# Samsung Electronics
## Device Solution Business

**SAMSUNG**

### ■ Division Information

● **MEMORY Division**
DRAM, NAND Flash, Nor Flash, SSD(Solid State Disk), Memory Card, Multi Chip Package, PRAM

● **SYS.LSI Division**
Mobile SOC, Home&Media SOC Solution, GSM/CDMA Solution, Mobile Processor, RF/Channel, Digital TV/STB, MP3/PMP SOC Solution, Wireless USB, CMOS Image Sensor, Mobile/Panel Display Driver IC, Smartcard, MCU, IP-Based ASIC, Strategic Foundry

● **LCD Division**
TV, Monitor, Notebook PC, DID(Digital Information Display) Panel, Flexible Display, Solar Cell

● **Storage system Division**
External HDD(Station, Portable, Mini), Desktop HDD(Spinpoint F,S,T) Mobile HDD(Spinpoint N), Consumer Electronics (Spinpoint CE), Enterprise-RAID Class

● **Test&Package Center**
semiconductor package & test

● **Semiconductor R&D Center**
Research & Development of the advanced and core technologies

● **Infra technology Service Center**
Infra Research for Manufacturing technologies

### ■ Career Opportunities

#### Memory Division

● **Hardware Design**
DRAM(DDR/Mobile/Graphic), Flash memory(Nor/Nand), PRAM, Analog & Digital Circuit, Flash Card controller, ARM Memory controller, ECC, SATA/SAS , Storage architecture

● **Software Design**
System Software, Computer Architecture, Memory & Storage Algorithm Design, FTL , Flash Memory File System, Journaling File System Design
Virtual Memory Management, Cache Algorithm, Dynamic Memory Management Development, Application Processor, Multimedia Processor, Memory Card Controller F/W, Inter-Processor Communication Algorithm Design, Parallel Processing Algorithm for SMP/AMP multi-Processor
H/W & S/W Performance Trade-off, Software Engineering, Embedded System Test , Test Case Design, Dependability, Fault Tolerant System Test Embedded System Development Process,Performance Analysis,OS, I/O System, Storage System, Infra(Clear Case, Clear Quest, Test Automation Tool)

● **Device Process**
Oxidation, Photo Resist, Photolithography, Etch, Diffusion, Cleaning, Thin Film, Ion Impantation, CVD, Metallization, Device Isolation, Transistor, Capacitor, Dielectric, SiO2/SiON Gate Dielectrics, High-K/Metal Gate

● **Manufacturing Technology**
- Yield Enhancement: Defect Reduction, Contamination Evaluation Technology, Particle Detection, Gas Impurity Evaluation Technology, Surface/Chemical Analysis Technology, Contamination Technology
- Metrology:Pattern Process Inspection, Critical Dimension Measurement

#### SYS.LSI Division

● **Hardware Design**
Wireless USB, CMOS Image Sensor, RF, D-TV, STB, DVD, MP3, DDI, S/Card, FCC, MCU, HDD Controller, ARM-Based Design, ASIC, Analog IC, Mixed Signal, High Speed Interface etc.

● **Software Design**
Embedded System Software, SE, SQA ,Flash File-System, Flash Device Driver Security IP Solution, S/W Platform, S/W Infra, AP/DVD/Modem/DSP/D-TV용 Solution/Firmware/System Solution

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- Metrology:Pattern Process Inspection, Critical Dimension Measurement

● **Test&Package**

#### Test&Package Center
- Package/Module Design, Analysis of Mechanical System, Vibration/Noise Control
- Structure optimization : robust design, topology optimization, etc.
- FEM Simulation : Thermal/Failure Analysis, Fluid analysis
- Package Process & Micro-structure Analysis

#### Semicondctor R&D Division

● **Advanced Process Development**
- High-K/Metal Gate Development FEOL/BEOL Process Integration
- Strain Engineering
- Photolithography (OPC/RET), Etch, Thin Film, Cleaning, CMP etc

● **CAD/TCAD**
Device Modeling, Process Modeling

#### Infra Technology Service Center
Modeling/Simulation, APC, MSPC/FDC, Logistics/Scheduling, Semiconductor material(Photo Resist, Slurry etc) development

