

WILLAS-ARRAY™

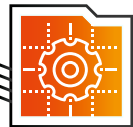
Willas-Array Electronics (Holdings) Limited

威雅利電子(集團)有限公司

OCT ISSUE



公司简介
Company Brochure



业务扩展 掌握先机 Business Expansion to Asia-Pacific Region

威雅利电子(集团)有限公司成立于1981年,40年来集团紧贴全球市场发展趋势,透过公司内部团结一致,以及与合作伙伴的紧密合作,业务由香港迅速发展至整个大中华地区,并以这些地区为核心再将业务扩展至全亚洲,与世界各地多家享负盛名的供应商建立了紧密而长远的合作关系,在电子元器件经销领域屹立于领导地位。

Founded in 1981, Willas-Array Electronics (Holdings) Limited has developed as one of the industry leaders of electronic components distribution in Hong Kong. The Group has always been keeping up with the market needs and trends throughout the last 40 years. By further combining the factors of dedicated staff-force with the close cooperation with business partners, Willas-Array demonstrated an extensive and rapid growth from Hong Kong to the Greater China area. The Group further expanded its core to the Asia-Pacific region, and established long term partnerships with reputable world-wide suppliers.



内外并进 携手创新 Developing Insightful Design and Solution

集团对内部管理及外部发展均十分重视。除了提高员工效率及竞争力,并以创新、精益求精为共同目标,完善内部系统及工作流程,以提高各部门的效率,增强整体的竞争力,将服务更为优化,不但提供了多元化的电子元器件,同时开拓了最全面可靠的参考方案,以最佳的成本效益,满足客户、供应商和雇员的需求,成为供应商及客户信赖的伙伴。

因此,今年集团继续走在市场尖端,与合作伙伴及客户携手一同与时俱进,开拓创新的设计意念,提供高性价比的参考设计,将客户的需求迅速转换成产品,以强化客户在市场上的优势,共同实现企业及客户双赢的局面。

Willas-Array values internal enhancement as much as the external development. With the strong desire to strengthen the Group's creativity and productivity, Willas-Array is constantly improving the internal operation procedures, resulting in enhanced and extensive competitiveness and performance. On top of the comprehensive range of electronic components that Willas-Array offers, the Group creates reference solutions with optimal cost in order to suffice the customers, suppliers and staff.

Willas-Array continues to lead the market in the year of 2023. By developing insightful strategies with partners and customers, we convert customer needs into turn-key products via value added design and reference solution. Willas-Array will together with the customers, strive stronger superiority in the market.



威雅利电子(集团)有限公司于2001年在新加坡交易所主板成功上市(SGX股份代号:BDR),并于2013年在香港交易所主板上市(SEHK股份代号:854)。

Willas-Array Electronics (Holdings) Limited was listed on Main Board of the Singapore Exchange (SGX stock code: BDR) in 2001, then further listed on Main Board of the Stock Exchange of Hong Kong (stock code: 854) in year 2013.

Business Scope 业务范围



多元化的代理产品 Wide Range of Products

现今电子产业的发展日新月异，标准要求也越来越高，而每位客户对于技术要求也不尽相同。集团提供多元化的产品线，满足各行各业所需，包括汽车电子、信息娱乐、物联网应用、电机驱动、开关电源及智能照明等等应有尽有。发掘高性价比的参考设计，让客户拥有灵活多变的选择，以强大的适应性配合市场，率先占领行业先机。

The Group offers a massive range of product to facilitate customers to deal with nowadays dynamic business environment. That includes: Automotive, Infotainment, Internet of Things, Motor Control, SMPS and Smart LED etc. The product portfolio provides good base for high value design and solution for customer to be agile enough to meet with their business needs.

专业的参考方案 Reference Solutions

作为行业的领导者，除了密切留意市场最新动向，为不同的客户提供高端的电子元器件之外，集团高质素的工程师队伍一直努力不懈地开拓崭新的参考方案，提升产品应用技术，力求在短期内完成研发并满足不同客户的技术要求，缩短客户研发周期，大大加快推出市场的时间，强化客户在市场的竞争力。

As one of the industry leaders, Willas-Array does more than just distribute electronic components. The Group assists customers to sustain their competitive advantages by offering reference solutions, and integrating concept into application in short period of lead time. The swift solutions help customer to save previous time on development stage, and accelerate their go-to-market plan in the most agile and flexible fashion.



优越的增值服务 Value-Added Services

我们深信优越服务至为重要，并竭力为客户提供增值服务。为进一步提升集团的营运效率，利用企业管理整合系统，再配合资讯科技部门不断改良，提升供应链管理、存货、销售和风险管理的运作；加上专业后勤及物流人员的配合，确保我们在现今激烈竞争的环境下，集团仍能一贯地为客户提供快捷准时的送货服务。

At Willas-Array, we believe service excellence is of utmost importance. We strive to deliver premium value-added services to customers. To further enhance the Group's operational efficiency, we have adopted a set of well-known ERP system. By refining the ERP to better suit our business environment, Willas-Array implemented a premium platform of Supply Chain Management, Inventory Management, and Sales & Operation Management. Together with professional logistics staff as the driver of the system, the Group ensures quick turnaround and swift delivery for the customers.



