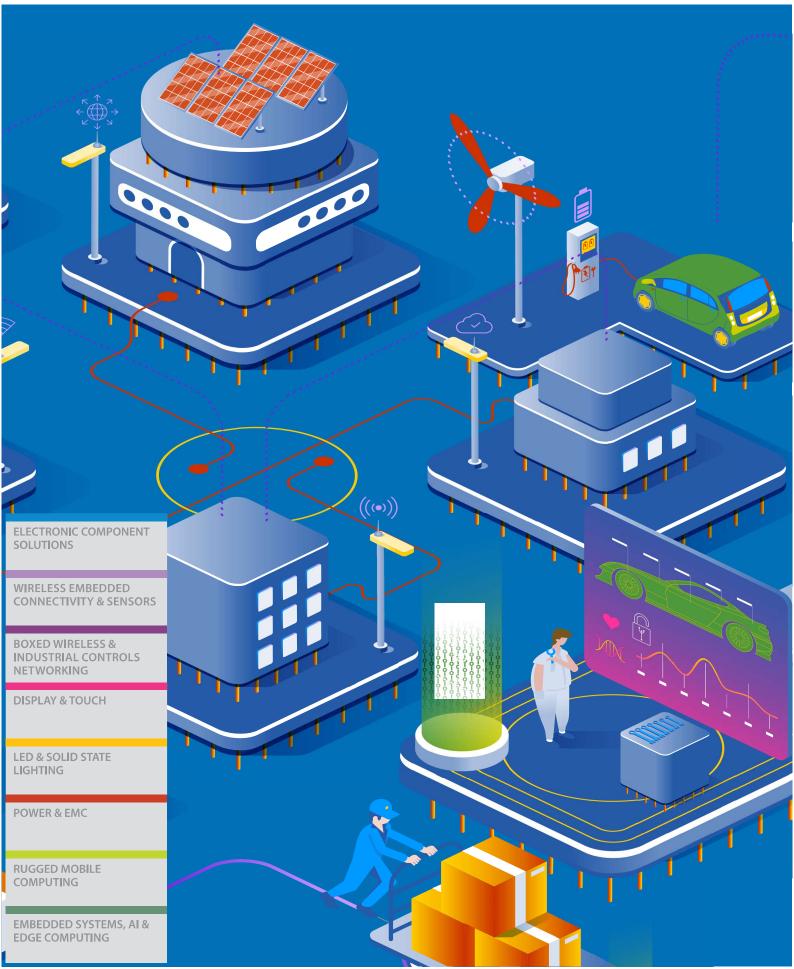


Specialism, knowledge and design-in expertise



# **ABOUT ALCOM**

## Bridging the gap between technology, people and business with a human interface

Alcom electronics is the leading "technical distributor/stocking rep and manufacturers' representative" for Electronic Component Solutions, Wireless Embedded Connectivity & Sensors, Boxed Wireless & Industrial Controls Networking, Display & Touch, Led & Solid State Lighting, Power & EMC, Rugged Mobile Computing and Embedded Systems, AI & Edge computing. We combine multiple product groups and matching advanced technologies fitting the end application of our customers.

Alcom electronics proudly represent the companies on our line-card in a true partnership by providing manufacturer certified technical sales and application engineers. This guarantees our business partners to meet solution-driven, technical competent and enthusiastic people supporting our customers with specialism, knowledge and design-in expertise from the ground up at Alcom.

We create value from component, module, board or system-level by presenting unique and scalable solutions that are leading the way into the 4th industrial revolution.

Alcom electronics differentiates itself with all round services based on technical competence and know-how starting at the customers' design-phase of a new design concept. We offer on-demand and flexible customer-specific logistics including cost-efficient worldwide supply chain management and focus on availability, longevity and price-performance competitiveness.

Alcom is the right organization for electronics professionals in R&D, development purchasing and logistics roles. A knowledgeable and dedicated team of 50 people are driving and servicing a wide variety of customers either OEM, big, small or start-ups active in diverse vertical market segments and applications.

We emphasize on a personal support and sustainable relationships at human scale supporting the local "make-industry".



