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South Africa.

### Wireless/IoT



Quectel is a global IoT solutions provider. As one of the leading providers of GSM/GPRS, UMTS/HSPA/LTE, GNSS modules with many years of extensive experience. A comprehensive product portfolio, strong R&D capability, matchless support services and global presence established our leadership position in the M2M marketplace.



matchless support services and global presence position in the M2M marketplace. 2G/3G Modules 4G Modules: LTE-A Automotive Modules LPWA Modules Smart Modules

4G Modules: LTE 5G Modules GNSS Modules Satellite Modules Wi-Fi Modules EVB Kits



EFR32xG27

DCDC Buck

Silicon Labs (NASDAQ: SLAB) is the leading innovator in low-power wireless connectivity, building embedded technology that connects devices and improves lives. Merging cutting-edge technology into the world's most highly integrated SoCs, Silicon Labs provides device makers with the solutions, support, and ecosystems needed to create advanced edge connectivity applications. Headquartered in Austin, Texas, Silicon Labs has operations in over 16 countries and is the trusted partner for innovative solutions in the smart home, industrial IoT, and smart cities markets.

#### Wireless:

Antennas

https://www.quectel.com/

- Wi-Fi SOCs
- Bluetooth SOCs & Modules
- Sub GHz + BLE SOCs
- Sub GHz SOCs & Modules
- Multiprotocol SOCs & Modules
- Sub GHz Transceivers
- Thread, Matter & Zigbee SOCs
- Wi-Sun SOCs & Modules

#### https://www.silabs.com/

Non-Wireless:

- MCU's
- Sensors
- Interfaces

SILICON LABS

- Power Management



Hexawave was founded in 1991, focusing on providing complete range of highfrequency and high-power RF ICs for 5G New Radio Power Amplifier, Low Noise Amplifier, and RF Switch MMIC solutions. Our product portfolio has diverse applications, including wireless connectivity, low earth orbit satellite, smart city and IoT products.

#### **Power Amplifier**

**GaN Power Device** 

https://hexawave.com/



GaAs RF Switch

### Wireless/IoT Cont....



ESP32-S2

Espressif Systems is a public multinational, fabless semiconductor company established in 2008. We have created the popular ESP8266, ESP32, ESP32-S, ESP32-C and ESP32-H series of chips, modules, and development boards.

#### SoCS:

- ESP32-S Series
- ESP32-C Series
- ESP32-H Series
- ESP32 Series
- ESP8266 Series

#### www.espressif.com



Shenzhen Hope Microelectronics Co., Ltd. ("HOPERF"), is a national high -tech

Modules:

- DevKlts
- Equipment



#### Wireless RF:

- Sub GHZ
- Matter
- 2.4GHZ
- LORA
- BLE

www.hoperf.com



enterprise which focuses on wireless RF chips and sensors.

Analog Devices & Signal Chain:

- Sensor
- Isolation Chip



Asian Creation Communication antenna factory is a Chinese antenna manufacturer with more than 20 years of experience in manufacturing RF antennas. Our mission is to solve difficult antenna issues for existing and next generation wireless standards. We provide standard and customized antennas to leading OEMs for Wi-Fi, LTE, GPS, Cellular, Radio Frequency Identification (RFID), Distributed Antenna Systems (DAS) and wireless Machine to Machine (M2M) applications and other wireless antenna technologies.



5G/CBRS Antennas 4G/LTE Antennas MIMO Antennas 4.9-6.4 GHz Antennas 3.3-3.8 GHz Antennas 2.3-2.7 GHz Antennas

**Combination Antennas** 

800-2100 Mhz Antennas

www.acantenna.com/



### Analog



Shanghai Chipanalog Microelectronics Co., Ltd. is a high-tech company focusing CHIPANALOG on R&D, design, and sales of high-end analog chips. The product portfolio involves Isolation, Interfaces, HPA, Driver and Power which is used in industrial and automotive electronics markets.