业务架构 Business Structure

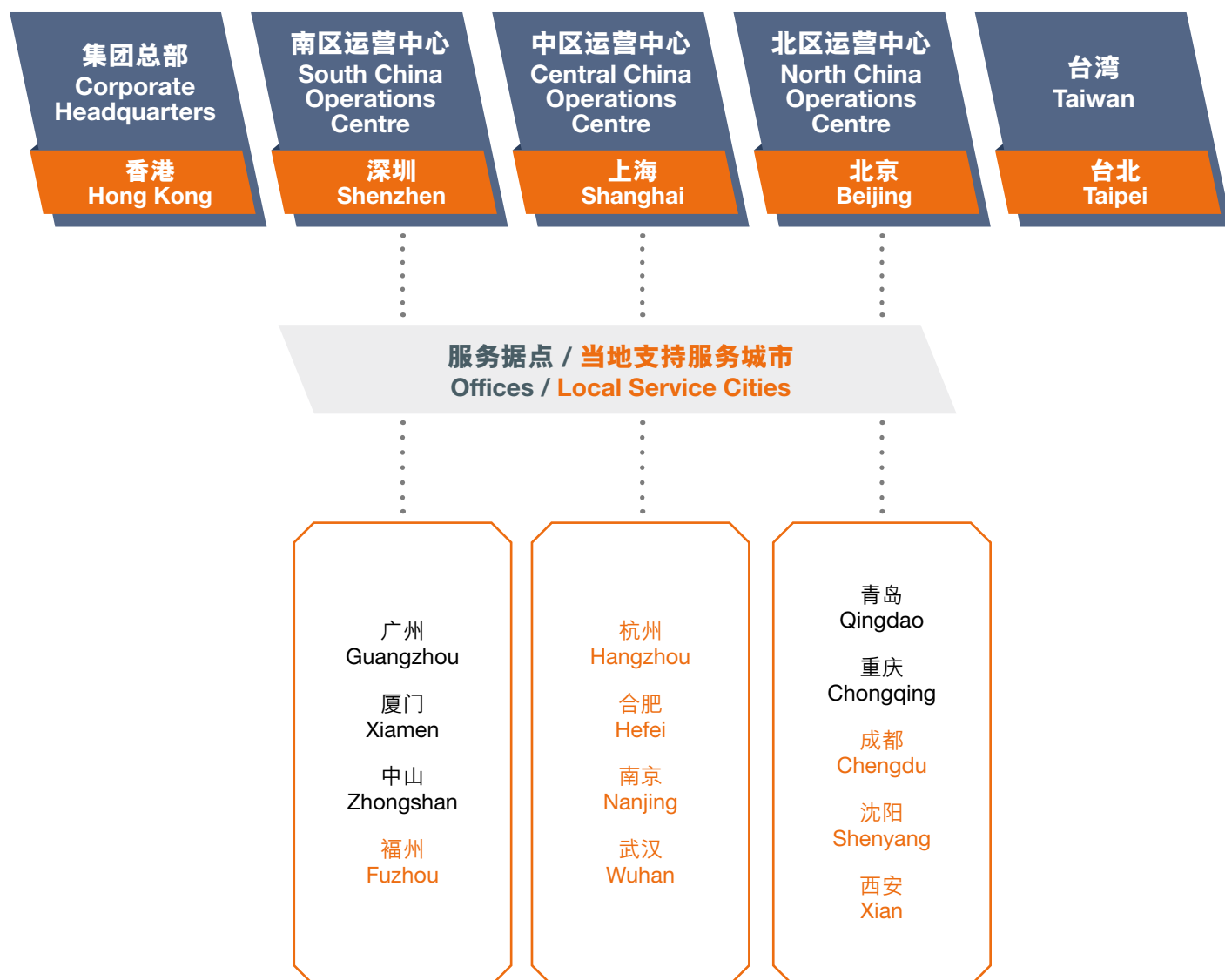
WILLAS-ARRAY™

Willas-Array Electronics (Holdings) Limited

威雅利電子(集團)有限公司

抱负 Our Vision

创新潜能拓展未来 • 瞻望中华掌握先机
Convert Tomorrow's Innovation into Today's Opportunity





供应商 Manufacturers

威雅利电子(集团)有限公司十分重视和珍惜与供应商之合作关系，我们把供应商视作最亲密的伙伴，与部分遍布欧美日的国际知名供应商更是合作超过三十载的岁月。这密切的关系有助我们针对客户的不同成本及功能需求提供稳定、充裕及多元化的货源，灵活多变的选择帮助客户赢得市场份额，同时令集团在市场上的领导地位得以更加牢固。

Willas-Array Electronics (Holdings) Limited is well-positioned as a premier distributor for reasons including the strong bond and relationship with every valuable partner. With more than three decades of business partnership with some of the most reputable international principals, the close ties between Willas-Array and manufacturers ensure a reliable and comprehensive supply of world-class quality lines.



客户 Customers

威雅利电子(集团)有限公司的客户来自不同的行业，通过互相信赖、体谅和承诺，与客户建立了长远、稳固且可贵的伙伴关系，并得到他们的信赖。我们以客户的最佳利益为依托，同时这也是威雅利不断进步的动力，配合来自不同业界的客户，我们竭力研发，提供多元化产品及方案，满足他们所需，成为他们最佳的选择。

Willas-Array Electronics (Holdings) Limited serves a wide range of customers with focus of offering the best for customers' interest. Together with the trusts earned throughout the long term relationship with customers, Willas-Array develops and provides extensive solution and product portfolio for the best of her customers. The Group treats the success of customer as one of the key motivations for improvement.

使命 Our Mission

放眼亚洲 The Asia Vision

发挥集团在大中华地区的稳固基础和销售网路的优势，以庞大的规模 and 专业的服务，发掘与亚洲区各地的合作机会，立志成为亚太区首屈一指电子元器件经销商之一。

Leveraging on the solid core in the Greater China Area, Willas-Array continues to expand its blueprint in Asia Pacific, and becomes one of the top notch electronic components distributor within the region.



增强效率 Efficiency Advancement

内部系统及流程虽然已经成熟，但我们仍不断追求更卓越的竞争力，提高各部门效率，将人力及资源最优化，于短期内完成研发并满足不同客户的技术要求，巩固及提升集团在市场中的位置，从而拓展销售及市场业务。

To optimize all resources with constantly-improving logistics. Willas-Array strives to strengthen competitiveness and performance by advancing the efficiency inside out, leading to solidified positioning in market with an upside to further expand.



优化服务 Service Optimization

积极的力求创新及服务优化，透过上下一心的团队来提升公司价值，成为更多供应商与客户最值得信赖和合作的伙伴。

Actively look for improvement and optimization, and in parallel enhancing the Group value from top to bottom. As a result, Willas-Array becomes one of the most trusted and reliable partners of manufacturers and customers.

推动未来 Insightful Ideas

强大的技术部门始终与客户站在一起，从客户的角度出发，针对他们的成本及功能需求，致力将崭新的开发理念融入高增值的市场需求和预算当中，提高系统设计能效，为客户推动具成本效益的设计方案。

The highly skilled technical division bases on the needs of customer, integrates insightful ideas into optimal value-added execution. Bringing customers with high performance solutions alongside with better cost efficiency.

