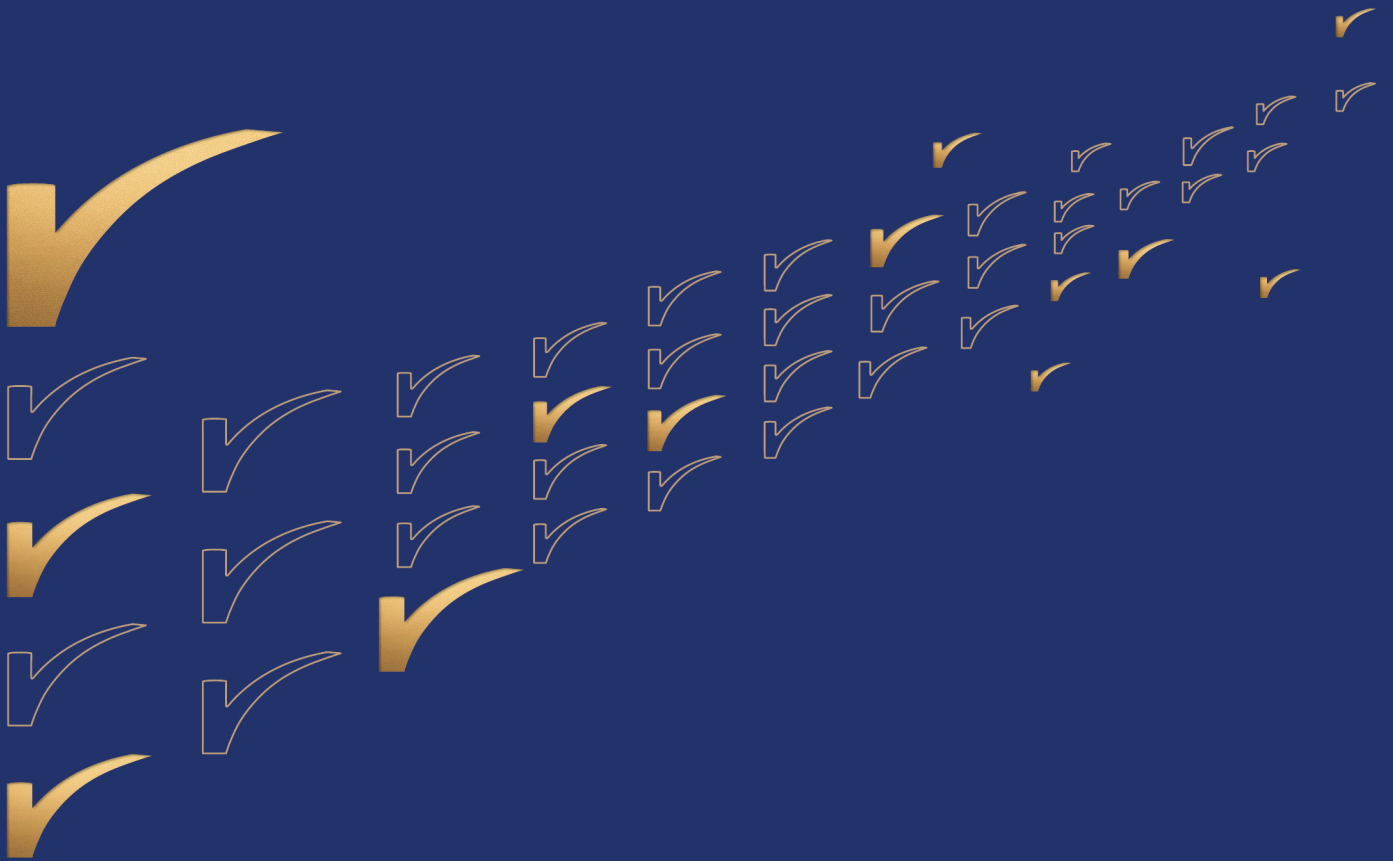


International Testing and
Calibration Laboratory

HCT
On Your Side



Always With You

To Make
Technology More
Safe and
Convenient,
Which Enriches
Our Lives.

AI



The Best Testing and
Certification Laboratory
in The Field of Telecommunications That
Prepares for The 6G Era beyond 5G



Measuring Instrument
Calibration Service That
Leads The Technological
Standards of Various Industries

CONTENTS

04 Lab Infrastructure

09 Testing and Certification Service

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30 Customer Service



A Company That Focuses on People and Technology, and Pursues The Safety and Happiness of People



Improving The Reliability of
Test Results Based on The Mutual
Synergy between Two Business Areas:
Testing & Certification +
Measuring Instrument Calibration



Expanding Service Areas to Mobility,
Military, Nuclear Power,
Secondary Battery Medical Devices,
Cyber Security, etc.

Lab Infrastructure

• Battery Testing Center

- Safety Testing Lab.
- Cycle Performance Test Lab.
- Explosion Chamber
- Impact Test Lab.
- Fire/Crush/Vibration Test Lab.
(Explosion Proof Room)

Building
4

• Defense Reliability Testing Center

- Extra Large walk-in Chamber(5M*8M*6M)
- Large walk-in Chamber(5M*4M*3M)
- Temperature & Humidity Chamber(1300L),
Corrosion Test Chamber(1100L)
- Composite Vibration Test system(1.5M*1.5M*1.5M/11t)
- Acceleration Tester (1system)

Building
5



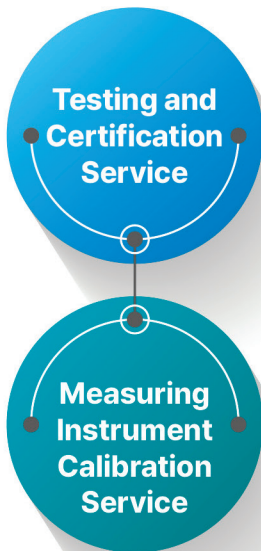
• Telecommunication and Calibration Center

- 10m EMC Chamber
- Anemometer Calibration Lab / CRM Lab
- Mobility & Defense EMC Lab
- Calibration Lab (Field Probe/ Horn Antenna/Length/Mass/ Volume/Density/Viscosity/Particle Counter/Force/Torque/Pressure/ Fluid Flow)
- Office, Conference Room

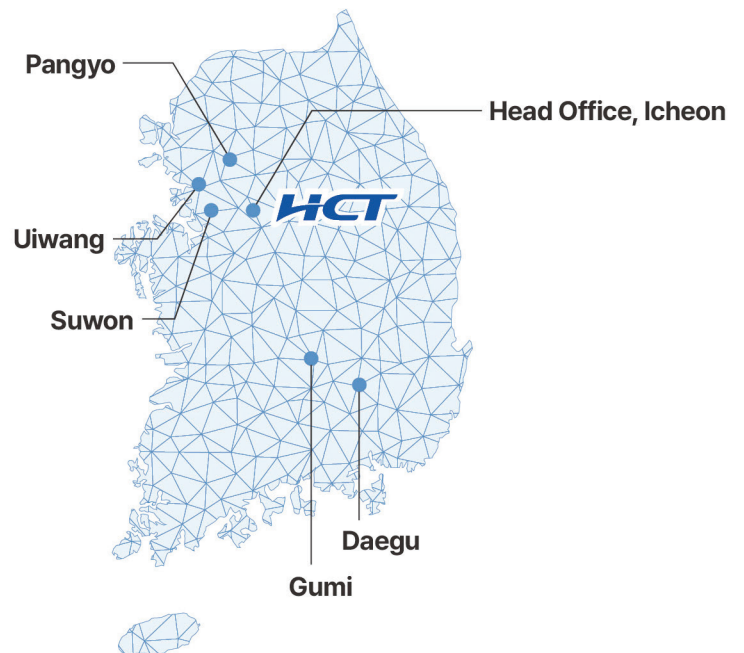
Building
2



Business Area



Domestic Location





Building 3

- **Safety and Reliability Center**
 - Electrical Safety Lab, Medical Device Test Lab.
 - Environmental Reliability Lab (Climatic, Mechanical, High Voltage)
 - Medical Device Test Lab.(X-ray)

