



Total Display Control

CHIPONE

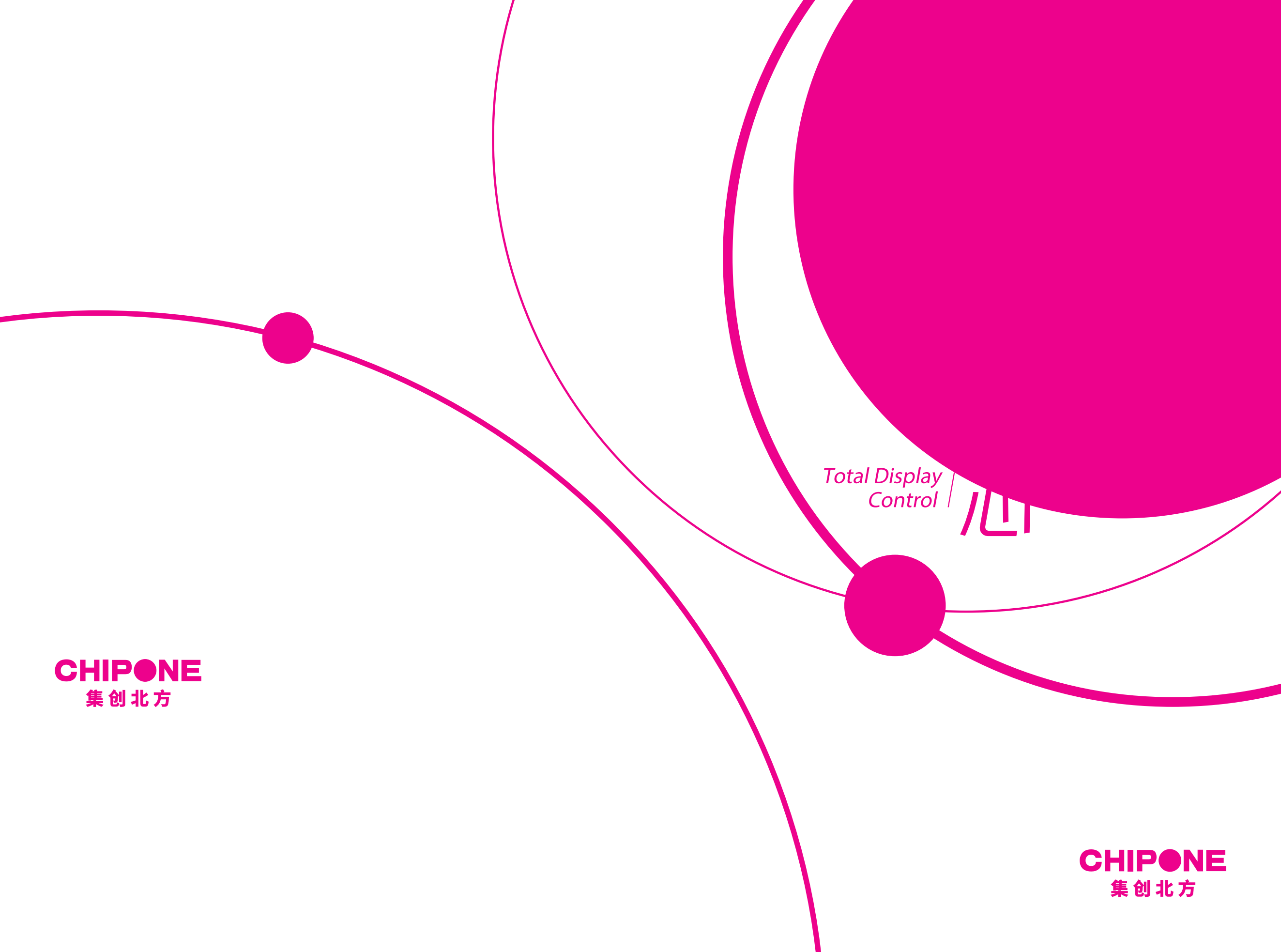
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Chipone Core Values

Integrity, Responsibility,
Professional Perseverance

Vision

To be a leading company
of display IC design

Devote to becoming the world's leading provider
of display IC products and solutions



Chipone
Official website

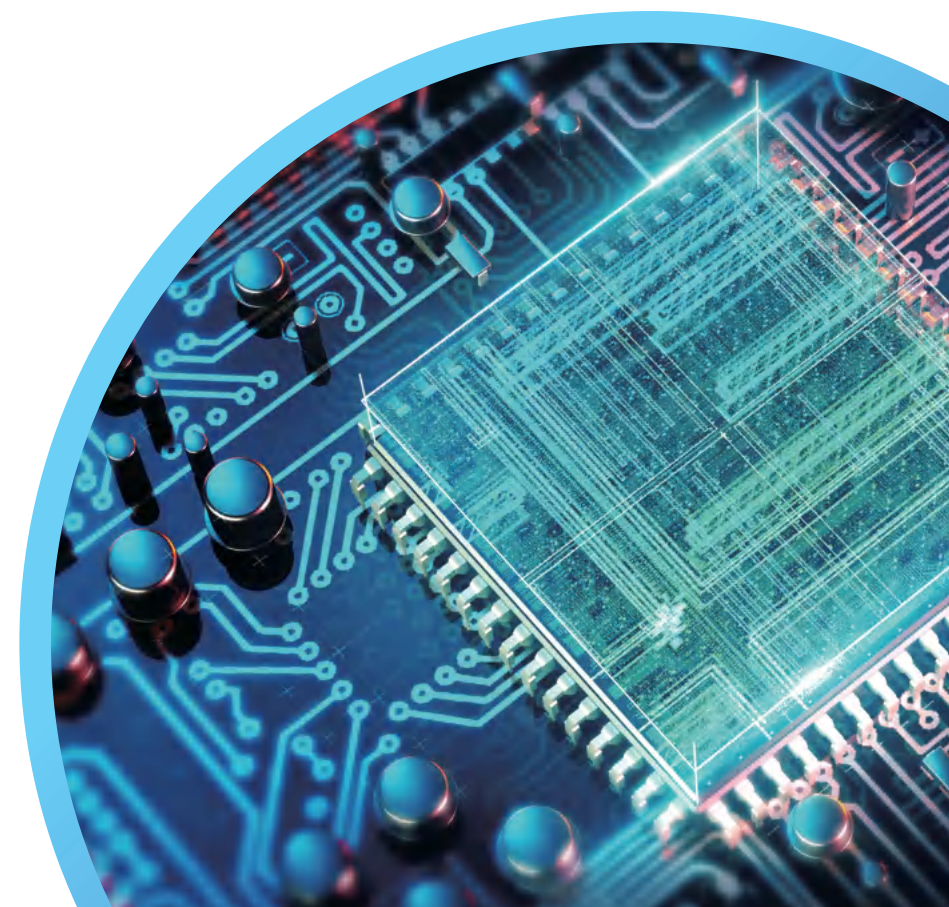


Company Profile

Founded in 2008, Beijing Chipone Technology Co., Ltd. is an international leading display chip design company, committed to becoming a leader in total display control.

The company now has a full range of display driver chips, power management chips, SoC chips, automotive chips and other product series, which can be widely used in mobile terminal products, wearable devices, indoor and outdoor ultra-high-definition displays, AR/VR, industrial, automotive, medical and other scenarios.

