KETI 30th ANNIVERSARY

KETI Korea Electronics Technology Institute

UNFRAMED PERSPECTIVE

KETI Korea Electronics Technology Institute

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In the era of change and convergence,
advanced technology being a step ahead of the world
limitless, rich imagination are
of paramount importance.

Through the smart business cooperation platform
which brings Solutions by meeting the Needs,
KETI provides creative business value.

KETI
embedded

Connecting imagination to the real world

Shaping the Future, As a Global Technology Leader, KETI will Take a Leap Forward

Welcome to Korea Electronics Technology Institute!

The era of Pax Technica has arrived. Due to the COVID-19 pandemic, our daily lives are going online and digital, and technology competition among major advanced economies has become a reality, not a future, to secure the global supply chain.

KETI is the R&D institute specializing in electronics and IT under the Ministry of Trade, Industry, and Energy(MOTIE) of the Republic of Korea. Since its establishment in 1991, KETI has driven the growth of domestic small and medium-sized companies in advanced technology fields. Thanks to the efforts, it has been established as one of business-friendly Korean research institutes by taking preemptive action for development of promising technologies to bring technological innovation to companies, and offering tailor-made growth platforms for enterprises.

In the wave of the major industrial transformation, KETI would like to become a global technology leader to take the initiative in changes in our society through signature technology development. To this end, we will contribute to national and industrial technology development with 「2030 three major value propositions」 such as 'great transformation in 5 major industries (Media·Biohealth·Mobility·Manufacturing·Energy environment),' 'SMEs Scale-up,' 'addressing national and social issues.' In this regard, we will actively support for domestic enterprises to grow as global, specialized companies.

I sincerely ask for your great support and interest in KETI which builds another 30-year-long hope.

Thank you.

KETI President
Shin, Heedong

Vision

Unframed Perspective

Mission

Lead technological Innovation and commercialization of SMEs

Develop advanced core technologies and create new industries

Organization

Board of Directors

President

R&D Planning Management Division

Management & Strategy Division
SMEs Collaboration Division

IT Materials & Components R&D Division
Communications & Media R&D Division
Convergence System R&D Division
Intelligent Information R&D Division
Semiconductor·Display R&D Division
Smart Energy·Manufacturing R&D Division
Smart Machine·Robot R&D Division

Gwangju Regional Branch
Jeonbuk Regional Branch
Southeast Regional Branch

History

1990's

1991.08
Established Korea Electronics Technology Laboratory

1995.03
Established Reliability and failure analysis Center

1997.08
Designated as a testing institution of Korea Laboratory Accreditation Scheme (KOLAS)

1999.08
Changed Name to KETI (Korea Electronics Technology Institute)

2000's

2005.04
Established Gwangju Regional Branch

2006.12
Established Jeonbuk Regional Branch

2008.05
Established Sangam Branch at DMC in Seoul (Specialized in communication & media R&D)

2010's

2012.07
Established Pangyo Branch in Seongnam (Specialized in system IC R&D)

2018.03
Established Air Consumer Electronics Innovation Support Center

2019.10
Established Southeast Regional Branch (Changwon)

2020.07
Renamed its official Korean name

As global R&D institute, KETI creates enterprise value

1990's

1991~2011
Fundamental technology for electronic components
Technology innovation for SMEs specializing in electronic components

1993~1998
GSM(Global System for Mobile Communications) mobile telecommunication devices
Export item initiative of GSM mobile phone

1994~1998
Interactive CATV systems
Localization of CATV systems

1995~2000
Application Specific Integrated Circuit(ASIC)
Driving force for the domestic HDTV industry

1995~2002
Micro Electro Mechanical Systems (MEMS) technologies
Base technology for the convergence industry

2000's

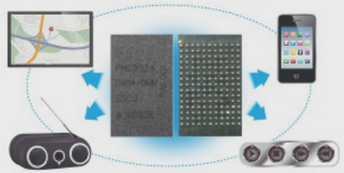
1997~2000
Small precision motors for home appliances and multimedia devices
Core components technology for digital home appliances

1999~2009
Next-generation large capacity storage devices
Base for commercializing large capacity storage devices

2001~2007
Development of Promising Next-generation Electronic Components
Development of core components such as micro motor and flexible devices

2003~2008
Next-generation DAB·DRM receiver technologies
Core technologies for next-generation digital mobile TV/Radio

2004~2009
Next-generation Batteries Project
Development of Components & Materials of Secondary Batteries