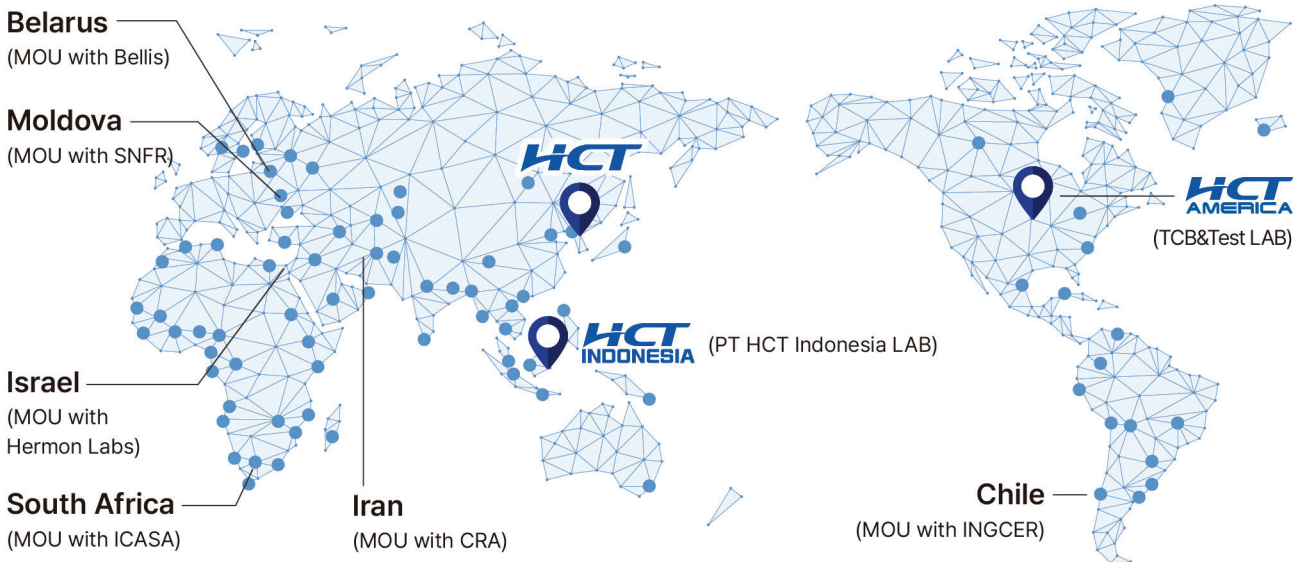
Building 6

- **Mobility Center**
 - HV Automotive Chamber
 - HV Shield Room
 - Charge/Discharge System
 - Automatic Fire Extinguishing System

Headquarter Building 1

- **Headquarter**
 - Office, Conference Room
 - EMC Test Lab, SAR Lab
 - RF Test Lab, OTA Test Lab
 - Calibration Lab (Electricity/RF/Temperature & Humidity/Photometry & Radiometry/ Particle Dilution Systems)
 - Calibration Reception Office(I/O), Repair Lab

Overseas Location



History

Through 40 Years of Accumulation, We Are Leaping Forward To Become A Global Company.



1983

1983: Started as Quality Assurance Department
Hyundai Electronics

2000

June 2000: Spun Off as
Hyundai Calibration &
Certification
Technologies Co., Ltd.



2005

July 2005: Established
U.S. Branch (HCTA)
(Lab/TCB
in San Jose, California)



2007

2007: Renamed to
HCT Co., Ltd.



2016

2016: Listed on
KOSDAQ

HCT has grown along with the history of technological development in Korea.



2018

2018: Established Indonesian Branch (Jakarta)



2019

2019 Signed F-35 MRO&U 1st Contract (Lockheed Martin)



2021

Established GreenEnergy Building for The Battery Testing

2022

2022: Established H&H BIO, A CRO Joint Venture with Hoseo University



2023

Established Mobility Testing Building

2024

Established Defense Reliability Testing Building

A Company Partnering at Customer's Level

As a reliable partner supporting K-technology that spreads globally, HCT will always consider product quality and consumer safety as top priority.

Award Details



2021

Standardization of Industrial
Technology Presidential Award



2023

Prime Minister's Award for
Exemplary Taxpayer

2022	Minister of Science, Technology, Information and Communication Award (to Mobility Centre)
2021	Presidential Award for Industrial Technology Standardization
2017	Prime Minister's Award for Industrial Development and Promotion
2015	Icheon-si Award for Industrial Development
2015	Exemplary Taxpayer Award of Icheon-si Tax Office
2013	Presidential Award for Industrial Technology Standardization
2012	Minister of Economy and Knowledge Award for Precision Industry Technology Contest
2009	Minister of Economy and Knowledge Award for Precision Industry Technology Contest
2004	Presidential Award for Precision Industry Technology Contest

Business Convention/Contract Status

- Bellis MOU (Testing and Certification)
- CSA Group MOU (Testing and Certification)
- CTTL MOU (Testing and Certification)
- EMITECH Group MOU (Testing and Certification)
- SK Hynix MOU (Testing and Certification)
- Sucofindo MOU (Testing and Certification)
- Dymstec MOU (Testing and Certification)
- MTCC MOU (Testing and Certification)
- KRIT(Korea Research Institute for Defense Technology Planning and Advancement) MOU (Testing and Certification)
- KAERI(Korea Atomic Energy Research Institute) / ETRI(Electronics and Telecommunications Research Institute) MOU (Joint Research and Development)
- ROK Army Consolidated Logistics School MOU (Technical exchange and mutual business cooperation)
- ROK Army Signal School MOU (Technical exchange and mutual business cooperation)
- Myungji Univ. Institute for Defense Industrial Security(IDIS) MOU (mutual business cooperation)
- KOREA AEROSPACE INDUSTRIES, LTD.(KAI) MOU (Testing and Certification)
- LIG Nex1 MOU (Testing and Certification)
- Laonstory.Inc / KDIA(Korea Drone Industry Association) MOU (Developing and Applying New Testing/Certification Service)
- KTC/KTL/KTR MOU (Testing and Certification)
- KTC MOU (Testing and Certification)
- RAPA MOU (Testing and Certification)
- TTA MOU (Testing and Certification)
- Anritsu MOU (Certification based on global regulatory standards)
- SENSORVIEW MOU (Testing and Certification & Calibration)
- C&BIS MOU (Cybersecurity field)
- H&H BIO MOU (Management System Establishment in Laws related to Animal Protection Act)
- Mediforte MOU (Testing and Certification)
- Solution Link Co., Ltd. MOU (Software Testing and Certification Business Field)
- Gumi Information High School MOU (Mutual exchange and cooperation between academia and industry)
- Gyeongsangbuk-do Office of Education MOU (Mutual exchange and cooperation between academia and industry)
- KOTICA Member
- KIEES Member
- KBIA Member
- KOTTA Member

HCT's
Promise



Testing and
Certification Service

The Best Testing Lab in Korea

Product Testing / Inspection /
Approval in All Industries

Engineering Consulting Services
for Certification Required by Country

HCT's technological prowess leads the world's
wireless communications field beyond Korea.