The market share of Chipone's LED display driver chips has ranked first in the world for four consecutive years, and the market share of LCD DDIC, TDDI chips and panel power management chips for smartphones has ranked first among mainland manufacturers. As of the end of September 2023, Chipone has applied for a total of 2,119 domestic and foreign patents, and has won many honors such as "National Intellectual Property Advantage Enterprise" and "National Manufacturing Single Champion Demonstration Enterprise".



Chipone Profile

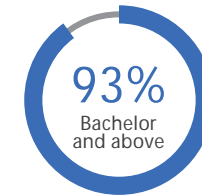
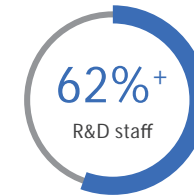
2008

Established in 2008
with 15 years of history

12 countries and regions

- | Beijing
- | Shanghai
- | Chengdu
- | Silicon Valley, USA
- | Zhuhai
- | Suzhou
- | Hong Kong
- | Korea
- | Shenzhen
- | Hefei
- | Taiwan, China
- | Singapore

1250⁺ Employees



2119⁺ Items

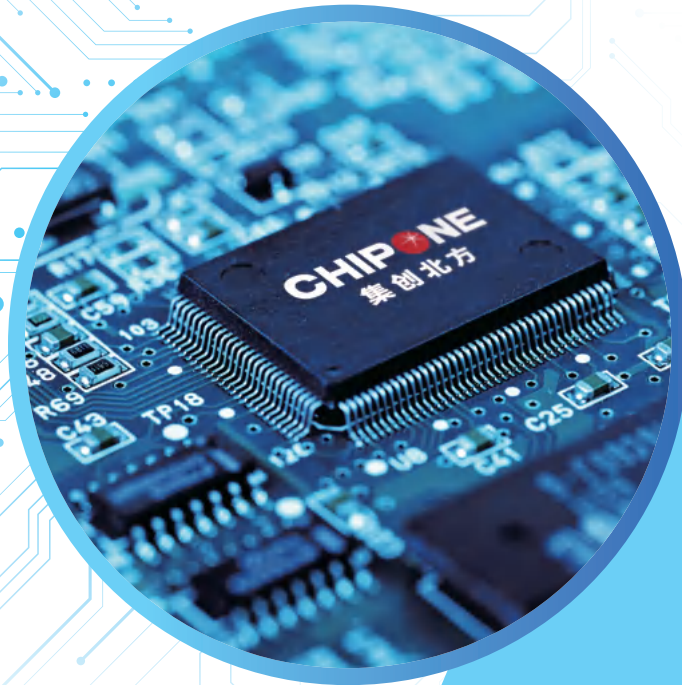


2119⁺ Patent applications

Invention patents 1816⁺

Overseas patents 1079⁺





1st

- 2022 Global market share of LED display driver chip ranks 1st
- 2022 Mainland China market share of Panel power management chip ranks 1st
- 2022 Global market share of LCD TDDI chip ranks 1st among the mainland Chinese manufacturers
- 2022 Global market share of smartphone LCD DDIC ranked 1st among mainland Chinese manufacturers

Data source: Omdia 2023 CINNO Research TrendForce

25 million

- TDDI IC shipments exceed 25 million in a single month
- 10 million chips lit up the Tiananmen Square screen on the 70th anniversary of the National Day

500 million

- TDDI total shipment exceeded 500 million
- Touch IC has shipped over 100 million in consecutive years

Enterprise Honor

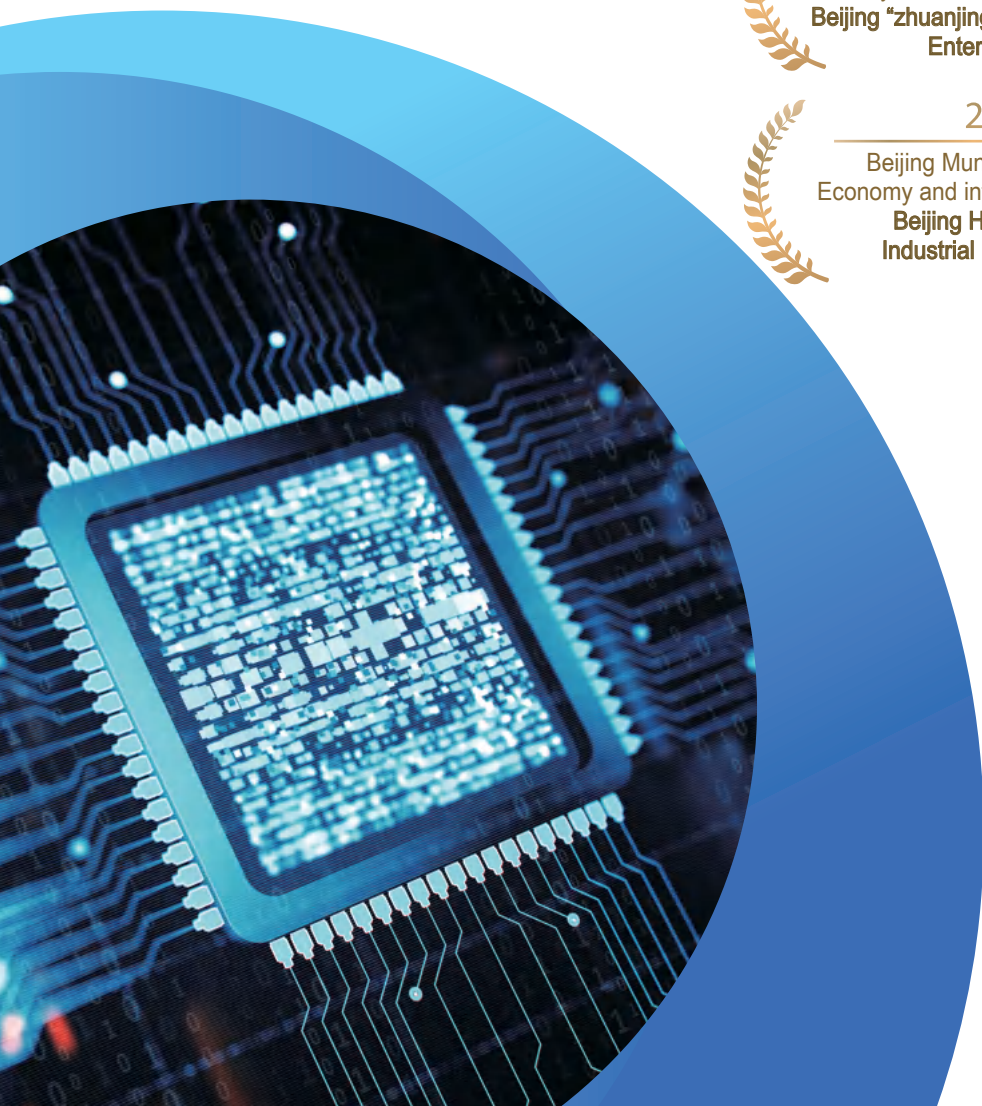
2022
National Intellectual Property Office
National Intellectual Property Advantage Enterprise

2022
Ministry of Industry and information Technology of the People's Republic of China
National Manufacturing Single Champion Demonstration Enterprise