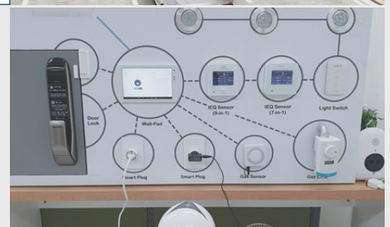


2010's

2009~2020
Vehicle Safety Service Technolgies for Connected Vehicle
Next generation ITS & V2X wireless communication technologies for autonomous vehicle

2011~2018
Development of Key Technologies to Create Global IoT Ecosystem
Core technologies for open IoT platform(Mobius) and global interworking

2013~2018
Nano-Carbon Film Heater
Flexible high-temperature film heater for EVs and home appliances



2020's

2016~2020
Optical Engine Technology for Scanning Lidar
Multi-channel scanning lidar technology for ADAS and self-driving vehicles

2018~2020
AI Companion Technology
AI-based sign language recognition technology

IT Materials & Components R&D Division

The key to global technology competitiveness is shifting to materials and components with global standardization of assembling·processing technology of end products. The IT Materials & Components R&D Division is developing core technologies required in whole industries including electronics, telecommunications, energy, and display as the advanced materials and components technology that enables to respond to future industry demand in the 4th industrial revolution era.
We have been especially dedicated to research and develop the flexible electronic components, RFIC, system packages, next-generation displays along with nano converging technology and convergence·complex technologies for electronic material. As a designated testing institution by Korea Laboratory Accreditation Sheme(KOLAS), we are also developing reliable techniques to improve reliability and quality of electronic components, providing systematic support for the testing, evaluation and improvement of product venerability produced by SMEs and business ventures. We promise to create a new market through materials & components development that responds to industry demand.

> The IT Materials & Components R&D Division is developing core technologies that required in whole industries including electronics, telecommunications, energy, and display as the advanced materials and components technology that enables to respond to future industry demand in the 4th industrial revolution era.

ICT Device & Packaging Research Center

- Wireless and optical communication components (Antenna, RF filter, FEM, RFIC/MMIC, RF modules, etc.)
- 5G/B5G RF components and wireless platforms
- RF radar technology
- Next generation packaging for convergence systems
- 2.5D/3D heterogeneous integration
- IT convergence components for Medical/construction/logistics

Electronic Convergence Material and Device Research Center

- 3D printing organic/inorganic composite materials for wearable device
- Inorganic-polymer composite materials and applications
- Thin film technology and multilayer process for ICT device
- High performance piezoelectric ceramics and applications
- Large-scale/fast ALD process and applications
- High-barrier encapsulation films
- Synthesis of Large-scale CVD graphene and applications
- Functional materials and thin film for smart windows
- Environment-friendly materials & bonding technology
- Heat-resistance bonding material and process technology for high temperature devices
- Adhesive and EMC material technology for high heat dissipation

Nano Convergence Technology Research Center

- Nanocarbon materials and functional composite materials
- Printed and flexible electronics
- Graphene materials, devices, processes and applications
- High performance glass coating and film technology
- Heating materials, TIM, heat dissipation materials and components
- Fine dust reduction materials and processes
- Environment, Safety, Security, Disaster-related technology
- Ship building and Underwater acoustics
- Terahertz devices and applications
- 3D printing (Materials, Equipments, Control & Monitoring and Applications)
- LED. Micro-LED and optical component technologies and applications

Reliability Research Center

- Thermal analysis and solutions
- RF/EMC analysis and solutions
- Mechanical Stress analysis
- Power semiconductor lifetime evaluation
- Reliability prediction (MIL 217+)
- Reliability testing (KS, MIL, AEC-Q)
- Accelerated life testing (ALT, HALT)
- Failure cause analysis (2D, 3D X-ray, SAT)
- Electron microscopy analysis (SEM, FIB)

Communications & Media R&D Division

Smart media services that adjust to the user's mood, augmented reality where virtuality meets reality, 3D holography that realizes dreams into reality, vehicles that drive themselves. All of these are pieces of ideal world that we dream of as well as the aim of the Communications & Media R&D Division. The division is developing next-generation core communication technology including short-distance wireless communication, wireless power transfer, VR/AR, and digital holography, and focusing research on next-generation ICT services such as smart home, next-generation broadcasting, digital contents, smart media, and virtual training system, etc. We will continue our efforts in improving the quality of people's lives by providing services that transcend time and space.