HCT's corporate philosophy of
"setting importance on people and technology"
is making a "difference."

- Well-Established Network with Local Authorities such as Certifying Body or Key Player in The Industry

- Experience in Certification of R & TTE and ITE in 110 Countries; Information Resource for Approximately 200 Countries; Global Network for Certification

Supports Global Certification in Over 200 Countries



- Extensive Experience and Technical Skills in Wireless Product Compliance
- Streamlined Certification Process by Developing The only Automated Test System in Korea

- Comprehensive Security Management for Confidential Information and Products

Laboratory Accreditation

Status of International / National Accreditation



국립전파연구원
National Radio Research Agency

RRA (National Radio Research Agency)
Designated Testing Lab



KOLAS Accredited Testing Lab
(KS Q ISO/IEC 17025)



식품의약품안전처
Ministry of Food and Drug Safety

Designated from The Ministry of Food Drug and Safety (MFDS) as a Medical Device Testing Laboratory



국가기술표준원
Korean Agency for Technology and Standards

Safety Confirmation Testing Lab Designated by Ministry of Trade, Industry and Energy



산업통상자원부
Ministry of Trade, Industry and Energy

Standby Power Testing Lab Designated by Ministry of Trade, Industry and Energy



산업통상자원부
Ministry of Trade, Industry and Energy

Energy Efficiency Management Testing Lab Designated by Ministry of Trade, Industry and Energy



환경부
Ministry of Environment

Noise Level Testing Organization Designated by Ministry of Environment



해양수산부
Ministry of Oceans and Fisheries

Type Approval Testing Agency Designated by Ministry of Oceans and Fisheries, Electric Propulsion System for Ships



KoFONS (Korea Foundation of Nuclear Safety)
Nuclear Safety-Related Equipment Qualification Entity



IECEE CBTL Designated Testing Lab
(IEC CB Scheme)



A2LA Accredited Testing Lab
(ISO/IEC 17025)



Federal Communications Commission

FCC Accredited Testing Lab



UL Accredited Testing Lab



CTIA Accredited Testing Lab



Innovation, Science and Economic Development Canada

ISED Canada Accredited Testing Lab



TÜV SÜD CARAT Designated Testing Lab



TUV Rheinland
Designated
Testing Lab



DEKRA
Accredited
Testing Lab



ORANGE
Accredited
Testing Lab



ICASA
Accredited
Testing Lab



SABS
Accredited
Testing Lab



NATA
Accredited
Testing Lab



VCCI of Japan
Registered
Testing Lab



Vodafone
Accredited
Testing Lab



OFCA
Accredited
Testing Lab



Bluetooth®
Qualification
Test Facility



FiRa™
Authorized
Test Lab



OnGo Alliance
Authorized
Test Lab

Designation Status of Outside Laboratory

LG Electronics Designated Testing Lab

Bluebird corp. Designated Testing Lab

Hyundai Mobis Designated Testing Lab

SKT Designated Testing Lab

Samsung S-1 corp Designated Testing Lab

SONY Designated Testing Lab

Samsung Electronics Designated
Testing Lab



르노코리아자동차



Hyundai-Kia / Renault Korea / KG Mobility Accredited EMC Testing Lab

Supporting of Certification & International Type-Approval

Korean Certification

Registration of Conformity

Certification system which confirms the compliance of the broadcasting communications equipment with the technical standards established in order to protect the domestic radio environment, broadcasting communications network and its users prior to selling the equipment.

※ Target devices: IT equipment, weak field strength wireless devices, some wired communications terminals and electric products

Certification of Conformity

Domestic accreditation and certification and testing service for various wired and wireless communication devices.

※ Target devices: mobile phone, bluetooth devices, short-range devices

Standby Power Reduction & Energy Efficiency Rating Labeling

The mandatory reporting system in accordance with relevant domestic laws for energy saving through standby power reduction labeling and energy efficiency grading for electronic products

※ Target devices for standby power reduction: computers, printers, multifunction devices, monitors, etc.

※ Target devices for energy efficiency: adapters, chargers, etc.

Electric Appliances Safety Certification/ Verification/DOC

Compulsory certification system that allows the sale of products certified by the safety regulatory authorities, in order to prevent safety accidents caused by risks and issues of electric appliances such as fire and electric shock.

※ Communication devices such as smartphones and tablets, multimedia devices such as TV and audio, and household appliances, Battery, ESS, Personal mobility

Noise Level Test

System that requires and noise level value marking of small-sized, portable acoustic devices equipped with earphones.

※ Target devices: MP3 Player, PMP, mobile phone

Nuclear Power Plant Equipment Qualification

Regulation demonstrating whether safety-related equipment can adequately perform its required safety functions in both normal operation and accident scenarios of nuclear power plant.

※ Target: Nuclear safety-related equipment(Class 1E equipment and interfaces), etc.

Type-Approval and Testing for Electric Propulsion System for Maritime Vehicles

To prevent safety accidents such as fire, electric shock, and other hazards caused by equipment installed and operated on maritime vessels, the mandatory certification system ensures that only equipment and products certified for safety by an approved testing and certification agency are installed and operated. This certification is obtained through formal approval testing

※ Target devices: ESS Battery Cell, ESS Battery Module, ESS Battery System, etc.

International Certification

FCC Certification (USA)



Compulsory Certification System for USA Communication Devices Managed by The Federal Communications Commission.

* Target Devices: PC and Accessories, Wireless Communication Devices, Cable Modem, Phones, Medical Devices

European CE Certification



Safety Certification System for Products Distributed in EU Countries

Japanese TELEC/JATE/VCCI (ITE)/PSE Certification



- TELEC: Certification for Conformance and Construction Design of Wireless Equipment According to The Radio Waves Act in Japan
- JATE: Certification for Conformance and Construction Design of Terminal Devices According to The Telecommunications Business Act in Japan
- VCCI: Certification System on Japanese Information & Technology Equipment Managed by The Voluntary Control Council for Information Technology Equipment
- PSE: Compulsory Certification System on Japanese Electric Products Managed by METI in Japan

Canada ISED Certification



Compulsory Certification System on Canadian Communications Devices Managed by The ISED Canada

IECEE CB Certification



International Certification System for The Safety of Electrical and Electronic Products Mutually Recognized Among Member Countries of The IECEE/CB Scheme

International Type-Approval

Our International Type Approval Service Provides The Advice and Guidance/Assistance for The Compliance Requirement of The Target Market of Your Telecommunication and Electrical Products.