2020
Beijing Municipal Bureau of Economy and information Technology
Beijing "zhuanjingtixin Little Giant Enterprise"

2019
Beijing Municipal Bureau of Economy and information Technology
Beijing High-Precision Industrial Design Center"

| | | | |
|--|---|---|--|
| <p>2023</p> <p>ISLE Excellent Product Award</p> | <p>2023</p> <p>ICDT Display of The Year Award</p> | <p>2022</p> <p>PMIC Outstanding Market Performance Product Award</p> | <p>2022</p> <p>AMOLED The 5th IC Innovation Award Achievement Industrialization Award</p> |
| <p>2021</p> <p>Beijing National Intellectual Property Demonstration Enterprise</p> | <p>2022</p> <p>AMOLED SID Best Display Component Product Award</p> | <p>2021</p> <p>Beijing Private Enterprises Technology Innovation Top 100</p> | <p>2021</p> <p>LED ISLE Display Excellent Product Award</p> |
| <p>2018-2021</p> <p>Four consecutive times IC Unicorn Award</p> | <p>2021</p> <p>TDDI SID Best of the Year Gold Award for Display Module Component Products</p> | <p>2020</p> <p>8K driver chip "China Chip Award" Excellent Technology Innovation Product Award</p> | <p>2020</p> <p>Zhongguancun High-Tech Enterprise Association Zhongguancun Top 100 High-Growth Enterprises</p> |
| <p>2020</p> <p>Beijing Cultural Investment Group Jointly with relevant industry associations Most Influential Brand Enterprise in Audiovisual Industry</p> | <p>2020</p> <p>China Optical Electronics Industry Association Liquid Crystal Branch Outstanding Contribution to the Development of China's New Display Industry Chain</p> | <p>2019</p> <p>Beijing Municipal People's Government The Fifth Beijing Invention Patent Award Third Prize</p> | <p>2019</p> <p>Beijing Municipal Bureau of Economy and information Technology Beijing High Precision and Advanced Industrial Design Center</p> |
| <p>2019</p> <p>Beijing Science and Technology Commission/ Beijing Municipal Bureau of Finance High-tech enterprise</p> | <p>2018</p> <p>China Quality Center ISO14001/ISO9001 Environmental Management System Certification</p> | <p>2018</p> <p>Beijing Municipal Human Resources and Social Security Bureau Postdoctoral Workstation</p> | <p>2017</p> <p>National Intellectual Property Office Outstanding Patent Excellence Award</p> |



Ecological Partners

In terms of upstream suppliers, Chipone has established stable cooperative relationships with large wafer manufacturers and sealed packaging and testing manufacturers, such as Vanguard Intentional Semiconductor Corporation, Nexchip, SMIC, TFME, JCET, and CHIPMOS to ensure the steady improvement of the company's products' shipments and quality.

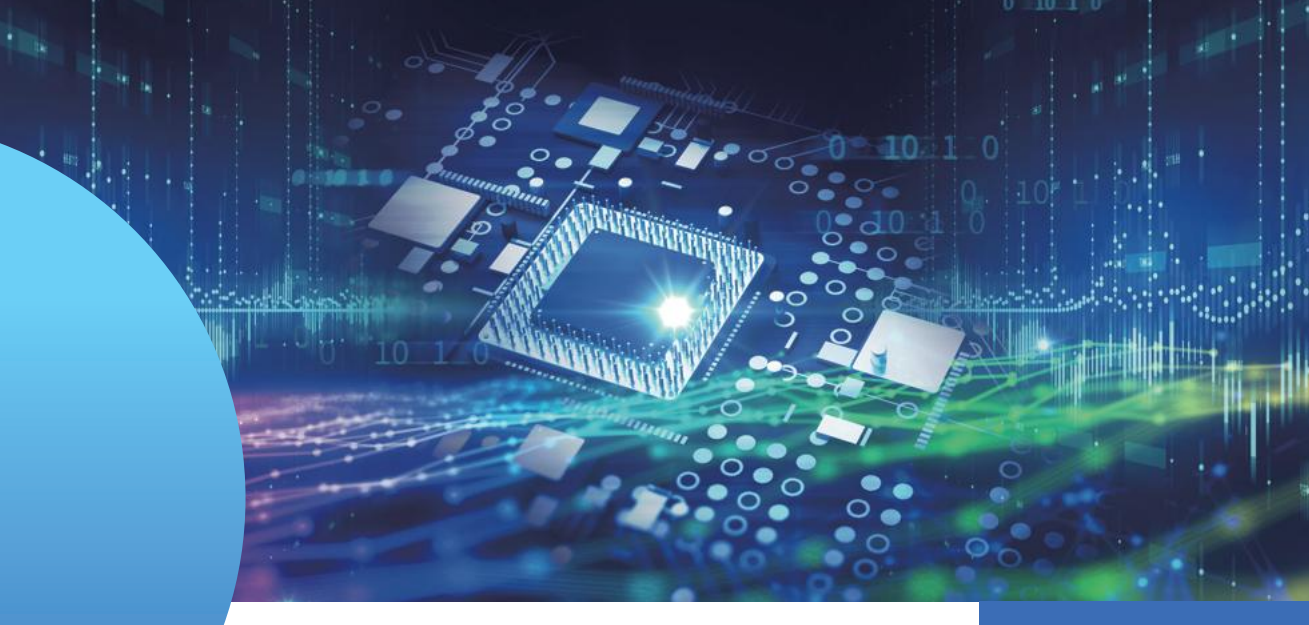
In terms of downstream clients, Chipone's key clients include BOE, TCL, HKC, Leyard, ,Unilumin, Absen, LG Display, and other domestic and foreign famous panel factories/LED screen factories. Meanwhile the products are widely used in TCL, LG, Samsung, OPPO, vivo, Xiaomi and other domestic and foreign famous terminal enterprises and have gained long-term recognition from many large and well-known clients from the whole value chain in the field of display business.

Wafer Fabrication Packaging and Testing

Panel Factories Screen Factories

Key Terminal Clients





Product Solutions



Total display control solutions for the whole field



Products



LED display & backlight chip Solutions

- Mini / Micro LED Driver Chips
- Light driver integrated LED driver chip
- High-current LED driver chip
- LED Display PWM Driver Chips
- General LED Driver Chips
- LED Display Line Driver Chips
- LED Display Control Chips
- Mini LED Backlight Driver Chips

Mini / Micro LED Driver Chips

| Name | Product Introduction | Number of output channels | Built-in MOS | Channel output current | Scanning design | Refresh rate | Current accuracy | GCLK | Packaging |
|----------|---|---------------------------|--------------|------------------------|-----------------|--------------|------------------|------|-----------|
| ICND2200 | Mini / Micro LED Driver Chips | 24 | 16PMOS | 0.5-25mA | 1-64 Scan | 3840hz+ | <±2% | PLL | QFN56 |
| ICND2260 | Mini / Micro LED display common cathode driver chip | 120 | 48MOS | 0.1-9.6mA | 1-96 Scan | 3840hz+ | <±1% | PLL | BGA225 |
| ICND2270 | | 48 | 30NMOS | 0.25-16mA | 1-90 Scan | 3840hz+ | <±1% | PLL | QFN88 |

Light driver integrated LED driver chip

| Name | Product Introduction | Output channels | Drive type | Channel output current | Scan | Refresh rate | Current accuracy | GCLK | Packaging |
|----------|--|-----------------|--------------|------------------------|------|--------------|------------------|------|-----------|
| ICND3103 | Light driver integrated LED constant current driver chip | 3 | Common Anode | 5/12/20mA | / | / | ±2.5% | / | / |