Smart Network Research Center

- Wireless power transfer (EV wireless charging, RF wireless charging)
- Low power short-range wireless communication (B-CDMA, SWIPT, Batteryless communication)
- Intelligent real-time wired and wireless networking technology
- Energy harvesting
- Intelligent NPU (Neural Processing Unit) and high-speed interface PHY technology
- Multi-space (land/sea/space) data communications
- Digital modeling & simulation technology for oceans and fisheries

Contents Convergence Research Center

- Convergence contents technology (Culture, Education, Public Safety·Welfare, Sports, Game)
- Immersive contents technology
- Intelligent contents technology
- Human-Centered Human-Content Interaction technology
- Contents Distribution & Device technology
- Blockchain technology

Hologram Research Center

- Holographic contents technology
- Holographic HOE/HMD/HUD technology
- Volumetric/Photometric technology
- Metaverse character & motion AI generation technology
- AI service utilizing Massive sound log data
- In camera VFX for Virtual prodcution technology
- XR streaming technology

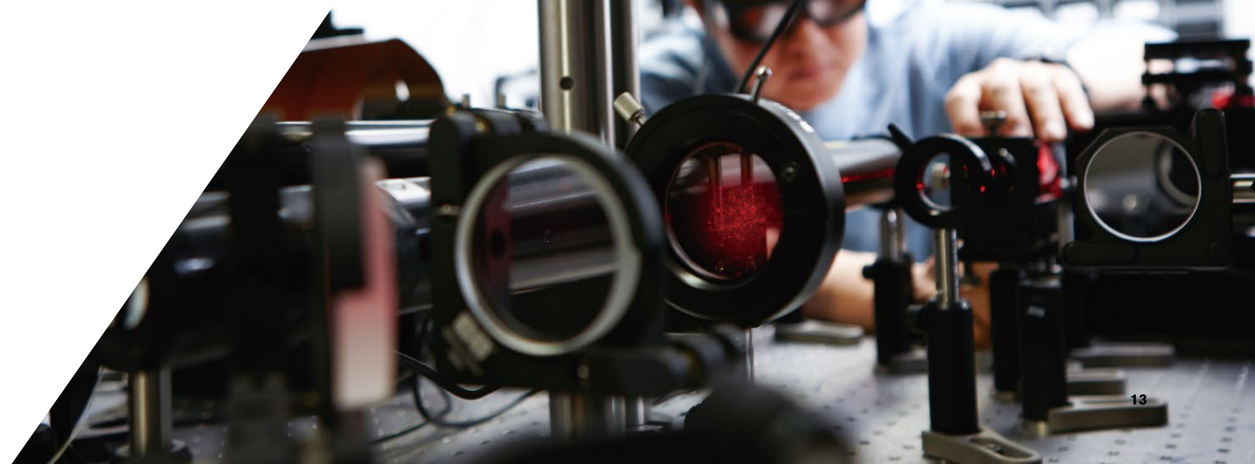
Information Media Research Center

- Analysis of structured·unstructured big data
- Cloud·edge Computing
- Intelligent video surveillance platform
- Media convergence data service
- Context-aware media recommendation & personalized media service platform
- Audio data analysis & performance evaluation

Virtual Reality and Augmented Reality Research Center

- Industrial education and virtual training software & system
- Virtual reality device and software & system
- Augmented reality device and software & system
- Five senses & emotion devices, system and services
- Hyper-reality interaction technology
- 5G based cloud VR/AR services
- Knowledge based VR/AR application services

"The division is developing next-generation core communication technology including short-distance wireless communication, wireless power transfer, VR/AR, and digital holography, and focusing research on next-generation ICT services such as smart home, next-generation broadcasting, digital contents, smart media, and virtual training system, etc."



Convergence System R&D Division

The 4th industrial revolution is driving changes, and the heart of change is convergence. The Convergence System R&D division is a factory for developing convergence technology. When small pieces of technology are combined together, they bring new technology to the world, opening the door to a future that is difficult to even imagine. Currently, we are living in a hyper-connected society in which things have intelligence and interconnected that enables things to judge and solve problem by itself. The division is focusing on developing technologies including autonomous intelligent IoT technology that enables communication anytime and anywhere, smart sensor technology which gives recognition/judgement, and logic control functions to things, bio health care technology that accelerates the average life expectancy of 100 years or more, and AI-based intelligent semiconductor technology. We are committed to provide full support to companies looking for new advances in this age of convergence to be more competitive.

Autonomous IoT Research Center

- IoT platform and data hub
- IoT communication and network
- Autonomous IoT technology
- Digital twin
- Spatiotemporal data analysis technology
- Edge IoT technology
- Unmanned vehicle technology (autonomous driving/flight, spatial recognition, GCS)
- AI-based IoT infrastructure management technology
- IoT convergence technology such as smart city, digital quarantine, forest disaster, digital shipbuilding, smart port, etc.

