

Smart Control Display Knob Solution for Home Appliances



LEVER AGE
JOINT
VALUE



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At A Glance



100,000m² Facility

Supports diverse operations and efficient manufacturing.



3 Product Segments

- Automotive High-Speed & RF Connector and Cable Assembly
- Switch Module & Electronic Product
- Precision Component



3 Market Segments

- Home Appliance
- Automotive
- 3C

INTEGRATED SOLUTION PROVIDER FOR ELECTRONIC PRODUCTS

Founded in 2009 and headquartered in Xiegang Town, Dongguan, Guangdong Province, Dongguan LJV Technology Co., Ltd. (LJV) integrates R&D, mold design, component manufacturing, final assembly, and testing validation into a complete, vertically integrated manufacturing process. Leveraging this end-to-end capability, we deliver customized electronic integration solutions to meet the diverse and evolving needs of our customers.



Together, we can leverage our joint value to drive innovation and growth.”

Jay Jiang

President

Product Development Roadmap



Precision Component
(Die Casting / Cold Forming / overmolded / Injection Molded / Stamped Part)

2009

Encoder, Switch, Potentiometer

2009-2017

Smart Control Display Knob

2018-2024

Next-Generation Integrated Smart Solutions

- Touch Control
- Wireless Charging
- Linear Haptic Feedback
- Color Display
- Bluetooth Communication
- Magnetic Attachment
- Voice Control
- Wireless Communication
- RGB

2025+



INTEGRATED SOLUTION FOR SMART CONTROL DISPLAY KNOBS



FULL-PROCESS SERVICES FROM **HARDWARE DESIGN** AND **MANUFACTURING** TO **SOFTWARE SYSTEM INTEGRATION**.



Integrated Design
Rotation, touch, and display functions in one.



Multi-Scenario Adaptability
Compatible with smart home environments such as laundry care, bathroom, and kitchen.



Customized UI Display
User interface customization, multiple screen types and size options.



Human-Machine Interaction
Haptic feedback, gesture recognition, voice recognition, etc.