High-current LED driver chip

| Name | Product Introduction | Output channels | Channel output current | Scan | Refresh | Current accuracy | GCLK | Packaging |
|----------|--|-----------------|------------------------|-------|---------|------------------|------|----------------------------|
| ICND8309 | High current constant current output LED driver chip | 16 | 2-90mA | 1-32S | 960HZ | ±2% | OE | SSOP24/QFN24 |
| ICND8392 | High current constant current output LED driver chip | 16 | 1-90mA | 1-16S | 7680Hz | ±2% | gclk | SSOP24/QFN24/TSSOP24/SOP24 |

LED Display PWM Driver Chips

| Name | Product Introduction | Number of output channels | Drive type | Channel output current | Scanning design | Refresh rate | Current accuracy (between channels) | GCLK | Packaging |
|-----------|--|---------------------------|----------------|------------------------|-----------------|--------------|-------------------------------------|------------|--------------|
| ICND2150S | Constant current output LED driver chips | 16 | Common Anode | 0.5-30mA | 1-16 Scan | 3840hz | <±2% | GCLK | SSOP24 |
| ICND2159 | | 16 | Common Cathode | 0.5-28mA | 1-16 Scan | 3840hz | <±1.5% | GCLK | SSOP24/QFN24 |
| ICND2153 | Constant current output LED driver chips | 16 | Common Anode | 0.5-25mA | 1-32 Scan | 3840hz | <±2% | GCLK | SSOP24/QFN24 |
| ICND2153S | | 16 | Common Anode | 0.5-30mA | 1-32 Scan | 3840hz | <±1.5% | PLL | SSOP24/QFN24 |
| ICND2055S | High performance constant current output LED driver chip | 16 | Common Anode | 0.5-35mA | 1-32 Scan | 3840hz+ | <±1.5% | PLL | SSOP24/QFN24 |
| ICND2165 | | 16 | Common Anode | 0.5-25mA | 1-64 Scan | 3840hz+ | <±1.5% | PLL | SSOP24/QFN24 |
| ICND3065 | High grey level constant current output LED common Anode driver chip | 16 | Common Anode | 0.5-25mA | 1-64 Scan | 7680hz+ | <±1.25% | PLL 200Mhz | SSOP24/QFN24 |
| ICND3069 | High grey level constant current output LED common cathode driver chip | 16 | Common Cathode | 0.35-20mA | 1-64 Scan | 7680hz+ | <±1.25% | PLL 200Mhz | SSOP24/QFN24 |

General LED Driver Chips

| Name | Product Introduction | Output Channels | Output Current | Scan | Refresh Rate | Current Accuracy | Packaging |
|-----------|---|-----------------|----------------|-------|--------------|------------------|--------------|
| ICND2038S | Constant current output LED driver chips | 16 | 0.5-45mA | 1-32S | 1920Hz | ±2% | SSOP24/QFN24 |
| ICND2046 | | 16 | 0.5-45mA | 1-32S | 1920Hz | ±2% | SSOP24 |
| ICND2047 | | 16 | 0.5-45mA | 1-64S | 3840Hz | ±2% | SSOP24 |
| ICND2049 | Constant current output LED common cathode driver chips | 16 | 0.5-25mA | 1-32S | 1920Hz | ±2% | SSOP24 |

LED Display Line Driver Chips

| Name | Product Introduction | output channels | Channel current | current impedance | Type of decoding | Eliminate ghosting | Lamp bead protection | Packaging |
|----------|--|-----------------|-----------------|-------------------|------------------|--------------------|----------------------|--------------|
| ICND2013 | Constant current output LED driver chips | 8 | 2.5A | 100mΩ | 138 Decoding | ✓ | ✓ | SSOP24/QFN24 |
| ICND2018 | | 8 | 2.5A | 100mΩ | Serial Decoding | ✓ | ✓ | SOP16/QFN16 |
| ICND3018 | | 16 | 2A | 130mΩ | Serial Decoding | ✓ | ✓ | SSOP16/QFN16 |
| ICND3019 | | 16 | 1.5A | 130mΩ | Serial Decoding | ✓ | ✓ | SSOP16/QFN16 |

LED Display Control Chips

| Name | Product Introduction | Interface | Data sets | Load Carrying (Capacity) | Correction | Gamma | HDR | Packaging | Screen type |
|----------|--|-----------|-----------|--------------------------|-------------------|-------|-----|-----------|-------------|
| ICND6603 | New LED commercial display control applications scheme, high degree of integration, image algorithm, Strong processing capacity, high-speed data interface, which can simplify the control system and improves stability | HDMI1.4 | 40 Groups | 960x540 | Brightness Chroma | ✓ | ✓ | BGA224 | 2K |

| Name | Product Introduction | input interfaces | input load | output interface | Output load | SPR | HDR | Packaging | Screen type |
|----------|---|------------------|-----------------|------------------|---------------|-----|-----|-----------|-------------|
| ICND6620 | 4K video cutting processing, strong image algorithm processing ability, High-speed data interface | HDMI2.0 DP1.4 | 3840x2160 @60hz | HDMI | 960x2160@60hz | ✓ | ✓ | BGA216 | 4K |

Mini LED Backlight Driver Chips

| Name | Product Introduction | Number of channels | Scanning design | Drive current | Channel withstand voltage | Refresh rate | Dimming levels | Current accuracy | Application terminals |
|----------|---|--------------------|-----------------|---------------|---------------------------|--------------|----------------|------------------|-----------------------|
| ICND8603 | High integration, high voltage withstand, high current, high zonal area dimming, low power consumption, accurate contrast ratio, HDR display picture quality. Effective brightness enhancement of LCD panels, colour gamut for high dynamic contrast ratio. | 48 | Up to 2 scan | 30mA | 55V | 3840hz | 14bit | ±2% | TV |
| ICND8501 | | 12 | Up to 12 scan | 80mA | 30V | 3840hz | 14bit | ±2% | NB/MNT |

Products



Large size display driver chip Solutions

- Source Display Driver Chips
- Gate Display Driver

Source Display Driver Chips

| Name | Resolution | Refresh rate | Colour depth | Packaging | Interface | Screen type |
|-----------|------------|--------------|--------------|-----------|-----------|-------------|
| ICNL9390S | 4k/8K | 120/60Hz | 8bit | COF | CSPI/ISP | TV/MNT |
| ICNL9381S | 4k/8K | 120/60Hz | 8bit | COF | CEDS | TV |
| ICNL9392 | 4k/8K | 120/60Hz | 8bit | COF | USI-T | TV |
| ICNL9391 | 4k/8K | 120/60Hz | 8bit | COF | CSP/ISP | TV |
| ICNL9383 | FHD/4K | 360Hz | 8bit | COF | iSP | MNT |
| ICNL9351 | 4K/8K | 120/60Hz | 8bit | COF | EPI | TV |
| ICNL9381 | UHD | 60Hz | 8bit | COF | CEDS | TV |
| ICNL9390 | UHD | 120/60Hz | 8bit | COF | CSP/ISP | TV/MN |
| ICNL9382 | 4K/8K | 288/120Hz | 8bit | COF | CHPI | TV |
| ICNL9309 | FHD | 60Hz | 8bit | COF | mini-LVDS | TV/MNT |
| ICNL9310 | FHD/HD | 60Hz | 8bit | COF | mini-LVDS | TV/MNT |
| ICNL9312 | FHD | 60Hz | 8bit | COF | mini-LVDS | TV |
| ICNL9305S | FHD | 60Hz | 8bit | COF | mini-LVDS | TV |
| ICNL9308S | FHD | 60Hz | 6bit | COF | mini-LVDS | MNT |
| ICNL9350 | FHD | 60Hz | 6bit | COF | EPI | MNT |
| ICNL9336 | FHD | 60Hz | 6bit | COG | mini-LVDS | NB |
| ICNL9337 | FHD | 60Hz | 6bit | COG | iSP | NB |
| ICNL9638 | WU | 165Hz | 8bit | COG | iSP | NB |
| ICNL9338 | FHD | 480Hz | 8bit | COG | iSP | NB |
| ICNL9631 | FHD | 75Hz | 8bit | TED | eDP1.2 | NB |

