

WILLAS-ARRAY™

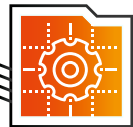
Willas-Array Electronics (Holdings) Limited

威雅利電子(集團)有限公司

OCT ISSUE



公司簡介
Company Brochure



業務擴展 掌握先機

Business Expansion to Asia-Pacific Region

威雅利電子(集團)有限公司成立於1981年，40年來集團緊貼全球市場發展趨勢，透過公司內部的團結一致，以及與合作伙伴的緊密合作，業務由香港迅速發展至整個大中華地區，並以這些地區為核心再將業務擴展至全亞洲，與世界各地多家享負盛名的供應商建立了緊密而長遠的合作關係，在電子元器件經銷領域屹立于領導地位。

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.



內外並進 攜手創新

Developing Insightful Design and Solution

集團對內部管理及外部發展均十分重視。除了提高員工效率及競爭力，並以創新、精益求精為共同目標，完善內部系統及工作流程，以提高各部門的效率，增強整體的競爭力，將服務更為優化，不但提供了多元化的電子元器件，同時開拓了最全面可靠的參考方案，以最佳的成本效益，滿足客戶、供應商和雇員的需求，成為供應商及客戶信賴的伙伴。

因此，今年集團繼續走在市場尖端，與合作伙伴及客戶攜手一同與時俱進，開拓創新的設計意念，提供高性價比的參考設計，將客戶的需求迅速轉換成產品，以強化客戶在市場上的優勢，共同實現企業及客戶雙贏的局面。

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.



威雅利電子(集團)有限公司於2001年在新加坡交易所主板成功上市(SGX股份代號：BDR)，並於2013年在香港交易所主板上市(SEHK 股份代號：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 業務範圍



多元化的代理產品 Wide Range of Products

現今電子產業的發展日新月異，標準要求也越來越高，而每位客戶對於技術要求也不盡相同。集團提供多元化的產品線，滿足各行各業所需，包括汽車電子、信息娛樂、物聯網應用、電機驅動、開關電源及智能照明等等應有盡有。發掘高性價比的參考設計，讓客戶擁有靈活多變的選擇，以強大的適應性配合市場，率先佔領行業先機。

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.

專業的參考方案 Reference Solutions

作為行業的領導者，除了密切留意市場最新動向，為不同的客戶提供高端的電子元器件之外，集團高質素的工程師隊伍一直努力不懈地開拓嶄新的參考方案，提升產品應用技術，力求在短期內完成研發並滿足不同客戶的技術要求，縮短客戶研發周期，大大加快推出市場的時間，強化客戶在市場的競爭力。

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.



優越的增值服務 Value-Added Services

我們深信優越服務至為重要，並竭力為客戶提供增值服務。為進一步提升集團的營運效率，利用企業管理整合系統，再配合資訊科技部門不斷改良，提升供應鏈管理、存貨、銷售和風險管理的運作；加上專業後勤及物流人員的配合，確保我們在現今激烈競爭的環境下，集團仍能一貫地為客戶提供快捷準時的送貨服務。

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.



