

環宇
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**Q3 2018
Quarterly
Online Investor
Conference
(線上法說會)**

Nov 2, 2018



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.

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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:

Brian Ann, CEO & President

Q&A: All

FINANCIAL SECTION

Statements of Comprehensive Income - QoQ



(in NT\$ thousands except EPS)

	3Q18	2Q18	3Q17	3Q18 Over 2Q18	3Q18 Over 3Q17
Net Operating Revenue	514,359	522,665	529,100	-1.6%	-2.8%
Gross Profit	247,314	256,217	223,559	-3.5%	10.6%
Gross Margin	48.1%	49.0%	42.3%		
Operating Expenses	(129,046)	(135,480)	(122,873)	-4.7%	5.0%
Operating Expenses to Revenue %	25.1%	25.9%	23.2%		
Operating Income	118,268	120,737	100,686	-2.0%	17.5%
Operating Margin	23.0%	23.1%	19.0%		
Non-operating Items	(335)	3,054	23,764	-111.0%	-101.4%
Income before Income Tax	117,933	123,791	124,450	-4.7%	-5.2%
Income Tax	(26,172)	(31,309)	(11,848)	-16.4%	120.9%
Net Income	91,761	92,482	112,602	-0.8%	-18.5%
Net Profit Margin	17.8%	17.7%	21.3%		
Basic EPS (NTD)	1.14	1.16	1.49		
Diluted EPS (NTD)	1.14	1.15	1.47		
R&D Expense % to Revenue	9.0%	9.4%	7.7%		

Note 1: 80,261,235 shares and 80,776,788 shares were used in basic EPS and diluted EPS calculation for 3Q18 respectively.

Note 2. Revenue supplemental information

	3Q18	2Q18	3Q17	3Q18 Over 2Q18	3Q18 Over 3Q17
Revenue in US\$ thousand	16,760	17,561	17,461	-4.56%	-4.0%
Exchange Rate	29.92	29.54	30.54		

Non-operating Income and Expenses- QoQ



(in NT\$ thousands)

	3Q18	2Q18	3Q17	3Q18 Over 2Q18	3Q18 Over 3Q17
Other Income	1,173	2,060	771	-43.1%	52.1%
Other Gains and Losses					
Net Gain or (losses) on financial liabilities at fair value through profit or loss	-	-	2,400	#DIV/0!	-100.0%
Net currency exchange gain or (loss)	290	1,833	(2,138)	-84.2%	-113.6%
Gain on disposal of Investment	-	-	28,024	-	-
Others	48	11	-	-	-
Finance Cost					
Interest expense for convertible bonds (Note)	-	(124)	(3,612)	-100.0%	-100.0%
Other interest expense	(1,081)	(1,004)	(1,378)	7.7%	-21.6%
Share of profit (loss) of equity-accounted investees	(765)	278	(303)		
Total Non-operating Income and Expenses	(335)	3,054	23,764	-111.0%	-101.4%

Note: Amortization of discount on convertible bonds

Statements of Comprehensive Income - YoY



(in NT\$ thousands except EPS)

	2018	%	2017	%	Change (%)
	January to September		January to September		
Net Operating Revenue	1,516,044	100.0%	1,399,020	100.0%	8.4%
Operating Cost	(798,209)	-52.7%	(740,074)	-52.9%	7.9%
Gross Profit	717,835	47.3%	658,946	47.1%	8.9%
Operating Expenses	(388,927)	-25.7%	(342,121)	-24.5%	13.7%
Operating Income	328,908	21.7%	316,825	22.6%	3.8%
Non-operating items	961	0.1%	(2,580)	-0.2%	-137.2%
Income before Income Tax	329,869	21.8%	314,245	22.5%	5.0%
Income Tax	(61,971)	-4.1%	(37,384)	-2.7%	65.8%
Net Income	267,898	17.7%	276,861	19.8%	-3.2%
Basic EPS (NTD)	3.36		3.76		
Diluted EPS (NTD)	3.32		3.72		
Average Exchange Rate-USD/NTD	29.92		30.54		
R&D expense % to Revenue	9.1%		8.8%		
ROA (%)	11.6%		13.1%		
ROE (%)	13.1%		16.4%		

Note 1: 79,741,189 shares and 80,671,482 shares were used in basic EPS and diluted EPS calculation for Q318, respectively.