Gate Display Driver Chips

| Name | Resolution | Refresh rate | Colour depth | Packaging | Interface | Screen type |
|----------|------------|--------------|--------------|-----------|-----------|-------------|
| ICNL9522 | FHD | 60Hz | N/A | COF | N/A | TV |
| ICNL9510 | FHD | 60Hz | N/A | COF | N/A | TV |
| ICNL9513 | FHD | 60Hz | N/A | COF | N/A | MNT |
| ICNL9556 | HD | 60Hz | N/A | COG | N/A | NB |

Products



Mobile device chip Solutions

- LCD Small and Medium Size Display Chips
- Fingerprint Chips
- Touch Chips

LCD Small and Medium Sized Display Chips

| Name | Product Introduction | Resolution | Display refresh rate | Interface protocols | Application size(inch) | Colour depth | Features | Maximum speed | Package form | Application terminals |
|-----------|---|--------------------|----------------------|---------------------|------------------------|--------------|---|---------------|--------------|---|
| ICNL9911C | | HD/HD+ 720*1760 | 90Hz | MIPI/SPI | 5"-7" | 8bit | High refresh rate of 90Hz | 950Mbps | COG | |
| ICNL9916 | Support for display touch all-in-one TDDI technology | HD/HD+ 720*1760 | 120Hz | MIPI/SPI | 5"-7" | 8bit | 120Hz high refresh rate narrow bezel low power consumption | 1.2Gbps | COG | High screen-to-body ratio LCD touch driver panels |
| ICNL9916C | | HD/HD+ 720*1760 | 120Hz | MIPI/SPI | 5"-7" | 8bit | 120Hz high refresh rate with narrow bezel | 1.2Gbps | COG | |
| ICNL9922C | Support LTPS display touch all-in-one TDDI technology | FHD/FHD+ 1080*2520 | 120Hz/144Hz | MIPI/SPI | 5"-7" | 8bit | 144Hz high refresh rate | 1.3Gbps | COG/COF | LCD touch driver panels |
| ICNL9951R | | WXGA+ 800*1280*2 | 120Hz | MIPI/SPI | 8"-12" | 8bit | Supports 2 cascade/ high brush/ active pen | 1.2Gbps | COG/COF | |
| ICNL9952 | Support for display touch all-in-one TDDI technology | WXGA+ 800*1280*2 | 120Hz/144Hz | MIPI/SPI | 8"-13" | 8bit | Supports 2 cascade/ high brush/ active pen/ narrow bezel technology | 1.2Gbps | COG/COF | Tablet related products |

Fingerprint Chips

| Name | Product Introduction | Packaging | Shape | Sensing area | Aera Array | Communication methods | Supply voltage | Communication Electrical Level |
|----------|-----------------------------------|-----------|--------------|--------------|---------------|-----------------------|----------------|--------------------------------|
| ICNF7318 | 2.1mm side fingerprint | LGA | Rectangle | 1.6mm*6.6mm | 38*155@598dpi | SPI | 2.8V~3.3V | 1.8V |
| ICNF7319 | | LGA | Rectangle | 1.6mm*8.0mm | 38*188@598dpi | SPI | 2.8V~3.3V | 1.8V |
| ICNF6156 | optical Under-Display fingerprint | COB | / | 1.8mm*8.0mm | 172*216@7.2um | SPI | 2.8V~3.3V | 1.8V/VDD |
| ICNF7339 | Back fingerprint | LGA | Round Square | 2.72mm*3.4mm | 64*80@598dpi | SPI | 2.8V~3.3V | 1.8V/VDD |
| ICNF7332 | industry fingerprint | LGA | Round Square | 3.2mm*4.0mm | 64*80@508dpi | SPI | 2.8V~3.3V | 1.8V/VDD |
| ICNF7352 | industry fingerprint | LGA | Round Square | 4.4mm*5.6mm | 88*112@508dpi | SPI | 2.8V~3.3V | 1.8V/VDD |

Touch Chips

| Name | Product Introduction | Number of channels | Reporting rate | Interface protocols | Application dimensions | Support for TP types | Packaging | Application terminals |
|----------|--|--|----------------|---------------------|------------------------|--|-----------|---|
| ICNT8952 | LCD external touch chip, strong anti-interference and high cost effective | 26TX*14RX | ≤120Hz | I2C | 2.0"- 8.0" | GFF/GG/LCD On-Cell | QFN52 | Tablet, Security, Home appliance, Industrial control, Rear-mounted vehicle and other products |
| ICNT8962 | | 17TX*30RX 16TX*31RX 15TX*32RX | ≤120Hz | I2C | 4.5"- 6.5" | GFF/GG/LCD On-Cell | QFN58 | Mobile phones |
| ICNT8918 | OLED wearable touch chip with high signal-to-noise ratio, low power consumption and flexible channel configuration | 8TX*8RX 7TX*9RX 6TX*10RX 5TX*11RX 4TX*12RX | ≤120Hz | I2C | ≤2.2" | Add-on Rigid OLED On-Cell Flexible OLED AP1S | WLCSP | Wearable devices |
| ICNT9268 | OLED mobile touch chip with high reporting rate and full functionality | 21TX*42RX | ≤480Hz | I2C/I3C/SPI | 5.0"- 7.8" | Foldable Panel Flexible OLED Y-Octa Flexible OLED AP1S Rigid OLED On-Cell | BGA | Flexible screen phones, Folding phone products |

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Products



OLED display driver chip Solutions

- OLED Mobile Phone Display Driver Chips
- OLED Wearable Display Driver Chips

OLED Mobile Phone Display Driver Chips

| Name | Product Introduction | Resolution | Refresh rate | LTPO/LTPS | RAM | Interface | Packaging |
|-----------|--|-------------------------------------|--------------|-----------|------------|-------------------|-----------|
| ICNA3512 | Supports high refresh, low power, cascade, CUP Delivered in volume production | 1280*2800 (FHD+) | FHD+ @144Hz | LTPO/LTPS | Dual RAM | MIPI-C phy/-D phy | COP |
| ICNA3511A | High refresh OLED mobile phone display driver chip | 1280*2560/ 1200*2800 (FHD+) | FHD+ @120Hz | LTPS | Dual RAM | MIPI-C phy/-D phy | COP |
| ICNA3520 | High refresh, low power consumption, cascade, CUP | 1284*2800 (FHD+) | FHD+ @144Hz | LTPO/LTPS | Dual RAM | MIPI-C phy/-D phy | COP |
| ICNA3508A | High refresh and small size | 1080*2520 (FHD+) 1280*2800(FHD+) | FHD+ @144Hz | LTPS | Single RAM | MIPI-D phy | COP |
| ICNA3508 | | 1080*2520 (FHD+) | FHD+ @144Hz | LTPS | Single RAM | MIPI-D phy | COP |