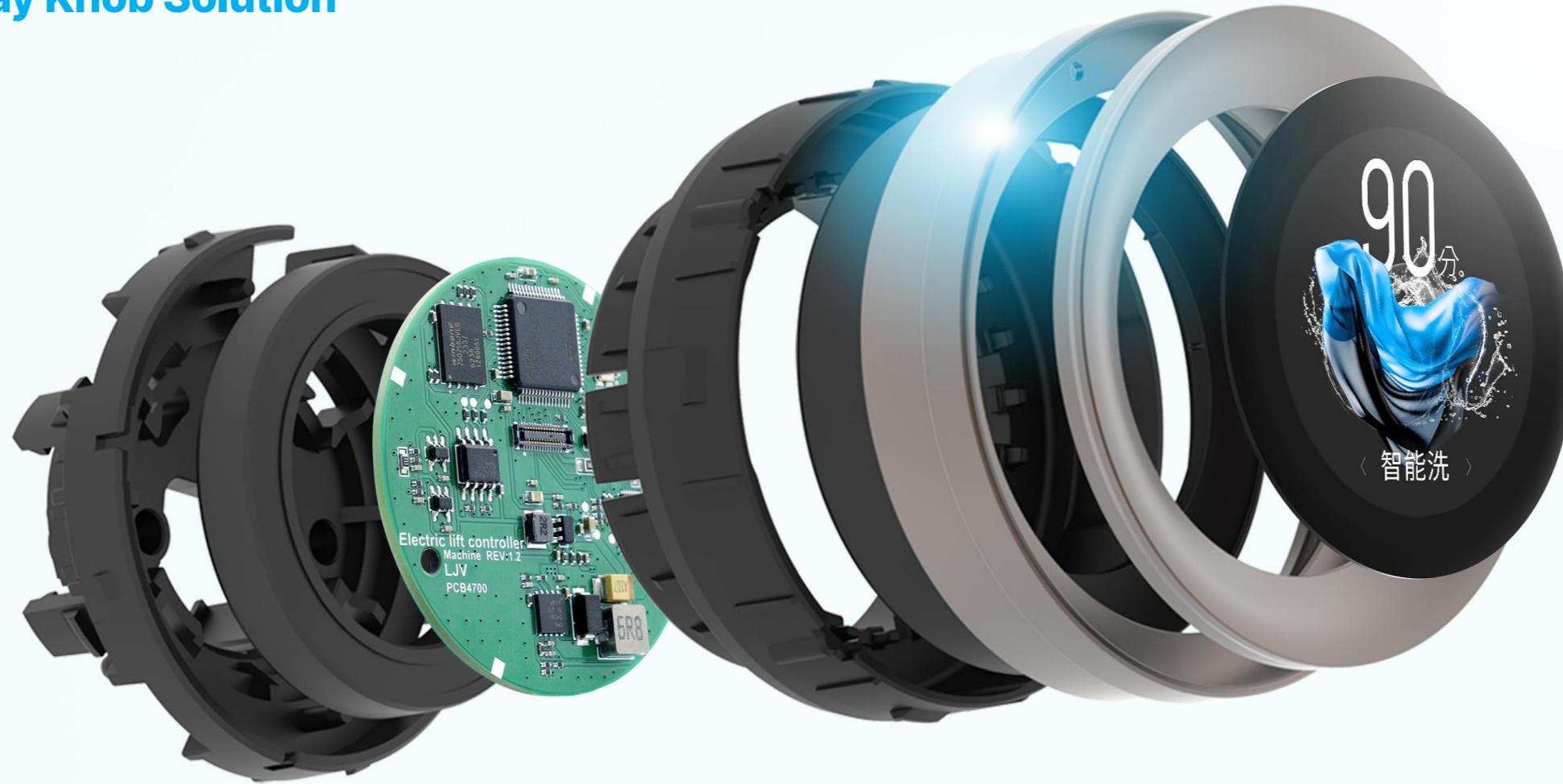


Smart Connectivity
SPI, QSPI, I²C, Bluetooth, Wi-Fi, etc.



Reliable Protection
Dust and water resistance with IPX2, IPX4, and IP67 ratings.

Smart Control Display Knob Solution for Home Appliances



LJV provides fully customized Smart Control Display Knob solutions for home appliances, covering LED, OLED, and TFT modules with tailored software features. Widely used in washing machines, ovens, air fryers, water dispensers, etc., our end-to-end services—from hardware design to software integration—enable smart, user-friendly upgrades for diverse appliances.



Custom Mechanical Components

- **Mechanical parts**
knob structural components, touch structural components, encoders, switches
- **Display parts**
LED, OLED, TFT screens, etc.
- **Control parts**
Control integrated circuits

Custom Software Integration

- **UI & HMI design**
- **Communication protocol support**
- **Functional integration**

Product Solutions

Smart Control Display Knob_ Washing Machine Series

Smart Control Display Knobs bring an innovative interface to laundry appliances, widely used in washing machines, dryers, and tumble dryers—ideal for upgrading premium models.

Combining a display with rotary and push control, and enhanced with a touch screen, they deliver intuitive, visual operation for a more convenient, efficient, and personalized laundry experience.



Rotary & Push Operation

RGB

Full-Color Display



Intuitive User Interface



Touch Control



Bluetooth Connectivity



ME7360XX-000
2.8" LED Display Knob

- Module dimensions: 73.6*25.3 mm
- Rotary operation
- Incremental encoder type
- I²C interface
- IPX4-rated enclosure



ME7650XX-000
2.9" LED Display Knob

- Module dimensions: 77*33 mm
- Rotary operation
- Absolute encoder type
- UART interface
- IPX4-rated enclosure



MSE8400-000
3.3" LED Display Knob (Press Function)

- Module dimensions: 84*33 mm
- Rotary and push-button operation
- Incremental encoder type
- Bluetooth interface
- IPX2-rated enclosure



ME7260XX-000
1.8" TFT Full-Colour Display Knob

- Resolution: 360(RGB)*360
- Module dimensions: 72.6*26.5 mm
- Rotary operation
- Incremental encoder type
- QSPI interface
- IPX2-rated enclosure

Customization

- Screen sizes: 1.5" to 3.5" .
- Display types: LED, OLED, TFT.
- Interfaces: Supports I²C, UART, SPI, QSPI, Bluetooth with secondary development capabilities.
- Materials and finishes: Metal (anodizing, sandblasting, polishing, sunburst patterns, etc.) or plastic (painting, plating, silk-screen printing, laser engraving, etc.)
- Personalized UI: Customizable colors, icons, and display content supported.

