Ur Hongxin Testing Technology

(Shenzhen)Co.,Ltd.





Impartial

Professional

Accurate

High-tech



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## **Abstract**

## About Ur Hongxin

Ur Hongxin Testing Technology (Shenzhen) co., Ltd. (Foxconn China Measurement Center) is a professional integrated laboratory with worldwide presences and strong R&D capabilities.

It provides fast, consistent, and accurate testing and measurement services for high-tech products design, development, and manufacturing. A nationwide network system:

laboratories have been established in Shenzhen, Dongguan, Kunshan, Wuhan, Zhengzhou, Yantai, Chengdu, Chongqing, Nanning and offices have been set up in major cities across the country; Provide customers with cross regional and high-quality testing technical services and product solutions.

Its goal is to assist the growth of Foxconn enterprise group into a highly competitive global technology company in the world.

### Advice line: **400-845-2188**



Employees: 1,500

**Equipments:** >4,300 sets

**Areas: >66,000** m<sup>2</sup>

ShenZhen

Tel: 0755-29846730

E-Mail:

chris.ck.hu@foxconn.com

**KunShan** 

Tel: 0512-57560010

E-Mail:

buller.zk.liu@foxconn.com

ChongQing

Tel: 023-61702888-31340

E-Mail:

hzcq-cmc-sales@foxconn.com

ZhengZhou

Tel: 0371-87012144

E-Mail:

li-ming.li@foxconn.com

DongGuan

Tel: 0755-33810188-31667

E-Mail:

cmc-sz-sales03@foxconn.com

YanTai

Tel: 0535-3821009

E-Mail:

hzyt-cmc-sales@foxconn.com

WuHan

Tel: 027- 59716120

E-Mail:

ming.kang@foxconn.com

ChengDu

Tel: 028-68522005

E-Mail:

hzcd-cmc-yw@foxconn.com

**TianJing** 

Tel: 0535-3821009

E-Mail:

hzyt-cmc-sales@foxconn.com

**NanNing** 

Tel: 0755-29846730

E-Mail:

chris.ck.hu@foxconn.com

## **Quality Certificate**











- Accredited by CNAS (China National Accreditation
   Service for Conformity Assessment) via the ISO/IEC
   17025:2005 (The General requirements for the competence of testing and calibration laboratories) since Feb 2003.
- Since 2002,Ur Hongxin continue to participate in the capability validation organized by the CNAS,IIS, ASTM and other international and domestic authorities. Obtained CNAS PTP certificate in 2016, Certificate NO. PT0053. Fully ensure our technology to reach the international advanced level.
- We have won recognition of many international customers ,Our professional technical ability, detection ability, the results of accuracy, fairness and confidentiality have won praise of the customers!







## **Our Customers**









































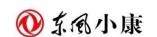






























## Our Tenet

Customer satisfaction is our mission

## **Our Advantages**

- Professional technical team
- Years of experience of testing and failure analysis in manufacturing industry
- Advanced equipment
- Comprehensive test solution
- Advanced testing equipmesnt and materials technology development capability
- Master the core technology and have patents
- Service around the country
- Customer first











## **Environmental, Mechanical, Packaging Material Reliability Testing**

The first laboratory in China to be Accredited by Dell for Vibration, Shock, Drop, and Packaging Material testing

#### **Environment Test Laboratory**

- High/Cold Storage Test
- Temp. and Humidity Cyclic Test
- Temperature Shock Test
- ESS Test
- Perspiration Resistance Test
- Salt Spray Test
- Dust Test
- Accelerated Weathering Test
- Xenon Exposure Test
- Altitude Test
- Temp. and Humidity Storage Test
- Thermal Profile Test
- Infrared Thermal Imaging
- HAST Test







### Vibration and Shock Test Laboratory

- Vibration Test
- Shock Test
- Drop Test
- Drop-G Test
- Measure and Analysis of Vibration
- Pallet Package Drop Test
- Pallet Package Vibration Test
- Floor Vibration Measure