**Digital Isolators** 

**Isolated ADC/DAC** 

**Isolated Driver** 

**Isolated Amplifier** 



**Isolated DC-DC Isolated Interface Interface Transceivers** 

#### http://echipanalog.com/



Runic Technology is a fast-growing, innovative semiconductor design and manufacture company that focuses on general purpose and highperformance analog and mixed-signal ICs, including op-amps, comparators, analog switches, data converters, level shifters, little logic ICs, voltage references, LDOs, DC/DCs, load switches, reset ICs.



**Operational Amplifier** Analog Switch **Logic Translator Power Products** 

Comparator Interface **Voltage Reference Source Data Conversion** 

#### https://www.run-ic.com/en/



Monolithic Power Systems (MPS) is a high-performance analog semiconductor company.

- **Power Management**
- **Battery Management**
- Automotive (AECQ Grade)
- Inductors
- Analog

Motor Driver & Motor Controllers **Complete Solution Boards** 

https://www.monolithicpower.com/

Isolation

AC-DC

- **Power Modules**
- Class-D Audio
- **Data Converters**
- Sensors



### Semiconductors



GigaDevice Semiconductor Inc. (SSE Code: 603986) is a world-leading fabless supplier founded in April 2005 and headquartered in Beijing, China. GigaDevice is creating a chip ecosystem fusing computing, storage, and sensing, embracing the smart networked chip age. GigaDevice's core product lines are Flash memory, 32-bit general-purpose MCU, smart human-machine interaction sensors, analog products and solutions. GigaDevice's industry-proven products are renowned for high performance and low power consumption.

#### <u>Flash</u>

- SPI NOR Flash
- SPI NAND Flash
- Parallel NAND Flash

#### <u>Sensor</u>

- Touch Controller
- Fingerprint Recognition

#### <u>MCU</u>

- Arm Cortex M3 & M4
- Arm Cortex M23 & M33
- Arm Cortex M7
- RISC-V
- <u>Analog</u>
- PMIC
- Motor Driver
- Lithium Battery Management
- High performance Power IC

Diodes

Transistors

MOSFETS

#### www.gigadevice.com

Diotec manufactures and supplies a wide range of discrete semiconductor solutions. Rectifiers in power supplies, transistors for switching and signal processing or protective elements in various circuits.

Rectifiers

Regulators

Protection (TVS/ESD)

https://diotec.com/en/home.html



Quantum® is Efinix's key technology: an FPGA fabric arranged in a simple block-based format with interspersed columns of RAM and multipliers or DSP blocks. This fabric is designed to be process and fab agnostic, as well as compatible with a true SoC design flow. This scalable platform targets markets from intelligent edge devices to industrial automation to vision systems to edge servers and communications. The first-generation Trion® FPGAs are based on the patent-protected Quantum® architecture. This family gives customers access to this key new FPGA fabric, enabling edge applications or high-volume applications such as mobile and IoT that need devices that are optimized for small packages, low power, and volume.

Titanium FPGAs

Trion FPGA's

https://efinix.com



Topaz FPGAs







### Semiconductors Cont....



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-peas

We provide industry leading energy harvesting and processing solutions – AEMs & Microcontrollers – to give infinite battery life to your wireless device by increasing the amount of harvested energy and by drastically reducing the energy consumption of all power consuming blocks of the system.

**Ambient Energy Managers** 

Photovoltaic

Thermal

**Pulsed Intermittent Source** 



**Dual Source Harvesting** 

**Radio Frequency** 

Vibration

Microcontrollers

www.e-peas.com



NETSOL is a fabless IC design and marketing company established in 2010. They are leading the world in the next generation memory solutions, particularly in STT-MRAM. Their headquarters is in Gyeonggi-do, Korea. Armed with strong development capabilities, they provide customized/optimized memory solutions to a wide range of applications. Leveraging the expertise in designing low cost, small size, and low power consumption memory solutions, their products are widely applied in industrial automation, network system, medical, gaming, enterprise data centre and IoT devices.