Note 2. Revenue supplemental information

	Jan to Sep/2018	Jan to Sep/2017	Change (%)
Revenue in US\$ thousand	50,670	45,815	10.6%
Exchange Rate	29.92	30.54	

Non-operating Income and Expenses- YoY



(in NT\$ thousands)

	2018 January to September	2017 January to September	Change (%)
Other Income	4,929	2,945	67.4%
Other Gains and Losses			
Net Gain or (losses) on financial liabilities at fair value through profit or loss	2,322	10,211	-77.3%
Net currency exchange gain or (loss)	(458)	(25,914)	-98.2%
Gain on disposal of investment		29,381	-100.0%
Other loss	(950)	-	-
Finance Cost			
Interest expense for convertible bonds (Note)	(881)	(14,540)	-93.9%
Other interest expense	(3,245)	(4,360)	-25.6%
Share of profit (loss) of equity-accounted investees	(756)	(303)	-
Total Non-operating Income and Expenses	961	(2,580)	-137.2%

Note: Amortization of discount on convertible bonds

Balance Sheet Highlight & Key Indices



Selected Items from Balance Sheet

(in NT\$ thousands)

	3Q18		2Q18		3Q17	
	Amount	%	Amount	%	Amount	%
Cash and Cash Equivalent	1,392,649	42%	1,365,587	42%	1,102,027	36%
Accounts Receivable and Notes Receivable	282,434	9%	256,702	8%	317,107	10%
Inventory	327,667	10%	350,986	11%	371,005	12%
Investments accounted for under the Equity Method	-	0%	14,620	0%	14,930	0%
Net Property, Plant and Equipment	711,777	22%	688,444	21%	638,352	21%
Deferred Tax Assets	155,701	5%	146,946	5%	199,687	6%
Intangible Assets	183,647	5%	183,026	6%	185,926	6%
Total Assets	3,277,729	100%	3,240,866	100%	3,086,846	100%
Short Term Loan	20,000	1%	20,000	1%	20,000	1%
Financial Liabilities at Fair Value through Profit and Loss	-	0%	-	0%	23,782	1%
Accounts Payable and Other Payables	157,234	5%	250,158	8%	306,272	10%
Bond Payable - Current Portion	-	0%	-	0%	109,902	4%
Long Term Bank Borrowings - Current Portion	20,479	1%	20,224	1%	19,492	0%
Long Term Bank Loans	62,314	2%	67,352	2%	82,061	2%
Deferred Tax Liabilities	55,393	2%	37,929	1%	57,396	2%
Total Liabilities	343,196	10%	428,416	13%	663,704	21%
Total Stockholders' Equity	2,934,533	90%	2,812,450	87%	2,423,142	79%

Key Indices

Current Ratio	954%	660%	358%
Debt Ratio	10%	13%	21%
AR Turnover Days	53	51	53
Inventory Turnover Days	140	144	163

Cash Flows



(in NT\$ thousands)

	<u>3Q18</u>	<u>2Q18</u>	<u>3Q17</u>
Beginning Balance	1,365,587	1,215,937	1,288,575
Cash from Operating Activities	131,052	141,563	233,361
Acquisition of property, plant and equipment	(48,089)	(43,185)	(60,898)
Decrease (Increase) in non-current assets	-	-	260
Acquisition of Subsidiaries	(2,442)	-	-
Proceeds from the sale of available-for-sale financial assets	-	-	35,381
Acquisition of Subsidiaries	-	-	(395,070)
Acquisition of intangible assets	(1,466)	(1,004)	(1,034)
Repayments of long-term loans	(5,007)	(4,822)	(4,742)
Repayments of Convertible Bonds	-	(2,800)	-
Employee Option Exercise	-	5,670	15,819
Cash Dividend Paid	(79,060)	-	-
Cash received through merger	27,263	-	-
The effect of exchange rate changes	4,728	54,098	(9,634)
Others	83	130	9
Ending Balance	1,392,649	1,365,587	1,102,027
Increase (Decrease) in Cash	27,062	149,650	(186,548)
Free Cash Flow (Note)	82,963	98,378	172,463