#### PROVIDED ADDITIONAL SERVICES

- Accessories to complement the key building blocks of a strategic component, module, board, display power or embedded system
- Worldwide A-Z product sourcing with focus on hard-to-get and EoL products
- Firmware updates, device programming
- Configuration of customized display and embedded system solutions
- Display & embedded kit or system-solution production and assembly

#### Let's connect

We invite all our customers and interested people and companies to connect and to stay in touch about the latest innovations, advanced technologies, future roadmaps and what is going on at Alcom electronics via personalized customer and supplier meetings, customer in-house seminars, exhibitions, social media, website, webinars and encourage to subscribe for:

#### MONTHLY TIPS 4 DESIGNERS

The latest innovations bundles monthly by seperate publications:

- Semiconductors, wireless & sensors
- Passives, e-mech, power & EMC
- Boxed wireless & industrial networking
- Displays, boards & systems
- LED & Solid State Lighting
- Rugged Mobile Computing



FEATURED TECHNOLOGY/SUPPLIER/APPLICATION

A monthly newsletter featuring a new or specific manufacturer, application, technology or product category.



## Let's meet and collaborate

Every person or company is welcome at Alcom.

The Alcom electronics qualified sales team is always at your disposal to meet with its guests, either friends or business partners- virtual or live.

We love meeting our business partners in person and are glad to serve our visitors a fresh cup of coffee.

#### ALCOM BELGIUM

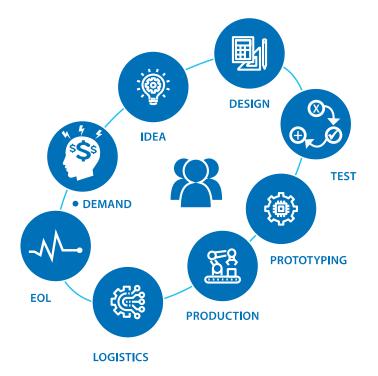
Alcom electronics nv/sa Singel 3 2550 Kontich, Belgium Tel: +32 (0)3 458 30 33 Email: info@alcom.be www.alcom.be ALCOM THE NETHERLANDS Alcom Electronics B.V. Rivium 1e straat 52 2909 LE Capelle a/d IJssel, The Netherlands Tel: +31 (0)10 288 25 00 Email: info@alcom.nl www.alcom.nl





## **Co-creation starts here**





Alcom considers everybody an indispensable added value in the collaborative chain with all of its partners.

**Components selection is one of the most crucial and challenging aspects of the electronic system design** 

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# **ELECTRONIC COMPONENT SOLUTIONS**

# **Semiconductors**



### Audio, video, multimedia

- Music & voice, audio, video, broadcasting ICs
- Connectivity solutions for long-reach, high resolution video driving HDBaseT and MIPI A-PHY standards.
- Audio SOCs; ISD Chipcorders for voice, audio recording and playback
- Audio CODECs; ADCs; DACs; Voiceband CODECs
- Audio amplifiers; audio & speech controllers
- Miniature & Vehicle speakers



#### Interface & Network ICs

- USB host & bridging solutions, USB development modules & cable solutions, Embedded Ethernet, EtherCAT, MotionNet, ISDN line interfaces, network controllers, PCle
- RS-232/RS-422/RS-485/LVDS/I2C/Profibus/CAN/LIN ICs
- Isolated Interface ; ISO-RS485/RS422; CAN; I2C; DI/DO
- Digital isolators , I/O expansion ICs
- LCD controllers & drivers, HMI display ICs, Embedded video engines
- Display power LED/RGB LED/LED Backlight Drivers & LCD Bias Supply
- Touch, proximity & gesture
- RFID/NFC



### **Memory ICs & modules**

- Parallel NOR and NAND Flash/SPI NOR and NAND Flash, I<sup>2</sup>C Eeprom, DDR Dram & Sync Dram, LP SRAM, OTP memories
- DRAM Modules SDRAM, DDR1/2/3/4/5
- NAND Flash Modules eMMC, PATA/CF, SATA, SD, microSD, USB

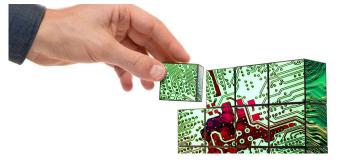
#### Analog, mixed signal & sensor ICs

- ADC/DAC-Isolated ADCs, mixed signal, precision analog & interface
- Linear & Amplifiers; Isolated Amplifiers
- Analog signal processors
- Analog & digital isolators
- Isolated standard and smart Drivers
- Magnetoresistance based products including sensors, isolator and power
   Intelligent sensors-biometric, humidity, magnetic, optical, proximity, light, temperature, thermocouple, position, pressure, current, angular position, vibration & accelerometers
- Image & TOF sensors