STT-MRAM

https://netsol.co.kr/





Analog Power brings you a range of application-specific solutions for power management. Our wide selection of products includes N-Channel and P-Channel MOSFETs, with on-resistance as low as 1.5 m $\Omega$ , in packages such as DFN3x3-8, SO-8, lead-less SO-8 (exposed pad), Dpak and TO-220.



MOSFETs



#### https://www.analogpowerinc.com/index.html



GOFORD Semiconductor provides high quality Power mosfet semiconductor devices for consumer, industrial and Auto markets, including MOSFET, SIC MOSFET, GAN MOSFET, IGBT. Goford offers a comprehensive range of power MOSFETs, serving diverse industries, including the automotive market, with advanced and efficient packaging options.



#### MOSFET

- N channel MOSFET
- P channel MOSFET
- Dual MOSFET



SIC MOSFET

IGBT GaN MOSFET

https://www.gofordsemi.com/en/product.html

### **Optoelectronics**



Khatod produces optical components by injection moulding: optoelectronic devices for automotive, military, household appliance applications; lenses for industrial applications. As a result of an extensive R&D research, Khatod became the first manufacturer to engineer and produce silicone LED lenses.

- General LED Lighting Lenses Optical Systems for Mid Power LEDs Reflectors Lenses and Reflectors for UV LEDs
- Wide Area LED Lenses Silicone Lenses Lenses for IR LEDs Optoelectronic Component

https://www.khatod.com/en/



Luckylight Electronics Co., Ltd is a professional LED manufacturer and supplier, and provides a diverse product portfolio consisting of High Power LEDs, SMD Chip LEDs, Through Hole Lamp, Lighting Components, LED Lighting Modules, Digital Displays, backlighting module, and Infrared Components for various applications.

LED Lamps

LED Display

LED Light Bar

LED Light Bar

http://lucky-light.com/



SMD LED Lamps Dot Matrix LED Display Infrared Devices Infrared Devices

#### HARVATEK

Harvatek Corporation is a leading manufacturer of semiconductor chips and LEDs with a wide spectrum of applications. With the highest quality products, unparalleled customer service, and perpetual emphasis on innovation, Harvatek has become one of the world's most preferred LED suppliers.



Visible LED OD CSP

www.harvatek.com/en/





Orient Display is one of the world's leading touch panel and LCD (liquid crystal display) display manufacturers in the flat panel industry, offering display technology solutions and support in off the shelf or full custom designs for monochrome passive LCD display, LCD module, active color TFT LCD display, OLED display, passive OLED display (PMOLED) and capacitive touch panels.



TFT Displays

LCD Displays

Custom LCD Displays

https://www.orientdisplay.com/



Embedded TFT Modules

**OLED** Displays

### **Optoelectronics** Cont....



At Riverdi we focus on solutions. Both our custom and off-the-shelf displays are designed and manufactured in our headquarters in Europe, from components sourced from across the world — including the latest glass technologies only available in Asian markets. By keeping a large inventory of components, we can offer short lead times and flexible minimum order quantities.



#### STM32 Embedded Displays

RCG, LVDS, MIPI DSI LCD Displays

#### **E-Paper Modules**

Accessories



Intelligent Displays **HDMI** Displays **Evaluation Boards** 

**EVT Intelligent Displays** 

https://riverdi.com/



Established in 1998, WINSTAR Display Co. Ltd has devoted itself to the manufacturing and development of high-quality products for the Industrial LCD Displays including monochrome TN/STN/FSTN LCM, COG LCD, VATN-LCD, TFT LCD, OLED display modules and System Integrated Solutions.

#### **TFT LCD**

Smart Display

**Character LCD** 



**OLED Module** Graphic LCD COG LCD **FSC LCD** 



VATN LCD System Integration

#### https://www.winstar.com.tw/



MULTI-INNO Technology Co., Ltd. is a Hong Kong based company with factories in China mainland. We are one of the pioneering technology-intensive service companies for touch display module products and complete panel solutions. Our core business covers the products of display (LCDs, OLEDs), Touch Panel and Keypad.