信赖伙伴

Trust

致力为供应商及客户建立信赖及承诺，搜罗更丰富的尖端产品供应，发掘更新更灵活的参考方案，共同面对市场上的种种挑战。

Building trust with manufacturers and customers by constantly sourcing and providing wider range of top notch innovative product and solutions. Such practice improves the agility of Willas-Array and partner to strive for more advanced position in the dynamic market.

以人为本

Human Orientation

集团拥有高素质及经验丰富的员工，既珍惜这些难能可贵人才，也鼓励前线员工坦诚开放和创新意念，在不断学习的过程中快速地成长和进步。

Always treasure the highly skilled and experienced staff as one of the most important assets. The Group encourages openness and creative thinking, promote rapid development in constant learning environment.

创造机会

Opportunities

视员工和客户为我们的内部和外部不可或缺的重要伙伴，除了主动预期及满足他们各项多变的需求外，并为他们提供全方位的资讯服务，给予优势、弹性和成功机会。

Willas-Array values employees as much as the customers. The Group continuously strive to fulfill their best interests by anticipating their wide range of needs and providing them with well-rounded information, flexibility and opportunities.

坚守承诺

Integrity

坚守对顾客、合作伙伴及员工的承诺，以开放和忠诚的态度作为经营之道。力求创新的同时，并重视优良的品质保证，不论是产品或参考方案，都为客户提供高于期望的优质产品，建立良好的品质及服务信誉。

Willas-Array stands firm on all commitments to customers, business partners and employees. With strong believe in credible, open and honest relationship, the Group respects the importance to both creativity and quality, always strives to provide better than what customer anticipated. Willas-Array believes this is the true way to develop long-term reputation in the market.

元器件品牌 Brands of Components



ABLIC Inc.

天线诊断 ICs、复合 ICs、便利型定时器、EDLC 保护 ICs、车载用电池保护 ICs、磁性传感器 IC (霍尔 IC) CMOS 运算放大器、实时时钟、串行 EEPROMs (SPI, I2C, Microwire)、电压检测器 (Reset ICs)、电压稳压器 (LDO)、看门狗定时器

Antenna Diagnosis ICs, Composite ICs, Convenience Timer, EDLC Protection ICs, Li-ion Battery Protection ICs, Magnetic Sensor ICs (Hall Effect ICs), Operational Amplifiers, Real-Time Clock ICs, Serial EEPROMs (SPI, I2C, Microwire), Voltage Detectors (Reset ICs), Voltage Regulators (LDO), Watchdog Timer



Allystar Technology Ltd.

单晶片 GNSS 解决方案
SOC GNSS Solution



Asahi Kasei Microdevices Corporation

模拟编码器芯片、音频数据转换器、音频数位信号处理器、自动对焦及光学影像驱动器、电流传感器、电子指南针 (罗盘)、霍尔 IC / 霍尔元件、红外线感应器

Analog Encoder Chip, Audio Data Converter, Audio DSP, Auto Focus and OIS Driver, Current Sensor, E-Compass, Hall IC & Hall Element, Infrared Sensors



BELDEN Incorporation

提供高附加值的定制化产品和服务，尤其应用汽车及工业机械人的电缆

Provides high value-added customized products and services, especially professional cables for automotive and industrial robots



Chemi-Con

铝电解电容器，导电性高分子回体铝电解电容器，导电性高分子混合型铝电解电容器，超级电容器，薄膜电容器，陶瓷压敏电阻器，纳米结晶合金 / 非晶 / 压粉扼流线圈

Aluminum Electrolytic Capacitors, Conductive Polymer Aluminum Solid Capacitors, Conductive Polymer Hybrid Aluminum Electrolytic Capacitors, Electric Double Layer Capacitors, Film Capacitors, Metal Oxide Varistors, Nanocrystalline/Amorphous/Dust Choke Coils



Dexerials

导方向性电胶膜、防反光膜、光学伸缩性合成树脂

Anisotropic Conductive Film (ACF), AR-Film, Optical Elasticity Resin (SVR)



eSOL Co Ltd.

实时操作系统、应用中间件、汽车软件、工厂自动化 / 机器人、工程服务、专业和咨询服务

Real-Time Operating Systems, Application Middleware, Automotive Software, Factory Automation / Robotic, Engineering Services, Professional Services & Consulting



FAITH LONG Crystal Technology Co., Ltd

石英晶体元器件

Quartz frequency timing crystal component



GPI International Ltd.

一次性电池：碱性、碳性、9V 电池；(CR、SR 及 LR 钮型电池) 充电电池：镍氢、锂离子、18650 充电电池

Primary Battery: Alkaline, Carbon Zinc, Lithium 9V Battery; (CR, SR & LR Coin Battery)

Rechargeable Battery: NiMH, Li-ion, 18650 Rechargeable Battery



IGNION, S.L.

SMT 芯片天线

SMT Antenna



Iriso Electronics Co Ltd.

板对板连接器、软板连接器、柔性扁平排线连接器、汽车电源介面

B to B Connector, FPC, FFC, Automotive Interface



Isahaya Electronics Corporation

DC-DC 直流变压器、IGBT 驱动器、多功能晶体管、小讯号电晶体管、小讯号 MOSFET

DC-DC Converter, IGBT Driver, Multi Function Transistors (MFT), Small Signal Transistor, Small Signal MOSFET



Micro Commercial Components Corporation (Taiwan)

二极管、晶体管、稳压器、MOSFETS、保护设备

Diodes, Transistors, Voltage Regulators, MOSFETS, Protection Devices



Murata Manufacturing Co Ltd.

电容器、电感器、降噪元件/ EMI 降噪滤波器、电阻器、时钟元件、声象机器及通信设备用滤波器、射频元件/ 模块、传感器、热敏电阻、电源、声音元件、微型机电产品陶瓷应用产品、负离子产生器、臭氧产生器、硬币型二氧化锰锂电池

Capacitors, Inductors (Coils), Noise Suppression Products/EMI Suppression Filters, Resistors, Timing Devices, Filters for Audio Visual & Communication Equipment, RF Components/Modules, Sensors, Thermistors, Power Supplies, Sound Components, Micromechatronics, Ceramic Applied Products, Ionissimo®, Ozone Generator, Coin Manganese Dioxide Lithium Batteries



Nisshinbo Micro Devices Inc.