業務架構 Business Structure

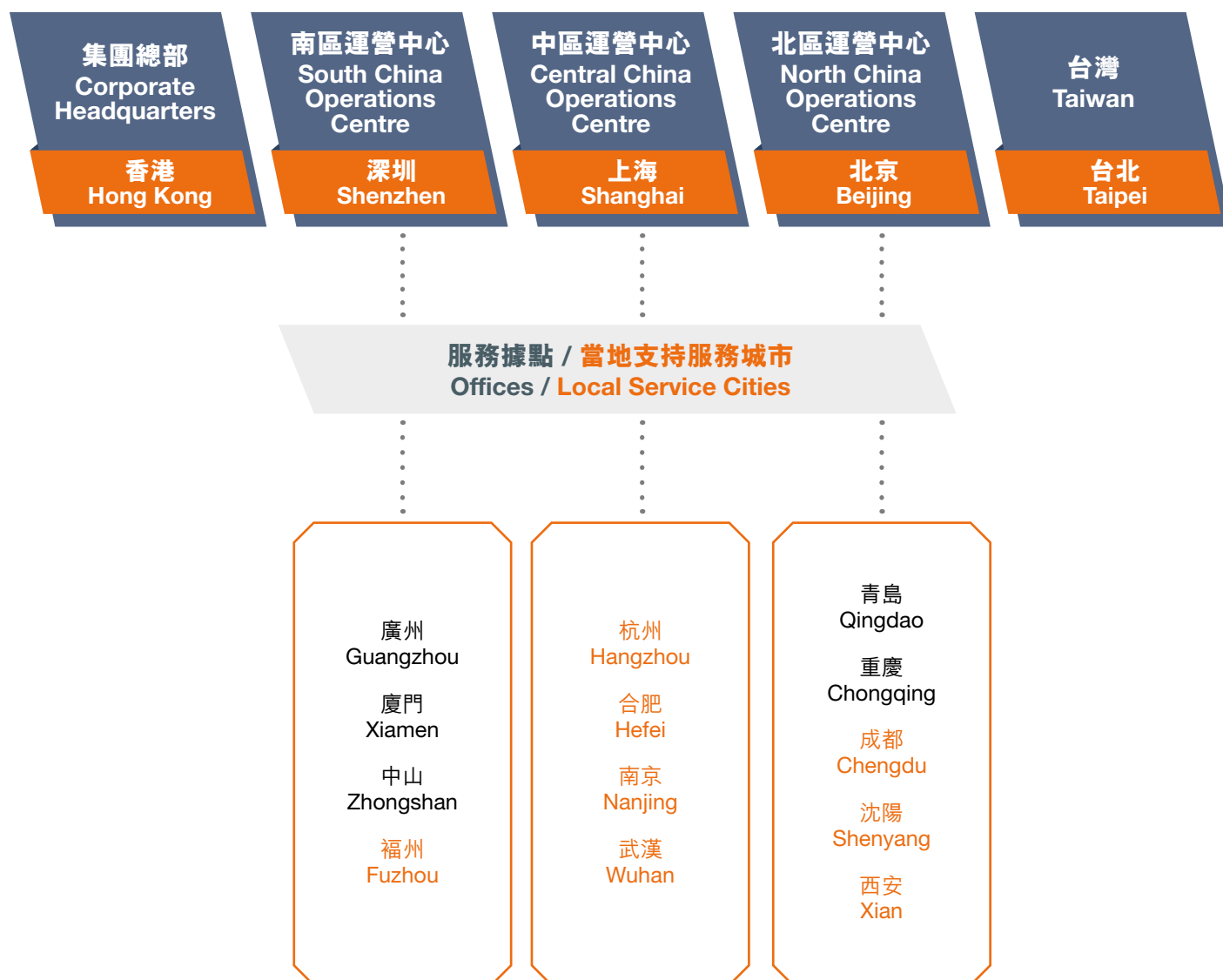
WILLAS-ARRAY™

Willas-Array Electronics (Holdings) Limited

威雅利電子(集團)有限公司

抱負 Our Vision

創新潛能拓展未來 • 瞻望中華掌握先機
Convert Tomorrow's Innovation into Today's Opportunity





供應商 Manufacturers

威雅利電子(集團)有限公司十分重視和珍惜與供應商之合作關係，我們把供應商視作最親密的伙伴，與部分遍布歐美日的國際知名供應商更是合作超過三十載的歲月。這密切的關係有助我們針對客戶的不同成本及功能需求提供穩定、充裕及多元化的貨源，靈活多變的選擇幫助客戶贏得市場份額，同時令集團在市場上的領導地位得以更加牢固。

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.



客戶 Customers

威雅利電子(集團)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託，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

放眼亞洲 The Asia Vision

發揮集團在大中華地區的穩固基礎和銷售網路的優勢，以龐大的規模和專業的服務，發掘與亞洲區各地的合作機會，立志成為亞太區首屈一指的電子元器件經銷商之一。

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.



增強效率 Efficiency Advancement

內部系統及流程雖然已經成熟，但我們仍不斷追求更卓越的競爭力，提高各部門效率，將人力及資源最優化，於短期內完成研發並滿足不同客戶的技術要求，鞏固及提升集團在市場中的位置，從而拓展銷售及市場業務。

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.



優化服務 Service Optimization

積極的力求創新及服務優化，透過上下一心的團隊來提升公司價值，成為更多供應商與客戶最值得信賴和合作的伙伴。

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.

推動未來 Insightful Ideas

強大的技術部門始終與客戶站在一起，從客戶的角度出發，針對他們的成本及功能需求，致力將嶄新的開發理念融入高增值的市場需求和預算當中，提高系統設計能效，為客戶推動具成本效益的設計方案。

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.

信賴伙伴

Trust

致力為供應商及客戶建立信賴及承諾，搜羅更豐富的尖端產品供應，發掘更新更靈活的參考方案，共同面對市場上的種種挑戰。

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.

以人為本

Human Orientation

集團擁有高質素及經驗豐富的員工，既珍惜這些難能可貴人才，也鼓勵前線員工坦誠開放和創新意念，在不斷學習的過程中快速地成長和進步。

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.