#### ■ Package Test Laboratory

- Container Compression Test
- Container Stacking Test
- Bursting Strength Test
- Pallet Test
- 90°/180°Peel Adhesion Test
- Corner (Edge) Protector Test







### **Mobile Product Test**

#### Cosmetic Test

- Chemical Resistance Test
- Linear Abrasion Test
- Adhesion Test
- Pencil Hardness Test
- Torque Test
- Force Test
- Ball Drop Test
- Static Pressure Test
- Twist Test
- Life Test
  - Keypad/Flip Lifecycle
  - Connector Lifecycle
  - Insert & Withdraw Test
- Drop Test
  - Free Fall Drop
  - Random Drop
  - Repetitive Drop

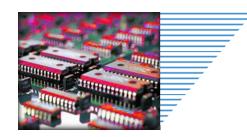


## **Highly Accelerated Life Test**

- Highly Accelerated Life Test
  - AC/DC Voltage Test
  - Temperature Margin Test
  - Rapid Thermal Transition
     Test
  - Tri-Axial Random Vibration Test
  - Combined Test
- Highly Accelerated Stress Screen
- Highly Accelerated Stress Audit











## Acoustic Measurement & Analysis

- Sound Power Level Test
- Sound Pressure Level Test
- Sound Quality Evaluation
- System Vibration Test
- Electro-acoustic Test







∕∕/Brüel & Kjær <del>--⊜</del>∗



### ■ SEM+EDS (Scanning Electron Microscope)

- IMC Inspection
- Element Analysis
- Tin Whisker Inspection
- C-SAM (C-Type Scanning Acoustic Microscope)
- 3D OM Inspection
- Cross Section
- Dye & Pry
- IC Decapping
- Wetting Balance
- Bonding Test
  - Shear Test
  - Pull Test
- Solder Paste Properties Test
  - Viscosity Test
  - Solder Tack Test
  - Open Life
  - Flux Content





**PCBA & PCB & Component Failure Analysis** 









### **Hazardous Substances Test**

- RoHS(Cd/Pb/Hg/Cr(VI)/PBBs/PBDEs)
- Metal Elements Quantification
- Migration Element in Toy
- Halogen(F/Cl/Br)
- Phthalates(DBP/BBP/DEHP/DIBP/DIDP/DINP /DnOP/ DMEP/Dnepr)
- **TBBPA**
- **PAHs**
- **HBCDD**
- SCCP/MCCP
- Cyclosiloxane(D3~D10)
- **DMF**
- Nickel Release
- PFOS/PFOA

**AZOs** 





### **Microbiological Test**

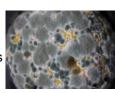
- Mold growth Test for Electric and Electronic **Products**
- **■** Evaluation for Plastic Mouldproof Effects
- **■** Evaluation for Paints Film Mouldproof Effects
- **■** Evaluation for Nonmetallis Gasket Materials **Mouldproof Effects**



#### ■ Mold Species

- Aspergillus Niger
- Aspergillus Terreus
- Hormoconis Resinae Penicillium Funiculosum
- Trihoderma Longibrachiatum
- Cladosporium Herbarum
- Aureobacidium Pullulans

- Aspergillus Flavus
- Chaetomium Globosum
- Paecilomyces Varioti
- Scopulariopsis
- Brevicaulis
- Penicillium Citrinum
- Alternaria Alternaria
- Aureobasidium Pullulans











### **Metal Material Test**

#### **Microstructure**

- Surface Observation
- Grain Size
- Uniformity Analysis of Carbides
- **Inclusion Analysis**
- Carburized Depth
- Metallographic Structure



- **Chemical Composition**
- **Fracture Analysis**
- **Hardness** 
  - Material/Surface/Core Vickers Hardness
  - Rockwell Hardness









AI5052 (Polarzing)



**Structure** 

(Brass)





**Fracture** Morphology

### **Mechanical Properties**

- Tensile/Yield Strength, Elongation
- **Bend Testing**
- Spring Force/Spring Rate
- Pulling/Pushing/ **Shearing Force**
- Torsion