运算放大器及比较器、音频及视频 IC、电源 IC、电动机 IC、通讯 IC、GaAs 开关及放大器、LED/LCD 驱动器、水晶振荡器 IC、光电半导体、脉搏及血氧反射式光电传感器、MEMS 麦克风放大器及传感器、电源管理与电池保护 IC

Operational Amplifiers & Comparators, Audio & Video IC, Power IC, Motor IC, Communication IC, GaAs Switches & LNA, LED Drivers, LCD Drivers, Quartz Crystal Oscillator IC, Optoelectronic Devices, Reflective Type Optical Sensor for Pulse Oximeter and Heart Beat Monitors, MEMS Microphone Amplifier and Transducer, PMIC and Battery Protection IC



Oike & Co Ltd.

功能性转印膜(金属转印膜及功能性转印膜)、金属箔粉(金属加饰膜及金属 Leaf Powder)

Metallic Molding Film (Step Film), Metallic Powder (LG Neo & Leaf Powder)

元器件品牌 Brands of Components



Pelion IoT Limited

融合 ARM 的安全加密连接技术，为物联网设备提供安全连接及云服务，实现不同设备的统一网络管理模式

Provides global connectivity for network device, security and the cloud service



Rectron Ltd.

桥式整流器、高效率二极管、肖特基二极管、整流二极管

Bridge Rectifier, High Efficiency Rectifier, Schottky Barrier Rectifier, Silicon Rectifier



Sanken Electric Co Ltd.

汽车驱动及电源 IC、IGBT、智能功率模块、马达控制 IC、功率快恢二极管、电源管理 IC、功率晶体管、碳化矽 (SiC) 肖特基二极管、TVS 二极管

Automotive Driver ICs, IGBTs, IPMs, Motor Control ICs, Power FRD, Power Management ICs, Power Transistors, SiC Schottky Diodes, TVS Diode



SCHOTT Japan Corporation

汽车、压缩机密封端子、频率控制、大型密封馈通件、光通信、特殊玻璃和温度保险丝

Automotive, Compressor Seals, Frequency Control, Large-Scale Feedthroughs, Opto-Electronics, Specialty Glass, Thermal Cutoffs



SIMCom Wireless Solutions Ltd.

5G 模块、LPWA 模块、4G 模块、LTE-A 模块、智能模组、车规级模组、3G 模块、2G 模块、GNSS 模组、Wi-Fi 模块

5G Module, LPWA Module, 4G Module, LTE-A Module, Smart Modules, Automotive Modules, 3G Module, 2G Module, GNSS Modules, Wi-Fi Module



SMK Corporation

车载电子、连接器、插头插座、手机配件、遥控器、端子、触控面板、开关

Automotive Electronics, Connectors, Jacks, Telecom, Remote Controls, Terminals, Touch Panels, Switches



Sony Corporation of Hong Kong Ltd.

CMOS 图像感应器

CMOS Sensor



STMicroelectronics

交流 - 直流转换器、直流 - 直流转换器、AM/FM 调谐 IC、音频功率放大器、音效处理器、双极电晶体、汽车音响和汽车专用 IC、低功耗蓝牙 (BLE) 晶片、CD 伺服器、电子抹除式可复写唯读记忆体、静电保护器、卫星定位导航处理器、家用音响、绝缘栅双极电晶体、智慧功率模组、照明控制 IC (电子镇流器、节能灯、LED)、微机电系统传感器、微机电麦克风、微处理器及嵌入式微处理器、金属半场效晶体管、马达控制 IC 和 IGBT / 驱动器、近场通信 / 射频识别、运算放大器、汽车等级 32 位微处理器、整流器、传感器、碳化矽 (SiC) 场效应晶体管、双向可控矽、高侧功率驱动晶片、稳压器、无线充电 SoC

AC-DC, DC-DC, AM/FM Tuner IC, Audio Power Amplifier, Audio Processor, Bipolar, Car Audio and Automotive ICs, Bluetooth (BLE) IC, CD Servo IC, EEPROM, ESD Protection, GPS Processor, Home Audio, IGBT, IPM, Lighting ICs (Ballast, CFL, LED), MEMS, MEMS Microphone, Microcontrollers and Embedded Microprocessors, MOSFET, Motor Control IC and IGBT/Driver, NFC/RFID Operational Amplifier, Power PC MCU, Rectifier, Sensors, Silicon Carbide (SiC) MOSFET, Triac VIPOWER, Voltage Regulator, Wireless Charging SoC



Stanley Electric Co Ltd.

LED 器件、光敏晶体管、红外发光二极管、反射传感器、液晶显示模组
LED Device, Photo Transistor, IRED, Reflector Sensor, LCD Module



Susumu Co Ltd.

薄膜片式高精度电阻器、电流检测用片式低电阻器、功率电感、高频衰减器
Thinfilm Surface Mount High Precision Resistor, Current Sensing Surface Mount Resistors, Power Choke Coils, High Frequency Surface Mount Components



Tamura Corporation of China Ltd.

电流传感器、IGBT/SiC/MOSFET 驱动器模组、电源模块
Current Sensor, IGBT/SiC/MOSFET Driver Module, Power Supply Module



TOMOHO Technology Ltd.

警报器、探测器、温湿度传感器、传感器
Alarm, Detector, Temperature and Humidity Sensors, Sensor



Torex Semiconductor Ltd.