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

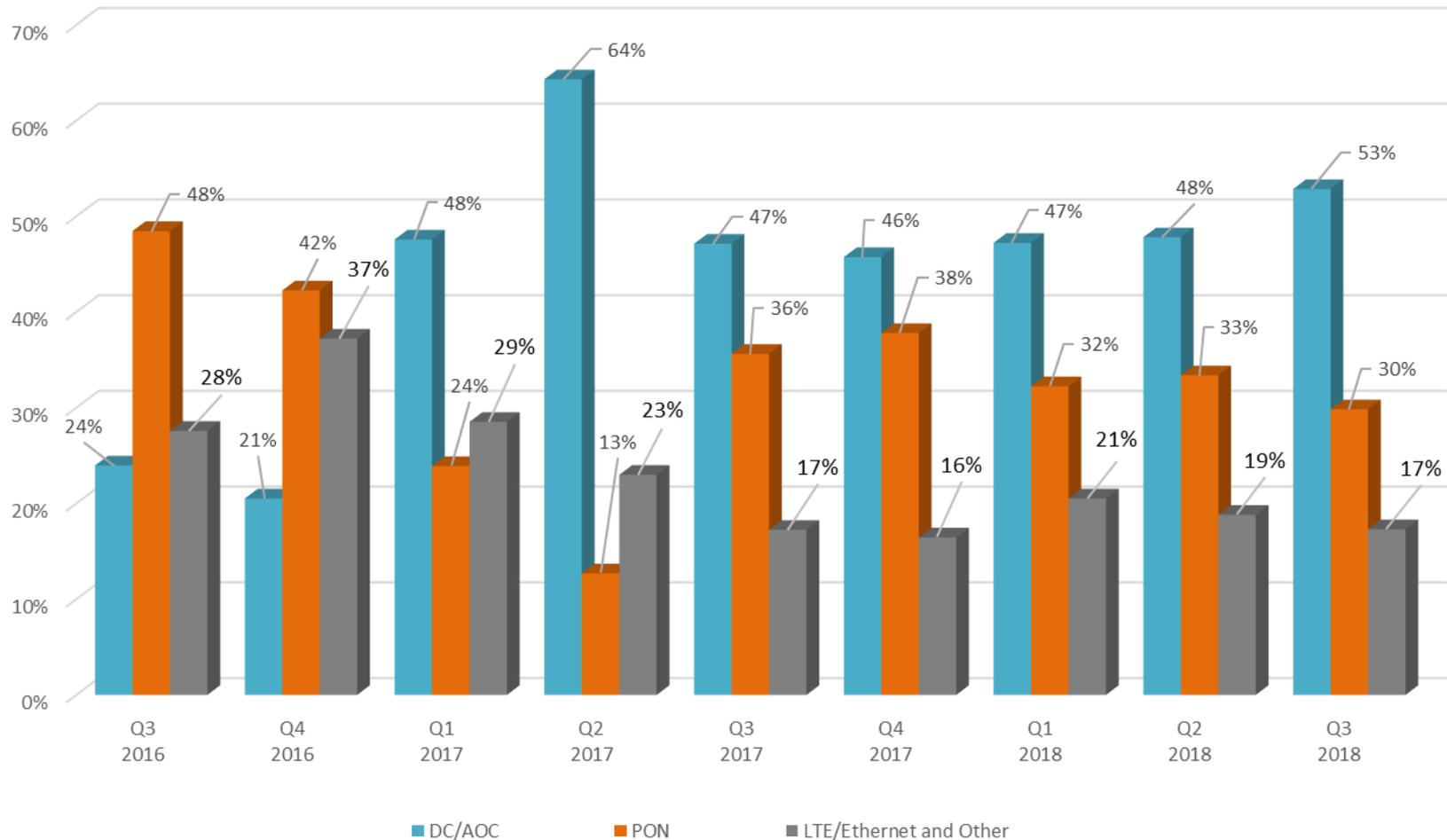
Revenue Mix % vs Gross Margin - QoQ



KGD Revenue Mix - QoQ

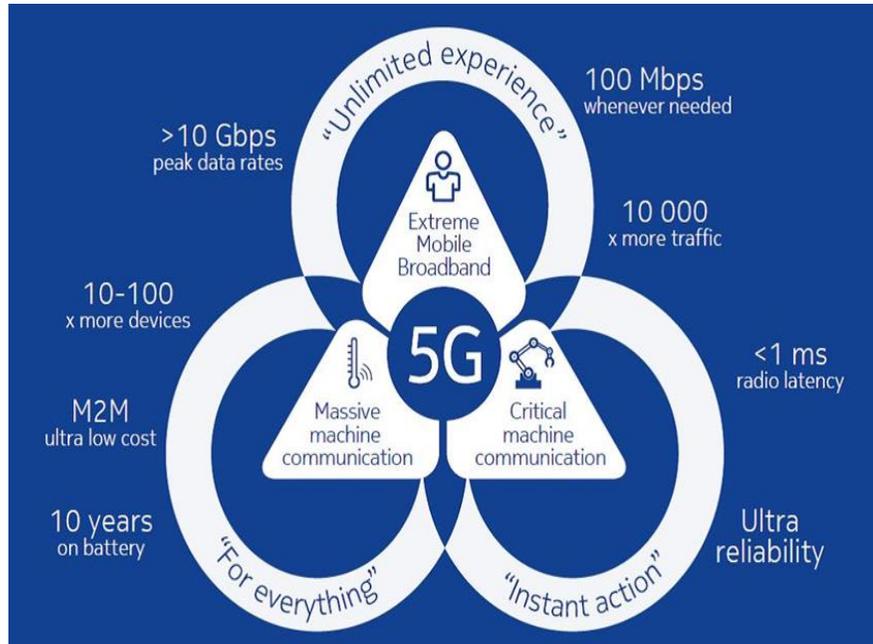


KGD Revenue Analysis-By Application



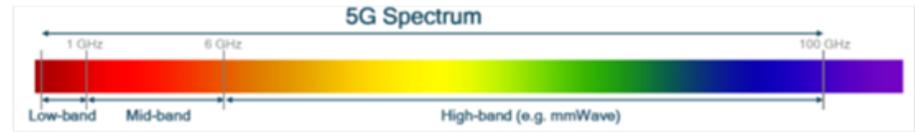
MARKET OVERVIEW

Future Growth Engine



Source: Nokia

Exhibit 1: 5G Spectrum Strategies for Low-, Mid- and High- Band Ranges



Spectrum Bands	Licensed	Shared	Unlicensed
Low-band Below 1 GHz limited capacity with large area coverage and indoor penetration	600 MHz US 700 MHz EU		
Mid-band 1 – 6 GHz Good for urban deployment with increased capacity	AWS (Band 66) 2.5 GHz 3.3 - 4.3 GHz 4.4 - 4.99 GHz	3.5 GHz CBRS US 3.7-4.2 GHz US 5.9-7.1 GHz US	5-5.9 GHz
High-band Above 20 GHz limited coverage with potential for very high capacity	24.25 - 29.5 GHz 27.5-28.35 GHz 37-38.6 GHz 38.6-40 GHz	37-37.6 GHz 57-71 GHz	64-71 GHz