Smart Control Display Knob_

Washing Machine Series



ME6800XX-000
2.5" LED Display Knob

- Module dimensions: 68*34 mm
- Rotary operation
- Absolute encoder type
- I²C interface
- IPX4-rated enclosure



ME7000XX-000
2.8" Colour LED Display Knob

- Module dimensions: 71*26mm
- Rotary operation
- Incremental encoder type
- I²C interface
- IPX4-rated enclosure



ME7001XX-000
2.8" LED Display Knob

- Module dimensions: 71*26mm
- Rotary operation
- Incremental encoder type
- I²C interface
- IPX4-rated enclosure



ME7002XX-000
2.8" LED Display Knob

- Module dimensions: 73*32mm
- Rotary operation
- Incremental encoder type
- I²C interface
- IPX4-rated enclosure

© Customization Options

- Screen sizes: 1.5" to 3.5" .
- Display types: LED, OLED, TFT.
- Interfaces: Supports I²C, UART, SPI, QSPI, Bluetooth with secondary development capabilities.
- Materials and finishes: Metal (anodizing, sandblasting, polishing, sunburst patterns, etc.) or plastic (painting, plating, silk-screen printing, laser engraving, etc.)
- Personalized UI: Customizable colors, icons, and display content supported.

Related Products >>>



RE4001XC-H01-0008



RE4003XD-H01-0010



Plastic Outer Bracket



Die-Cast Decorative Ring



Stamped Encoder Brush

Smart Control Display Knob_ Kitchen Appliance Series

Smart Control Display Knobs are widely used in integrated stoves, gas cooktops, ovens, and air fryers, providing a convenient, efficient, and personalized cooking experience.

The innovative knob interface combines rotary, push, and touch controls for precise flame adjustment, function selection, temperature control, and timer operations. High-definition full-color displays support advanced cooking scenarios, making operation intuitive and intelligent.



Rotary & Push Operation

RGB

Full-Color Display



Dynamic Graphic Interface



Advanced Touch Experience

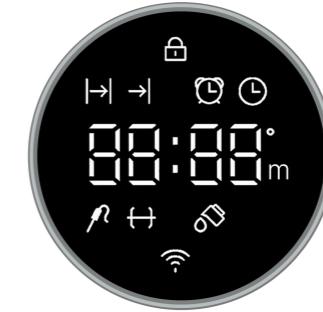


Customizable Functions



MSE4800XPXX-002
1.8" LED Display Knob
(Press Function)

- Module dimensions: 48.4*33mm
- Rotary and push-button operation
- Incremental encoder type
- UART interface
- IPX2-rated enclosure



MSE4801XPXX-020
1.8" LED Display Knob
(Press Function)

- Module dimensions: 48.5*36.8mm
- Rotary and push-button operation
- Incremental encoder type
- UART interface
- IPX2-rated enclosure



MSE5500XPXX-001
2" LED Display Knob
(Press Function)

- Module dimensions: 55*24mm
- Rotary and push-button operation
- Incremental encoder type
- I²C interface
- IPX2-rated enclosure



ME5502XX-001
2" LED Display Knob

- Module dimensions: 55*18.2mm
- Rotary operation
- Incremental encoder type
- SPI interface
- IPX2-rated enclosure

© Customization Options

- Screen sizes: 1.5" to 3.5" .
- Display types: LED, OLED, TFT.
- Interfaces: Supports I²C, UART, SPI, QSPI, Bluetooth with secondary development capabilities.
- Materials and finishes: Metal (anodizing, sandblasting, polishing, sunburst patterns, etc.) or plastic (painting, plating, silk-screen printing, laser engraving, etc.)
- Personalized UI: Customizable colors, icons, and display content supported.