电池充电 IC、电荷泵、DC/DC 转换器、二极管、负载开关、MOSFETs、振荡器 IC、PLL 时钟产生器、温度传感器、电压检测器、电压调整器
Battery Charge IC, Charge Pump, DC/DC Converters, Diodes, Load Switches, MOSFETs, Oscillator IC, PLL Clock Generator, Temperature Sensor, Voltage Detectors, Voltage Regulators



Wuxi Sencoch Semiconductor Co.,Ltd

压力传感器、压力变送器、流量传感器、气体传感器、红外传感器、转速传感器、电流传感器、智能物联终端设备及解决方案
Pressure Sensor, Pressure Transmitter, Flow Sensor, Gas Sensor, Infrared Sensor, Rotational Speed Sensor, Current Sensor, IoT Device and Solution



汽车电子 / 信息娱乐方案 Automotive / Infotainment Solution

BMS 系统 BMS System



方案特色 Features

- E9963/L9963高精度 AFE 提供精准电芯电压采集
E9963/L9963 high precision AFE provides precise cell voltage
- SPC58高性能 MCU 提供强大运算能力
SPC58 high performance MCU provides powerful computing power
- VIPower 智能 MOS 提供可靠负载驱动能力
VIPower intelligent MOS provides reliable load driving capability



应用范围 Target Applications

- 新能源汽车
EV-CAR

车门域控制系统 Door Zone Control



方案特色 Features

- 高集成度，包括开关和控制单元都布置在车门内部，车门之间通过总线进行通信，有效降低产品的总体成本
Highly integrated and cost reductions in electronic components
- 集成 Fail safe 模式以及热保护功能
Integrated fail safe mode. Thermal shutdown protection
- 集成可编程 soft-start 功能，有效的限制了冲击电流对负载的影响
Programmable soft-start function to drive loads with higher inrush currents as current
- 自动恢复功能与 VBAT 强制 standby 功能，使产品更加智能
Forced VBAT standby and auto recovery



应用范围 Target Applications

- 乘用车
Passenger vehicle

新能源矢量冷凝风扇 FOC Cooling Fan for New EV



方案特色 Features

- 高性能 SPC560P 系列 MCU
High-performance MCU SPC560P series
- 智慧型具有故障诊断系统的半桥驱动 L9907/8
Intelligent half-bridge driver L9907/8 with full diagnostic
- 低损耗的 MOSFET
MOSFET with very low Rds-on



应用范围 Target Applications

- 新能源车动力电池散热
E-car power battery heat dissipation
- 驱动电机电控散热
E-car motor driver heat dissipation
- 汽车空调系统散热
Automotive air conditioning system

无刷变频水泵 BLDC Water Pump



方案特色 Features

- 8位车规级 MCU，成本低
8-bit MCU with low cost
- 具有 BEMF 检测和硬体保护功能的半桥驱动 L99ASC03
The half-bridge driver L99ASC03 with BEMF detection and hardware protection
- 体积小，低损耗 MOSFET
The MOSFET with small size and low Rds-on



应用范围 Target Applications

- 车用小型直流无刷风扇，水泵，油泵控制
For automotive application, such as small BLDC fan, water pump and oil pump

CMOS 镜头 CMOS Sensor Camera

方案特色 Features

ISX021

- 250万像素，1/2.31"，3um，背照式，单芯片
2.5M, 1/2.31", 3um, BI, SoC
- 高动态范围 120dB (@60fps)
High Dynamic Range 120dB (@60fps)
- 出色的低感光度
Excellent Low Light Sensitivity
- 超级对比度/分辨率提高可见度
Super Contrast/Resolution Improve visibility
- 低功耗 650mW (Typ)
Low Power Consumption 650mW (Typ)
- 符合 AEC-Q100 2级标准
Qualification AEC-Q100 Grade 2

应用范围 Target Applications

- 360环视
360 surround view
- 流媒体后视镜
Streaming rearview mirror
- 盲点监视
Blind spot surveillance
- 车内监视
Interior surveillance
- 行车记录仪
Driving recorder

数字收音机 + 音效 + 功放 Digital Car Tuner + DSP + AMP

方案特色 Features

AKM AK7765 是一款高性能、低成本的DSP，适用于带Radio、音频处理包括ADC和DAC的汽车娱乐系统应用。

AKM AK7765 is a high-performance, low-cost DSP for automotive infotainment system applications with Radio, audio processing including ADCs and DACs.

应用范围 Target Applications

- 汽车导航系统
Car navigation systems
- 汽车音响
Car audio
- 汽车相关的音频系统
Car-related audio systems



电机驱动方案 Motor Control Solution

工业控制 / 人机界面 Industrial Control / HMI

方案特色 Features

- 板载芯讯通4核64位ARM Cortex-A53处理器的SIM8500智能蜂窝模组，Android 10系统，内置Mali T820 MPI GPU，支持高清摄像头和电容触摸屏，适用快速开发与多媒体，无线通讯相关应用和产品
The SIM8500 smart cellular module with Unisoc 4-core 64-bit ARM Cortex-A53 processor on board, Android 10 system, built-in Mali T820 MPI GPU, support multiple high resolution camera and capacitive touch screen, suitable for rapid development of multimedia, wireless communication applications and products
- 高度集成无线蜂窝通讯，短距离通讯和卫星定位，支持GSM/GPS/EDGE，WCDMA/HSPA+，LTE-FDD，LTE-TDD通讯制式，支持WIFI 802.11 b/g/n，BLE 4.2短距离通讯，GNSS卫星定位
Highly integrated wireless cellular communication, it supports GSM/GPS/EDGE, WCDMA/HSPA+, LTE-FDD, LTE-TDD communication system. It supports GNSS multi-mode satellite positioning and short distance communication including WIFI 802.11b/g/n, and BLE 4.2
- 通过板上集成一颗ARM CortexM4内核MCU用于协议转换，可以轻松匹配现有的CAN Bus、RS485协议产品
By integrating an ARM Cortex-M4 kernel MCU for protocol conversion on the board, it CAN easily match the existing CAN Bus and RS485 protocol products

应用范围 Target Applications

- 工业自动化控制 Industrial automation control
- 人机交互界面显示 HMI
- 智能家居 Smart Home
- 物联网 IoT
- 工程运输工具仪表盘
Engineering transport instrument dashboard
- 智慧医疗 Smart medical care



