

Strategy/ Performance: Leadership Growth

May 2017

#### Safe Harbor

This presentation contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. These statements are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and assumptions that could cause actual results to differ materially from those described in the forward-looking statements. All statements other than statements of historical fact are statements that could be deemed forwardlooking statements. For example, statements regarding expected (i) customer demand, (ii) utilization and cross utilization of our Fabs, (iii) growth in our end markets, (iv) market and technology trends, and (v) growth in revenues, cash flow, margins and net profits are all forward-looking statements. Actual results may differ materially from those projected or implied by such forwardlooking statements due to various risks and uncertainties applicable to TowerJazz's business as described in the reports filed by Tower Semiconductor Ltd. ("Tower") with the Securities and Exchange Commission (the "SEC") and the Israel Securities Authority ("ISA"), including the risks identified under the heading "Risk Factors" in Tower's most recent filings on Forms 20-F and 6-K. No assurances can be given that any of the events anticipated by the forward-looking statements will transpire or occur, or if any of them do, what impact they will have on the results of operations or financial condition of TowerJazz.

TowerJazz is providing this information as of the date of this presentation and expressly disclaims any obligation to update any of the forward-looking statements or other information contained in this document as a result of new information, future events or otherwise.



### **TowerJazz: The Global Specialty Foundry Leader | A SNAPSHOT**

## Proven Analog Business Model

Fastest Growing Foundry in the world with Proportional Growth in All Financial Metrics

#### Technology Leadership

Wide Range of
Advanced and
Differentiated
Specialty Analog
Offerings



#### Market Leadership

Well Positioned in the
Fastest Growing
Markets with Long Term
Customer
Relationships and
Roadmap Alignment



#### Operational Excellence

Worldwide
Manufacturing
Capabilities and
Flexibility



## The Global Specialty Analog Foundry







#### Specialty Analog IC Manufacturing

Proprietary Process Technology

Analog-Accurate Design Kits

Global specialty manufacturing capacity

Enabling fast time to market and high volume assurance of supply









## **Q1 2017 Financial Results**

Revenue	\$330M	19% YoY growth
<b>Gross Profit</b>	<b>\$85M</b>	38% YoY increase
Operating Profit	\$53M	71% YoY increase
EBITDA	<b>\$101M</b>	30% YoY increase
Net Profit	<b>\$46M</b>	83% YoY increase (excluding SA acquisition gain)
Free Cash Flow	<b>\$42M</b>	110% YoY increase
Q2 Revenue Guidance	\$345	Mid range +/- 4%  Up 13% year over year



## **Foundry Landscape**

(\$M)	20	05	20	10	20	15	20	16	2016/15 Change	Accumulated Change
А	TSMC	8,217	TSMC	13,307	TSMC	26,439	TSMC	29,488	11%	259%
В	UMC	3,259	UMC	3,965	GF	4,990	GF	5,545	10%	390%
С	SMIC	1,171	GF	3,510	UMC	4,464	UMC	4,582	3%	41%
D	PowerChip	1,587	PowerChip	2,424	SMIC	2,222	SMIC	2,921	31%	150%
Е	Chartered	1,132	SMIC	1,555	PowerChip	1,268	PowerChip	1,275	1%	-20%
1	Vanguard	353	TowerJazz	509	TowerJazz	961	TowerJazz	1,249	30%	1125%
2	Dongbu	347	Vanguard	505	Vanguard	736	Vanguard	800	9%	127%
3	HHNEC	313	Dongbu	495	Hua Hong	650	Hua Hong	712	10%	127%
4	SSMC	280	SSMC	330	Dongbu	585	Dongbu	672	13%	94%
5	He Jian	250	X-Fab	320	SSMC	460	X-Fab	510	54%	146%
11	Tower	102								

Digital Deep Sub Micron

Specialty Analog

The fastest growing foundry in the world

Source: IC Insights, EE Times, Company Reports



## **Analog vs. Digital: Main Differences**

	Digital Foundries	Specialty Analog Foundries		
Capacity CapEx	High	Low		
Technology CapEx	High	Low		
Product Lifetime	Short	Long		
Customer Engagement	Typically multi-source	Sole or limited source		
Technology Differentiation	At leading edge only	Across process technologies		
Process Technologies	CMOS	CIS, SiGe, BCD, BiCMOS, MEMS		
Technology Nodes	65nm-16nm 10nm prototyping	350nm-65nm — SPECIALTY		
	High speed data crunching and heavy storage	Real world interfacing to digital world		