Source: KNect365

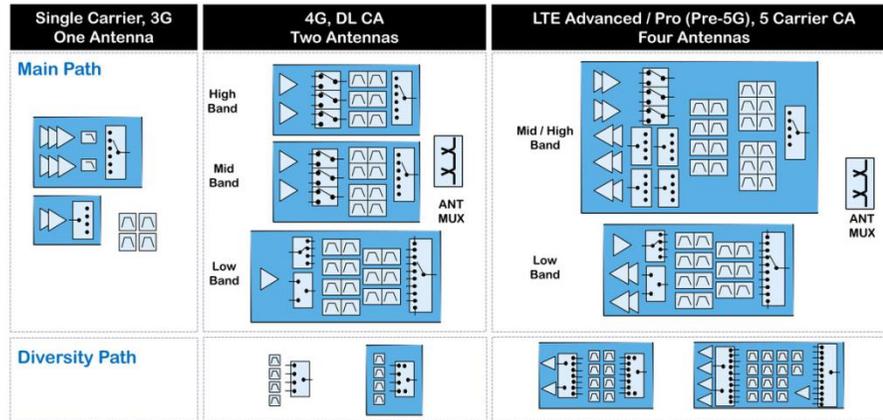
- Smaller base stations, multiple in multiple out (MIMO) architectures
- More and higher frequency bands, MIMO for cell phones
- ➔ More RF components (PA and Filter)

M2M: Machine to Machine

More RF Components in 5G



Evolution of the RF Front End



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RF Front-End BOM Estimates by Phone Type, 2018

	Entry-Level Smartphone 3G	Midrange Smartphone LTE	High-End Smartphone LTE	Flagship Smartphone LTE
Power Amplifiers	\$0.85	\$1.75	\$3.25	\$4.75
Switching/Tuning	\$0.35	\$1.50	\$2.25	\$4.50
Filters	\$0.95	\$4.00	\$6.50	\$8.75
Other RF Content	\$0.35	\$0.35	\$0.50	\$1.20
Total RF Front-End Content	\$2.50	\$7.50	\$12.50	\$19.20

