets	171,323	5%	155,701	5%	164,924	6%
Intangible Assets	185,489	6%	183,647	5%	183,654	6%
<b>Total Assets</b>	<b>3,402,284</b>	<b>100%</b>	<b>3,277,729</b>	<b>100%</b>	<b>2,981,355</b>	<b>100%</b>
Short Term Loan	20,300	1%	20,000	1%	20,000	1%
Financial Liabilities at Fair Value through Profit and Loss	-	0%	-	0%	31,204	1%
Accounts Payable and Other Payables	183,703	5%	157,234	5%	157,116	5%
Bond Payable - Current Portion	-	0%	-	0%	60,006	2%
Long Term Bank Borrowings - Current Portion	20,818	1%	20,479	1%	19,366	1%
Long Term Bank Loans	57,424	2%	62,314	2%	75,797	3%
Deferred Tax Liabilities	84,451	2%	55,393	2%	39,466	1%
<b>Total Liabilities</b>	<b>389,499</b>	<b>11%</b>	<b>343,196</b>	<b>10%</b>	<b>443,786</b>	<b>15%</b>
<b>Total Stockholders' Equity</b>	<b>3,012,785</b>	<b>89%</b>	<b>2,934,533</b>	<b>90%</b>	<b>2,537,569</b>	<b>85%</b>

## *Key Indices*

Current Ratio	894%	954%	557%
Debt Ratio	11%	10%	15%
AR Turnover Days	48	53	49
Inventory Turnover Days	140	140	149