Human IT Convergence Research Center

- AI-based Digital Healthcare
- Cloud Native*
- Intelligent Edge Computing
- Human-AI Interaction and Understanding
- Digital therapeutics
- Medical Digital Twin
- Energy-based Treatment Devices
- Electronic Medicine and Bioelectronic Devices
- Bio Sensors and Bioprocessing Equipment
- Smart Beauty Devices and Personalized Treatment System

* Cloud technology for microservices

> The convergence system R&D division is developing autonomous intelligent IoT technology, smart sensor technology, AI-based intelligent semiconductor technology as well as bio healthcare system technology that accelerates the average life expectancy of 100 years or more.

Data Convergence Platform Research Center

- Data Signal Processing and Machine-Learning
- 3D Space Data Precise Sensing Technology
- Spatial data acquisition and situational awareness skills
- On-Offline Data Integration Technology
- User Interaction Technology
- Real/Virtual XR Production Platform
- Industrial Data Convergence Platfom
- Data Processing/Analysis Equipment
- Augmented Analytics for Data
- Industrial Data Virtualization
- Industrial IoT Edge Devices
- Convergence of Artificial Intelligence and Industrial Data
- Data Distribution Services

Intelligent Information R&D Division

The new era of wisdom comes closer beyond the era of smartness. In this era, the technologies such as Big Data and AI that search, refine, and reason information are considered the representative technologies of the 4th industrial revolution.
The Intelligent Information R&D division is developing image recognition-based object tracking, intelligent image processing technology such as media processing, Artificial intelligence technology such as multi-modal interaction, reasoning, and natural language processing technology, autonomous vehicle and unmanned vehicle platform technology, and intelligent integrated SW technology for vehicle application module and industry big data analysis. We will make our utmost effort to take the initiative in the future of technologies such as intelligent vehicle, 3D printing, intelligent service serving as future growth engines and/or advanced technologies in one of the nation's innovative, growth industries.

Intelligent Image Processing Research Center

- Image recognition technology (object, facial expression, gesture, human emotion, pedestrian, scene, etc)
- Multiple objects tracking technology
- Depth information prediction & image segmentation technology
- 4D reconstruction technology (video based object construction and deformation)
- Video based motion capture and transition technology
- Video based context understanding technology
- UHD/3D video codec technology
- Video quality enhancement technology (SR, HFR, form-factor conversion, underwater video, etc)
- Deep learning optimization technology for Mobile/Edge devices
- Image processing IP & chip design technology
- NPU IP design technology

Mobility Platform Research Center

- Autonomous mobility sensing signal processing technology
- Autonomous mobility certification/security technology
- Autonomous mobility control platform and service technology
- Autonomous mobility real-time communication system technology
- Autonomous mobility AI platform technology
- High-speed, high-reliability sensing platform technology for autonomous vehicle
- High-reliability sensing platform technology For drone
- V2X platform technology

Intelligence Integrated Software Research Center

- Industry data platform & AI application
- Industrial operating system level virtualization and orchestration edge software
- High reliability industrial safety software framework
- Data analysis and control system based on wearable devices
  - Firmware for measurement and control of wearable devices based on sensor
  - AI algorithm software for analysis of sensing data and control of actuator
- 3D build strategy, processor, and simulation software for additive manufacturing
  - Component-based graphics & enhanced video rendering framework solution

Artificial Intelligence Research Center

- Understanding human behavior and intents
- Situational, and context understanding, and multimodal reasoning
- Natural language understanding and representation
- Visual and langage data generation based on artificial intelligence techniques
- Understanding, explaining, and analyzing contents
- High performance reasoning with aritificial intelligence
- Continual understanding based human interaction, decision, and modeling
- Construction and custumization of AI datasets
- Core research on artificial intelligence
- High performance computing for artificial intelligence

"The Intelligent Information R&D division is developing object tracking technology based on image recognition, intelligent image processing technology including media processing, AI technologies such as motion recognition-based sign language recognition technology, and motion recognition-based natural language recognition technology, unmanned vehicle platform technologies like autonomous driving vehicle, and intelligent integrated SW technologies that are used for automobile, application module, and industrial big data analytics."

Semiconductor·Display R&D Division

Semiconductors and displays are the most basic technologies that will drive the era of the Fourth Industrial Revolution and new lifestyle changes such as post-corona. The role of sensing the surrounding situation. calculating and judging, digitizing natural signals and displaying processed information on the screen are key technologies that enables new services such as autonomous vehicles, smart devices, and foldable displays. The Semiconductor and Display division are concentrated on next-generation semiconductor technology including artificial intelligence and general-purpose, specialized SoC platform technology covering all fields of ICT and automotive. And we also focus on next generation AR/VR display solution, RF transceiver for Beyond 5G, high-speed physical layer interface for next-generation memory, smart sensor technology. We will actively support domestic fabless, foundry and display companies, which are at a new turning point through securing advanced semiconductor and display technologies, to improve their competitiveness.