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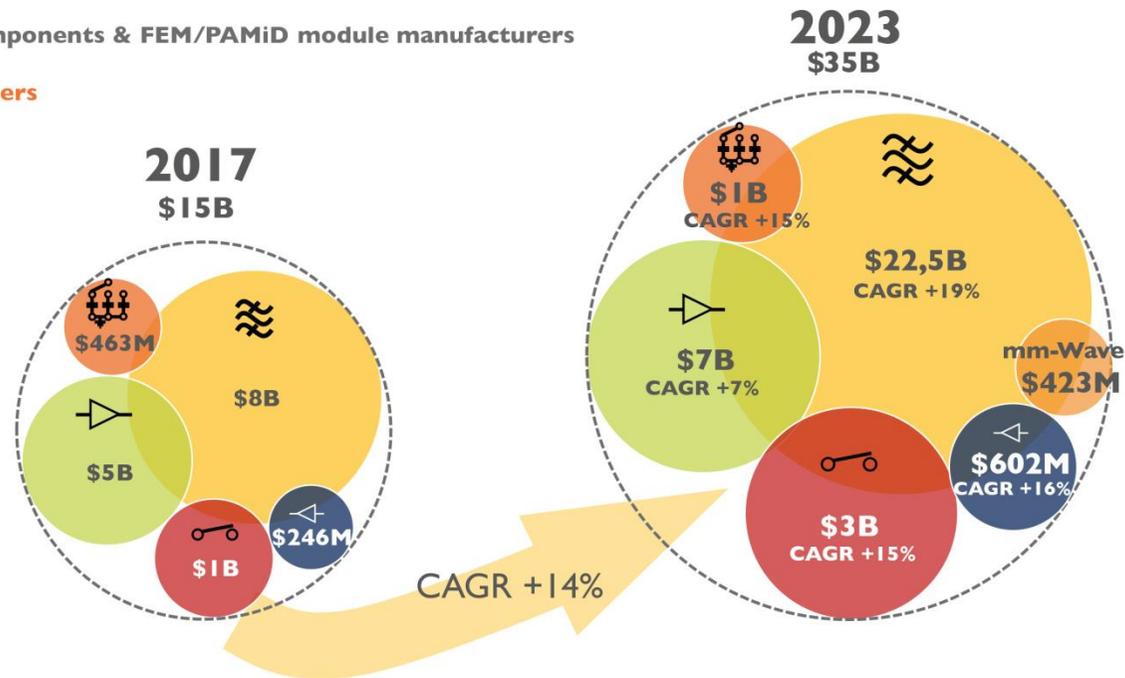
Front End Module Market



2017-2023 RF front-end modules market outlook

(Source: 5G's Impact on RF Front-End Module and Connectivity for Cell Phones 2018, Yole Développement, June 2018)

- Total RF components & FEM/PAMiD module manufacturers
- Filters
- Antenna tuners
- Switches
- PAs
- LNAs
- mmW FEM