Standard Character LCD **Standard TFT Modules** Sunlight Readable TFT Modules

http://www.multi-inno.com/



Standard Graphic LCM **HDMI TFT Modules LED Modules** 

### Passive/Electromechanical



Antenk Electronics Co., LTD., is a well-known professional Connector and Cable Assembly manufacturer, integrating mould development, production, and sales. The company's products are in line with the European Union ROHS and REACH environmental protection requirements, most of the products are UL certificated.

PCB Connectors

Battery Holders



**Rectangular I/O Connectors** 

**Male Pin Headers** 

Combo Power D-sub Connectors

https://www.antenk.com/

Wire to Board Connectors Battery Connectors Circular I/O Connector Female Pin Headers IC Socket Connectors



CAP-XX is a world leader in the design and manufacture of thin, flat supercapacitors and energy management systems used in portable and smallscale electronic devices. The unique feature of CAP-XX supercapacitors is their very high-power density and high energy storage capacity in a space-efficient prismatic package.

Prismatic Ultra-thin Supercaps

Large Supercaps (350F – 3000F)

Small Cylindrical Supercaps

Coin Cell Supercaps (0.1F – 1.5F)

CAP.X CAP.X

Li-Ion / Hybrid Supercaps

**Truck Start Modules** 

www.cap-xx.com



**ZROCORE** 



Erocore was established in 1997 and the main products are SMD (Surface Mount) Power Inductors, Common Mode Choke & Filter, Wire Wound Coil & Inductors, Multilayer Chip Bead, Torodial Inductor, Radial & Axial Inductor, Ferrite Core, etc.



**RF Wire Wound Inductor** 

Coil & Chokes

EMI MnZn Ferrite Core

www.core.com.tw





Taimag was established in 1977 and designs and manufactures network-related parts. The main products of Taimag include, network transformers (filters), network connectors RJ-45, pulse transformers, DC-DC transformers, etc.



**Ethernet Transformers** 





**RJ45 Magnetic Jack** 

### Passive/Electromechanical Cont....



Link-pp is a global supplier of magnetic telecom, networking components and optical transceiver modules. Our products are widely used in networking and communication equipment such as HUB, PC card, Switch, Router, PC Main Board, SH, PDH. IP Phone, xDSL modem.

#### **RJ45** Connector with or without Magnetics

**Optical Transceivers** 

**Discrete Magnetic Transformers** 



#### www.link-pp.com



SHENZHEN MUP INDUSTRIAL CO., LTD. specialises in the development and production of Smart card connector, SIM card connector, Memory card connector, USB C connector, Micro USB connector, Mini USB connectors A connector, HDMI connector, FPC/FFC connector, BTB,RF connector, Battery connector, Spring connector,RJ series , POGO PIN and other precision connectors.

**Smart Card Connector** 

Micro USB FFC/FPC Connector Spring Hardware Sharpnel OBD USB TYPE C HDMI Connector Battery Connector PCMCIA Memory Card Connector USB RF Series SMA/SMB RF Connector Sim Card Connector Mini USB BTB Connector RJ Connector

https://www.mupconnector.com/mobile



Würth Elektronik is one of the leading manufacturers of electronic and electromechanical components in Europe. The product portfolio includes EMC components, capacitors, inductors, RF inductors and LTCC components, transformers, components for circuit protection, power modules, LEDs, connectors, switches, power elements in press-fit technology and assembly technique.



Passive Components Power Modules (MAGI'C Series)

Thermal Management

Electromechanical Components

Wireless Connectivity & Sensors

https://www.we-online.com/en

**Digital Isolators** 

Optoelectronics

Automotive



### Passive/Electromechanical Cont....



"Yoketan" is a leading manufacturing service for high performance frequency components. Our main products include Crystal Resonator, Crystal Oscillator and Crystal Filter, which are widely used in the field of wire and wireless telecommunication (GSM, PHS, Transceivers, DSC, GPS, RF Remote Controls, TV sets, Computers, etc.