SoC Platform Research Center

- Intelligent SoC architecture technology
- Artificial intelligence SW-SoC technology
- High-Speed Interface PHY IP technology
- Processor In Memory technology
- Fault Detection and diagnosis sensor SoC technology
- Optic-SoC technology
- (Operation Organization) Verification Support & Certificate Center for Semiconductors and Products

Convergence Signal SoC Research Center

- RF/Analog/Mixed-signal IC Design and Signal Processing Technology
- Wireless Communication RF Transceiver Design Technology
- Wireline or Wireless Sensor Interface Circuit Design Technology
- Intelligent Radar Sensor and Signal Processing SoC Technology
- Next-generation Data/Memory Serial Interface Design Technology
- High-efficiency PMIC(Power Management IC) Design Technology
- Artificial Intelligence Analog Computing Technology

> The Semiconductor and Display division are concentrated on next-generation semiconductor technology including artificial intelligence and general-purpose, specialized SoC platform technology covering all fields of ICT and automotive.

Display Research Center

- Organic/Inorganic Light Emitting Display (OLED, QD EL, Inorganic EL, micro & nano LED)
- Reflection type display (electronic paper)
- Driving Circuit and devices : Oxide TFT active matrix, Passive matrix
- Free Shape Display (Flexible, Stretchable, Rollable)
- Holographic Display devices (Laser holographic LCoS)
- Nano-photonic Crystal, Quantum-dot, Nano Imprint Optical Polymer and Film
- 2D Digital Sensor Array and Image Diagnosis Device
- Large Area Functional Polymer and Device of Heat Dissipation, Shielding, Self-Heating
- Transparent Solar Cell, Sensor and Module for Smart Window

Smart Sensor Research Center

- Nano/MEMS-based smart sensors and components(temperature-humidity / pressure / accelerometer / magnetic / flow / IR / ultrasonic / sound / THz sensors, etc.)
- Next-generation input devices and NUI/UX(touch, Virtual sensor, wearable, etc.)
- Integrated optics sensors and devices (evanescent field-based sensors, laser applications, etc.)
- Environment/Bio sensors and devices(Gas Sensor, Lab-on-a-Chip, waveguide-based sensors, etc.)
- Self-powered IoT devices and wearable sensor technology(Energy Harvesting and wireless power transmission)
- Smart Sensor Application System

Smart Energy· Manufacturing R&D Division

Clean, natural energy is taking a leap forward with the worsening fine dust issue, the strengthened Paris Climate Agreement, and the price decline in generating unit. However, nature is not controlled by human kind, and its intermittency and unpredictability is decreasing the effectiveness of new and renewable energy. In the meantime, the efforts toward Industry 4.0 is being realized in an advanced form of a smart industrial complex which goes beyond smart factory. The Smart Energy·Manufacturing R&D Division is conducting research on energy IT convergence technologies such as new and renewable energy and secondary battery, IIoT-based smart factory technology, etc. We will accelerate fundamental innovation in energy/manufacturing sector which is the foundation of a civilized society.

Energy IT Convergence Research Center

- Smart city energy platform
- IoT-based energy efficiency analysis and management
- Demand response system
- Virtual power plant(VPP), distributed energy resource(DER) management platform
- Renewable energy(Photovoltaic, Wind) control, generation forecast
- Energy big data platform, data science
- Smart grid and AMI/ESS interoperability
- Future logistics technology such as smart sensor tags

Advanced Batteries Research Center

- Cathode and anode materials of lithium secondary batteries for electric vehicles
- Solid electrolytes and all solid-state batteries
- Next generation battery with high energy density using lithium metal
- Redox flow batteries for energy storage
- SO2 inorganic electrolyte-based rechargeable batteries
- Materials for lithium-ion capacitor
- Cutting edge analysis techniques for materials & components of rechargeable batteries
- Reuse, repurposed, recycling technologies of used rechargeable batteries

Smart Manufacturing Research Center

- Smart manufacturing equipment·Operation SW technology
- 5G Industrial Technology
- Interoperability & scalability technologies between smart manufacturing devices
- Open IIoT smart factory platform, edge computing technology
- Manufacturing Big Data/AI/CPS Technology
- Smart manufacturing process, equipment commercialization and service support technology
- Infrastructure-Establishment for advanced level of smart manufacturing and education support in related field

New & Renewable Energy Research Center

- New electrode materials for crystalline silicon solar cells
- High power functional photovoltaic module
- Flexible & semi-transparent photovoltaic modules for EV application
- Stability enhancement, recycling & upcycling system of photovoltaic modules
- Condition based maintenance & monitoring for PV plants
- PV powered water treatment
- ICT·IoT device for smart farming

> The Smart Energy·Manufacturing R&D Division is conducting research on energy IT convergence technologies such as new renewable energy and secondary battery, and IIoT-based smart factory technologies.