Smart Control Display Knob_

Kitchen Appliance Series



MSE4001XPXX-001
1.5" LED Display Knob (Press Function)

- Module dimensions: 45.5*44.1mm
- Rotary and push-button operation
- Incremental encoder type
- UART interface
- IPX4-rated enclosure



MSE4001XPXX-000
1.5" LED Display Knob (Press Function)

- Module dimensions: 45.5*44.1mm
- Rotary and push-button operation
- Incremental encoder type
- UART interface
- IPX4-rated enclosure



MSE4700XX-000
1.8" LED Display Knob (Press Function)

- Module dimensions: 48*33.4mm
- Rotary and push-button operation
- Incremental encoder type
- UART interface
- IPX4-rated enclosure



MSE4800XPXX-001
1.8" LED Display Knob (Press Function)

- Module dimensions: 48.4*33mm
- Rotary and push-button operation
- Incremental encoder type
- UART interface
- IPX2-rated enclosure

◎ Customization Options

- Screen sizes: 1.5" to 3.5" .
- Display types: LED, OLED, TFT.
- Interfaces: Supports I²C, UART, SPI, QSPI, Bluetooth with secondary development capabilities.
- Materials and finishes: Metal (anodizing, sandblasting, polishing, sunburst patterns, etc.) or plastic (painting, plating, silk-screen printing, laser engraving, etc.)
- Personalized UI: Customizable colors, icons, and display content supported.

Related Products >>>



RE4001XC-H01-0008



RE4003XD-H01-0010



Plastic Inner Bracket



Die-Cast Decorative Ring



Stamped Bracket

Smart Control Display Knob_

Kitchen Appliance Series



MSE5301XX-000
2" LED Display Knob (Press Function)

- Module dimensions: 54*39.55mm
- Rotary and push-button operation
- Incremental encoder type
- SPI interface
- IPX4-rated enclosure



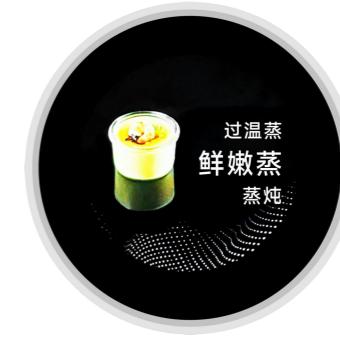
MSE5300XX-000
1.39" AMOLED Full-Colour Display Knob (Press Function)

- Resolution: 454(RGB)*454
- Module dimensions: 54*39.55mm
- Rotary and push-button operation
- Incremental encoder type
- SPI interface
- IPX4-rated enclosure



MSE6000XX-000
1.28" TFT Color Display Knob (Press Function)

- Resolution: 240(RGB)*240
- Module dimensions: 59.5*40.9mm
- Rotary and push-button operation
- Incremental encoder type
- UART interface
- IPX4-rated enclosure



MSE6210XX-000
1.5" TFT Color Display Knob (Press Function)

- Resolution: 360(RGB)*360
- Module dimensions: 62.1*43.3mm
- Rotary and push-button operation
- Incremental encoder type
- SPI interface
- IPX4-rated enclosure



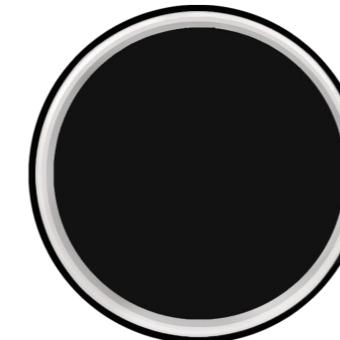
MSE5501XX-000
1.28" TFT Full-Colour Display Knob (Press Function)

- Resolution: 240(RGB)*240
- Module dimensions: 55.1*35.8mm
- Rotary and push-button operation
- Incremental encoder type
- SPI interface
- IPX4-rated enclosure



MSE5503XX-000
1.28" TFT Full-Colour Display Knob (Press Function)

- Resolution: 240(RGB)*240
- Module dimensions: 55.16*36.25mm
- Rotary and push-button operation
- Incremental encoder type
- UART interface
- IPX4-rated enclosure



MSE4800XPXX-000
1.8" Knob (Press Function)

- Module dimensions: 48.4*33mm
- Rotary and push-button operation
- Incremental encoder type
- UART interface
- IPX2-rated enclosure



MSE4801XPXX-000
1.8" Knob (Press Function)

- Module dimensions: 48.5*36.8mm
- Rotary and push-button operation
- Incremental encoder type
- UART interface
- IPX2-rated enclosure

© Customization Options

- Screen sizes: 1.5" to 3.5" .
- Display types: LED, OLED, TFT.
- Interfaces: Supports I²C, UART, SPI, QSPI, Bluetooth with secondary development capabilities.
- Materials and finishes: Metal (anodizing, sandblasting, polishing, sunburst patterns, etc.) or plastic (painting, plating, silk-screen printing, laser engraving, etc.)
- Personalized UI: Customizable colors, icons, and display content supported.