# Cash Flows

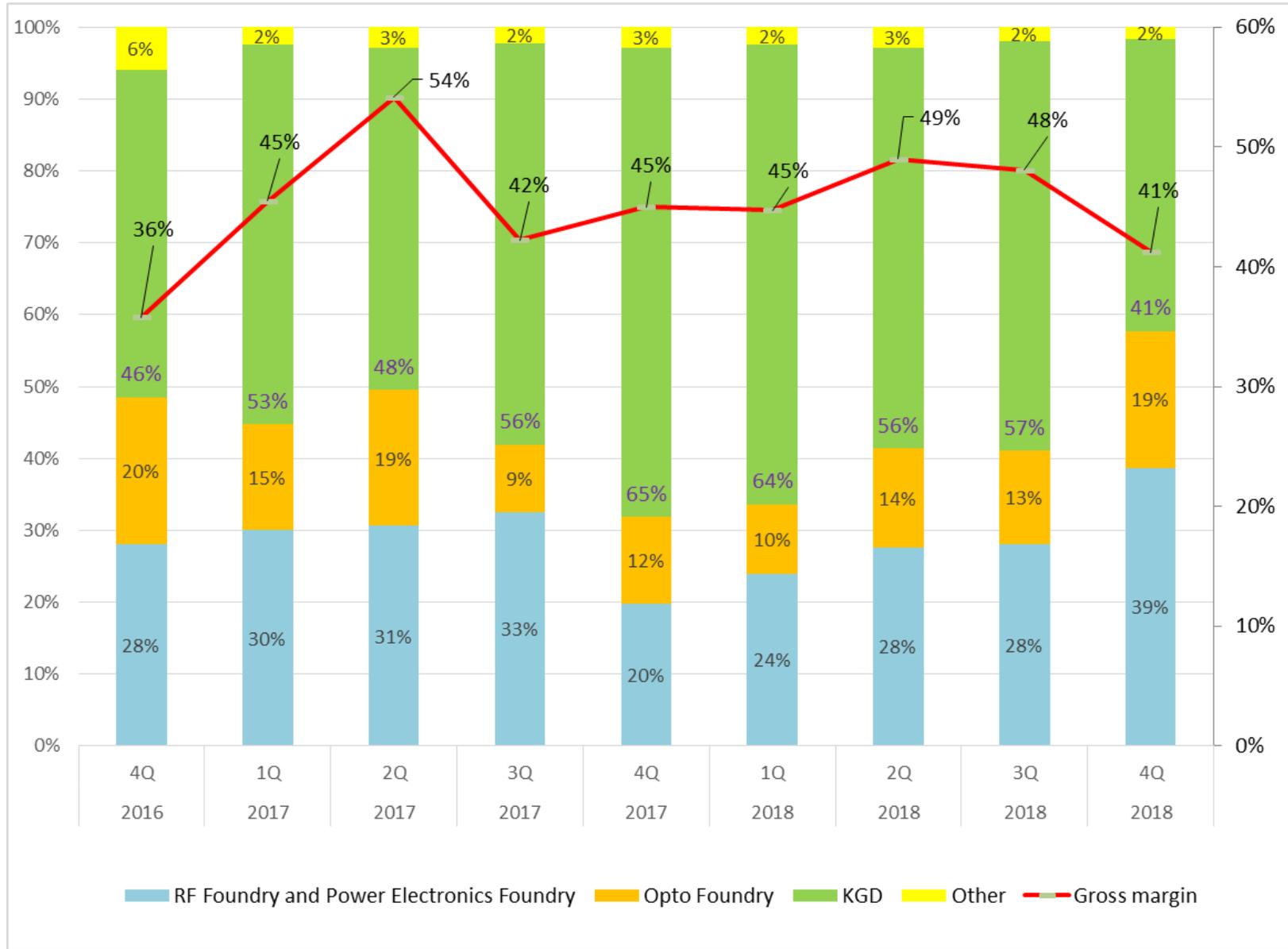


(in NT\$ thousands)

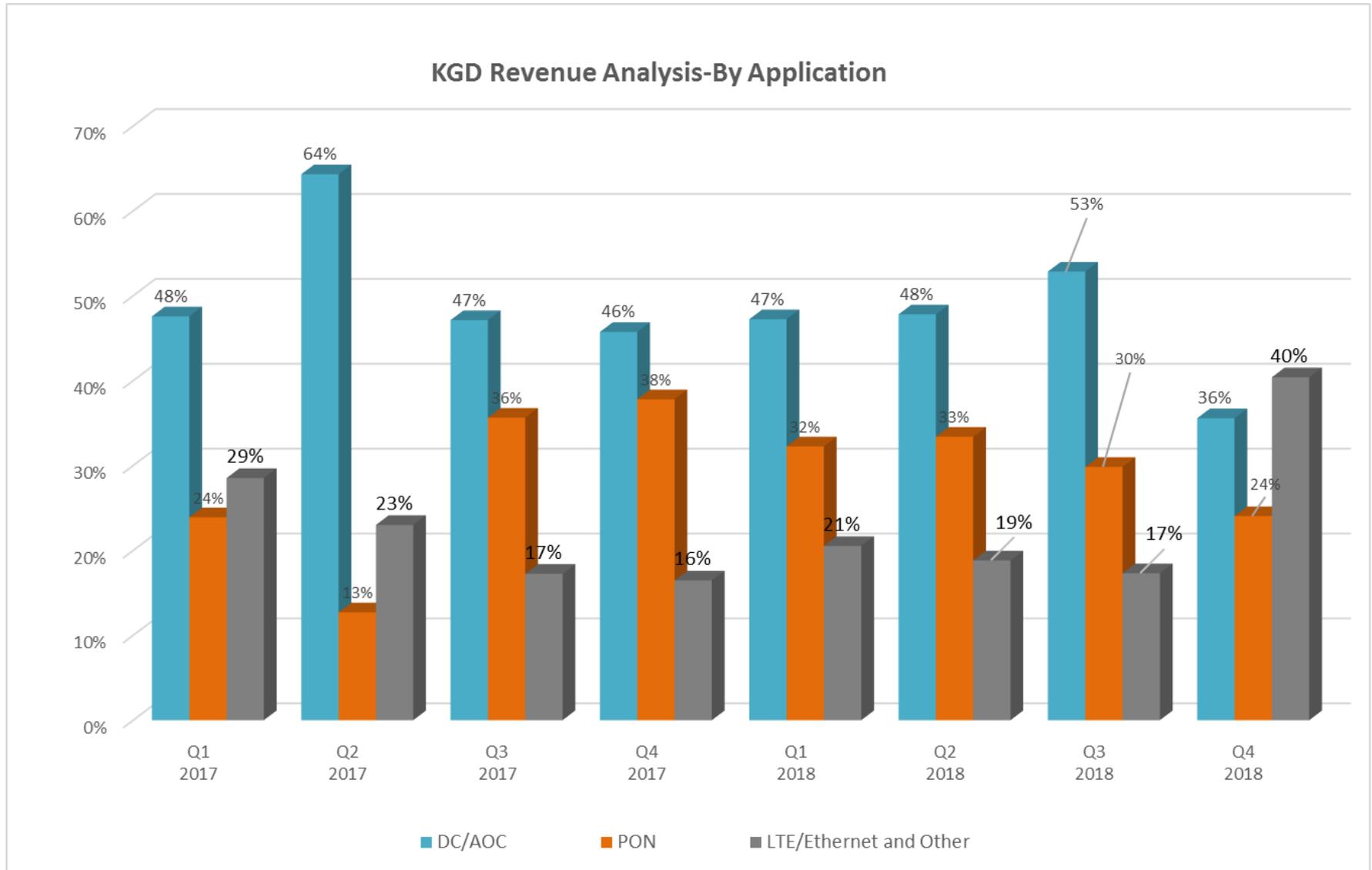
	<u>4Q18</u>	<u>3Q18</u>	<u>4Q17</u>
<b>Beginning Balance</b>	1,392,649	1,365,587	1,102,027
Cash from Operating Activities	161,850	131,052	139,933
Acquisition of property, plant and equipment	(39,269)	(48,089)	(36,105)
Acquisition of Subsidiaries	-	(2,442)	-
Acquisition of intangible assets	(2,079)	(1,466)	-
Proceeds from the sale of Property, plant and equipment	-	-	456
Prepayments Paid	(5,792)	-	-
Repayments of long-term loans	(5,085)	(5,007)	(4,767)
Employee Option Exercise	29	-	117
Cash Dividend Paid	-	(79,060)	(73,275)
Cash received through merger	-	27,263	-
The effect of exchange rate changes	10,748	4,728	(8,674)
Others	(188)	83	-
<b>Ending Balance</b>	1,512,863	1,392,649	1,119,712
<b>Increase (Decrease) in Cash</b>	120,214	27,062	17,685
<b>Free Cash Flow (Note)</b>	122,581	82,963	103,828