OLED Wearable Display Driver Chips

| Name | Product Introduction | Resolution | Refresh rate | Features | Interface | Packaging | Application terminals |
|----------|--|-------------|---------------------|----------------------------|----------------------------|-----------|-----------------------------------|
| ICNA3310 | OLED wearable watch/smart band display driver chip | 480RGB*480 | 1~60Hz, step1Hz | Round/Notch, SCC | MIPI-D phy SPI/QSPI/MCU | COF | Watch wearable devices |
| ICNA3311 | | 480RGB*480 | 1~60Hz, step1Hz | Round/Notch, SCC, CGM, PCD | MIPI-D phy SPI/QSPI/MCU | COF | Watch wearable devices |
| ICNA3306 | OLED wearable smart band display driver chip | 240RGB*360 | 1~60Hz, step1Hz | Round/Notch, SCC, CGM, PCD | MIPI-D phy SPI/QSPI/MCU | COG/COF | Wristband wearables |
| ICNA3320 | OLED High-end TDDI wearable display driver chip | 480RGB*480+ | 0.1~60Hz, step0.1Hz | LTPO/LTPS, Smart AOD | MIPI-D phy SPI/QSPI/MCU | COP/COF | Smart Home Watch wearable devices |
| ICNA3312 | OLED High-end wearable display driver chip | 480RGB*480+ | 0.1~60Hz, step0.1Hz | LTPO/LTPS, Smart AOD | MIPI-D phy SPI/QSPI/MCU | COP/COF | Smart Home Watch wearable devices |

Products



Power Management Chip Solutions

- PMIC Product
 - LCD PMIC Product
 - OLED PMIC Product
- P-Gamma / DVCOM Product
- Level Shifter Product
- OP Product

PMIC LCD PMIC Product Range

| Name | Product Introduction | Input voltage range | AVDD output voltage range | Number of DVDD channels | HAVDD architecture | VGH/VGL architecture | Number of VCOM channels | Number of Gamma channels | Level shifter | Packaging | Application terminals |
|-----------|---|---------------------|---------------------------|-------------------------|--------------------|--|-------------------------|--------------------------|---------------|-----------------|-----------------------|
| iML8209 | LCD Mobile Bias PMU | 2.5-4.8V | ±4.5-6V | NA | NA | NA | NA | NA | NA | DFN12-2.4x1.5 | LCD Mobile |
| ICN68116 | LCD Tablet Bias PMU | 2.7-5.5V | ±4-6.5V | NA | NA | NA | NA | NA | NA | WCSP | LCD Tablet |
| iML7525 | | 2.7-5.5V | ±4-6.5V | NA | NA | NA | NA | NA | NA | DFN12-3x3 | |
| iML8875 | LCD NB/Tablet Bias PMU | 2.5-5.5V | 4.5-11V | 1CH | OP | NA | 1CH | NA | NA | TQFN20-4x4 | LCD NB/Tablet |
| iML8882 | | 2.5-5.5V | ±4-6.5V | 2CH | NA | CP/CP | 1CH | NA | NA | WQFN28-3.5x5.5 | |
| iML8884 | | 2.5-5.5V | 7-13.5V | 3CH | OP | Bridge | 1CH | 2CH | NA | FCQFN28-3.5x3.5 | |
| iML8999 | LCD NB/Tablet Bias PMU 2in1 PMIC+P-Gamma | 2.5-5.5V | 7-13.5V | 3CH | OP | Boost/CP | 1CH | 2CH | NA | FCQFN28-3.5x3.5 | LCD NB/Tablet |
| iML8997 | LCD NB/Tablet Bias PMU 3in1 PMIC+P-Gamma+ Level Shifter | 2.8-6V | 7.5-11.5V | 3CH | OP | Bridge | 1CH | 2CH | 8CH | QFN42-3.5x9 | LCD NB/Tablet |
| iML8940 | LCD TV/MNT Bias PMU | 8-14V | 13.5-18.4V | 2CH | Buck | CP/CP | NA | NA | NA | TQFN40-6x6 | LCD TV/MNT |
| iML8943 | | 9-14V | 13.69-19.02V | 2CH | OP | VGH: Boost/CP VGL: Inverting/CP | NA | NA | NA | VQFN40-5x5 | |
| iML8973B | LCD TV/MNT Bias PMU 2in1 PMIC+P-Gamma | 8-18V | 13.5-19.8V | 1CH | Buck | CP/CP | 1CH | 10CH | NA | TQFN40-5x5 | LCD TV/MNT |
| iML8982A | | 8.6-14.7V | 11-18V | 3CH | Buck | Boost/Inverting | 1CH | 4CH | NA | WQFN52-6x6 | |
| iML8974A | | 8.6-14.7V | 13.5-19.8V | 3CH | Buck | Boost/Inverting | 1CH | 4CH | NA | WQFN52-6x6 | |
| iML8947 | | 8.6-14.7/ 4.3-6V | 13.5-19.8V | 1CH | Buck | VGH: Boost/CP VGL: Inverting/CP | 2CH | 14CH | NA | QFN4.5*6.5 | |
| iML8978 | LCD TV/MNT Bias PMU 3in1 PMIC+P-Gamma+ Level Shifter | 8-14.7V | 11-19.2V | 3CH | Buck | CP/CP | 3CH | 14CH | NA | VQFN56-7x7 | LCD TV/MNT |
| iML1946/A | | 8-18V | 13-19.2V | 3CH | Buck | Boost/Inverting | 3CH | 19CH | 12CH | QFN82-12x8 | |
| iML1976A | | 8-14.7V | 13-19.2V | 3CH | Buck | CP/CP | 3CH | 14CH | 12CH | VQFN72-8x8 | |
| iML8948 | | 8-18V | 13-19.2V | 3CH | Buck | Boost/Inverting | 3CH | 14CH | 19CH | QFN82-12x8 | |

PMIC OLED PMIC Product Range

| Name | Product Introduction | Application terminals | Input voltage range | ELVDD output voltage range | ELVSS output voltage range | Maximum load carrying capacity | AVDD output voltage range | AVDD load carrying capacity | VINT output voltage range | VINT load carrying capacity | Packaging |
|---------|----------------------|-----------------------|---------------------|----------------------------|----------------------------|--|---------------------------|-----------------------------|---------------------------|-----------------------------|---------------|
| iML7522 | AMOLED PMU | Wearable | 2.9-5.5V | 2.8-5.3V | -0.6--5V | 80mA | NA | NA | NA | NA | WLCSP-16 |
| iML7524 | | Mobile | 2.9-5V | 4.6V | -1.4--6V | 600mA | 6.9-7.9V | 150mA | NA | NA | WLCSP-25 |
| iML7526 | | Mobile | 2.9-5V | 4.6-5V | -1.4--6V | 650mA | 5.5-7.9V | 150mA | NA | NA | WLCSP-36 |
| iML7531 | | Mobile/Tablet | 2.9-4.6V | 4.6-5V | -1.4--6V | 1000mA | 5.5-7.9V | 100mA | NA | NA | WQFN32-4x4 |
| iML7533 | | NB | 6V/8-21V | 4-5.5V | -2--6V | 2000mA | 5.5-7.6V | 300mA | -2--6V | 50mA | QFN40-3.5x6.5 |
| iML7537 | | NB | 6V/8-21V | 2.4-5.4V | -6--12V | 2000mA@ ELVSS=-6V; 1000mA@ ELVSS=-12V | 5.5-7.6V | 300mA | -2--6V | 50mA | QFN40-3.5x6.5 |