創造機會

Opportunities

視員工和客戶為我們的內部和外部不可或缺的重要伙伴，除了主動預期及滿足他們各項多變的需求外，並為他們提供全方位的資訊服務，給予優勢、彈性和成功機會。

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.

堅守承諾

Integrity

堅守對顧客、合作伙伴及員工的承諾，以開放和忠誠的態度作為經營之道。力求創新的同時，並重視優良的品質保證，不論是產品或參考方案，都為客戶提供高于期望的優質產品，建立良好的品質及服務信譽。

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.

天線診斷 ICs、複合 ICs、便利型定時器、EDLC 保護 ICs、車載用電池保護 ICs、磁性傳感器 IC (霍爾 IC) CMOS 運算放大器、實時時鐘、串列 EEPROMs (SPI, I2C, Microwire)、電壓檢測器 (Reset ICs)、電壓穩壓器 (LDO)、看門狗定時器

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.

單晶片 GNSS 解決方案
SOC GNSS Solution



Asahi Kasei Microdevices Corporation

模擬編碼器芯片、音頻數據轉換器、音頻數位信號處理器、自動對焦及光學影像驅動器、電流傳感器、電子指南針 (羅盤)、霍爾 IC / 霍爾元件、紅外線感應器

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產品和服務，尤其應用汽車及工業機械人的電纜

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



Chemi-Con

鋁電解電容器，導電性高分子回體鋁電解電容器，導電性高分子混合型鋁電解電容器，超級電容器，薄膜電容器，陶瓷壓敏電阻器，納米結晶合金 / 非晶 / 壓粉扼流線圈

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

導方向性電膠膜、防反光膜、光學伸縮性合成樹脂

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



eSOL Co Ltd.

實時操作系統、應用中間件、汽車軟件、工廠自動化 / 機器人、工程服務、專業和諮詢服務

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



FAITH LONG Crystal Technology Co., Ltd

石英晶體元器件

Quartz frequency timing crystal component



GPI International Ltd.

一次性電池：鹼性、碳性、9V 電池；(CR、SR 及 LR 鈕型電池) 充電電池：鎳氫、鋰離子、18650 充電電池

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 芯片天線

SMT Antenna



Iriso Electronics Co Ltd.

板對板連接器、軟板連接器、柔性扁平排線連接器、汽車電源介面

B to B Connector, FPC, FFC, Automotive Interface



Isahaya Electronics Corporation

DC-DC 直流變壓器、IGBT 驅動器、多功能晶體管、小訊號電晶體管、小訊號 MOSFET

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



Micro Commercial Components Corporation (Taiwan)

二極體、晶體管、穩壓器、MOSFETS、保護設備

Diodes, Transistors, Voltage Regulators, MOSFETS, Protection Devices



Murata Manufacturing Co Ltd.

電容器、電感器、降噪元件/ EMI 降噪濾波器、電阻器、時鐘元件、聲象機器及通信設備用濾波器、射頻元件/ 模塊、傳感器、熱敏電阻、電源、聲音元件、微型機電產品陶瓷應用產品、負離子產生器、臭氧產生器、硬幣型二氧化錳鋰電池

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.

運算放大器及比較器、音頻及視頻 IC、電源 IC、電動機 IC、通訊 IC、GaAs 開關及放大器、LED/LCD 驅動器、水晶振盪器 IC、光電半導體、脈搏及血氧反射式光電傳感器、MEMS 麥克風放大器及傳感器、電源管理與電池保護 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.

功能性轉印膜(金屬轉印膜及功能性轉印膜)，金屬箔粉(金屬加飾膜及金屬 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 的安全加密連接技術，為物聯網設備提供安全連接及雲服務，實現不同設備的統一網絡管理模式

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



Rectron Ltd.

橋式整流器、高效率二極體、蕭特基二極體、整流二極體

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



SanKen Electric Co Ltd.

汽車驅動及電源 IC、IGBT、智能功率模塊、馬達控制 IC、功率快恢二極管、電源管理 IC、功率晶體管、碳化矽 (SiC) 肖特基二極管、TVS 二極管

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



SCHOTT Japan Corporation

汽車、壓縮機密封端子、頻率控制、大型密封鎖通件、光通信、特殊玻璃和溫度保險絲

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



SIMCom Wireless Solutions Ltd.