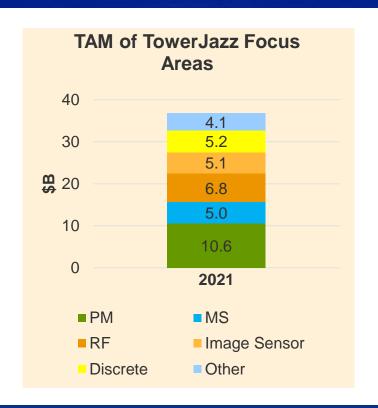


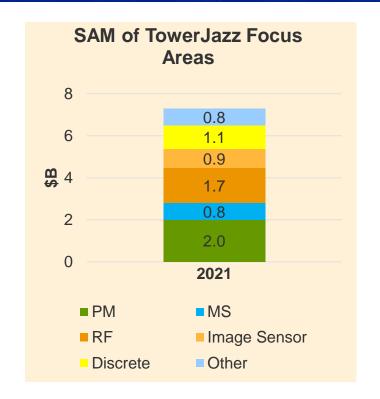
## **Global Footprint**





## Our TAM and SAM: Focus on Analog Power, CIS Imaging and RF End Markets





Our present served applications represent ~\$7.5 billion of wafer based revenues opportunity and a total analog opportunity of ~\$40 billion in 2021

A large and exciting growth opportunity for TowerJazz

Source: 1. World Semiconductor Trade Statistics Organization

2. Internal and IDM data



## Market MEGATRENDS driven by Internet of Things Driving rapid growth in Specialty Analog applications



#### **Specialty Analog Technologies**

Power Management

**RF and HPA** 

Sensors (Imaging, MEMS)



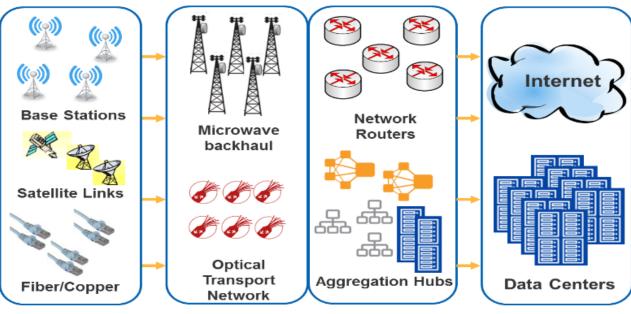
### **End-to-End View of Our RF Applications Markets**

#### **Mobile**

**Smartphones** 



#### Infrastructure



Connections at <100 Mbps Built in **RF SOI**, **SiGe** 

Connections Up to 100 Gbps Built in **High Speed SiGe** 



### **Infrastructure: Exploding Data Traffic Driving Analog Content**

Data Traffic Growth\* ('15 to '20)

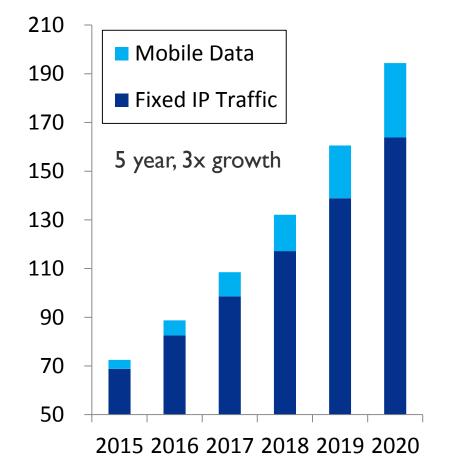
Mobile 53% CAGR

Overall 22% CAGR

- Driving need for
  - Higher data rates
     Higher margin, faster components
  - More connectionsHigher volume of our served Analog ICs

High volume and margin growth in a market where we enjoy > 60% share

Global Monthly Data Traffic in Billions of GBytes



<sup>\*</sup> Source: CISCO VNI, 2016



## CIS market segments and trends





**ADAS** and **Autonomous** driving

Industrial / Machine **Vision** 



IoT and food automation

Medical



**Technology** shift

**High end** photography and Cinematography



**Market share** increase

3D, Gesture control, AR/VR





**Disruptive** new market

**Security** 





IoT



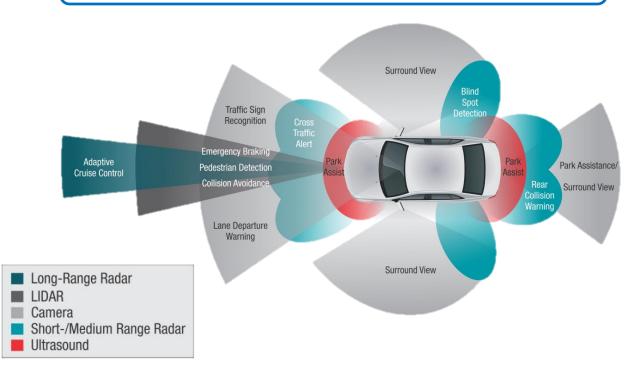
### Fast growing markets – Automotive (RF and CIS)

#### Advanced Driver Assistance Systems (ADAS) and Autonomous Driving

- 360° coverage
- 6-8 cameras per car
- VGA moving to HD
- High Dynamic Range (HDR)
- Near IR vision
- LIDAR