P-Gamma/DVCOM Product Range

| Name | Product Introduction | AVDD working range | DVDD Working range | Number of Gamma channels | Gamma load carrying capacity | Number of VCOM channels | VCOM load carrying capacity | Communication protocols | Packaging | Application terminals |
|----------|---------------------------------------|--------------------|--------------------|--------------------------|------------------------------|-------------------------|-----------------------------|-------------------------|------------|-----------------------|
| iML7924C | 14CH 10Bit P-Gamma 1CH 7Bit P-VCOM | 6.5-18V | 2.9-3.6V | 14CH | 75mA | 1CH | 140mA | I2C | TQFN24-4x4 | LCD NB/MNT/TV |
| iML7942 | 4CH 10Bit P-Gamma 1CH 10Bit P-VCOM | 9-20V | 2.7-3.6V | 4CH | NA | 1CH | NA | I2C | TQFN20-4x4 | LCD NB/MNT/TV |
| iML7972B | 7Bit 1CH P-VCOM | 6-18V | 2.6-3.6V | NA | NA | 1CH | 250mA | I2C | DFN8-3x3 | LCD NB/MNT/TV |

Level Shifter Product Range

| Name | Product Introduction | VGH/VGL working range | DVDD working range | Clock Phase | Charge sharing | OCP | Rising Slew Rate | Falling Slew Rate | Communication protocols | Packaging |
|------------|--|-----------------------|--------------------|-------------|----------------|------------|------------------|-------------------|-------------------------|-----------|
| iML7263 | 14CH High voltage Level Shifter output | -20-35V | NA | 8Phase | supporting | supporting | 50V/us | 50V/us | NA | QFN28-4x4 |
| iML7264 | 8CH High voltage Level Shifter output | -15-40V | NA | 4Phase | supporting | supporting | 95V/us | 95V/us | NA | QFN24-3x3 |
| iML7278 | 13CH High voltage Level Shifter output | -15-40V | 2.6-5.5V | 8Phase | NA | supporting | 60V/us | 1000V/us | NA | QFN32-4x4 |
| iML7282 | 14CH High voltage Level Shifter output | -20-45V | 2.6-5.5V | 8Phase | supporting | supporting | 1000V/us | 60V/us | I2C | QFN32-4x4 |
| iML7272A/B | 16CH High voltage Level Shifter output | -18-40V | 2.6-5.5V | 10Phase | NA | supporting | | 1000V/us | I2C | QFN32-4x4 |

OP Product Range

| Name | Product Introduction | AVDD voltage range | Number of channels | Peak drive current | Static current / Per CH | Slew Rate | BW | ESD-HBM | Packaging |
|----------|---------------------------------------|--------------------|--------------------|--------------------|-------------------------|-----------|-------|---------|-----------|
| iML7811 | Single channel operational amplifiers | 5-20V | 1CH | 320mA | 1.5mA | 20V/us | 40MHz | 2KV | TDFN/MSOP |
| iML2211 | | 5-20V | 1CH | 2000mA | 5mA | 40V/us | 35MHz | 4KV | TDFN/MSOP |
| iML2122 | Dual channel operational amplifiers | 5-20V | 2CH | 600mA | 1.2mA | 50V/us | 30MHz | 2KV | TDFN/MSOP |
| iML2228 | | 4.5-19V | 4CH | 1300mA | 3mA | 45V/us | 35MHz | 4KV | TDFN/MSOP |
| iML2240 | Four channel operational amplifiers | 4.5-20V | 4CH | 600mA | 1.6mA | 30V/us | 35MHz | 4KV | TSSOP13 |
| iML2240B | | 4.5-20V | 4CH | 1000mA | 3mA | | | | TSSOP14 |
| iML2242 | | 4.5-20V | 4CH | 1300mA | 3mA | 45V/us | 35MHz | 4KV | TSSOP14 |

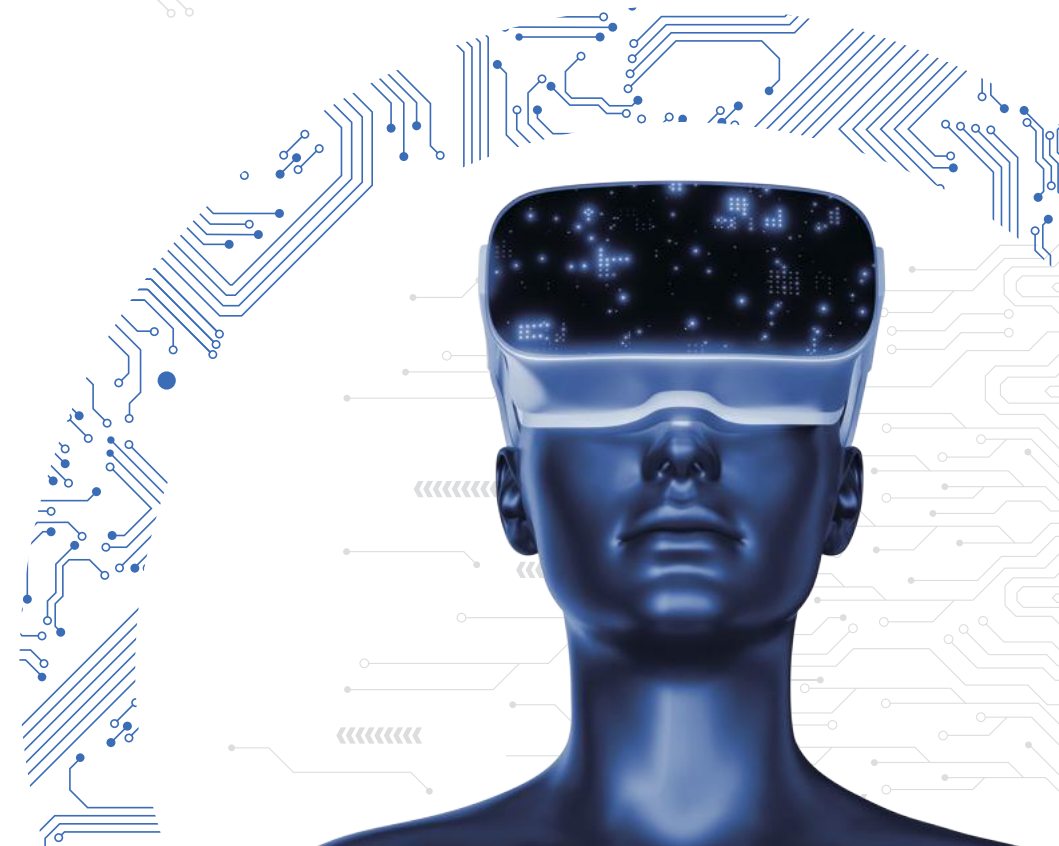
Products



Si-based OLED display chips Solutions

- Micro OLED (ADT)

| Name | Product Introduction | Micro OLED (ADT) | | | | | | |
|----------|----------------------------|--------------------|------------|-------|----------------|--------------------|--------------------|-----------------|
| | | Zone AA dimensions | Resolution | PPI | Interface | Maximum frame rate | Maximum brightness | Maximum voltage |
| ICNU1210 | 0.5inch 1600RGB x 1200 | 0.5 inch | 1600x1200 | 4,032 | MIPI DPHY | 120Hz | 3,000nit | 8V |
| ICNU1510 | 1.3inch 3552RGB x 3840 | 1.3 inch | 3552x3840 | 4,032 | MIPI DPHY+CPHY | 90Hz | 5,000nit | 8V |
| ICNU1218 | 0.49inch 1600RGB x 1200 | 0.49 inch | 1600x1200 | 4,032 | MIPI DPHY | 120Hz | 3,000nit | 8V |
| ICNU1221 | 0.49inch 1920RGB x 1080 | 0.49 inch | 1920x1200 | 4,536 | MIPI DPHY | 120Hz | 3,000nit | 8V |