Smart Machine·Robot R&D Division

Robotics is one of the most popular technologies in the era of the 4th industrial revolution, and has become the key to lead the global industry. Furthermore, its application has widely spread to the whole industry serving as a high-added value platform to address social issues and innovate production. The Smart Machine·Robot R&D division is mainly conducting research on robot technologies such as intelligence, motion, components(motor, sensor, controller), and platform, etc. We are also focusing on development of technologies of high-efficiency power conversion system (inverter, converter), and of power modules for next-generation mobility such as EV(Electric Vehicle) and PAV(Personal Air Vehicle) represented by the technological shift to electrification. We will make continued effort to create future values for businesses.

Intelligent Robotics Research Center

- Robotics based service technology
- Industrial and service robot system technology
- Robotic application evaluation and technical support
- Intrinsic robot technology such as mobility, manipulation and teleoperation
- Advanced robot intelligence technology including perception, decision, action and HRI
- Cloud Robotics and RIoT (Robot Iol) technology
- Robot motion and process control technology
- Robot actuator, sensor, control module technology
- Precision mechanical parts technology such as robot reducer
- Robot convergence components evaluation and technical support

Intelligent Mechatronics Research Center

- High-power design technology for electric propulsion module of future mobility
- High-efficiency and high-precision industrial electric machine design technology
- Smart fluid machinery design technology
- Energy/Environment/Safety related flow system control technology
- Multi-physics based active heat dissipation design technology
- Ultra-high-density and high-efficiency power electronics solution using WBG semiconductors
- Power electronics technology for electric power train of Future Mobility
- Power electronics technology for renewable energy and ESS systems
- High performance motor control technology based on real time multi-processing
- Smart power control based on power system stabilization technology

Power System Research Center

- Ultra-high-density and high-efficiency power electronics solution using WBG semiconductors
- Power electronics technology for electric power train of Future Mobility
- Power electronics technology for renewable energy and ESS systems
- Power electronics technology for high-precision battery charging & discharging
- High performance motor control technology based on real time multi-processing
- Motor control technology based on High voltage multi-level topology
- IM/PM sensorless control technology
- Smart power control based on power system stabilization technology
- Power electronics system performance evaluation technology

"The Smart Machine·Robot R&D Division is conducting research on fundamental technologies of robotics such as robot intelligence, motion control, and robot components which reflect technology convergence, and mechatronic technologies such as smart motors, actuators, and high efficiency power conversion systems."

Gwangju Regional Branch

Gwangju Regional Branch

With the aim of leading the regional state-of-the-art technology and strategic industries, Gwang-ju Regional Headquarters is striving to advance the future home appliances and air solution industries, spatial recognition technology-based metaverse industries, new energy industries, and mobility electronics industries such as automobiles, ships, and drones.

Energy Convergence Research Center

- LVDC, HVDC and micro-grid core technology
- Power conversion technology for renewable energy and energy storage system
- Intelligent energy management system
- Power analysis & evaluation technology of grid

IT Convergence Components Research Center

- High speed and multi-channel LiDAR
- Sensor fusion & multimodal data enhancement
- AI based 3D multiple object detection
- Intelligent immersive interaction technology
- XR human computing

Smart Electrics Research Center

- Sustainable high safety electrics technology for mobility system
- AI based operating system technology considering mobility function safety and security
- Core technology for power conversion system and electrics connected with AIoT
- Electric driving redundancy component management technology for high safety (Motor, Actuator, Passive component etc.)
- Electromagnetic sensor, EMC (Electromagnetic Compatibility), Gas explosion proof/Intrinsically Safe, Process Technology

Smart Appliances Innovation Support Center

- Health care/bio-electrical signal measurement and life-tracking technology
- Air-Purifier technology(Filter/Tower)
- Test certification and enterprise support air consumer electronics
- Support for equipment utilization and KOLAS authentication
- Support for technology advancement and commercialization of smart appliances industry
- Empowerment of small and mid-sized business employees

Jeonbuk Regional Branch

Jeonbuk Regional Branch

With KETI's advanced IT technologies, Jeonbuk branch leads the IT technology of Jeollabuk-do province through its strategical industry networks to support SMEs in various fields including research on SW & cultural contents convergence technology, and the operation of nano fab & automotive components center.