## **Polymer Material Analysis**

#### **Mechanical Properties**

- **Tensile Testing**
- Flexural Testing
- Hardness Testing
- Impact Testing

#### **Physical Properties**

- **Specific Gravity**
- Ash Content
- Melt Flow Index
- Color Difference

#### **Others**

- Thermal Analysis
- Flammability **Properties**
- **Optical Properties**













# Test Items of Lithium Battery Materials

- Moisture
- Specific Surface Area
- PH Value (positive and negative electrode materials, electrolyte)
- Tap Density
- Particle Size Analysis
- IC Gram Capacity
- Discharge Capacity
- Chlorinated Paraffin / CP
- Impurity
- Conductivity
- Density
- Acidity
- Tensile
- Puncture
- Air Permeability
- Porosity
- Areal Density



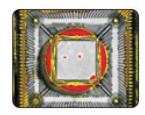


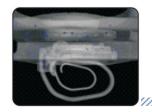
### **Failure Analysis**

- Metal Materials and Parts
- Fracture ,Cosmetic Defect, Corrosion, Wear, Crack. Distortion
- **Polymer Materials and Plastic Parts**
- Injection Black Spots, Plastic Fracture,
   Cracking, Mixed Color, In Blister, Layered,
   Coating Falling off, Corrosion



- Poor Soldering, Components Defect,
   Electrochemical Corrosion, PCB Defect
- **■** Abnormal Composition
- Heterochromatic and Odor Analysis, Nozzle Material Analysis, Organic Residue, Analysis of Industrial Pharmaceutical Composition









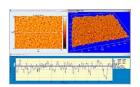


### **Precision Measurement**

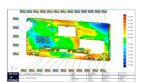
- Dimensional Measure
- Computer Aided Verification (CAV)/Reverse Engineering
- Gear Test
- Geometric Tolerance Analysis
- Surface Roughness Test
- 3D MicroStructure Analysis



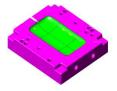
3D Optic Interferometer



3D Surface Roughness



3D Color Plots for Deviation Analysis



Precision Model Verification





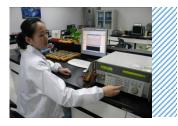




## **Equipment Calibration**

- Length Calibration
- Electrical Calibration
- Mass Calibration
- Force Calibration
- Temperature Calibration
- Physics&Chemistry Calibration
- Maintainess













### **EMC Test**

### Accredited by NVLAP and VCCI

- Radiated Emission (3m Chamber)
- Radiated Emission (10m Chamber)
- Conducted Emission
- Harmonic Test
- Flicker Test

- ESD Test
- Radiated Susceptibility
- EFT Test
- Surge Test
- Conducted Susceptibility
- PFMF Test
- Dip Test
- Ring Wave Test



RS Test Setup(743 Chamber)



10m Chamber



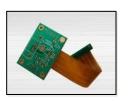


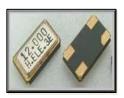
## **Passive & Electromechanical Component Test**

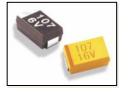
- PCB
  - R-PCB
  - F-PCB
- Connector
  - Inner Connector
  - I/O Connector
- Protection Device
  - Thermistor
  - Fuse
  - ESD ProtectionDevice

- Res./Cap./Ind.
  - Resistor
  - Capacitor
  - Inductor
  - Bead/filter
  - Transformer
  - RF Component
- **■** Fre. Component
  - Crystal
  - Oscillator













### **Main Service Item**

- Raw Material Analysis
- Mechanical & Physical Analysis
- Electrical & Functional Test
- Life Test

- Environmental & Reliability
  Test
  - Failure Analysis
- Integrated Validation