工业控制 / 人机界面 Industrial Control / HMI

方案特色 Features

- 基于STM32H743高性能Cortex-M7内核ARM，通过S.O.DIMM Socket 204物理插槽，提供客户针对工业自动化控制以及HMI的整体解决方案。板上集成SDRAM、QSPI Flash、Ethernet PHY，降低客户前期评估硬件/软件投入，加速项目落地时间
Based on the STM32H743 high-performance ARM Cortex-M7 core, through the S.O.DIMM Socket 204 physical slot, to provide customers with a total solution for industrial automatic control and HMI. SDRAM, QSPI Flash and Ethernet PHY are integrated on the board to reduce the hardware/software investment of customers in the early evaluation and accelerate the project completion time
- 软件部分提供基于FreeRTOS & LVGL以及定制的GUI Builder解决方案
The software section provides FreeRTOS & LVGL based and customized GUI Builder solutions

应用范围 Target Applications

- 工业自动化控制
Industrial automation control
- 人机交互界面显示 HMI



工业控制 / 人机界面 Industrial Control / HMI

方案特色 Features

- 基于STM32MP157高性能MPU处理器，通过S.O.DIMM Socket 204物理插槽，提供客户针对工业自动化控制以及HMI的整体解决方案。板上集成DDR3L、QSPI Flash、eMMC、Ethernet PHY、PMIC，降低客户前期评估硬件/软件投入，软件部分提供基于Linux SDK
Based on the STM32MP157 high-performance MPU processor, through the S.O.DIMM Socket 204 physical slot, to provide customers with a total solution for industrial automatic control and HMI. DDR3L, QSPI Flash, eMMC, Ethernet PHY, PMIC are integrated on the board to reduce the customer's hardware/software investment in early evaluation. The software part is based on Linux SDK
- 同时我们也提供硬件定制交货服务
We also provide custom hardware delivery services

应用范围 Target Applications

- 工业自动化控制
Industrial automation control
- 人机交互界面显示 HMI



2KW 空调外机一体化解决方案 2KW Air Conditioning Outdoor unit integrated solution

方案特色 Features

基于低成本的STM32G071CBT6，单板提供数字PFC、压缩机FOC控制，通过可控矽代替传统继电器控制阀门，提供整体可靠性和降低成本

Based on the low-cost STM32G071CBT6, the single board provides digital PFC, compressor FOC control, and offers overall reliability and cost reduction via thyristor instead of traditional relay control valves

应用范围 Target Applications

- 家用空调外机 Air Conditioning Unit



无位置检测滚筒洗衣机 Sensorless Front Load Washing Machine

方案特色 Features

使用STM32F301K8最有性价比的CortexM4去驱动无传感的洗衣机，功率部分使用STM SLLIMM 2nd IPM STGIB8CH60TS-L

Use the most cost-effective CortexM4 of the STM32F301K8 to drive the sensorless washing machine, the power stage use STM SLLIMM 2nd IPM STGIB8CH60TS-L

应用范围 Target Applications

- 无位置检测滚筒洗衣机 Washing machine
- 商用搅拌机 Blender
- 工业水泵 Industrial water pump

IPM 电机驱动 IPM Motor Drive

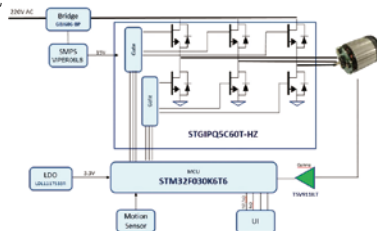
方案特色 Features

使用STM32F030K6和ST SLLIMM™ nano 2nd IPM，单电阻采样无霍尔传感FOC方案

Using the STM32F030K6 and ST SLLIMM™ nano 2nd IPM, One shunt for current sensing without hall FOC Solution

应用范围 Target Applications

- 空调风机/空气净化器风机
Air conditioner fan / Air cleaner
- 冰箱压缩机
Refrigerator compressor
- 洗碗机热水泵
Hot water pump for dishwasher
- 风筒 Hair dryer



高速低压矢量电机驱动 High-Speed Low-Voltage FOC Motor Driver

方案特色 Features

基于STSPIN32F0的低压高速电机驱动，最大限度的节省外围元件和成本

Based on STSPIN32F0, high speed and low voltage motor drive maximize the savings of peripheral components and cost

应用范围 Target Applications

- 洗碗机 Dishwasher
- 低压风扇 Low voltage fan
- 低压水泵 Low voltage water pump
- 电动工具 Power tools
- 工业过程电机控制 Industrial process motor
- 无线吸尘器 Wireless vacuum cleaner

高压集成控制电机驱动 High Voltage Integrated Control Motor Driver

方案特色 Features

基于STSPIN32F0601的高压高速电机驱动，最大限度的节省外围元件和成本

Based on STSPIN32F0601, high speed and high voltage motor drive maximize the savings of peripheral components and cost

应用范围 Target Applications

- 空调风机/空气净化器风机
Air conditioner fan / Air cleaner
- 冰箱压缩机
Refrigerator compressor
- 洗碗机热水泵
Hot water pump for dishwasher
- 风筒 Hair dryer





物联网应用方案 Internet of Things Solution

ZigBee / BLE 模组 (STM32WB) ZigBee / BLE Module (STM32WB)

方案特色 Features

基于STM32WB的ZigBee & BLE 多模无线通讯模块 ZigBee & BLE Multiprotocol wireless module based on STM32WB

- 支援蓝牙 BLE 5.0 MESH 无线通讯协议
Support Bluetooth 5.0 MESH protocol
- 支援 ZigBee 3.0 无线通讯协议
Support ZigBee 3.0 protocol
- 支持 MAC 802.15.4 无线通讯协议
Support MAC 802.15.4 protocol

应用范围 Target Applications

- 智能家居 Smart home
- 工业智能网 Industrial networking
- 电子门锁 Electronic door lock

BLE 模组 (BlueNRG) BLE Module (BlueNRG)

方案特色 Features

- 内置 ST BlueNRG-1/2 BLE 单芯片
Embedded with ST BlueNRG-1/2 BLE SoC
- 符合蓝牙 V4.2/V5.0 低功耗规范
Fully Qualified Bluetooth Smart V4.2/V5.0 specification
- Cortex M0 MCU 内核带 160kB/256kB 闪存 · 24kB RAM
Cortex M0 MCU core with 160kB/256kB flash memory, 24kB RAM
- 支持 2 主 3 从连接
Support up to 2 masters and 3 slaves connections
- 适合使用纽扣型电池的 2.0V – 3.6V 工作电压
Coin battery friendly 2.0V – 3.6V operation
- 低功耗
Low power consumption
- 内置 PCB 天线
Build-in PCB antenna