Product Solutions

Smart Control Display Knob_

Small Household Appliance Series

Smart Control Display Knobs bring convenience, efficiency, and personalization to small appliances such as blenders, water purifiers, faucets, electric steamers, and food processors.

Featuring rotary, push, and touch control, they support temperature adjustment, timers, and mode switching. Available in TFT, LED, and PMOLED screens from 0.42" to 3.5", with customizable UI for tailored user experiences.



Rotary & Push Operation

RGB

Full-Color Display



Flexible Graphical Interface



Advanced Touch Experience



Water and Dust Resistant



MSE4200XX-000
0.96" PMOLED Display Knob (Press Function)

- Resolution: 128(RGB)*64
- Module dimensions: 48*28mm
- Rotary and push-button operation
- Incremental encoder type
- SPI interface
- IPX2-rated enclosure



MSE5000XX-000
0.96" PMOLED Display Knob (Press Function)

- Resolution: 128(RGB)*64
- Module dimensions: 50*25mm
- Rotary and push-button operation
- Incremental encoder type
- UART interface
- IPX4-rated enclosure



MSE5501XX-000
1.53" TFT Display Knob (Press Function)

- Resolution: 360(RGB)*360
- Module dimensions: 55.1*35.8mm
- Rotary and push-button operation
- Incremental encoder type
- SPI interface
- IPX4-rated enclosure



ME9000XX-000
2.4" TFT Display Knob (Touch Control Function)

- Resolution: 320(RGB)*240
- Module dimensions: 91*20mm
- Rotary and touch control operation
- Incremental encoder type
- UART interface
- IPX2-rated enclosure

◎ Customization Options

- Screen sizes: 0.42" to 3.5".
- Display types: LED, OLED, TFT.
- Interfaces: Supports I²C, UART, SPI, QSPI, Bluetooth with secondary development capabilities.
- Materials and finishes: Metal (anodizing, sandblasting, polishing, sunburst patterns, etc.) or plastic (painting, plating, silk-screen printing, laser engraving, etc.)
- Personalized UI: Customizable colors, icons, and display content supported.

Smart Control Display Knob_

Small Household Appliance Series



MSE5500XPXX-000
**2" LED Display Knob
(Press Function)**

- Module dimensions: 55*24mm
- Rotary and push-button operation
- Incremental encoder type
- I²C interface
- IPX2-rated enclosure



ME2600XX-001
1" LED Display Knob

- Module dimensions: 26*12mm
- Rotary operation
- Incremental encoder type
- I²C interface
- IPX2-rated enclosure



MSE3200XX-000
**0.66" PMOLED Display Knob
(Press Function)**

- Resolution: 64(RGB)*48
- Module dimensions: 32*29mm
- Rotary and push-button operation
- Incremental encoder type
- SPI interface
- IPX4-rated enclosure



ME4002XX-000
**0.96" PMOLED Display Knob
(Touch Control Function)**

- Resolution: 128(RGB)*64
- Module dimensions: 40.6*29mm
- Rotary and touch control operation
- Absolute encoder type
- SPI interface
- IP67-rated enclosure

◎ Customization Options

- Screen sizes: 0.42" to 3.5"
- Display types: LED, OLED, TFT.
- Interfaces: Supports I²C, UART, SPI, QSPI, Bluetooth with secondary development capabilities.
- Materials and finishes: Metal (anodizing, sandblasting, polishing, sunburst patterns, etc.) or plastic (painting, plating, silk-screen printing, laser engraving, etc.)
- Personalized UI: Customizable colors, icons, and display content supported.