Vietnam VNTA

Taiwan NCC / BSMI

Indonesia SDPPI / SNI

Algeria ARPCE / ANF

Tunisia CERT

Brazil ANATEL

Argentina RAMATEL

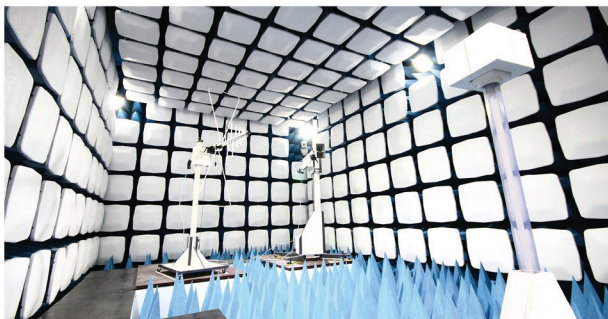
China CCC / SRRC / NAL

International Type-Approval Services for More Than 200 Countries in The World



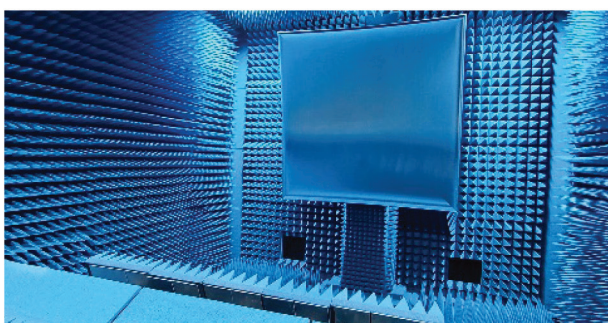
Test Item

RF Testing, OTA Testing



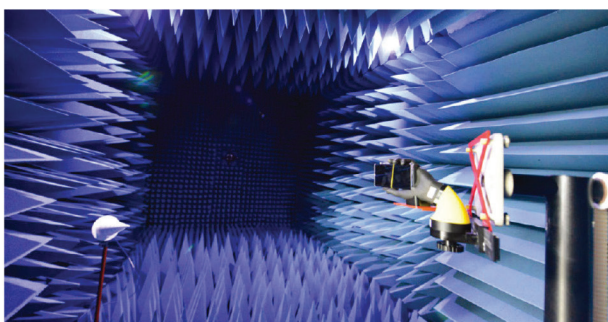
Fully Anechoic Chamber

- Smart Phone
- Base Transceiver Station / Repeater
- Wi-Fi
- Bluetooth
- NFC, NB-IoT, etc.



5G NR CATR Chamber

- 5G NR
- Automotive Radar
- WiGig (802.11ay)
- mmWave



OTA Testing

- Smart Phone
- Tablet PC
- Cellular (5G NR, LTE, WCDMA, GSM)
- A-GPS
- Wi-Fi

Wired Testing



Sound Pressure Level Test System

- Broadcasting Equipment
- Cable Modem
- Optical
- Router, etc.
- Connector, Telecom Cable

SAR · 5G PD · HAC

Fast SAR Testing



- Smart Phone
- Tablet PC

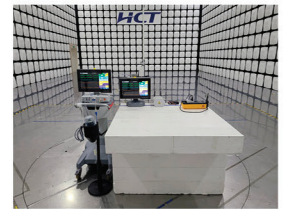
5G Power Density & SAR Test System



- Laptop
- Radio Transceiver

EMC Testing

- Wireless Equipment
- Home Appliances
- Technical Support & Consulting for EMC (Including Chamber Validation)
- Multimedia Equipment (IT, AV, etc.)
- Industrial Equipment (Including On Site Test)
- Medical Equipment



Software Testing

Software Functional Safety Testing

- ESS, BMS, BPU
- Household Appliance
- Medical Device
- KC 62619 Annex E
- KS/IEC 60730-1 Annex H, KC/IEC 60335-1 Annex R
- IEC 62304

Software Static Testing

- Software Source Code
- IEC 61508-3
- ISO 26262-6, MISRA C/C++
- IEC 62279, EN 50128

Software Quality Testing

- Web Applications
- Mobile, Package SW
- Embedded SW, etc.
- ISO/IEC 25023
- ISO/IEC 25051

Software R&D Project Verification Testing

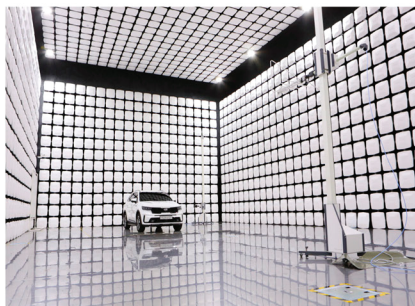
- The Outcomes of R&D Project
- All Types of Software
- Evaluation Metrics of Business Plan and Research Proposal
- Customer Specification



Mobility

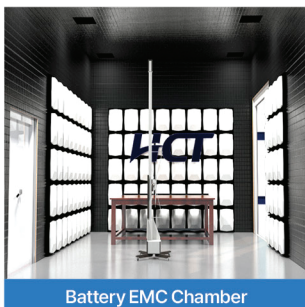
EMC Testing Laboratory Recognized by Automotive Manufacturers

- **Domestic** Hyundai Motor Company / Kia Corporation, RENAULT KOREA MOTORS, KG MOBILITY Corp., etc.
- **Overseas** Volkswagen, RIVIAN, Stellantis, Tesla, Toyota, Volvo, Honda etc.
- **Component Manufacturer** HYUNDAI MOBIS, MOTREX, Valeo Kapec Co.,Ltd., LG Electronics, WOORY Co.,Ltd., LG Innotek, etc.

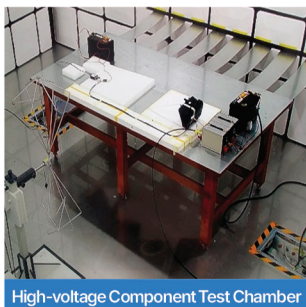


EMC and Environmental Reliability Testing

- Automotive Components
- Eco-friendly Battery Pack
- High-voltage Components
- Eco-friendly Electrification Systems
- Connectivity Systems



Battery EMC Chamber



High-voltage Component Test Chamber



Mechanical Environmental Test Lab.

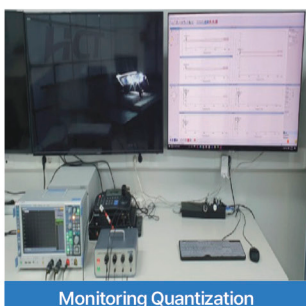


Climatic Environmental Test Lab.

Technical Support and Consulting for Automotive Developments



Test Automation



Monitoring Quantization



Automotive EMC Technical Seminar

Defense Industry

Environmental Reliability Testing

- Product(Military Equipment, Battery, etc.)
- Environmental Test(High/Low Temperature, Humidity, Low Pressure(Altitude), Temperature Shock, Salt Spray, Waterproof, Dustproof, etc.)
- Mechanical Test(Vibration, Shock, Impact, Drop, etc.)