应用范围 Target Applications

- 低功耗物联网产品 Low power consumption IoT device
- 医疗保健监控 Healthcare monitoring
- 体育和健身器材 Sports and fitness equipment

蓝牙断路器 Bluetooth Circuit

方案特色 Features

- BlueNRG-LP 蓝牙® 5.0 低功耗无线系统芯片
BlueNRG-LP Bluetooth® 5.0 low energy wireless system-on-chip
- VIPER16LD 低功耗开关电源解决方案
VIPER16LD low-power switching power supply solution
- STM8S003xx 系列 MCU 提供高性能和降低系统成本
STM8S003xx series MCU provides high performance and reduced system cost

应用范围 Target Applications

- 电表 Electric meter

4G CAT1 模组 4G CAT1 Module

基于鼎桥 (TD Tech) 的 4G CAT1 模组 ME901S-806c 无线模块实现 ARM Pelion 部署

Deploy the ARM Pelion iCloud based on TD Tech 4G CAT1 (ME901S-806c) wireless module

方案特色 Features

- 透过鼎桥的 4G CAT1 模组 ME901S-806c 通过 ARM Pelion 物联网平台可以帮助企业用户在日趋复杂的碎片化场景下实现混合环境下的端到端物联网连接、设备和数据管理，并能使用户专注于业务逻辑和产品开发
Through TD Tech's 4G CAT1 Module (ME901S-806c) and ARM Pelion IoT platform, enterprise users can realize end-to-end Internet of things connection, device and data management in a mixed environment in the increasingly complex fragmentation scenario, and focus on business logic and product development
- Pelion 可以帮助您轻松地设备获取数据而不需要牺牲安全性。Pelion Connectivity Management 允许通过单一的全球移动合同，在多个网络标准上实现物联网设备在全球任何地方完成部署
Pelion helps you to get from device to data easily without compromising on security. Pelion Connectivity Management allows IoT devices to be deployed anywhere in the world over multiple network standards through a single global mobile contract

应用范围 Target Applications

- 智能家居 Smart home
- 固定资产管理 Fixed-assets management
- 工业 IoT Industry IoT Network

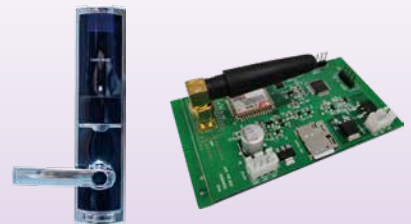




方案名称

智能门锁方案 Smart Door Lock Solution

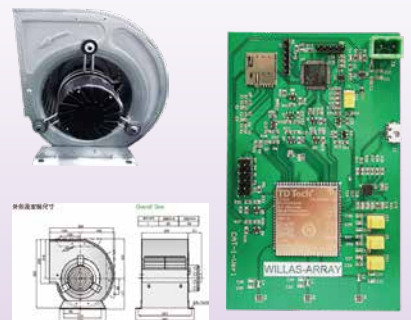
- **通讯方式：**NB
Communication method: NB
- **控制介面：**Web 介面，微信小程序，APP
Control Panel: Web interface, WeChat app and APP
- 智能门锁方案可实现远程基站定位，通过NB 5G网络，实现超低功耗、超远距离、超轻传输方式进行开关控制，简单可靠，方便快捷，轻松实现人与物之间网络的连接。
The NB smart door solution is simple, reliable and convenient. People can lock/unlock your door with Web, WeChat and APP. The solution provides remote base station positioning and also let your smart lock with ultra-low power consumption, ultra-long distance, and ultra-light transmission mode.



方案名称

远程智慧风机 Remote Smart Fan

- **通讯方式：**CAT1/NB-IOT
Communication method: CAT1/NB-IOT
- **控制介面：**Web 介面，微信小程序，APP
Control Panel: Web interface, WeChat app and APP
- **电机：**PMSM/BLDC 风机
Motor: PMSM/BLDC Fan
- 智慧风机采用 CAT1/NB-IOT 网络制式进行远程控制，直接使用运营商的通信网络，不需要搭建本地网关，直接实现点对点控制，不仅实现电机的远程启动关停、无极调速、本地联动，还可以上报设备的运行状态，实现设备的人工智能控制。
The smart fan solution provides CAT1 or NB-IOT network system. You can remotely control fans without gateway. The intelligent application helps you to remote control fans' actions and also report the operating status, such as turn on and off motors, adjust speed and fault alarm.



参考方案 Reference Solutions



电机开关电源 / 智能照明方案 SMPS/Smart LED Solution

多功能调光 LED 驱动 Multi-Function Dimming LED Driver

方案特色 Features

多功能 Multiply function:

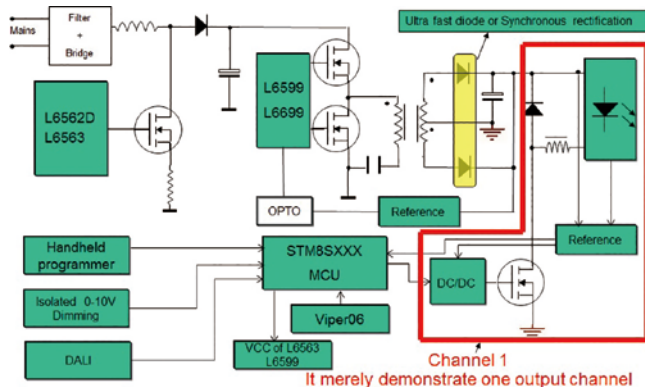
- 二通道输出
Two-channel output
- 手持编程器调整输出参数
Handheld programmer adjusts output parameters
- 内置多条调光曲线，可以对每个通道的调光曲线进行独立编程
Built-in multiple dimming curves, Reprogrammable two independent dimming curve, one per channel.
- DALI, 0-10V 调光信号控制，记录工作时间
DALI, 0-10V Dimming, Record working hours
- 可以设定过温保护曲线以及NTC曲线
Setting over temperature protection curve and NTC curve
- 可以扩展Wi-Fi BT RF Zigbee
Wi-Fi BT RF Zigbee can be extended