#### Storage System Division

● **Hardware**
ASIC Development(Servo, Mechanical, Disk controller, and Read channel), Motor/Base/Assembly/Head Stack Assembly Design, Head Disk Assembly, VCM/Ramp/Latch, Head Disk Interface, Component Test & Simulation, Drive Integration, Head/Media Evaluation and Verification, Servo Controller Design

● **Software**
Embedded firmware for disk drives, Embedded operating systems, Multi-processors systems, ARM processors, SATA, SAS and/or other storage interfaces, Programming hardware interfaces through I/O ports, shared memory and interrupts, Security(DRM, Copy Protection, Cryptography), Software Architecture, SW Performance Tools, DSP Application Design,

● **Mechanical Design**
Component, assembly, and product level testing and characterization, Mechanical failure analysis, problem solving, sub-assembly and component design, Operate 3D CADsystem, Finite Element, and analytical software(design and drafting), ABS Design/Tribology

#### LCD Division

● **Device Technology Development**
Product Technology
- Note PC, Monitor, LCD-TV, Transmission Type/Reflective Type LCD Panel, High-transparent Organization, Light Recycling Organization, System Integration Technology, Device Test, Process Architecture
Design Technology (Color, Driver Circuit, Light Source, CAE)
- TFT/CF Circuit, Backlight Design, Mechanism Design, Module Design, Color Processing, Image Processing, SMPS Power LCD Driving Circuit, Low-consumption Low-electric Power Driving Circuit Design, Timing Controller, Interface Circuit, Backlight, CCFL, LED, Inverter, Optical Film, CAD S/W, Device Simulation, Optical Simulation, Process Simulation, Device/Element Analysis

● **Process Development**
TFT/CF Process, LC Mode/Process, Module Process, Material Development
- Photo Lithography, CVD, Sputter, Wet/Clean, Dry Etching, Photo Resist, Organic Insulator, Stripper, Etchant, Electronics Material, ELA(Eximer Laser Anneal) SLS(Sequential Lateral Solidification), MILC(Metal Induced Lateral Crystallization), Liquid Crystal, Low Tension/High Speed Liquid Crystal Material, Liquid Crystal Mode, Alignment Layer, Rubbing, LC Alignment Adhesives, Anisotropic Conductive Film, OLB, SMT, Printed Circuit, Chip On Glass, Pb free

● **System**
Digital Circuit, Analog Circuit, DSP, ASIC(SOC)
- ASIC Optimize : Low Power, Design for Testability
- High Power Driver IC Development Technology
- Logic Design, Analog Circuit Design, High Definition Picture Processing Technology, Integrated Circuit Design, PCB Board Design, High Speed Data Transmission Technology, Feedback Circuit Design, Conductive Splice Technology

● **Inverter**
Electric Power Electronics, Analog Circuit Power Design
- High Frequency Power Design(DC/AC Adapter, DC/DC Converter), SMPS Technology
- Light Source Drive(CCFL, EEFL, LED) Circuit Design
- Power Design Technology, Transformer Design Production Technology

● **Display Development**
Flexible Display
- Organic TFT, New Display Mode, E-Ink, Evaporation, Ink Jet Printing, Roll-to-Roll Process, Low Temperature/High Tension Process Technology, Encapsulation Technology

● **Optics**
Geometric Optics, Surge Optics, Thin Film, Optical System Design and Estimation
- Light Source Design and Optimization, Optical Instrumentation (Radiometry/Photometry), Color Engineering
- Estimation of Image Quality and Analysis, Optical Thin Film Design and Estimation

● **Machine Design**
Mechanism Design
- Three Dimension CAD Utilization Technology, Molding Technology(Injection Molding Analysis), Thermal Analysis, Impulse Analysis, Reliability Test

● **Material Element**
- Surface Analysis, Credibility Analysis, Biography Element, Chemistry Analysis

● **Solar Cell Technology**
- CVD, Sputter, ITO Film Surface Technology, Photo/Etch, ZnO Exclusive Etchant Development Test, Laser Patterning Process Development, PA, Photoelectric Transformation Analysis, P-i-N Characteristics

#### Marketing&Salse supports
- Overseas/Domestic Marketing and Sales, Procurement, Management Support Product Planning Management
- MBA, Business Administration, Electronics, Electrical Engineering, Industrial Engineering