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Financial Highlights

Continuous revenue growth, achieved more than $10 billion in 2018
Business Milestones

- Business Start
- Foundry 1st HKMG Mass Production
- Foundry 1st FinFET Mass Production
- Industry 1st 10nm Mass Production
- New Business Unit
- S3-Line Ramp up
- 7nm EUV Mass Production

Timeline:
- S1-Line Construction: 2005
- S2-Line Ramp up: 2011
- 8-inch Business Start: 2015
- 14LPE: 2016
- EUV Line Construction: 2017
- 10nm Mass Production: 2018
- 7nm EUV Mass Production: 2019
Global Manufacturing Sites

Advanced 300mm Fabs, Matured 200mm Fab, Test/Package Facilities
in 3 Locations in Korea and US
in Korea
in Korea and China

SSES: Samsung Electronics Suzhou Semiconductor
TSP: Test and System Package

- S2-Line (65nm~14nm)
- S3-Line (10nm~)
- S4-Line (65nm~28nm)
- EUV Line (under construction)

- SSES: Suzhou, China
- TSP: Giheung, Korea
- Line-6 (180nm~65nm)
- S1-Line (65nm~8nm)
- S2-Line (65nm~14nm)
- S3-Line (10nm~)
- S4-Line (65nm~28nm)
- EUV Line (under construction)

*SSES: Samsung Electronics Suzhou Semiconductor
*TSP: Test and System Package
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Smart and Connected World

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

* DSP: Design Solution Partners / EDA: Electronic Design Automation / OSAT: Outsourced Semiconductor Assembly and Test
Foundry Market Opportunities

Foundry Market by Node
Expected to grow more than 4% per year on average by 2021

# of Foundry Providers by Node
Now only 2 companies, including Samsung, provide leading-edge foundry services

* Source: Gartner, Samsung Internal
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

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 Structure
- Planar
- FinFET
- GAA

Design Rule
- 32/28\text{nm}
- 14\text{nm}
- 10\text{nm}
- 7\text{nm} 5\text{nm} 3\text{nm}

Lithography
- ArF
- EUV

Light Source
- Gate All Around

Development 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

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Available ○ Under Development

Next Generation eMRAM Strategy

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

HPC Package

- System-on-Film
- 2.5D Si Interposer
- RDL Interposer

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

- Silicon proven
- Comprehensive
- From 350nm↑ to EUV based advanced node
- for various applications
- Silicon proven

Optimized and Tuned for Samsung's Foundry Process

EDA/DM

IP/Library

Design Solution

Cloud

Effective and Secure
Dedicated and Flexible Technical Support
Realize Your Idea
Integrated Solutions in Supply Value Chain

Everything on the Platform
Worldwide Design Service on Cloud

GRAND ECO-SYSTEM ALLIANCE

Reference Flow from RTL to GDS II

* IP: Intellectual Property / EDA: Electronic design automation / DM: Design Methodology
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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