**Note: Free Cash Flow = Cash from Operating Activities - Capital Expenditures**

# Revenue Mix % vs Gross Margin - QoQ



# KGD Revenue Mix - QoQ



# MARKET OVERVIEW

# 5G is Here!



# 5G in China

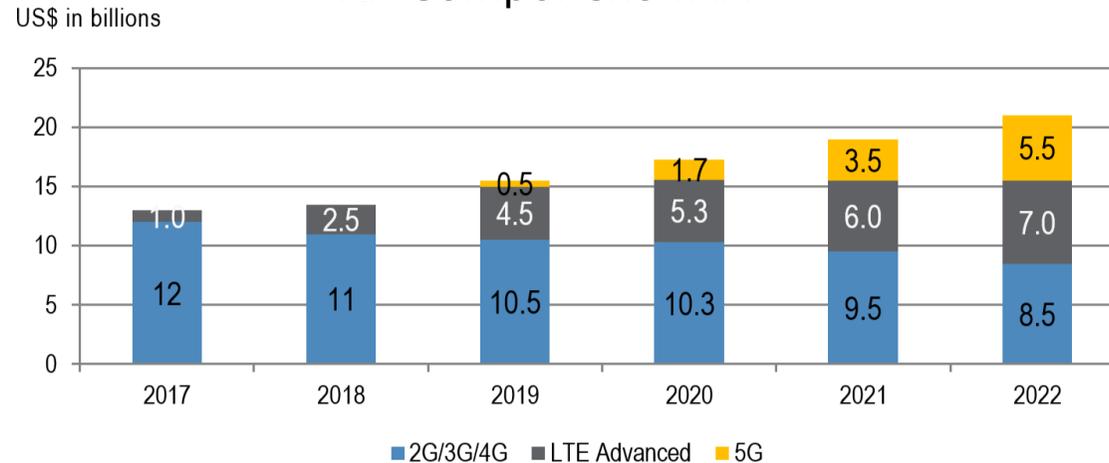


- 1/23/2019 5G第三阶段测试基本完成，基站与核心网设备达到预商用要求。
- 2019年将启动5G增强及毫米波技术研发试验等工作。
- 2019 中国将在若干个城市发放5G临时牌照，使大规模的组网能够在部分城市和热点地区率先实现，同时加快推进终端的产业化进程和网络建设，下半年还将用上诸如5G手机、5G iPad等商业产品。
- 2019 5.17世界电信日期间，可能会发5G临时牌照，5G正式牌照有望2020年发放。
- 2019 1.31中国移动公布25G规模组网建设及应用示范工程无线主设备租赁单一来源采购结果，华为、中兴等五大设备商中标。
- 野村中国电信及高科技股票分析师: **2019年5G预计将需要17万个宏基站。** “**5G比4G投资高50%左右，5G投资持续6-7年左右。**”

# More RF Components in 5G



## RF Component TAM



Source: Qorvo.

## RF Front-End BOM Estimates

US\$

Smartphone category	Entry-level	Mid-range	High-End	Flagships	High-end
Network	3G	LTE	LTE	LTE	5G
Power Amplifiers	0.9	1.8	3.3	4.8	8.3
Switching/Tuning	0.4	1.5	2.3	4.5	8.3
Filters	1.0	4.0	6.5	8.8	15.3
Other RF content	0.4	0.4	0.5	1.2	2.5
<b>Total RF Front-end content</b>	<b>2.5</b>	<b>7.6</b>	<b>12.5</b>	<b>19.2</b>	<b>34.5</b>

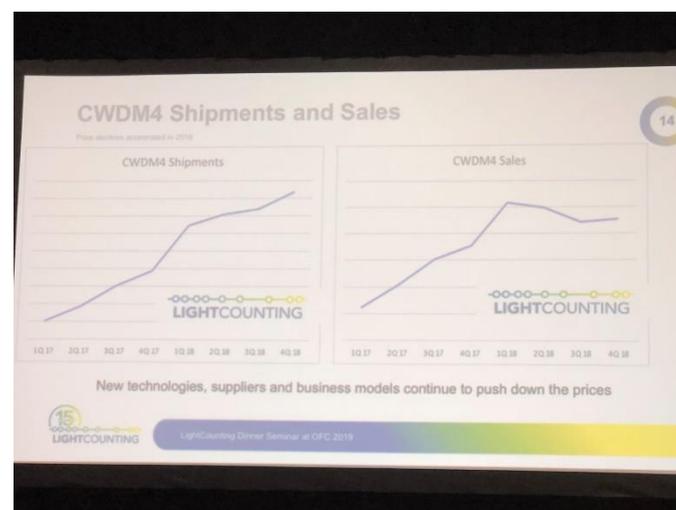
  

Growth (%)					
Power Amplifiers		106%	86%	46%	75%
Switching/Tuning		329%	50%	100%	85%
Filters		321%	63%	35%	75%
Other RF content		0%	43%	140%	108%
<b>Total RF Front-end content</b>		<b>204%</b>	<b>64%</b>	<b>54%</b>	<b>79%</b>

Source: Gartner, IHS, Company data, J.P. Morgan estimates.

# 400G is Here!

- 2018 dip – ZTE, 100G volume up but deeper price erosion
- 2019 back to 2017 level if trade war stops
- 400G CWDM/DWDM starts deployment in 2019 including China
- 10G-PON scale is still modest
- Small scale of FTTH deployment continues around the world, except China
- Higher priority on 5G wireless
- Constructions of DCs continues and increasing cloud companies in China