### **Module Test and SI**

#### **Signal Integrity** Measurement

- DDR/PCI/Clock/...
- DVI/HDMI/DP/...
- USB/SATA/PCIE/...
- Power Integrity

#### **Power Unit**

- SPS
- Adapter/Charger
- Battery/Power Bank

#### **Storage Module**

- HDD, Optical Disc
- Memory DIMM
- Performance Test
- **Compatibility Test**
- Mechanical Test
- Reliability Test

#### **Image, Acoustics Module**

- LCD Module
- Touch Panel

#### Cable, Fan

- Power Cord
- Data Cable
- Fan

#### Communication

- Wi-Fi, Bluetooth
- TV Tunnel

- Camera Module
- Speaker, Microphone













### Service Items

- Functionality and Electrical

- **Optical Performance Test**
- **RF Performance Test**
- Safety/EMC Test
- Signal Integrity Measurement
- Module FA















## **Active Types**

- ASIC/ASSP
  - CPU/MCU/ Audio/Clock/LAN/I/O
- Linear IC
  - Standard Linear ICs
  - Power Controller/ Sensors
- Digital Logic IC
  - Standard Logic ICs/PLD
- Memory
  - EEPROM/NOR/NAND Flash /SRAM/ DRAM
- Discrete
  - MOSFET/Transistor/ Diode/LED

## **Major Services**

- Function Test
- Electrical Characteristic
  - Parameter Test
- ESD Rating Test
- MSL Rating Test

- Package Quality Test
- Reliability Test
- Failure Analysis
- Component Quality

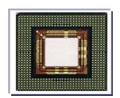
Verification

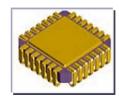






















### **Test of Automobile Materials and Parts**

#### Material Test

- Mechanical Properties
- Chemical Composition
- Physical Properties
- Thermal Properties

- Structure Analysis
- Size Measurement
- Plastic Combustion Performance And Electrical Performance Test
- Material Composition Analysis Test





#### Coating Performance Test of Interior and Exterior Trim Parts

- Gravel Impact
- Paint Film Thickness
- Gloss
- Water Resistance
- Paint Film Hardness
- Cross-cut Test

- Bending
- Abrasion Resistance
- Color Difference
- Salt Spray
- Solar Radiation
- Flexibility



#### **■** Wire Harness /Connector Test

- Environmental Stress
- Mechanical Stress
- Mechanical Service Life

- Chemical Stress
- Electrical Strength



#### ■ Cleanliness Test



### **Environment Test**

#### Drinking Water Safety Test

- Heavy Elements
- Organics

- Disinfection By-products
- Microbiological Index



Heavy Elements

pH

COD

Turbidity

#### ■ Indoor/Workplace Air Test

- Benzene Series and Formaldehyde
- Other Gaseous Pollution

#### Gaseous Pollution Emission Test

- Sulfur Dioxide and Nitric Oxide
- Non-methane Total Hydrocarbon
- PM10 and PM2.5
- Other VOCs











## **Proficiency Testing(PTP)**

#### **Electrical and Electronic Products**

- High Temperature (IEC 60068-2-2, GB/T 2423.2)
- Vibration (IEC 60068-2-6, GB/T 2423.10)
- Shock (IEC 60068-2-27, GB/T 2423.5)
- Low Temperature (IEC 60068-2-1, GB/T 2423.1)

#### Measurement

- Length of Common Parts (ASME Y14.5, GB/T 3177)
- Surface Roughness of Multi Scribed Template (GB/T 10610)
- True Roundness of Common Parts (ASME Y14.5, GB/T 1958)

#### Plastic Test

- Decabromodiphenyl Ether (IEC62321-6)
- Cr(VI) (EC 62321-7-2)
- Cl, Br(BS EN14582)
- Pb, Cd , Hg(IEC 62321-5)
- Density (GB/T 1033.1, ISO 1183-1, ASTM D 792)
- Tensile Strength (GB/T 1040.1, GB/T 1040.2, ISO 527.1, ISO 527.2, ASTM D 638)











Ur Hongxin Testing Technology(Shenzhen) Co.,Ltd.



# Looking Forward to Your Cooperation



http://www.urhongxin.com