Standard

Standard	Standard Name	Test Range
MIL-STD-167- 1, 1A	Mechanical Vibrations of Shipboard Equipment (Type I-Vibration)	<ul style="list-style-type: none"> Atmospheric Pressure: (71 ~ 101.33) kPa Temperature: (- 70 ~ 180) °C Humidity: (10 ~ 98) % R.H. NaCl Concentration: 5 % Frequency: (2 ~ 2 000) Hz Vibratory Acceleration: 200 G (Sine) 160 G (Random) Shock Acceleration: 300 G (Half Sine) Depth of Flooding: 1 000 mm
MIL-STD- 202- G,H	Test Method Standard Electronic and Electrical Component Parts	
MIL-STD- 810 C, E, F, G (CHG1), H	Environmental Test Methods and Engineering Guidelines, Test Method Standard for Environmental Engineering Considerations and Laboratory Tests	
RTCA DO-160G	Environmental Conditions and Test Procedures for Airborne Equipment	
MIL-PRF-28800F	Performance Specification Test Equipment for Use with Electrical and Electronic Equipment, General Specification for	

Facilities

- Extra Large Walk-in Chamber: 8m × 5m × 6m / Large Walk-in Chamber: 5m × 4m × 3m
- Composite Vibration Test System, Acceleration Tester



Extra Large Walk-in Chamber



Composite Vibration Test System (11 ton)



Temperature & Humidity Chamber



Walk-in Chamber Altitude Chamber

Electromagnetic Testing

Product

- Military Equipment & System

Standard	Standard Name	Test Range
MIL-STD-461D MIL-STD-461E MIL-STD-461F MIL-STD-461G	Requirements for The Control of Electromagnetic Interference Characteristics of Subsystems and Equipment	RE: 30 Hz ~ 40 GHz CE: 30 Hz ~ 40 GHz RS: 30 Hz ~ 40 GHz CS: 30 Hz ~ 40 GHz
MIL-STD-704F	Aircraft Electric Power Characteristics	SAC, TAC, SVF, RBF, SXF, LDC, HDC
MIL-STD-1275E	Characteristics of 28 Volt DC Input Power to Utilization Equipment in Military Vehicles	-

Facilities

- Military 10m Chamber(1system): 25.2m × 15.2m × 10.7m / Door Size: 3m*4m
- Military 3m Chamber(3system): 9.3m × 7.2m × 6.5m / Door Size: 2.5m*2.5m

Safety Testing Fields

Electrical Appliance Safety Testing

Product

- Information Technology, Multimedia, Wireless/Wired Equipment
- Household Appliance & Similar Electrical Appliance
- Industrial Equipment, Lighting, etc.

Standard

- IEC/EN/UL 62368-1, 60950-1, 60065
- IEC/EN/UL 60335-1 Series
- IEC/EN/UL 60598
- IEC 60529, UL 50E, NEMA 250

* Testing & Certification fields

CB, CE, UL, NRTL, PSE, IP Test, NEMA 250, Standby Power, CEC, DOE



Safety Testing Lab



IP Testing Room

Medical Equipment Safety & Performance Testing

Product

- Ultrasound Medical, LASER & Light Medical Equipment
- Radioactive-ray, Stimulator & Therapy Equipment
- Diagnostic Equipment, Measurement Equipment

Standard

- IEC/EN 60601 Series
- IEC/EN 61010 Series
- Ministry of Food and Drug Safety's Notification on "Medical Device Electrical/Mechanical Safety and Electromagnetic Waves Standards"

* Testing & Certification fields

MFDS(Designated from The Ministry of Food Drug and Safety), CB, CE, FDA ASCA, Performance Testing, etc.



Medical Testing Lab



Radiation Shielding Laboratory: Permitted



Ultrasonic Sound Field Measurements

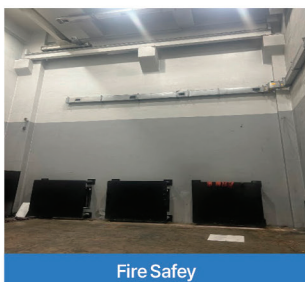
Battery Safety & Performance Testing

Product

- Electric Vehicle Battery
- Energy Storage System
- Hydrogen Fuel Cell for Drone
- e-Mobility Battery
- Small Battery for ICT Product and Power Tool
- Industrial & Military Battery

* Testing & Certification fields

CB, CE, NRTL, PSE, JIS, KC, KBIA, KMVSS, UN 38.3, Propagation, Type Approval Testing Agency for Electric Propulsion System of Ships, Inspection Agency for Reusable Batteries(2024)



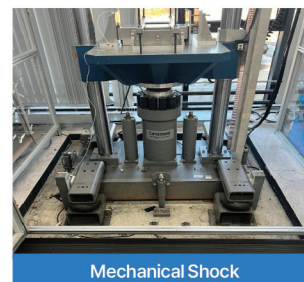
Fire Safety



Temp.Humidity Walk-in Chamber



High-Temperature Chamber



Mechanical Shock

HCT's
Promise



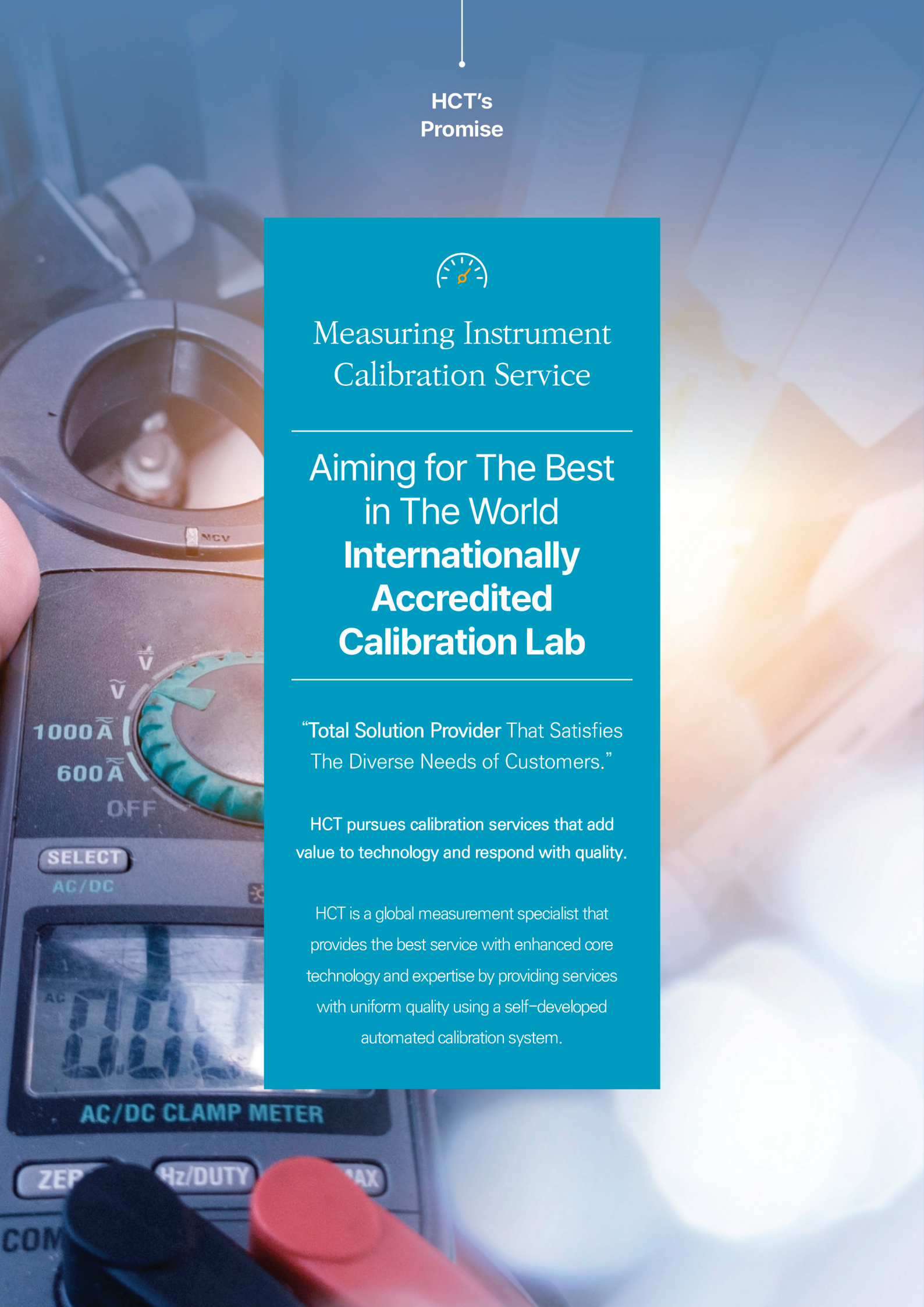
Measuring Instrument Calibration Service

Aiming for The Best in The World **Internationally Accredited Calibration Lab**

“Total Solution Provider That Satisfies
The Diverse Needs of Customers.”