5G 模塊、LPWA 模塊、4G 模塊、LTE-A 模塊、智能模組、車規級模組、3G 模塊、2G 模塊、GNSS 模組、Wi-Fi 模塊

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



SMK Corporation

車載電子、連接器、插頭插座、手機配件、遙控器、端子、觸控面板、開關

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



Sony Corporation of Hong Kong Ltd.

CMOS 圖像感應器

CMOS Sensor



STMicroelectronics

交流 - 直流轉換器、直流 - 直流轉換器、AM/FM 調諧 IC、音頻功率放大器、音效處理器、雙極電晶體、汽車音響和汽車專用 IC、低功耗藍芽 (BLE) 晶片、CD 伺服器、電子抹除式可複寫唯讀記憶體、靜電保護器、衛星定位導航處理器、家用音響、絕緣柵雙極電晶體、智慧功率模組、照明控制 IC (電子鎮流器、節能燈、LED)、微機電系統傳感器、微機電麥克風、微處理器及嵌入式微處理器、金屬半場效晶體管、馬達控制 IC 和 IGBT / 驅動器、近場通信 / 射頻識別、運算放大器、汽車等級 32 位微處理器、整流器、傳感器、碳化矽 (SiC) 場效應晶體管、雙向可控矽、高側功率驅動晶片、穩壓器、無線充電 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、光敏晶體管、紅外發光二極管、反射傳感器、液晶顯示模組
LED Device, Photo Transistor, IRED, Reflector Sensor, LCD Module



Susumu Co Ltd.

薄膜片式高精度電阻器、電流檢測用片式低電阻器、功率電感、高頻衰減器
Thinfilm Surface Mount High Precision Resistor, Current Sensing Surface Mount Resistors, Power Choke Coils, High Frequency Surface Mount Components



Tamura Corporation of China Ltd.

電流傳感器、IGBT/SiC/MOSFET 驅動器模組、電源模塊
Current Sensor, IGBT/SiC/MOSFET Driver Module, Power Supply Module



TOMOHO Technology Ltd.

警報器、探測器、溫濕度傳感器、傳感器
Alarm, Detector, Temperature and Humidity Sensors, Sensor



Torex Semiconductor Ltd.

電池充電 IC、電荷泵、DC/DC 轉換器、二極管、負載開關、MOSFETs、振盪器 IC、PLL 時鐘產生器、溫度傳感器、電壓檢測器、電壓調整器
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

壓力傳感器、壓力變送器、流量傳感器、氣體傳感器、紅外傳感器、轉速傳感器、電流傳感器、智能物聯終端設備及解決方案
Pressure Sensor, Pressure Transmitter, Flow Sensor, Gas Sensor, Infrared Sensor, Rotational Speed Sensor, Current Sensor, IoT Device and Solution



汽車電子 / 信息娛樂方案 Automotive / Infotainment Solution

BMS 系統 BMS System

方案特色 Features

- E9963/L9963高精度 AFE 提供精準電芯電壓采集
E9963/L9963 high precision AFE provides precise cell voltage
- SPC58高性能 MCU 提供強大運算能力
SPC58 high performance MCU provides powerful computing power
- VIPower 智能 MOS 提供可靠負載驅動能力
VIPower intelligent MOS provides reliable load driving capability

應用範圍 Target Applications

- 新能源汽車
EV-CAR

車門域控制系統 Door Zone Control

方案特色 Features

- 高集成度，包括開關和控制單元都佈置在車門內部，車門之間通過總線進行通信，有效降低產品的總體成本
Highly integrated and cost reductions in electronic components
- 集成 Fail safe 模式以及熱保護功能
Integrated fail safe mode. Thermal shutdown protection
- 集成可編程 soft-start 功能，有效的限制了沖擊電流對負載的影響
Programmable soft-start function to drive loads with higher inrush currents as current
- 自動恢復功能與VBAT強制standby功能，使產品更加智能
Forced VBAT standby and auto recovery

應用範圍 Target Applications

- 乘用車
Passenger vehicle

新能源矢量冷凝風扇 FOC Cooling Fan for New EV

方案特色 Features

- 高性能 SPC560P 系列 MCU
High-performance MCU SPC560P series
- 智慧型具有故障診斷系統的半橋驅動 L9907/8
Intelligent half-bridge driver L9907/8 with full diagnostic
- 低損耗的 MOSFET
MOSFET with very low Rds-on

應用範圍 Target Applications

- 新能源車動力電池散熱
E-car power battery heat dissipation
- 驅動電機電控散熱
E-car motor driver heat dissipation
- 汽車空調系統散熱
Automotive air conditioning system