Related Products >>>



RE2805XF-H01-0090



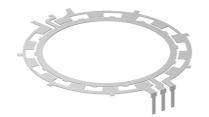
RE3502XC-H01-0052



Plastic Mounting Base



Aluminum Alloy
Decorative Ring



Stamped Encoder Disc

Next-Generation INTEGRATED SMART SOLUTIONS



Touch Control



Voice Control



Haptic Feedback



Full-Color Display



WIFI



Bluetooth
Connectivity



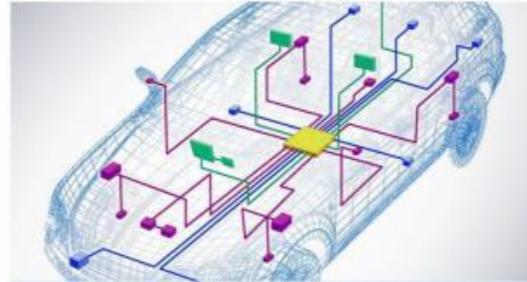
Wireless Charging



IP Rating

Other Products Automotive Electronic Products

- High-Speed RF Connector & Cable Assemblies Solutions for Intelligent Connected Vehicle
- Control Switch Module Solutions for Automotive
- Electronic Products & Precision Components



Connectors & Cable Assemblies

FAKRA | X-FAKRA | VSMP | HSD | Type-C/HSL | HSN



Applications

- Sensors
- Domain Controller
- Display Screen
- Multimedia Interaction
- Wireless Communication
- Connected Car Control Unit



Control Switch Module

- Electronic Parking Brake Switch
- Center Console Switch



Applications

- Parking Brake System
- Center Console System



- Combination Switch
- Steering wheel Roller



Applications

- Lighting Control System/Windshield Wiper Control System
- Steering Wheel Control System/Trunk Control System



- Lumbar Adjustment Switch Module
- Seat Adjustment Switch Module
- Multi-Directional Seat Adjustment Switch