HCT pursues calibration services that add
value to technology and respond with quality.

HCT is a global measurement specialist that
provides the best service with enhanced core
technology and expertise by providing services
with uniform quality using a self-developed
automated calibration system.



Strength

Keeping Pace with The 6G Era

Quick Response to Rapid Changes in The Era of 6G Satellite Communication

- Product Name**
- Signal Source
 - Harmonic Mixer
 - Spectrum Analyzer
 - Network Analyzer
 - Waveguide Attenuator
 - Waveguide Filter
 - Horn Antenna



Measurement Range

5 Hz ~ 325 GHz

Korea's Only Calibration Laboratory Accredited by KOLAS and A2LA

- Korea's Only Accredited Calibration Laboratory Certified by KOLAS (Korea Laboratory Accreditation Scheme) and A2LA (American Association for Laboratory Accreditation) in Accordance with (KS Q) ISO/IEC 17025



Operation of Calibration Center Accredited by Global Equipment Manufacturers Global Partnership



NI Certified Calibration Center

- Modular Measuring Instruments

ANITE Certified Calibration Center



LM PSPn(Product Support Provider network)

Maintenance Tool Calibration Service for The F-35 Fighter Jet

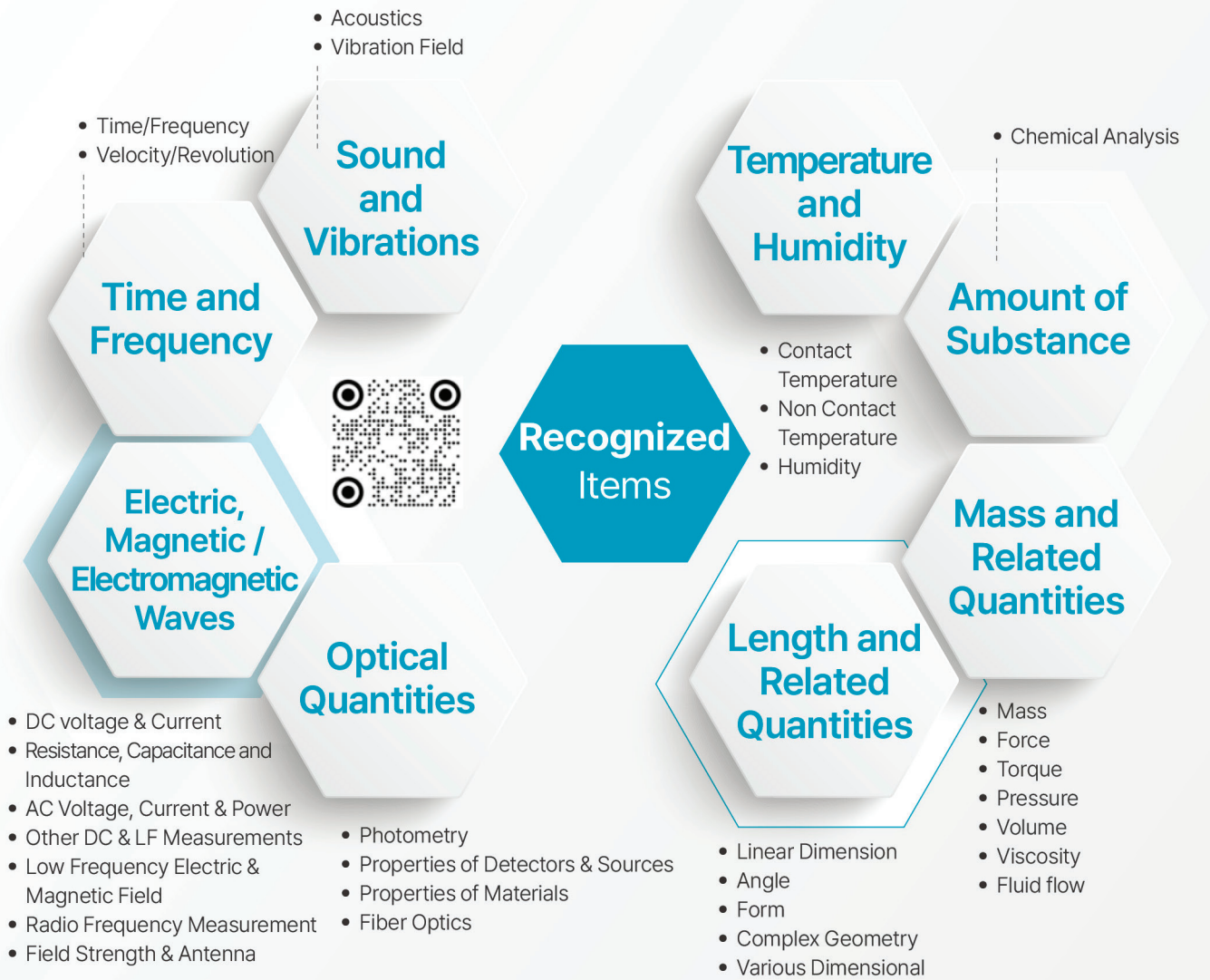


Certified Calibration Center for Fluke Networks

- DSX-5000, DSX-8000, OTDR

Certified Calibration Repair Center for Kanomax

- PARTICLE COUNTER



Calibration Items

A2LA Accredited Calibration

A2LA Accredited Calibration of Test Probes & Vibration Tester

Standard Lamp

Luminous Intensity, Color Temperature, Total Spectral Radiant Flux, Spectral Irradiance, Spectral Radiance

Breath Alcohol Analyzers

Dry: (0.000 ~ 0.450) % BAC
Wet: (0.000 ~ 0.080) % BAC

Battery Simulator

Charge & Discharge Voltage: (0.1 ~ 1 500) V
Charge & Discharge Current: 0.1 mA ~ 1 000 A

Electromagnetic Resistant EMS

ISO & IEC Calibration Standard
Surge, Burst, Dip / ESD

Sound

Sound Level Meter, Microphone, Sound Calibrator
3-Port Coupler: 20 Hz ~ 20 kHz

Power Meter(Analyzer)

AC-DC Power, Harmonic, Flicker, Power Factor

Non Contact Thermometry

Calibration for Standard Radiation Thermometers, Thermal Image Apparatus and Blackbody Furnaces

Flowmeter

Gas Flowmeter: (0.001 8 ~ 260) m³/h
Liquid Flowmeter: (0.005 ~ 50) m³/h

Vibration

Vibration Transducer, Shock Transducer
Frequency: 1 Hz ~ 20 kHz
Shock: (20 ~ 10 000) G