性能 Performance:

- 符合 Class2 要求
Meet Class2 specification
- 兼容有源/无源调光器，符合 ANSI E1.3 - 2001 (R2011) 0-10V 调光接口标准
Support active and passive dimmer ANSI E1.3 - 2001 (R2011) 0 to 10 V analog control specification
- DALI2
Meet DALI2
- CV 或者 CC 模式
CV or CC mode
- 完善的保护，UL LISTED, CLASS P
Perfect protection: UL LISTED, CLASS P

应用范围 Target Applications

- 智能照明控制 Intelligent lighting control



带 NFC 控制 LED 调光驱动 LED Dimming Driver w/NFC Interface

方案特色 Features

速度，灵活性 Speedy, Flexibility:

- 可以在任何时间场合通过 NFC 介面设定输出参数
Setting output parameter through NFC interface at any stage
- 采用高速读写卡器读写，不需要复杂的机器
Programing fixtures faster without complex mechanics

安全性 Security:

- 可以设置和保护专门的识别信息，也可以根据存储的信息方便地找到替换品
Set and protect proprietary info. Find correct replacement driver

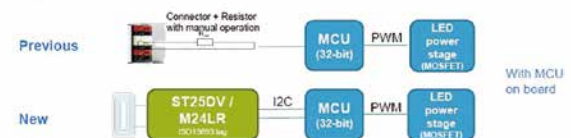
降低成本 Reduced cost:

- 可以满足不同的客户快速，方便地调整产品的输出参数
Meet a diverse set of customer Easily adjust devices

应用范围 Target Applications

- 智能照明控制 Intelligent lighting control

High-end segment



Low-end segment



智能电表电源 Smart Meter SMPS

方案特色 Features

以智能电表为基础构建的智能计量系统，能够支持智能电网对负荷管理、分散式电源接入、能源效率、电网调度、电力市场交易和减少排放等方面的要求，因此智能电表的应用越来越普遍，对智能电表所采用的电源的可靠性和性能的要求也越来越高，传统的工频变压器已经很难胜任这一任务，然而ST最新开发的1050V耐压的VIPER系列开关电源可以很好地胜任这个应用。

The intelligent metering system built on smart meters can fulfil the requirements of smart power grids for load management, distributed power access, energy efficiency, grid dispatching, electricity market transactions and emission reduction. Generally, the requirements for the reliability and performance of the power supply used by smart meters are becoming higher and higher. Traditional power frequency transformers have been difficult to perform this task. However, the latest 1050V VIPER series SMPS developed by ST can be well qualified for this application.

应用范围 Target Applications

- 单相/三相智能电表电源
Power supply for 1 and 3-phase smart energy meters
- 三相工业电器系统辅助电源 3-phase industrial systems
- 宽电压大功率 Ultra-wide voltage range
- LED 照明电源 High power LED lighting
- 空调系统电源 Air conditioning

数字电源 Digital Power

方案特色 Features

- 数字控制，内置固件，无需编程
Digital control, Controller built-in firmware. No programming is required.
- PFC 部分 PFC section:
 - ▶ 斜坡增强固定导通时间，带有高速和低速数字控制环路，双环控制，极佳的 THD
Ramp Enhanced Constant On Time with high speed digital loop and low speed digital loop, Double loop control, Perfect THD
 - ▶ 多模式操作 @ 中 / 重载，@ 轻负载，@ 特别轻负载
Multi-mode operation @ medium / high loads, @ low load, @ very low load
- 半桥部分 Half bridge section:
 - ▶ LLC 或 LCC，电流模式，时间偏移控制，增强保护特性，可编程突发模式
LLC or LCC, current-mode operation, Time-shift control, Advanced protections, Programmable Burst mode
- FTP (NVM) 存储器允许更改 IC 内部参数去满足不同的应用场合包括在生产过程中
FTP (NVM) memory allows adapting the IC to different applications by programming several K-parameters during manufacturing

应用范围 Target Applications

- 智能照明控制 Intelligent lighting control

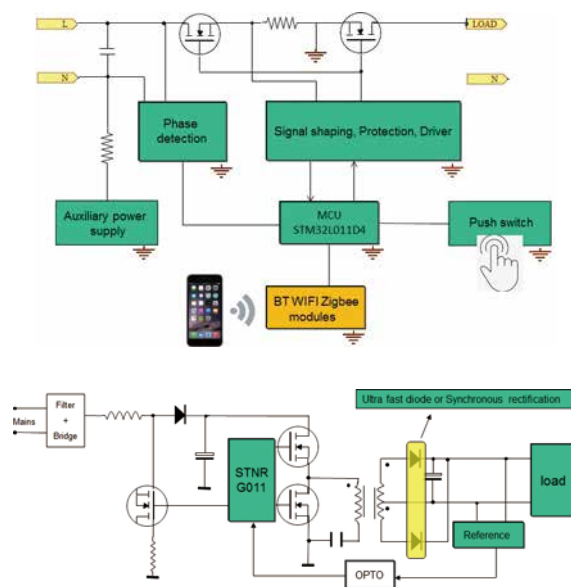
数字可编程调光器 Digital Programmable Dimmer

方案特色 Features

- MCU+MOSFET 拓扑结构，相容 R,L,C 负载
MCU+ MOSFET topology, Compatible with R, L, C loads
- 具备 UART 通信口，采用涂鸦智能的通信协议，相容 BT WIFI Zigbee 模组，可采用 App 操控
UART communication port available, Adopt TUYA communication protocol for BT WIFI Zigbee modules, App Control
- 可编程相位角设定，智能控制开机相位角，软启动
Programmable phase angle setting, Intelligent control of phase angle in start period, Soft start
- 具备 PUSH 开关远距离操控功能
Push switch remote control function
- 全數位化，抗干扰能力强，具备各种保护
Digital control, Strong anti-interference capability and protection

应用范围 Target Applications

- 高效率照明控制 High efficiency and energy saving lighting control
- 智能照明控制 Intelligent lighting control



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