Products

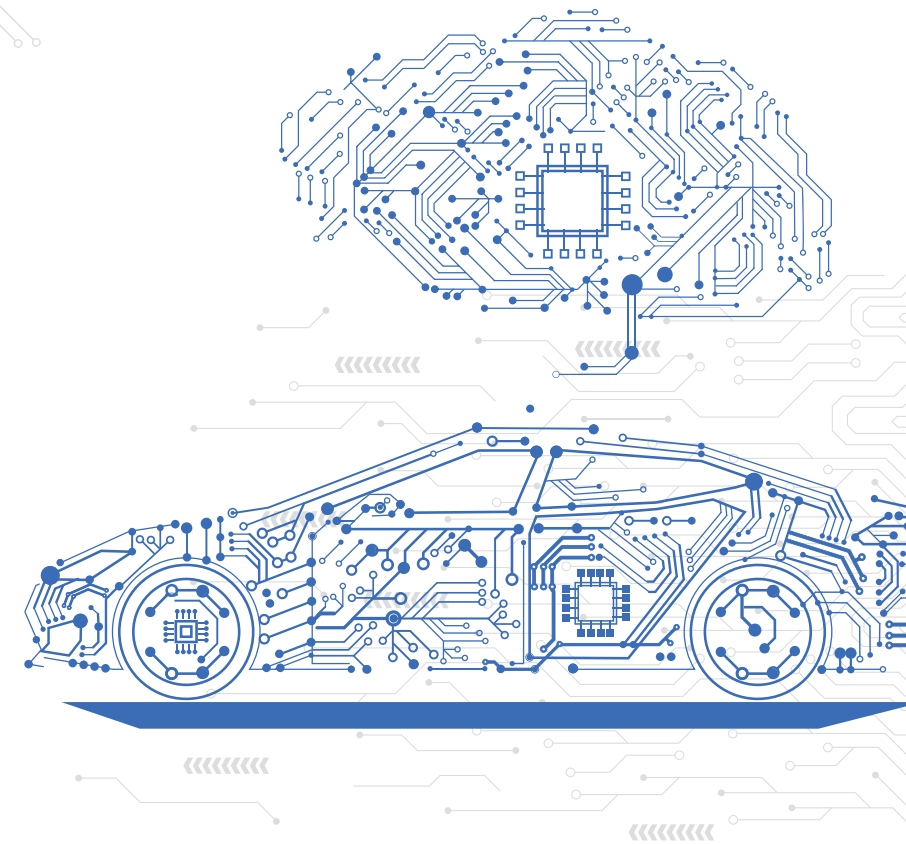


Automotive Display Solution

| Name | Introductions | Application | Features | Interfaces | Resolution |
|-----------|--|--|---|--|---|
| ICNM7801Q | Automotive bridge chip with local dimming dynamic dimming algorithm and OSD menu | Central control screen Dashboard screen | The first domestic automotive bridge chip, self-developed local dimming algorithm | / | 8K1K, two cascades can support 16K1K |
| ICNL9971 | Automotive TDDI | Central control screen Dashboard screen | Domestic TDDI driver chips | Support A-Si/LTPS/IGZO LCD 3 chips cascade, LVDS interface TDDI chip AEC-Q100 Grade2 | / |
| IML9880 | Automotive PMIC | LCD screen power | High efficiency high load and high voltage specifications | support positive and negative voltage 15V high conversion efficiency and is used in LCD display Pass AEC-Q100 Grade2 | / |
| ICND7001 | Automotive LED driver | LED direct display and miniLED backlight driver chip | Domestic LED driver chips | Support 48 channel output used in headlights, flowing lights taillights and other applications 16bit dimming Pass AEC-Q100 | / |

Automotive chip

- Automotive Mini LED Backlight Driver Chip
- Automotive Mini LED Direct Display Driver Chip
- Automotive PMIC Power Management Chip
- Automotive TDDI display touch chip
- Automotive protocol conversion chips



Products



SOC

- SOC
- Timing control chip
- JLogic AI-SoC

| SOC | | | | | | | | | |
|----------|---------------------------------|--|---|---|-------|-----------|----|---|-----------------|
| Name | Introduction | Application | Features | Interfaces | HDR | Converter | OD | Refreshrate | Resolution |
| ICNM8001 | Monitor scaler IC for QHD panel | Desktop monitor/ Portable monitor/ Industrial monitor Adapter | multi high-speed interfaces | input: HDMI 2.0/DP 1.4/ Audio output: LVDS eDP 1.4 | HDR10 | √ | √ | 75Hz | QHD (2560*1440) |
| ICNM8501 | Monitor scaler IC for 4K panel | Desktop monitor/ Portable monitor/ Industrial monitor Adapter | multi high-speed interfaces | input: HDMI 2.0/DP 1.4/ Audio output: LVDS eDP 1.4 | HDR10 | √ | √ | 3840*2160 @60Hz 1920*1080 @144~240Hz | 4K (3840*2160) |
| ICNM7401 | Monitor scaler IC for FHD panel | Desktop monitor/ Portable monitor/ Industrial monitor Adapter | multi high-speed interfaces | input: HDMI 1.4/DP1.2/VGA output: LVDS | HDR10 | √ | √ | 100Hz | FHD (1920*1200) |
| ICNM7301 | Converter IC HDMI to VGA | Adapter Cable | Video transfer/ Small area/ Low consumption | input: HDMI 1.4 output: VGA | / | / | / | 60Hz | FHD (1920*1200) |

| Timing control chip | | | | | | |
|---------------------|------------|-------------|-------------|-----------|----------------------------------|--------------|
| Name | Resolution | Refreshrate | Color depth | Packaging | Interfaces | Screen Types |
| ICNC65 | 1366*768 | 60Hz | 6/8bit | QFN48 | input: LVDS output: mini-LVDS | TV |
| ICNC66 | 1920*1200 | 100Hz | 6/8bit | QFN68 | input: LVDS output: mini-LVDS | TV |
| ICNC81 | 1920*1200 | 100Hz | 6/8bit | TQFP64 | input: LVDS output: mini-LVDS | MNT |

| JLogic AI-SoC | | | | | | |
|---------------|---|------------------------|--|--|---|--|
| Name | Production | Resolution | Field | Internal operational unit | HD video interfaces | AI algorithms |
| JLV2600 | new generation of AI-PQ image quality enhancement processor | 4K @144Hz 8K @ 60Hz | Smart display, machine vision, medical imaging equipment, edge computing, large-screen control, vehicle CMS, etc | Image Computing Unit: 1) Six-core NNE engine, 32T 2) Dual-core DSP engine 3) Video codec: H.264/H.265, 4K120fps | Video Input Interface: 1) MIPI_CSI 1~4 channels, 4K60Hz maximum 2) Dual DP1.4/eDP, 4K144/8K60Hz maximum 3) VBO-like interface, 16Lane, 4K144Hz maximum | 1) AI-PQ image quality enhancement: AI-ISP, infinite scaling, Local Dimming, HDR, etc 2) AI detection and recognition: medical auxiliary diagnosis, defect detection, etc |

Development History