Contact Thermometry

Calibration Range: (-80 ~ 1600) °C

Anemometer

Hot-wire Type, Pitot Tube, Vane, etc.
(0.1 ~ 55) m/s

Major Measurement Items

Antennas

Loop Antenna

- Loop Antenna, Loop Sensor: 10 Hz ~ 400 MHz

Dipole Antenna

- Dipole Antenna: 20 MHz ~ 18 GHz
- Biconical Antenna: 20 MHz ~ 40 GHz
- Log Periodic Antenna: 20 MHz ~ 40 GHz
- Hybrid Antenna: 20 MHz ~ 18 GHz

Antenna Calibration Standard

- ANSI C63.5
- SAE ARP 958
- CISPR 16-1-6

Rod(Monopole) Antenna

- Rod(Monopole) Antenna: 1 kHz ~ 30 MHz

Horn Antenna

- 200 MHz ~ 325 GHz



Field Probes

Field Probe

- Electric Field Probe / E-Field probes: 5 Hz ~ 40 GHz
- Magnetic Field Probe / H-Field probes: 10 Hz ~ 1 GHz

Field Probe Calibration Standard

- IEEE Std 1309
- IEC 61000-4-3



mmWAVE

5 Hz ~ 325 GHz



Target Equipment

- Signal Generator
- Spectrum Analyzer
- Network Analyzer
- Source Module(Multiplier)
- Harmonic Mixer
- Waveguide Attenuator
- Directional Coupler
- Horn Antenna

SALES

Measuring Instrument Sales

- Various Measuring Instruments Sales (Selection and Recommendation of Necessary Equipment)



[Enquiry] E-mail: equip_sales@hct.co.kr

Production and Sales of Certified Reference Materials(CRM) for Polystyrene Spherical Particles

- HCT Polystyrene Sphere Certified Reference Material

- Completely Spherical Particles Made of Polystyrene, a Type of Plastic. It is a Liquid Product Dispersed in a Surfactant.

The Homogeneity and Stability of The Particle Diameter Size Are Guaranteed for More Than Two Years through Stringent Quality Control by an ISO 17034 Reference Material Producer.

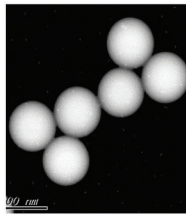
- Reference Material Producer Certified by KOLAS

- Reference Material Producer Certified by KOLAS in Accordance with ISO 17034



Use: Calibration of Particle Counters or Particle Sizer, Filter Testing, R&D Related to Aerosols or Microplastics

Reference MATERIAL CODE	Particle Size	Certification Scope	Unertainty of Measurement
HCT-CRM-P0050	50 nm	40~60 nm	within 10 %
HCT-CRM-P0100	100 nm	80~120 nm	within 10 %
HCT-CRM-P0200	200 nm	180~220 nm	within 10 %
HCT-CRM-P1000	1 000 nm	800~1 200 nm	within 10 %



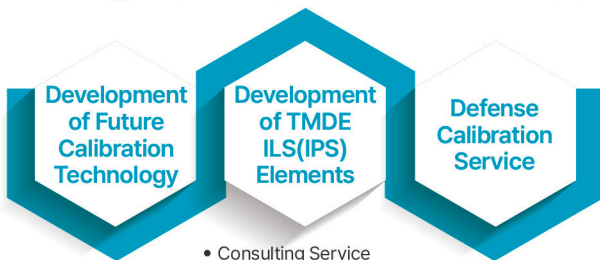
[Enquiry] E-mail: crm_sales@hct.co.kr

SYSTEM ENGINEERING

Defense TMDE Solutions

Providing Total Solution for Defense Calibrations

- Consulting Service
- Build the Smart Factory for Defense PMELs
- Development of Calibration Automation System
- Development of D-SI/DCC



- Consulting Service
- Development and Acquisition of Calibration System
- Development of Technical Manual(Calibration Procedure)
- Education / Training

- Performance Based Calibration Service
- Defense Outsourcing and Overseas Calibration/Repair Consignment Service
- Technical Support of Discontinued Repair Products

FMS (Facility Monitoring System)

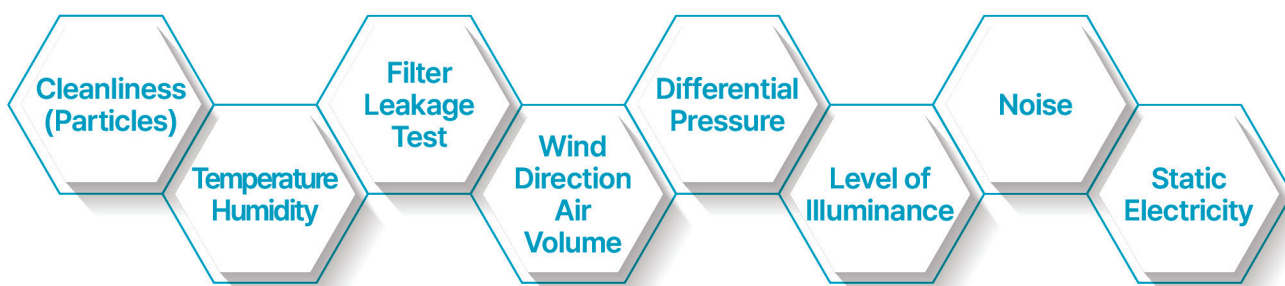
Clean Room Contamination Solution

HCT is a testing and evaluation institution of the group quality certification system for clean room performance evaluation by the Korea Air Cleaning Association.

Clean Room Performance Evaluation

Available for Distribution/Retail Selling of equipment

- Measurement Items



Clean Room Environmental Analysis / Contamination Removal

- Particle Evaluation / Contamination Source Analysis
- 3D Airflow Measurement and Analysis
- ESD Static Electricity Control, Measurement and Evaluation
- Floating & Falling Bacteria



FMS Solution

Sales(Including Calibration) and Maintenance of Particle Counters / Temperature and Humidity Sensors / Differential Pressure Sensors, etc.

- Interface of Environmental Measurement Equipment with Various Manufacturers/ Protocols
- Real-Time Data Monitoring, Statistical Analysis, Trend Analysis, History Management
- Establishing a Quick Warning System
- Establishing a Wireless Temperature & Humidity Monitoring System
- Providing Maintenance and Calibration Services for Measuring Equipment
- Developing an Integrated Operation Program That Reflects Customer Requirements

Other Global Activities



- Location: **San Jose, California (Silicon Valley)**
- Establishment Date: July 2005
- Provided Services: TCB Certification, Testing, Calibration

ISO/IEC 17065: TCB Certification

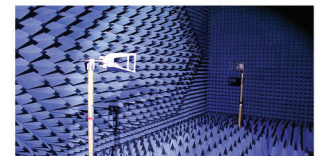
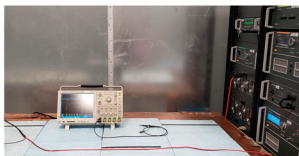
ISO/IEC 17025: Testing, Calibration

Testing & Certification

- **Wireless Communication**
 - Wi-Fi / Bluetooth / RFID / NFC / LoRa
 - Medical Implant Communication Service (MICS) / UWB
 - 2G/3G/4G/5G Cellular
- **Electromagnetic Compatibility (EMC)**
 - Information and Communication Equipment EMC
 - Medical Device EMC/RFID Immunity
 - Automotive EMC
- **Service Country**
 - USA, Canada, Europe, Korea, Japan, Taiwan, Australia, etc.