無刷變頻水泵 BLDC Water Pump

方案特色 Features

- 8位車規級 MCU，成本低
8-bit MCU with low cost
- 具有 BEMF 檢測和硬體保護功能的半橋驅動 L99ASC03
The half-bridge driver L99ASC03 with BEMF detection and hardware protection
- 體積小，低損耗 MOSFET
The MOSFET with small size and low Rds-on

應用範圍 Target Applications

- 車用小型直流無刷風扇，水泵，油泵控制
For automotive application, such as small BLDC fan, water pump and oil pump

CMOS 鏡頭 CMOS Sensor Camera

方案特色 Features

ISX021

- 250万像素，1/2.31"，3um，背照式，單芯片
2.5M, 1/2.31", 3um, BI, SoC
- 高動態範圍 120dB (@60fps)
High Dynamic Range 120dB (@60fps)
- 出色的低感光度
Excellent Low Light Sensitivity
- 超級對比度/分辨率提高可見度
Super Contrast/Resolution Improve visibility
- 低功耗 650mW (Typ)
Low Power Consumption 650mW (Typ)
- 符合 AEC-Q100 2級標準
Qualification AEC-Q100 Grade 2

應用範圍 Target Applications

- 360環視
360 surround view
- 流媒體後視鏡
Streaming rearview mirror
- 盲點監視
Blind spot surveillance
- 車內監視
Interior surveillance
- 行車記錄儀
Driving recorder

數字收音機 + 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，適用於帶Radio、音頻處理包括 ADC 和 DAC 的汽車娛樂系統應用。

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

應用範圍 Target Applications

- 汽車導航系統
Car navigation systems
- 汽車音響
Car audio
- 汽車相關的音頻系統
Car-related audio systems

參考方案 Reference Solutions



電機驅動方案 Motor Control Solution

工業控制 / 人機界面 Industrial Control / HMI

方案特色 Features

- 板載芯訊通4核64位ARM Cortex-A53處理器的SIM8500智能蜂窩模組，Android 10系統，內置Mali T820 MPI GPU，支持高清攝像頭和電容觸摸屏，適用快速開發與多媒體，無線通訊相關應用和產品
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
- 高度集成無線蜂窩通訊，短距離通訊和衛星定位，支持GSM/GPS/EDGE，WCDMA/HSPA+，LTE-FDD，LTE-TDD通訊制式，支持WIFI 802.11 b/g/n，BLE 4.2短距離通訊，GNSS衛星定位
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
- 通過板上集成一顆ARM CortexM4內核MCU用於協議轉換，可以很輕鬆的匹配現有的CAN Bus、RS485協議產品
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

應用範圍 Target Applications

- 工業自動化控制 Industrial automation control
- 人機交互界面顯示 HMI
- 智能家居 Smart Home
- 物聯網 IoT
- 工程運輸工具儀錶盤
Engineering transport instrument dashboard
- 智慧醫療 Smart medical care



工業控制 / 人機界面 Industrial Control / HMI

方案特色 Features

- 基於STM32H743高性能Cortex-M7內核ARM，通過S.O.DIMM Socket 204物理插槽，提供客戶針對工業自動控制以及HMI的整體解決方案。板上集成SDRAM、QSPI Flash、Ethernet PHY，降低客戶前期評估硬件/軟件投入，加速項目落地時間
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
- 軟件部分提供基於FreeRTOS & LVGL以及定制的GUI Builder解決方案
The software section provides FreeRTOS & LVGL based and customized GUI Builder solutions

應用範圍 Target Applications

- 工業自動化控制
Industrial automation control
- 人機交互界面顯示 HMI



工業控制 / 人機界面 Industrial Control / HMI

方案特色 Features

- 基於STM32MP157高性能MPU處理器，通過S.O.DIMM Socket 204物理插槽，提供客戶針對工業自動控制以及HMI的整體解決方案。板上集成DDR3L、QSPI Flash、eMMC、Ethernet PHY、PMIC，降低客戶前期評估硬件/軟件投入，軟件部分提供基於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
- 同時我們也提供硬件定制交貨服務
We also provide custom hardware delivery services

應用範圍 Target Applications

- 工業自動化控制
Industrial automation control
- 人機交互界面顯示 HMI



2KW 空調外機一體化解決方案 2KW Air Conditioning Outdoor unit integrated solution

方案特色 Features

基於低成本的STM32G071CBT6，單板提供數字PFC、壓縮機FOC控制，通過可控矽代替傳統繼電器控制閥門，提供整體可靠性和降低成本

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

應用範圍 Target Applications

- 家用空調外機 Air Conditioning Unit



無位置檢測滾筒洗衣機 Sensorless Front Load Washing Machine

方案特色 Features

使用STM32F301K8最有性價比的CortexM4去驅動無傳感的洗衣機，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

