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# SAMSUNG FOUNDRY

Investor Presentation 2020

# **BUSINESS UPDATE** MARKET OPPORTUNITIES SAMSUNG STRATEGY **KEY TAKEAWAYS**

# Financial Highlights

### Continuous revenue growth, exceeded \$10 billion since 2018





## **Business Milestones**



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### 7nm EUV Production Start

#### S3-Line Ramp up



#### 2018





2019

# **Global Manufacturing Sites**



\* SSES: Samsung Electronics Suzhou Semiconductor

\* TSP: Test and System Package

#### SAMSUNG





#### V1 Line (7nm~



# **BUSINESS UPDATE MARKET OPPORTUNITIES** SAMSUNG STRATEGY **KEY TAKEAWAYS**

# Smart and Connected World

New applications emerge with 5G, bringing greater demand for semiconductor Foundry will be a pathfinder in realizing unforeseen technology



### Samsung Foundry, Pathfinder







#### SAMSUNG



Mobile and Network

Advanced **Driver Assistance Systems** 



**High Performance Computing** and Artificial Intelligence

# Foundry Market Opportunities

### Foundry Market by Node

#### Expected to grow more than 5% per year on average by 2022

### *#* of Foundry Providers by Node



\* Source: Gartner, Samsung Internal

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#### Now only 2 companies, including Samsung, provide leading-edge foundry services

# **BUSINESS UPDATE** MARKET OPPORTUNITIES SAMSUNG STRATEGY **KEY TAKEAWAYS**

## **Our Vision**

## The Most Trusted Foundry, providing creative solutions for customers' innovation needs

## Technology

- Unrivaled process technology
- Customer-friendly design infrastructure
- Semiconductor 'One stop shop'

## Operation

- Flawless supply chain management
- Unparalleled execution to deliver our commitment
- Highest level of visibility & flexibility



#### SAMSUNG

## Service

 Service beyond expectation Deep knowledge and expertise to solve customer challenges Agile collaboration for customers' success

# Advanced Technology

Maintain Firm Technology Leadership through Continuous Node Scaling Ready to support a wide variety of applications and customers

| Transistor<br>Structure     | GatePlanar      |              | FinFET       |                 |
|-----------------------------|-----------------|--------------|--------------|-----------------|
| Design Rule                 | <b>32/28</b> nm | <b>14</b> nm | <b>10</b> nm | 7 <sub>nm</sub> |
| Lithography<br>Light Source |                 | ArF          |              |                 |
| Development<br>Schedule     | 2010 2012       | 2014         | 2016         | 2018            |







2020

# **Differentiated Platform, FD-SOI**

## 28/18FDS, Solution for IoT, Security, Industrial, and Automotive

- RF : Supports 110GHz mmWave
- eMRAM : Extremely small bitcell, superior write speed and endurance time

### FDS Technology Offering

|           | Logic | RF | eMRAM |  |
|-----------|-------|----|-------|--|
| 28FDS     |       |    |       |  |
| 18FDS     | 0     | 0  | 0     |  |
| Available |       |    |       |  |

### Next Generation eMRAM Strategy

- 28FDS eMRAM solution's Commercial Shipment Started in 2019
- 1Gb eMRAM Development on Track
- eMRAM on FinFET Technology under development

### SAM

# 8-inch Value-Added Offerings

### Portfolio Expansion from eFlash, Power IC, DDI, CIS, MS/RF to Power-discrete Technologies extensively optimized through many years of product manufacturing



# **Advanced Package Solutions**

### Advanced Package Technology Drives System Level Performance Improvement by Enabling More Integration and Better Performance

### Mobile Package



\*iPoP : integrated Package-on-Package / PLP: Panel-Level-Package / SiP: System-in-Package

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### **HPC** Package



# Foundry Ecosystem

'SAFE', the Ecosystem that Samsung Foundry has Built with its Partners, is Always SAFE



#### SAMSUNG

Design Solution **Dedicated and Flexible Technical Support** 

**Realize Your Idea** 

Integrated Solutions in Supply Value Chain

**Effective and Secure** 

**Ready to Use Design Environment** 

**Everything on the Platform** Worldwide Design Service on Cloud

# **BUSINESS UPDATE** MARKET OPPORTUNITIES SAMSUNG STRATEGY **KEY TAKEAWAYS**

# Key Takeaways

Maintain firm leadership in advanced node technology Expanding differentiated offerings and solutions for various applications Enhancing state-of-the-art operations to satisfy customers' needs Providing best products and services to enable customers' success

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