Calibration

- **Antenna**
 - 9 kHz – 40 GHz
 - ANSI C63.5 / SAE ARP 958 / CISPR 16-1-6
- **Chamber Evaluation**
 - NSA, sVSWR, Field Uniformity
- **RF/Electrical Field**
 - Signal Generator, Spectrum Analyzer, CDN, LISN, etc.
- **EMC Resistant Equipment**
 - IEC 61000-4-2/4/5/8/11, ISO 7637-2/3
- **Harmonic/Flicker Measurement Equipment**
- **Acoustics/Vibration Field**
- **Temperature and Humidity/Appliance Field**



Certification [TCB Certification Laboratory]



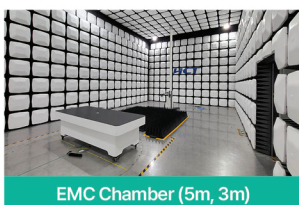
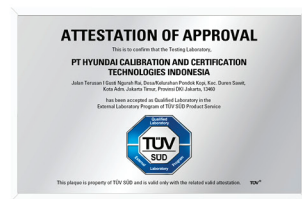
- **U.S. (FCC) Certification**
 - Authorized for All Areas of Wireless Communication
- **Canada (ISED) Certification**
 - Authorized for All Areas of Wireless Communication



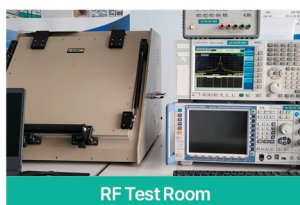
- Location: **Columbia, Maryland (Washington, D.C. area)**
- Establishment Date: July 2021
- Main Roles: Shortening The TCB Certification Review Period and Improving Accuracy through Technical Consultation with The FCC



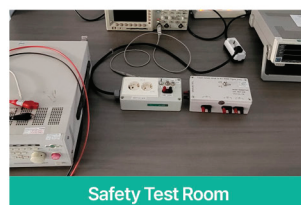
- Location: **Jakarta, Indonesia**
- Establishment Date: November 2018
- Completion of The New Building: May 2023
- Facility Status: 2 EMC Chambers, 2 Shield Rooms, 2 RF Test Rooms, Safety Test Room, DVB Test Rooms, and Securing Other Test Spaces (SAR Scope to be added)
- Provided Services: SDPPI, International Standard Testing Service (CE)
- Authorization Status: KAN, SDPPI, TUV SUD



EMC Chamber (5m, 3m)



RF Test Room



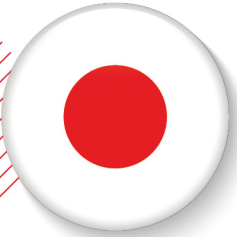
Safety Test Room



Shield Room

Test Service		Specification		National
RF		Perdirjen SDPPI No. 2 Tahun 2019 (WLAN) Perdirjen Postal No.370/DIRJEN/2010 (2G) Perdirjen SDPPI No.5/Tahun/2019 (4G)	Perdirjen SDPPI No. 161 Tahun 2019 (SRD) Perdirjen Postal No.173/DIRJEN/2009 (3G) Peraturan Menteri Kominfo No.18 Tahun 2015 (HF, VHF, UHF)	Indonesia (SDPPI)
DVB		Peraturan Menteri Kominfo No.3 Tahun 2014 (EWS) Peraturan Menteri Kominfo No.4 Tahun 2019 (DVB C, S, T, T2)		
Safety		SNI IEC 60950-1 (Section 5.1, 5.2)		
EMC		CISPR 22 / CISPR 32 / CISPR 35 FCC PART 15 Subpart B / ANSI C63.4:2014 EN 55032 / EN 55035 / EN 301 489-xx EN 55022:2010, CISPR 22:2008 IEC 61000-4-2/3/4/5/6/11 IEC 61000-3-2/3		International
RF	RSE	ETSI EN 300 328 / ETSI EN 301 893	ETSI EN 300 440 / draft ETSI EN 303 687	
Tuner		EN 303 340 EN 303 372-2		

Japan



To actively engage in cooperation with Japanese manufacturers, HCT has a dedicated team stationed in Japan.

Collaborating closely with key institutions such as JATE, we have forged special partnerships within the testing and certification industry, enabling vibrant business activities on the ground.

Brazil



We are actively pursuing various initiatives to strengthen our capabilities in the challenging South American market, known for its difficulty in certification acquisition.

With Brazil as our focal point, we are formulating diverse strategies and establishing local networks to facilitate certification acquisition in South America. Our overseas certification acquisition efforts are in full swing to support this endeavor.

India



In July 2017, we established a legal entity in anticipation of proactive responses to local certification market changes. Currently, the branch serve as a pivotal entity in market intelligence and certification market monitoring.

Leveraging our exceptional understanding of TEC certification and BIS certification, acquired through longstanding collaborations with government certification agencies and testing laboratories in line with TEC enforcement, it contributes significantly to enhancing HCT's business.



CRO Joint Venture Between HCT and Hoseo Univ

H&H Bio Hoseo University Safety Assessment Center provides more scientific and reliable testing services through international level safety evaluation tests for chemicals, pesticides, pharmaceuticals, health functional foods, etc.

Test Items

Toxicity Test



Environmental Toxicity Test



Analysis Test



Toxic Pathology Test



Effect Test



Non-GLP



COMPANY INFO

TEL 041-540-9830 | FAX 041-540-9830 | EMAIL hnhbioglp@hnhbio.com

ADDRESS Safety Evaluation Center at Hoseo University, 20, Hoseo-ro 79beon-gil, Baebang-eup, Asan-si, Chungcheongnam-do

We Think Twice from Customer's Perspective.

To Make Customer's Time More Comfortable at HCT



Provide Free Beverages and Meals



Leisure Support During Waiting Time
(Indoor Golf, Gym, Billiards, etc.)



Support Accommodation Booking with Discounted Price

In Order to Monitor The Service Progress in Real-time

Business Trip Pickup & Delivery



Customer Convenience Service, Overseas Calibration is Also Available

Web-Site Used for Client Only



www.callab.co.kr

Search Calibration History and Tracking Progress, View and Print Test Reports

Protection of Customer's Information



Apply Anti-counterfeiting and Tamper-proof Security Paper and Hologram

E-mail, SMS Mailing Service

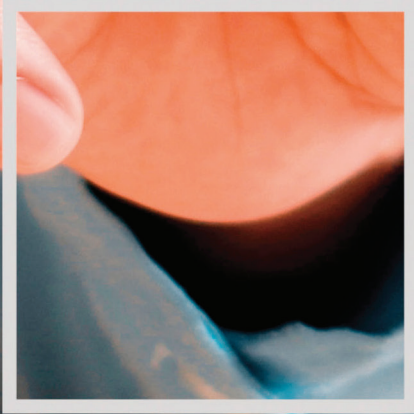
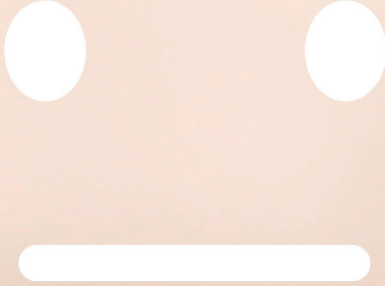


SMS Sent for Application, Completion, Delivery, Schedule Business Trip



E-mail Notification Service for Details Subject to Calibration Every Month

EACH AND EVERY EMPLOYEE AIMS TO PROVIDE BETTER SERVICE.



Beyond Korea to The World!
International Testing and
Calibration Laboratory

On Your Side, HCT



KOSDAQ
LISTED COMPANY

ESG

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