Applications

- Seat Adjustment
- Seat Heating



Electronic Product

Encoder | Switch | Potentiometer



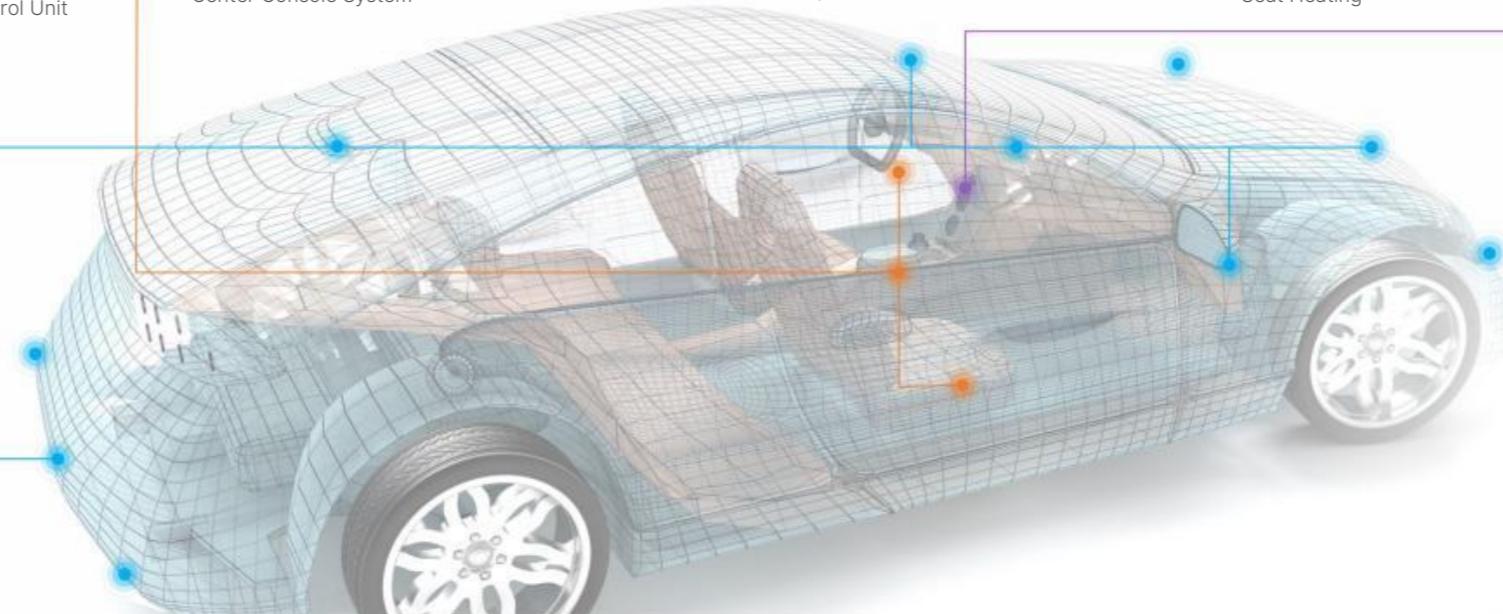
Precision component

- Die-Casting Part
- Stamped Part
- Cold Forming Part
- Injection Molded & Overmolded Parts



Applications

- Instrument Control System
- Automotive Air Conditioning Control System
- In-Vehicle Entertainment and Interaction System



Precision Component Customization Service



Vertically Integrated Manufacturing with In-House Capabilities

Supported by mold development and precision machining, we provide customers with in-house precision electronic component manufacturing and integration services, creating a vertically integrated value chain. This approach fosters closer and more efficient interactions, enabling efficient production, stable quality, on-time delivery, and flexible, rapid responses to customer needs.

Major Customers



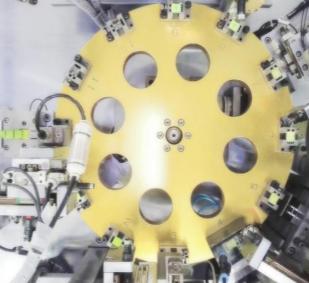
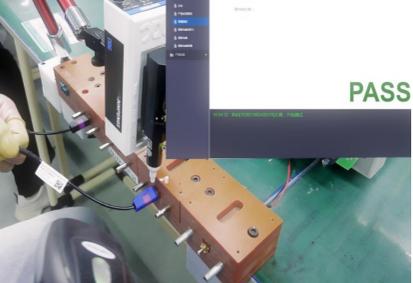
Customer-Oriented · Customized Solutions

LJV stays closely aligned with market and customer needs, continuously enhancing product R&D and technological innovation, while responding swiftly and effectively to customized requirements.

Vertically Integrated Manufacturing Capabilities

		
<p>Precision Components</p> <ul style="list-style-type: none"> Zinc/Aluminum/Magnesium Alloy Die Casting Part Cold Forming Parts Injection Molded & Overmolded Part Stamped Part 	<p>Switch Modules & Electronic Products</p> <ul style="list-style-type: none"> Switch Module & Smart Control Knob Encoder & Switch & Potentiometer 	<p>Connectors & Cable Assemblies</p> <ul style="list-style-type: none"> Telematic Connector Cable Assemblies
<p>Product Lines</p> <ul style="list-style-type: none"> Zinc Die Casting: 25~170 tons Aluminum Die Casting: 180~400 tons Cold Forming: 500 tons Injection Molding & Overmolding: 10~200 tons Stamping: 3~160 tons 	<p>Equipment / Assembly Lines</p> <ul style="list-style-type: none"> Lean production lines Automated production lines 	<p>Equipment / Assembly Lines</p> <ul style="list-style-type: none"> Lean production lines Automated production lines
<p>Monthly Capacity (PCS)</p> <ul style="list-style-type: none"> Precision Component: 91000K 	<p>Monthly Capacity (PCS)</p> <ul style="list-style-type: none"> Switch Module & Smart Control Knob: 800K Encoder & Switch & Potentiometer: 8000K 	<p>Monthly Capacity (PCS)</p> <ul style="list-style-type: none"> Connector & Cable Assemblies: 3000K

Value Chain

<p>Design Engineering</p> <ul style="list-style-type: none"> R&D Engineers: 100+ NPI: 2-4 weeks KAT: For KA Customers Lab: In-house standardized lab Patents: 170+ (2024) YoY Spend: 5% of annual sales 	<p>Design Verification Test</p> <p>An independent in-house standardized laboratory effectively shortens product development and verification cycle.</p>	<p>Automation Focus</p> <p>LJV has an in-house automation R&D team and comprehensive automated equipment. Together with fully automated assembly lines, this supports efficient product production and assembly.</p>	<p>Quality with Complete Traceability</p> <p>MES system digitizes the entire production, logistics, and quality process, providing accurate real-time data for customer products and ensuring comprehensive traceability of quality information.</p>
			