應用範圍 Target Applications

- 無位置檢測滾筒洗衣機 Washing machine
- 商用攪拌機 Blender
- 工業水泵 Industrial water pump

IPM 電機驅動 IPM Motor Drive

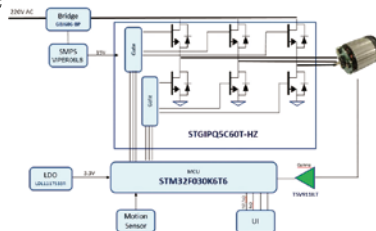
方案特色 Features

使用STM32F030K6和ST SLLIMM™ nano 2nd IPM，單電阻採樣無霍爾傳感FOC方案

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

應用範圍 Target Applications

- 空調風機/空氣淨化器風機
Air conditioner fan / Air cleaner
- 冰箱壓縮機
Refrigerator compressor
- 洗碗機熱水泵
Hot water pump for dishwasher
- 風筒 Hair dryer



高速低壓矢量電機驅動 High-Speed Low-Voltage FOC Motor Driver

方案特色 Features

基於STSPIN32F0的低壓高速電機驅動，最大限度的節省外圍元件和成本

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

應用範圍 Target Applications

- 洗碗機 Dishwasher
- 低壓風扇 Low voltage fan
- 低壓水泵 Low voltage water pump
- 電動工具 Power tools
- 工業過程電機控制 Industrial process motor
- 無線吸塵器 Wireless vacuum cleaner

高壓集成控制電機驅動 High Voltage Integrated Control Motor Driver

方案特色 Features

基於STSPIN32F0601的高壓高速電機驅動，最大限度的節省外圍元件和成本

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

應用範圍 Target Applications

- 空調風機/空氣淨化器風機
Air conditioner fan / Air cleaner
- 冰箱壓縮機
Refrigerator compressor
- 洗碗機熱水泵
Hot water pump for dishwasher
- 風筒 Hair dryer



參考方案 Reference Solutions



物聯網應用方案 Internet of Things Solution

ZigBee / BLE 模組 (STM32WB) ZigBee / BLE Module (STM32WB)

方案特色 Features

基於 STM32WB 的 ZigBee & BLE 多模無線通訊模塊
ZigBee & BLE Multiprotocol wireless module based on STM32WB

- 支援藍牙 BLE 5.0 MESH 無線通訊協議
Support Bluetooth 5.0 MESH protocol
- 支援 ZigBee 3.0 無線通訊協議
Support ZigBee 3.0 protocol
- 支援 MAC 802.15.4 無線通訊協議
Support MAC 802.15.4 protocol

應用範圍 Target Applications

- 智能家居 Smart home
- 工業智能網 Industrial networking
- 電子門鎖 Electronic door lock

BLE 模組 (BlueNRG) BLE Module (BlueNRG)

方案特色 Features

- 內置 ST BlueNRG-1/2 BLE 單晶片
Embedded with ST BlueNRG-1/2 BLE SoC
- 符合藍牙 V4.2/V5.0 低功耗規範
Fully Qualified Bluetooth Smart V4.2/V5.0 specification
- Cortex M0 MCU 內核帶 160kB/256kB 閃存 · 24kB RAM
Cortex M0 MCU core with 160kB/256kB flash memory, 24kB RAM
- 支持 2 主 3 從連接
Support up to 2 masters and 3 slaves connections
- 適合使用鈕扣型電池的 2.0V – 3.6V 工作電壓
Coin battery friendly 2.0V – 3.6V operation
- 低功耗
Low power consumption
- 內置 PCB 天線
Build-in PCB antenna

應用範圍 Target Applications

- 低功耗物聯網產品 Low power consumption IoT device
- 醫療保健監控 Healthcare monitoring
- 體育和健身器材 Sports and fitness equipment

藍牙斷路器 Bluetooth Circuit

方案特色 Features

- BlueNRG-LP 藍牙® 5.0 低功耗無線系統晶片
BlueNRG-LP Bluetooth® 5.0 low energy wireless system-on-chip
- VIPER16LD 低功耗開關電源解決方案
VIPER16LD low-power switching power supply solution
- STM8S003xx 系列 MCU 提供高性能和降低系統成本
STM8S003xx series MCU provides high performance and reduced system cost