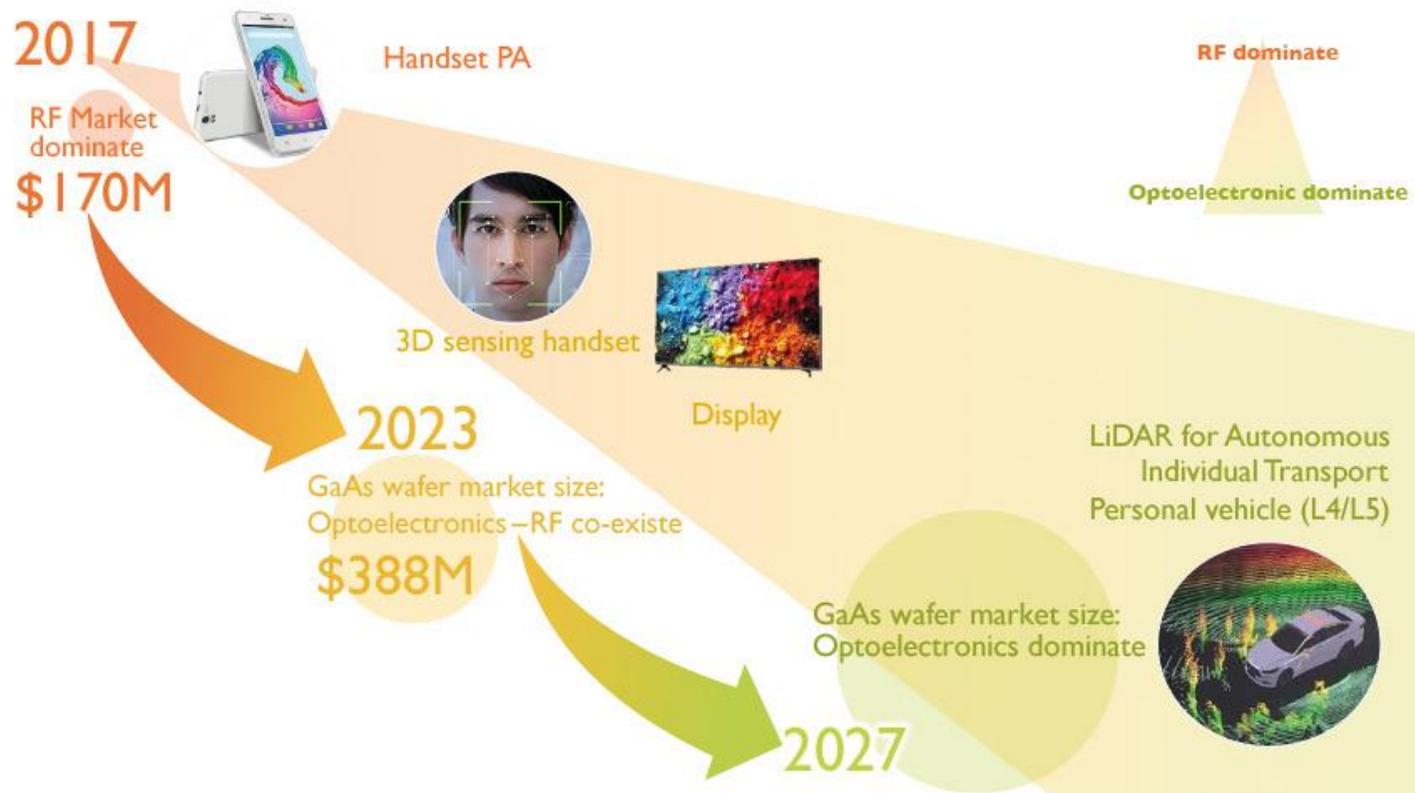


Evolution of the GaAs Market

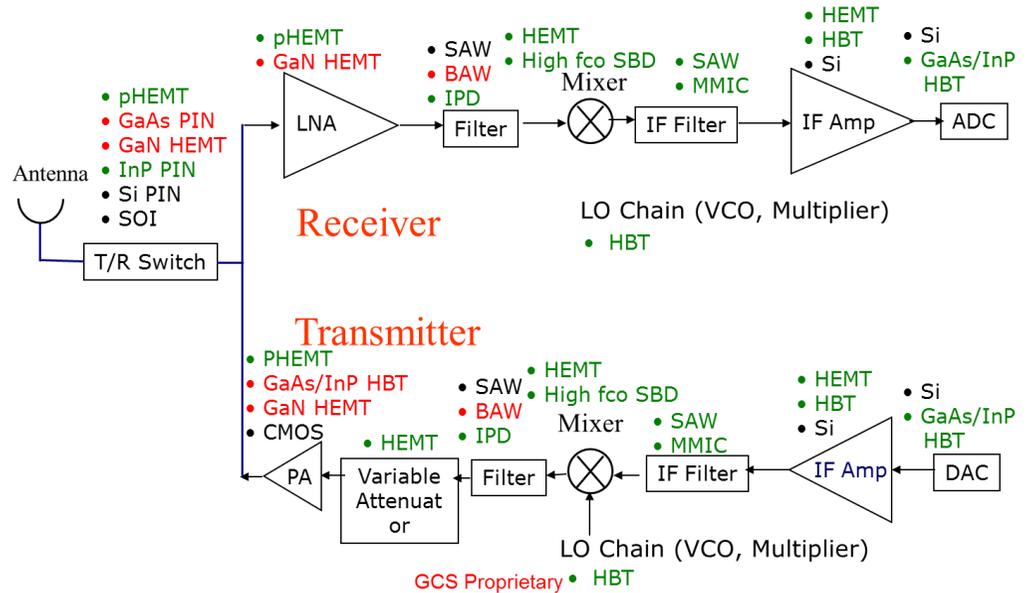
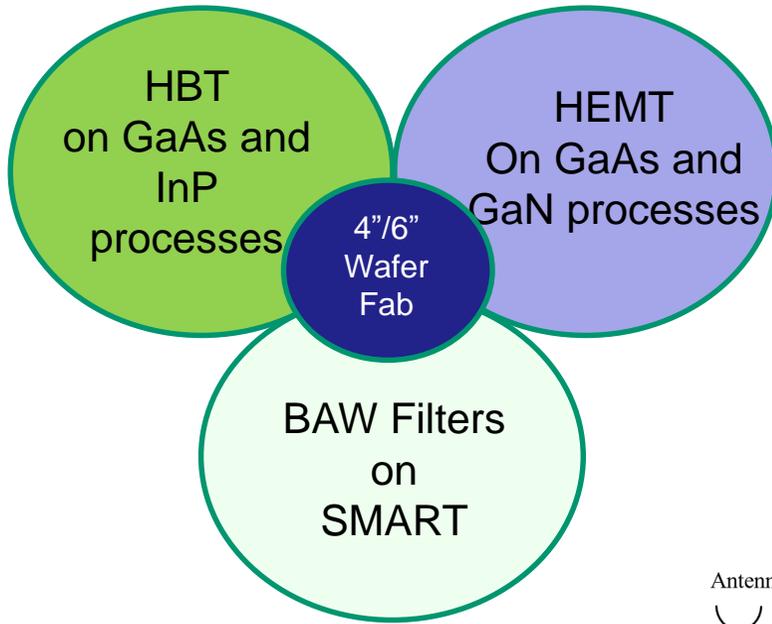