Smart Electronics Research Center

- Technical support in smart electronics
- Next generation display and semiconductor devices
- Smart devices by sensor fusion
- Electronic Circuit 3D printing

IT Application Research Center

- Agriculture-Bio software convergence IT components/system applications
- Automotive electronic components and electromagnetic compatibility related applications
- IT Applications with next generation Energy harvesting & storage components and materials
- IT Applications with 3D printing & Nano Carbon components and materials.

SMEs Innovation Support Center

- Support start-up/small and mid-sized/ venture companies (operation of Business Incubation Center)
- Equipment support service and cultivation of professional human resources

Southeast Regional Branch

Southeast branch is responsible for improvement in corporate productivity and creation of highly-added value by linking capabilities of KETI, the leading research institute in smart manufacturing, with key industries in the region.
We are also focusing on fostering ICT talent and companies by utilizing our DNA (Data, AI, Network) capabilities and creating new growth models for new industries such as robots, hydrogen, and defense.

ICT Convergence Research Center

- Smart manufacturing technology based on digital twin
- Edge cube and edge hub technology based on AI
- Quality evaluation and testing system of smart manufacturing components and equipments using data and AI server

Corporate Cooperation Center

- Field-oriented training of human resources and support for technology commercialization of local companies
- Operation of hydrogen energy infrastructure and support for safety management technology
- Support for defense technology advancement

KETI – SME collaboration platform, where ‘needs’ create ‘solutions’

COMPANY

NEEDS

Online Platform
Strategic Technology for Commercialization

Collaboration/Support requests can be made online.

Offline Platform
Technology Innovation Exchange Seminar

Technology innovation exchange seminars (technology matchmaking event, etc.) are hosted to communicate with enterprises.

SMEs Platform

① Access KETI website (www.keti.re.kr)
② Click ‘Collaboration Platform’
③ Click ‘Application’
④ Submit your application
⑤ Support availability and support methods are replied

We provide solutions to start-ups and companies that seek new technology or assistance.

※ Through 1:1 networking, ‘with KETI’ technology matchmaking events, we provide support and gather a wide range of opinions so that enterprises can utilize the latest technologies that can facilitate industrial development in many areas.
※ Event details can be checked via our website.
[SMEs Collaboration Department]
E-mail. support@keti.re.kr

SMEs Program

01 Joint R&D

02 Technology Transfer and Commercialization Support

03 Technology Consulting

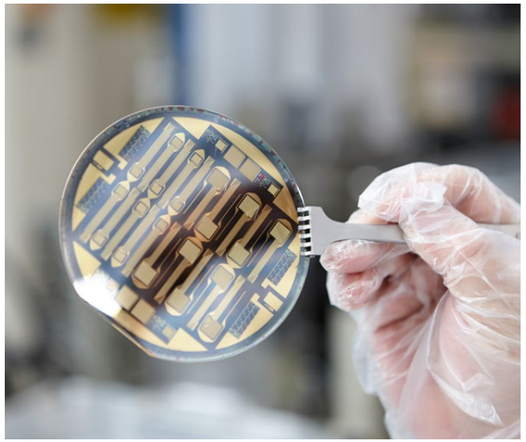
04 Reliability Evaluation Support

05 Research Equipment Utilization

06 Start-up Support

SOLUTION

COMPANY



01
Joint R&D

KETI is a leader in the field of advanced electronics & IT technologies. Companies can join in joint R&D projects with KETI.

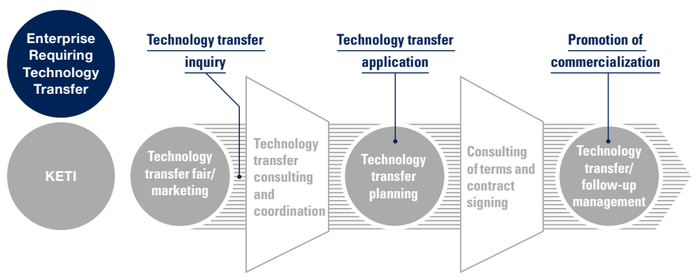
02
Technology Transfer and Commercialization Support

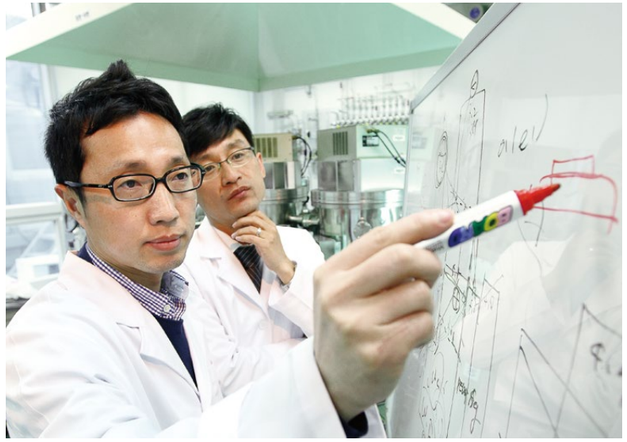
KETI has know-how to transfer our core technologies and patents, and helps the SMEs achieve commercialization successes.