應用範圍 Target Applications

- 電表 Electric meter

4G CAT1 模組 4G CAT1 Module

基於鼎橋 (TD Tech) 的 4G CAT1 模組 ME901S-806c 無線模塊實現 ARM Pelion 部署

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

方案特色 Features

- 透過鼎橋的 4G CAT1 模組 ME901S-806c 通過 ARM Pelion 物聯網平台可以幫助企業用戶在日趨複雜的碎片化場景下實現混合環境下的端到端物聯網連接、設備和數據管理，並能使用戶專注於業務邏輯和產品開發
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 可以幫助您輕鬆地從設備獲取數據而不需要犧牲安全性。Pelion Connectivity Management 允許通過單一的全球移動合同，在多個網絡標準上實現物聯網設備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

應用範圍 Target Applications

- 智慧家居 Smart home
- 固定資產管理 Fixed-assets management
- 工業 IoT Industry IoT Network



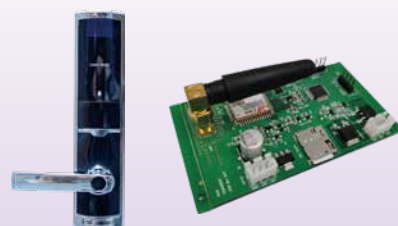


方案名稱

智能門鎖方案 Smart Door Lock Solution

- **通訊方式：**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
- 智能門鎖方案可實現遠程基站定位，通過NB 5G網絡，實現超低功耗、超遠距離、超輕傳輸方式進行開關控制，簡單可靠，方便快捷，輕鬆實現人與物之間網絡的連接。

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.

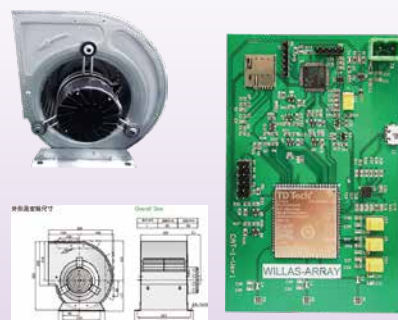


方案名稱

遠程智慧風機 Remote Smart Fan

- **通訊方式：**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
- **電機：**PMSM/BLDC 風機
Motor: PMSM/BLDC Fan
- 智慧風機採用CAT1/NB-IOT網絡制式進行遠程控制，直接使用運營商的通信網絡，不需要搭建本地網關，直接實現點對點控制，不僅實現電機的遠程啟動關停、無極調速、本地聯動，還可以上報設備的運行狀態，實現設備的人工智能控制。

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.



參考方案 Reference Solutions



電機開關電源 / 智能照明方案 SMPS/Smart LED Solution

多功能調光 LED 驅動 Multi-Function Dimming LED Driver

方案特色 Features

多功能 Multiply function:

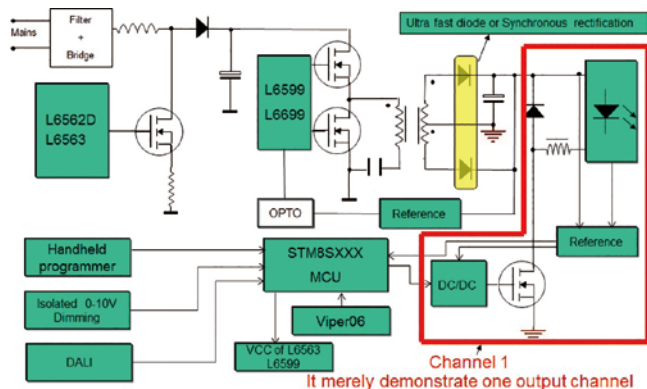
- 二通道輸出
Two-channel output
- 手持編程器調整輸出參數
Handheld programmer adjusts output parameters
- 內置多條調光曲線，可以對每個通道的調光曲線進行獨立編程
Built-in multiple dimming curves, Reprogrammable two independent dimming curve, one per channel.
- DALI, 0-10V 調光信號控制，記錄工作時間
DALI, 0-10V Dimming, Record working hours
- 可以設定過溫保護曲線以及NTC曲線
Setting over temperature protection curve and NTC curve
- 可以擴展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/無源調光器，符合 ANSI E1.3 - 2001 (R2011) 0-10V 調光接口標準
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
- 完善的保護，UL LISTED, CLASS P
Perfect protection: UL LISTED, CLASS P

應用範圍 Target Applications

- 智能照明控制 Intelligent lighting control



帶 NFC 控制 LED 調光驅動 LED Dimming Driver w/NFC Interface

方案特色 Features

速度，靈活性 Speedy, Flexibility:

- 可以在任何時間場合通過 NFC 介面設定輸出參數
Setting output parameter through NFC interface at any stage
- 採用高速讀寫卡器讀寫，不需要複雜的機器
Programing fixtures faster without complex mechanics