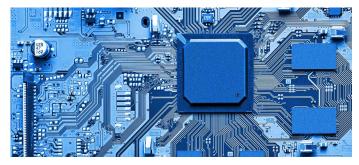
#### Active circuit protection

- Overvoltage & Protection ICs, USB data line protection ICs, EMI/ESD Suppression
- TVS arrays, Steering Diodes, Thyristor Surge suppressors, TVS Diode Arrays
- Polysurg ESD suppressors, Varistors-MLV/MOV/MOVTP/MOVGT, Automotive rated products



### Microcontroller, microprocessors

- Microcontrollers & Microprocessors 4-32 bit; Proprietary and ARM Cortex Cores; RISC-V; DSP's, Interface, peripheral & connectivity MCU's
- MCU/MPU Starter kits, development boards & tools
- IoT Silicon, software and tools for protocols incl Bluetooth, Wi-Fi, Wi-Sun, Zigbee, Z-Wave, Thread, Matter, Amazon Sidewalk and proprietary.
- Identity provisioning for secure IoT infrastructures
  Secure elements, smart card products and open ARM platforms for
- security applications, Managed PKI to secure IoT devices



## **Semiconductors**



### **Timing & frequency control**

- kHz, & MHz SMD/THT Quartz Crystals
- Quartz Crystal oscillators uPower/ultra low power/programmable
- MEMS timing-oscillator, clock and resonator products
- Real time clock modules
- Jitter Cleaners/Network Synchronizers
- Clock buffers, clock generators
- VCXO, VCTCXO, SPXO, LPXO, TCXO, OCXO
- · Spread spectrum, high temperature, automotive oscillators
- Ceramic resonators, SAW resonators products & Filters
- 1U/3U rack mounting & DIN-rail high precision time servers



#### Power management ICs

- AC/DC & DC/DC power management
- · PMIC, LDO, supervisory, reset & battery monitoring management,
- Single & multiple output power modules with integrated inductor
- Moulded inductors supporting power management ICs
- USB, Load & Analog switches, e-fuses
- High & Low voltage switches
- MOSFET drivers, Power switches & modules
- Wireless charging components and modules
- Isolated DC/DC Converters & Modules

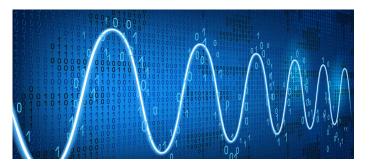


## Power semiconductors & modules

- Diodes, rectifiers, power MOSFET & JFETs, thyristors
- Power modules with integrated inductors
- IGBT drivers & SIC driver DC/DC converters
- Wireless power modules

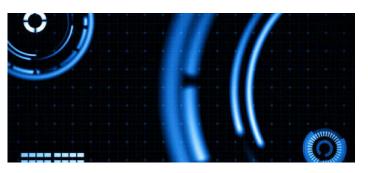
## Programmable logic, ASIC, ASSP

- Small & medium density FPGA's, Arora (V) SRam & Littlebee Flash based FPGA's
- Bridge ASSP between USB & SPI, JTAG, I<sup>2</sup>C, GPIO and UART
- ASIC solutions-gate arrays, embedded arrays, standard cells
- Starter kits and development tools
- EDA integrated design tools from design entry to verification



#### **Motion/motor control**

- DC Motor drivers, stepper motor and lens motor drivers; non-isolated Gate Drivers
- Motor Drivers & Controllers; 3 phase BLDC Motor controllers
- Smart motor modules
- Robot and motor drive technology including e-mobility



#### **PoE power management modules**

- PoE PD & PSE ICs & integrated modules
- High power PoE transformers
- PoE systems including injectors/midspan and switches



# Timing, electromechanical, connectors & cooling

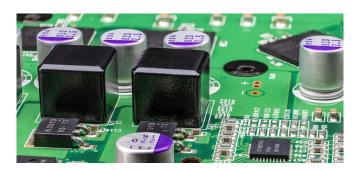


## **Capacitors & resistors**

- Tantalum, Chip Ceramic & MLCC, film,
- Polymer-Radial-SMD-Aluminum Electrolytic
- · Double layer supercapacitors & supercapacitor modules
- Resistors & thermistors