"The global autonomous car market is expected to witness a CAGR of over 10% through 2035" (Markets and Markets)





### **Power Management Growing Markets**

Power Management ICs are needed in every electronic system to efficiently deliver the required voltages and currents while reducing the drain on the power grid and maximizing battery life



Leading the Foundry Arena with High-Performance Power Management Platforms



#### **M&A Strategy**

#### 1. Increase Served Market

- Acquire new technologies w/ established customer base
- Acquire new technologies which serves existing base

#### 1. Increase Operational Capacity

Acquiring capacity at substantial lower cost than organic growth

#### 1. Create Geographic Alignment

- Improved customer alignment through local manufacturing (e.g. JDP execution)
- Operational optimization and reduced customer risk through flow cross qualification



## M&A Examples: Adding Advanced Analog Capacity at Minimal Cost and Minimal Risk

- Acquire existing factories from system or device maker companies with
  - Long term loading agreements to cover first multiple years running costs
  - Available capacity for incremental business from day one
  - Employee base and expertise within our defined strategic core analog capabilities

# TowerJazz Announces Completion and Kick-off of its Joint Venture with Panasonic Corporation

Joint Venture to include three Semiconductor Factories in Japan, Manufacturing of Panasonic and Additional Products

**April 1, 2014** 

# TowerJazz Completes Acquisition of Maxim's Fabrication Facility in San Antonio, Texas

Acquisition to expand TowerJazz's worldwide manufacturing capacity and capabilities; Supporting Company's excess customer demand

**February 2, 2016** 



#### **Industry Consolidations**

To date, the major consolidations have opened up greater opportunities for us because we were a trusted supplier of either the acquiring or the acquired company or both

Examples of consolidations with TowerJazz press released relationships (there are additional):



















Happening now







## **End Market Diversification – Top Customers**

	Power		equency / nance Analog	CMOS Image Sensors	Other (A&D, Mixed-Signal, Sensors, Embedded Memory, ESD etc.)
	~28%	~22% mobile	~8% Infrastructure	~18%	~25%
Customer 1	✓	✓	✓	✓	✓
Customer 2		✓	✓		
Customer 3	✓		✓		✓
Customer 4	✓				
Customer 5		✓	✓		<b>√</b>
Customer 6		✓	✓		
Customer 7	✓			✓	<b>√</b>
Customer 8	✓		✓		✓
Customer 9					<b>√</b>
Customer 10	✓				
Customer 11-15	✓		✓	✓	<b>√</b>

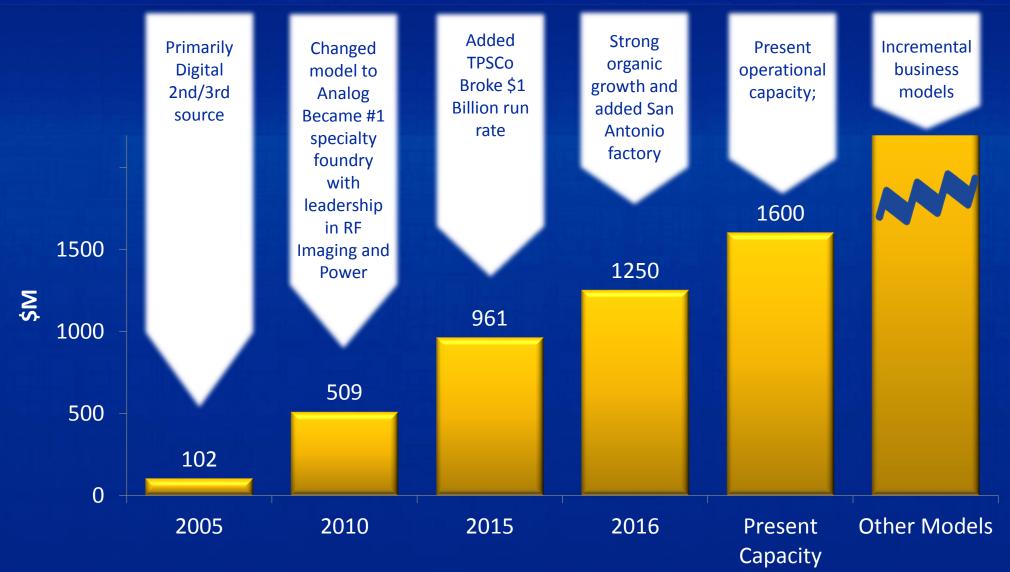


#### **Revenue Build**

Strong rent connitrough sole committees our cine through sour cine Other **Specialty** (most all of which is sole source) 3800M under or contract or contract or agreement IDM Sole Source incl. Take-or-Pay and Maxim 15 year contract \$200M **Customer Pre Payment** Driving ~\$200M **Panasonic** \$360-420M



## **Summary: Major Company Milestones**







**Contact**: Noit Levy-Karoubi, VP Investor Relations, noitle@towersemi.com, +972-4-6047066