安全性 Security:

- 可以設置和保護專門的識別信息，也可以根據存儲的信息方便地找到替換品
Set and protect proprietary info. Find correct replacement driver

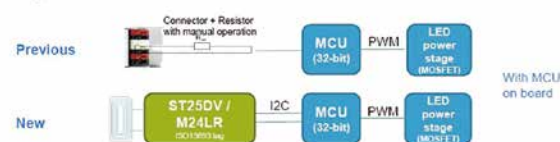
降低成本 Reduced cost:

- 可以滿足不同的客戶快速，方便地調整產品的輸出參數
Meet a diverse set of customer Easily adjust devices

應用範圍 Target Applications

- 智能照明控制 Intelligent lighting control

High-end segment



Low-end segment



智能電表電源 Smart Meter SMPS

方案特色 Features

以智能電表為基礎構建的智能計量系統，能夠支持智能電網對負荷管理、分散式電源接入、能源效率、電網調度、電力市場交易和減少排放等方面的要求，因此智能電表的應用越來越普遍，對智能電表所採用的電源的可靠性和性能的要求也越來越高，傳統的工頻變壓器已經很難勝任這一任務，然而ST最新開發的1050V耐壓的VIPER系列開關電源可以很好地勝任這個應用。

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.

應用範圍 Target Applications

- 單相/三相智能電表電源
Power supply for 1 and 3-phase smart energy meters
- 三相工業電器系統輔助電源 3-phase industrial systems
- 寬電壓大功率 Ultra-wide voltage range
- LED 照明電源 High power LED lighting
- 空調系統電源 Air conditioning

數字電源 Digital Power

方案特色 Features

- 數字控制，內置固件，無需編程
Digital control, Controller built-in firmware. No programming is required.
- PFC 部分 PFC section:
 - ▶ 斜坡增強固定導通時間，帶有高速和低速數字控制環路，雙環控制，極佳的 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 / 重載，@ 輕負載，@ 特別輕負載
Multi-mode operation @ medium / high loads, @ low load, @ very low load
- 半橋部分 Half bridge section:
 - ▶ LLC 或 LCC，電流模式，時間偏移控制，增強保護特性，可編程突發模式
LLC or LCC, current- mode operation, Time-shift control, Advanced protections, Programmable Burst mode
- FTP (NVM) 存儲器允許更改 IC 內部參數去滿足不同的應用場合包括在生產過程中
FTP (NVM) memory allows adapting the IC to different applications by programming several K-parameters during manufacturing

應用範圍 Target Applications

- 智能照明控制 Intelligent lighting control

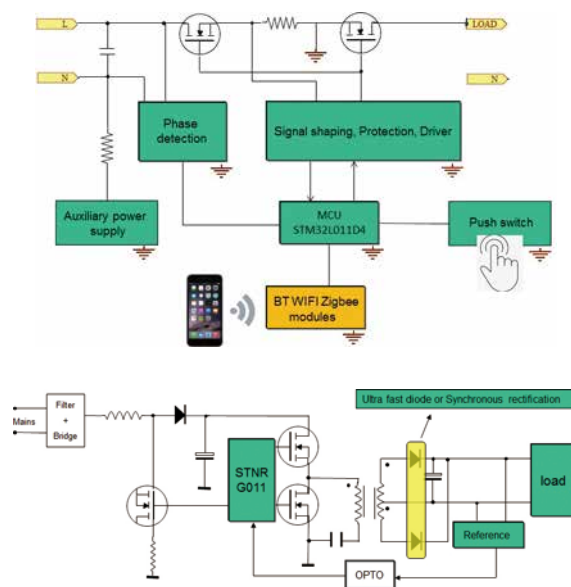
數字可編程調光器 Digital Programmable Dimmer

方案特色 Features

- MCU+MOSFET 拓撲結構，相容 R,L,C 負載
MCU+ MOSFET topology, Compatible with R, L, C loads
- 具備 UART 通信口，採用塗鴉智能的通信協議，相容 BT WIFI Zigbee 模組，可採用 App 操控
UART communication port available, Adopt TUYA communication protocol for BT WIFI Zigbee modules, App Control
- 可控化相位角設定，智能控制開機相位角，軟啟動
Programmable phase angle setting, Intelligent control of phase angle in start period, Soft start
- 具備 PUSH 開關遠距離操控功能
Push switch remote control function
- 全數位化，抗干擾能力強，具備各種保護
Digital control, Strong anti-interference capability and protection

應用範圍 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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