Evolution of the GaAs industry, from 2017 to 2027 By market segment

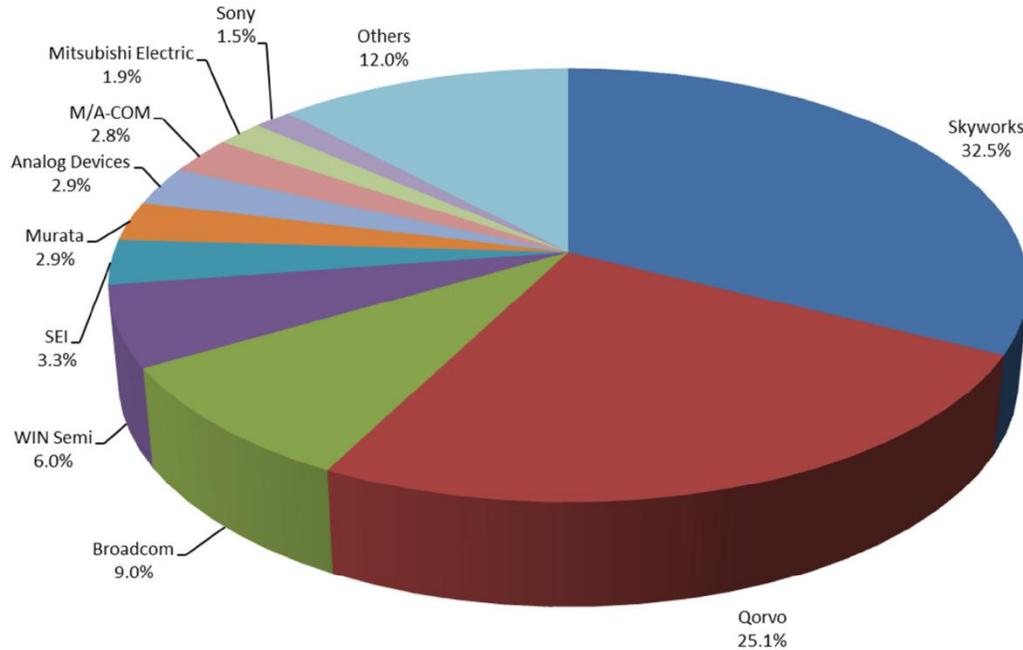
(Source: GaAs Wafer and Epiwafer Market: RF, Photonics, LED, and PV applications, Yole Développement, July 2018)



GCS Advanced Processes for 5G

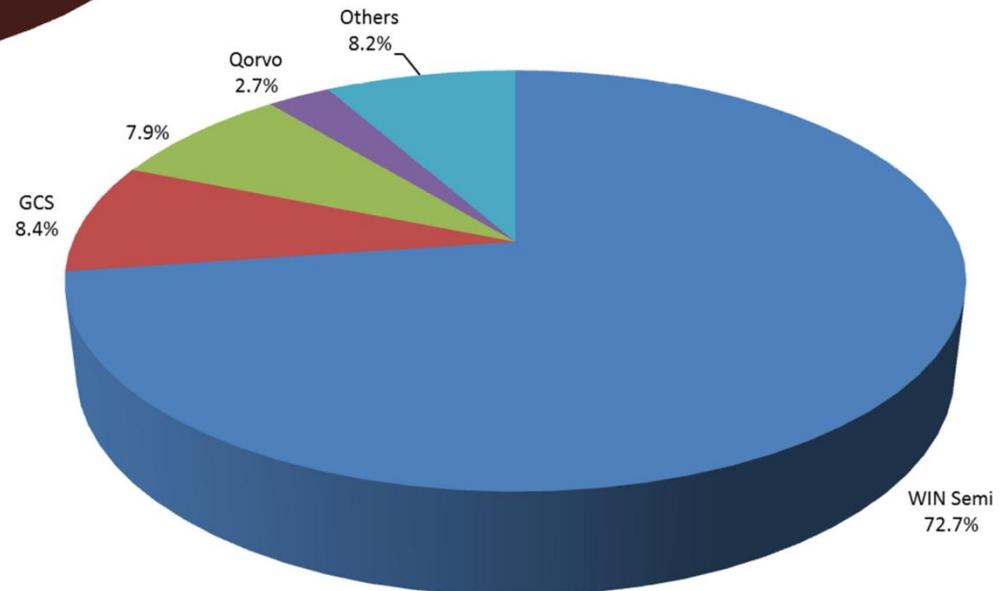


Overall CS Market (2017)