Crystals

тсхо



**Crystal Oscillator** 



The Aihua Group, established in 1985, is a publicly listed as a technology enterprise group focused on the design, development, manufacturing, and sales of aluminium electrolytic capacitors as well as the manufacturing of aluminium foil and machines. The Aihua Group's manufacturing facilities are in Sichuan, Jiangsu, Hunan and Xinjiang.



Radial Leaded

Surface Mount

Snap In

**Screw Terminal** 

https://www.aishi.com/

**Radial Polymer** 

**SMT** Polymer



Metallized Polypropylene capacitors

**Multi-layer Polymer** 



In the 25 years since its establishment, Amtek Technology Co., LTD. has evolved into a leading worldwide professional manufacturer of various connectors. Our connectors are furnished in a wide variety of styles and configurations to suit any design requirements. In addition to standard ranges, custom-built connectors can be designed, developed, and manufactured to meet customers' individual requirements.



**Board-to-Board Connectors Board-to-Wire Connectors** 

**Header and Socket** 

**FPC/FFC** 

**IO Connector** 

**RF** Connector

**USB** Series

Card Edge PCI

Mini PCI

https://www.amtek-co.com.tw/

**IC Carrier** Modular Jack & Plug Din41612 Connectors Switch **Terminal Block** PCB Terminal Hood Shielded Case **PiFa Antennas DDR 3 & 4** 

## Passive/Electromechanical



Hongda Capacitors<sup>®</sup>

‡Hī

Dongguan Better Electronics Technology Co. Ltd. was established in 2003. The company is positioned as a comprehensive circuit protection component manufacturer and solution consultant and has now become a leading brand in the fuse industry in China. The company focuses on mid-to-high-end electronics and power circuit protection components and focuses on product research and development and innovation.

**Overcurrent Protection Fuses** 

**Overvoltage Protection** 

**Multiple Protection** 

https://www.betterfuse.com

**Fuse Accessories** 

**OT Thermal Protectors** 

Hongda Capacitors are manufacturers of capacitors since 1999. High energy tantalum and polymer capacitors are used for automotive, consumer electronics and industrial applications. We are ISO9001:2015 and IATF16949 certified factory.

High Q Multilayer Ceramic Capacitors MLCC

Polymer and Radial Electrolytic Capacitors

**Tantalum Hybrid Capacitors** 

**Tantalum Capacitors** 

**SMD Electrolytic Capacitors** 

Chip Inductors and Beads

https://hongdacap.com.hk/

Chip Ceramic Capacitors SMD Resistors



### **Power Supplies/Batteries**



ECCO electronics technology Co. Ltd, was established in 2005, focus on R & D and manufacture DC/DC converters, AC/DC converters, and PV power supply in China.

**DC-DC Converter** 

**Telecom Ring Generator** 

Photovoltaic (PV) Power Supply



Railway Power Supply



www.eccoelec.com

Custom Designs

**AC-DC Converter** 

# Power Supplies/Batteries



Located in Changzhou Jiangsu China, HGPOWER focuses on power supply development and production for all kinds of power supplies, battery chargers and LED drivers.

**Battery Charger** 

DIN Rail



LED Driver

Adapter

Custom Design ODM & OEM



YiLink Energy has been in operation in the general battery business since 2004 and its lithium battery production facilities have been in operation since 2013. YiLink Energy uses only brand-new certified Grade A prismatic cells, these cells are manufactured by Gangfeng, one of the largest battery cell manufacturers in China. YiLink claims a 0% cell failure rate over the past 3 years.



**YiLiNK** 

LiFePO4 Solar Batteries

Switching Power Supply

http://en.hgpower.com/



https://www.yilink-energy.com/

### Industrial SSD & NAND



As NAND Flash Manufacturers, Flexxon is the leading brand to design, manufacture, and retail industrial NAND flash storage and memory devices. Our key emphasis is to provide top-notch memory solutions ensuring the highest level of data security. We have a range of versatile compact memory storage solutions to serve every sector; specifically, the CYBERSECURITY, INDUSTRIAL, MEDICAL & AUTOMOTIVE (CIMA) applications.





Industrial NAND Flash Manufacturers & NAND Storage Devices