<p>Innovation-driven</p> <p>Utilizing professional design engineering capabilities to develop innovative solutions.</p>	<p>Reliability & Functionality</p> <p>Ensuring product reliability with rigorous design verification tests.</p>	<p>Lean Manufacturing</p> <p>Achieving precision and efficiency in manufacturing with automation.</p>	<p>MES</p> <p>Upholding quality standards with traceability throughout production process.</p>

Quality Management

Total Quality Management

Employee engagement in quality management is essential for system ongoing improvement. With strong support from senior management and a customer-centric approach, we motivate our team to actively contribute to system development and company growth, ensuring smooth execution of quality planning, control, assurance, and improvement activities.

“Quality is about creating value to our customers while driving growth for our company.”

Sam Lau
General Manager

Quality Policy

Quality First, Management by Scientific Approach,
Efficiency Enhancement by Standardization
Act Real Do Thorough Make Solid Be Strong

Quality Objectives

- Customer audit pass rate $\geq 95\%$
- Part manufacturing batch conformity rate $\geq 99\%$
- Final inspection defect rate ≤ 50 PPM
- Customer return defect rate ≤ 5 PPM
- Average customer satisfaction score ≥ 95

Quality Certificates

- IATF16949
- ISO9001
- ISO14001
- ISO45001
- IECQQC080000
- D-U-N-S

Quality Certificates

- Quality Planning
- Document Control
- Compliance
- Quality Control
- Supplier Management
- Process Improvement
- Customer Satisfaction
- Management Review

Quality Traceability

MES facilitates the display of crucial process information during manufacturing, ensuring swift and accurate traceability throughout the entire production process.

Quality Improvement & Problem Correction

- 8D Report
- One Product One Page Report
- QRQC (Quickly Response Quality Control)
- Knowledge Base

Quality Control

- FTQ
- SOP Review
- Sequential Inspection
- First Article Inspection
- Standard Sample Inspection
- Quality Red Line Management

Quality Alerts

The MES system provides comprehensive quality alert functions from incoming material anomalies to finished product warehousing alerts.

Emergency Response

In case of emergencies, all departments are required to implement contingency measures within 4 hours.

Customer Satisfaction



Culture & Vision

LJV's core values guide our vision and strategy, creating exceptional value for customers, teams, partners, and society, and driving sustainable brand growth.



Growth Plan

Current	Near-Term			Mid-to-Long Term
Integrated Site	Headquarters Expansion			Overseas Market Expansion
	Headquarters	New R&D Center	CNAS Laboratory	Overseas Manufacturing Base
				
<p>The integrated production base is built according to standardized, systematic, intelligent, and unified principles, including factories, R&D centers, office buildings, and laboratories.</p>	<p>LJV focuses on enhancing its value chain and core competitiveness, advancing intelligent, lean production, and innovating products and solutions to energize the electronic information industry.</p>	<p>Continuously advancing cutting-edge technologies, LJV strengthens its R&D capabilities to provide solid technical support for long-term growth. We enhance research facilities, expand the R&D team, and attract and retain top talent.</p>	<p>LJV is planning to apply for CNAS certification and actively participates in laboratory assessments to ensure compliance with relevant standards. This enhances the lab's international recognition and authority, providing global customers with higher-standard testing services.</p>	<p>LJV continuously expands market share and optimizes production capacity based on demand and orders. While steadily increasing domestic market presence, LJV actively explores overseas markets, establishing international production bases to offer more competitive products and services to global customers.</p>
<ul style="list-style-type: none"> • Facility Area: 42000m² • Location: Xiegang, Dongguan • Q4 2023: In operation 	<ul style="list-style-type: none"> • Facility Area: 60000m² • Location: 1km from the current site • Q1 2024: Project initiation and planning • Q1 2026: Completion of construction • Q2 2026: In operation 	<ul style="list-style-type: none"> • Team Size: 200+ • Q4 2026: In operation 	<ul style="list-style-type: none"> • Q2 2025: Project kick-off • Q3 2026: In operation 	<p>Q4 2025: Establish Southeast Asia Hub 2026: Launch production line layout</p>



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