Total OEM Market Revenue: \$8827.9M
Pure play foundry revenue included

Total Foundry Revenue: \$743.3M
8.4% of Total OEM Revenue

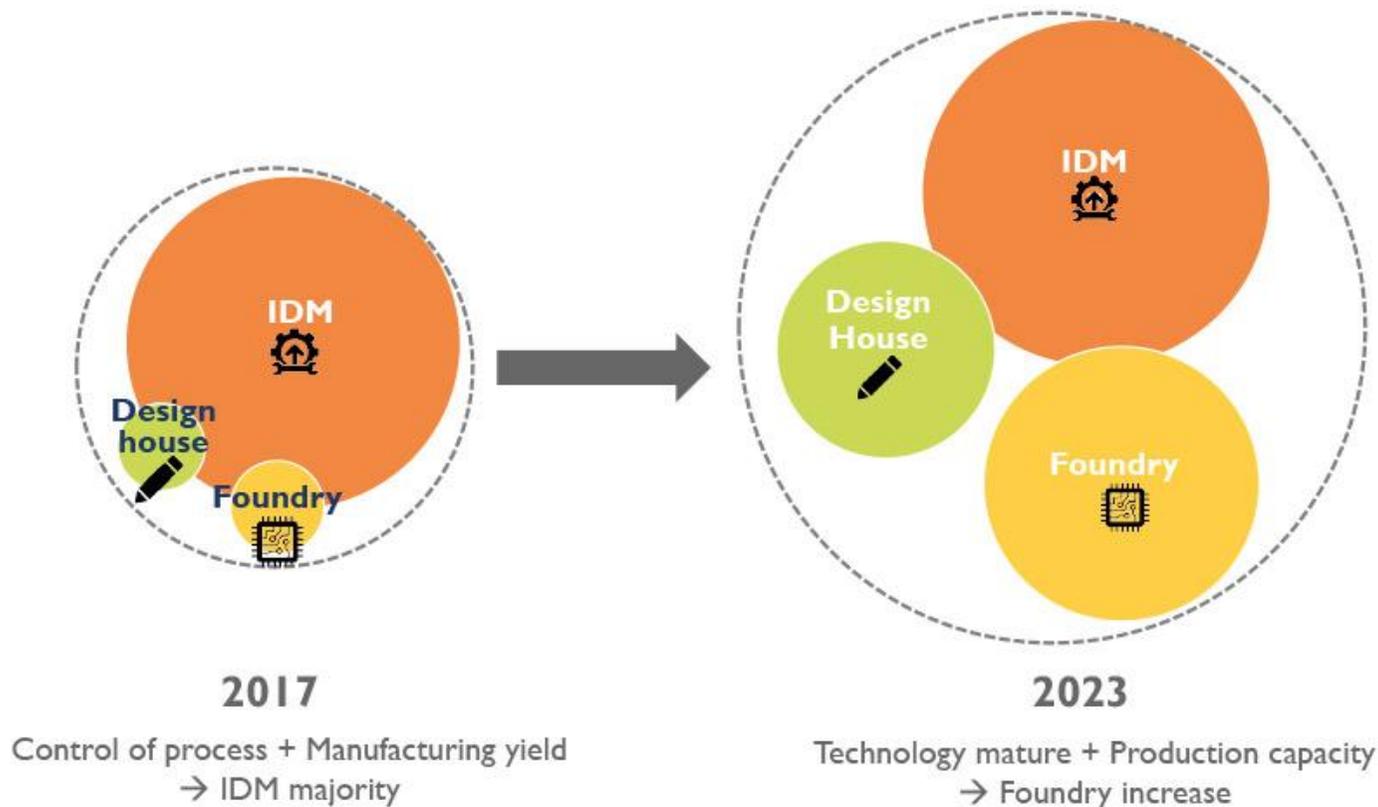


Business Model Evolution



Business model comparison: Integrated Device Manufacturer vs. foundry

(Source: RF GaN Market: Applications, Players, Technology, and Substrates 2018-2023,
Yole Développement, January 2018)



Going Forward



Majority of the capacities are within IDM's

- Lack of efficiency like Silicon
- WIN is the only company that can offer full foundry services

Imminent need for a viable second source to WIN to allow IDM's to let go of their own production. GCS has everything that WIN has except capacity

- Brand, Process Portfolio, Track Records, Customer Base

Break the capacity constraints

- Walk on Two Legs
- Optimize the capacity in US for advanced processes
- GaN on 6", Photonic integrated circuits, Automotive Advanced Driver-Assistance System (ADAS)
- Capitalize the JV production in Asia for high volume products
- GaAs HBT, PHEMT, Filters for 5G
- VCSEL for 3D sensing, etc.
- IDM outsourcing opportunities

Trade Wars

- China is the largest market for cell phones, passive optical networks (PON) and has the largest infrastructure company (Huawei).
- Major semiconductor companies are US based.

Opportunities for those who can manage to have localized production capacity to supply local customers

Strengthen KGD product portfolio and supply chain

- High speed/bandwidth lasers and photo diodes for data center
- Back end processing and assembly capability in Asia.

Customer Activities



- ❖ Data Center momentum continuing – 100G in volume and 400G qualified
- ❖ 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
- ❖ 3D sensing VCSELs qualified → move to 6” fab
- ❖ PIC customers in 6” production
- ❖ Several automotive Advanced Driver Assistance Systems (ADAS) customers in development phase

Q & A



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