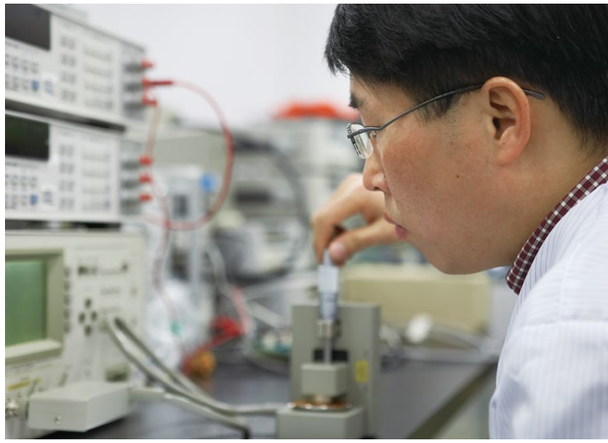
- **Technology Transfer Information**

  After accessing KETI website (www.keti.re.kr), then click ‘Collaboration Platform’

- **Technology Transfer Process**







03
Technology Consulting

We provide technology solutions for enterprises through expert matching, customized technology guidance and consulting.

04
Reliability Testing/Analysis

As an international accredited reliability testing agency (KOLAS), KETI provides reliability test, evaluation, analysis and solutions concerning developed and manufactured products. We are ready for diverse reliability tests and analysis requests such as failure analysis, heat reliability, reliability prediction, automotive application product reliability testing (AEC-Q), EMC analysis/ solution and accelerated-life testing (ALT).

05
Research Equipment Utilization

You can utilize a variety of research equipment at KETI. KETI supports the use of over 400 high-tech R&D machines related to optical & electronic image and radio wave measuring, compound preprocessing analysis, semiconductor process & test, communication signal processing and electrical & electronic measuring, testing and analysis.

06
Start-up Support

KETI operates business incubation center to foster startups as sound SMEs by providing the KETI’s training spaces and infrastructure.

Global Network

Global Network with 164 institutions in 50 countries

※ validity: 19 institutions in 10 countries

United States

- Embedded AI-based automation cooperation for fully autonomous driving systems [Carnegie Mellon Univ.(CMU)]
- Open-Architecture Remote Terminal Unit(RTU) (Exxon-Mobil)
- Camera-based Real-time Artificial Intelligence System for Autonomous Driving (IIT)
- Cooperation on commercialization of cancer diagnostic platforms [Massachusetts General Hospital(MGH)]]
- AI based solutions for metaverse performance and unmanned facility inspection (UCSD)

Germany

- Open Industry IoT (IIoT) Smart Factory Platform and Factory-Thing Hardware cooperation (Fraunhofer IOSB)
- Development of material and process technology for eco-friendly quantum dot light emitting diode (Fraunhofer IAP)
- High efficiency GaN MMIC Power amplifier and 5G/6G Modem development (Fraunhofer HHI)

Italy

- European ETSI message set compliant V2X system and applications based on ITS-G5 (CNR-IEIIT)

Spain

- Smart Farm Platform for high-quality and traceable yield (ALARAD) [CT Ingenieros Aeronauticos de Automocion e Industrialeds (CT Ingenieros)]

Sweden

- Smart, Attack-resistant IoT Networks [RISE(Research Institutes of Sweden)]

Czech

- Embedded intelligence based on advanced methods of machine learning for edge-computing systems [Brno Univ. of Technology (BUT)]
- AI-based safe, self-driving service at roundabouts [Czech Technical Univ. at Prague (CTU)]

China

- Smart-Home/Factory Satandards Cooperation (IGRS)
- Research and application on 5G-NR-V2X based enhanced automotive valet parking key technologies (CUPT, CCA, CAICT, TU)

Vietnam

- Vietnam Technology Advice and Solutions from Korea (VITASK) participation and business support through industrial technology ODA

Myanmar

- Support for the Foundation of Myanmar LED lighting Infrastructure [DRI(Department of Research and Innovation)]

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Design your innovation with KETI