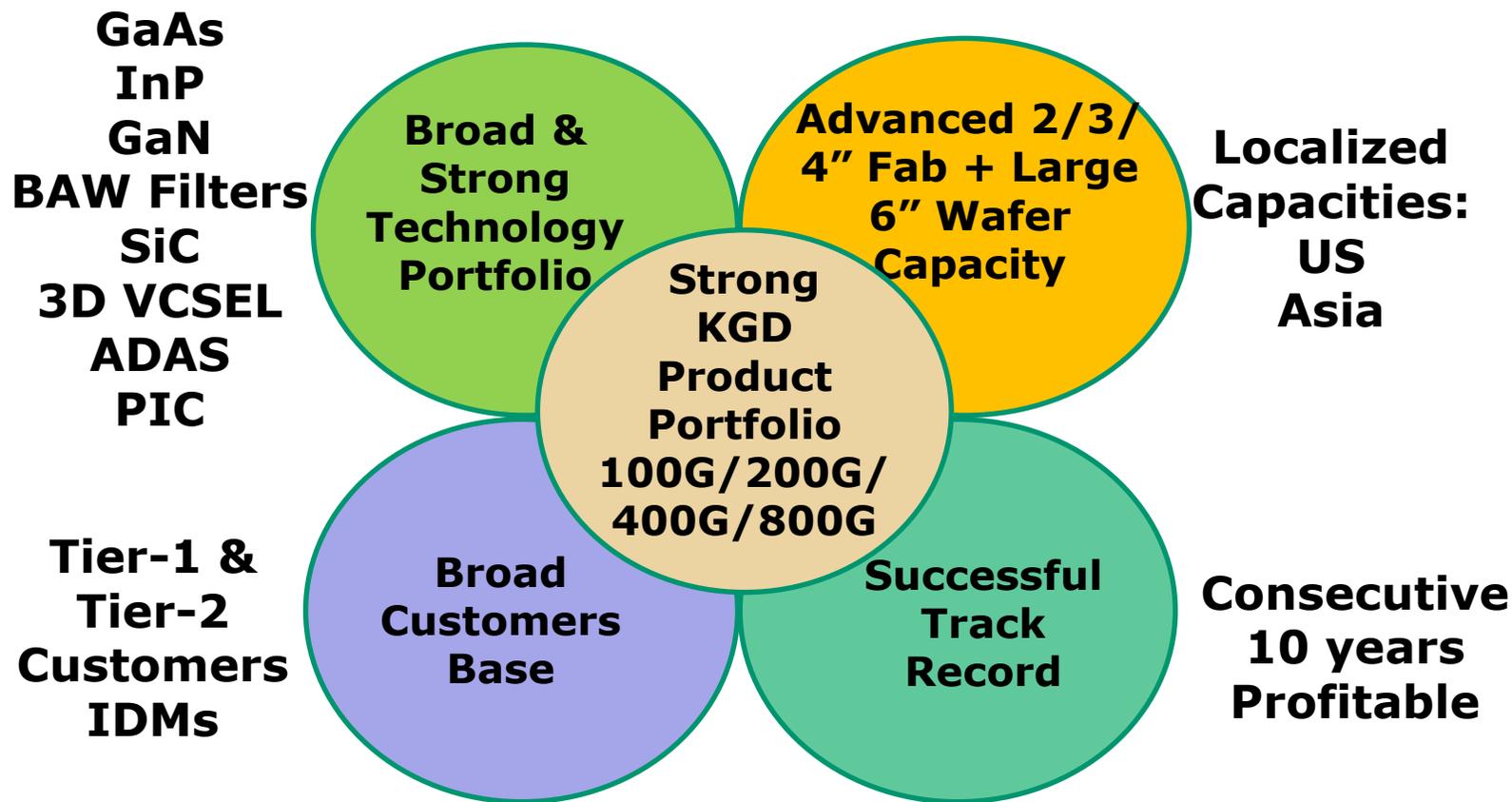


# Customer Activities



- ❖ Data Center momentum continuing – 100G in volume and 200G/400G starts production
- ❖ Major customers evaluating GCS 25G VCSEL (for 100G/200G/400G)
- ❖ In discussion with major customers on GaN 6" production for base stations
- ❖ SMART BAW process in final development with strategic customers and move to 6" fab
- ❖ 3D sensing VCSELS qualified → move to 6" fab
- ❖ PIC customers in 6" production
- ❖ Several automotive Advanced Driver Assistance Systems (ADAS) customers in development phase

# Growth Strategies



**Market:**  
**Optical communications**  
**4G/5G/6G RF communications**  
**High volume 3D sensing**  
**Autonomous driving**  
**Power electronics**  
**Industrial/medical applications**

# Q & A



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**For further inquiry  
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