#### Light & optical sensors

- Silicon, InGaAs & GaAs photodiodes
- Laser Diodes-Detectors, Emitters, High Power Pulsed, InGAAs APD/PIN modules &, modules
- Light sensing (customized) solutions





#### **Magnetics, inductors & transformers**

- Chip/surface mount/DIP, high power inductors & ferrite beads
- Common-mode & differential mode chokes, magnetic cores, bobbins
- RF & Signal Inductors
- Ethernet magnetics & connector modules
- Low & high frequency transformers, signal transformers
- Battery Management system magnetics, Automotive magnetics
- Gate drive/current sensors/planar transformers
- Space, MIL and high-rel magnetics
- EMI & RFI Filters



## Cable assemblies & cords

- Inlet/outlet/cord connectors & cord sets
- Cable assemblies-RF, circular, USB, ethernet, SATA, HDMI, board to wire, LVDS,...
- USB cable assemblies-USB RS232/RS 422/RS 485/TTL cable series
- Custom cable assemblies
- Network Cables RJ45 Cat 5e/Cat6/Cat 6A
- LED Connectors Cable Assembly
- Coaxial cable assemblies, Machine vision and camera link cables
- High speed transmission cable assemblies, Specialized vehicle harnesses

#### **Circuit protection**

- Overvoltage & Protection ICs, EMI/ESD Suppression
- TVS arrays, Steering Diodes, Thyristor Surge suppressos
- Polysurg ESD suppressors, Varistors-MLV/MOV/MOVTP/MOVGT, Automotive rated products
- Fuses, efuses, PTC, thermofuses, fuse-holders/blocks/clips
- Thermal circuit breakers and accessories; voltage selectors
- Multi-discrete modules & power modules



#### Connectors

- PCB-board to board, headers & sockets, wire to board, IC sockets, plugs & jacks
- PCB card-mPCle, M.2, mPCl, MXM, SO DIMM, SIM Card, COMe, cPCl, PC/104, Pogo pins, battery connectors, terminal blocks
- D-Sub incl filtered & mixed combi D, hoods & accessories & customized solutions, I/O; sealed I/O, circular M5/M8/M12/M23, RF, optical, waterproof connectors
- DIN41612, highspeed backplane, VPX, VME-bus, advanced TCA
- Power entry modules without filter, IEC power distribution units
- Automotive & machine vision/camera link connectors



## **ELECTRONIC COMPONENT SOLUTIONS**

# **Connectors & cables**

## **Thermal management**

- Thermal Pads/Pastes/GreasesTapes/Gap fillers
- Insulator materials
  Axial/blower DC, AC and EC Fans, Blowers and accessories
- DC chip coolers
- Thermal modules, Heatsinks and liquid cool products





### All-in-one mechanical solutions

- Complete HMI solutions including display, electronics and housing
   Sub assemblies & multi process assemblies
- One-stop assemblies of multiple parts mechanical & electronics
   Aluminium extrusion-plastic injection-precision machining-die casting-metal stamping-die cutting-surface treatment-busbars-cold plates-emi

## KEY PARTNERS

A 3PEAK	Memory IC's and More		ASIX.	Const to the Second	<b>Bridgetek</b>	Central Semiconductor Corp.	CHIPANALOG
Cologne Chip	DAPU	DELIRON CONNECT 2 CUSTOMIZE	FAT•N	<b>Elec &amp; Ellek</b> 版酬安選 # # # # # # #	EPSON <sup>®</sup> EXCEED YOUR VISION	ept	<b>FTDI</b> Chip
FUANTRONICS	GigaDevice	Golledge	GO₩IN	HOLTEK	Hongda Capacitors®	нтк	INRC@RE
	kinetic technologies	LinkCom Manufacturing Co., Ltd.	Lipoly	MPS	NIC Components Corp.	ηυνοΤοη	
	PROJEK DEVICES	Pulse Electronics			SILICON LABS	<u>Si</u> Time <sup>-</sup>	<b>SRX</b> tronic
TANNURA	TAOGLAS.	Valens	W+P PRODUCTS weber+partner GmbH	:WTL			



# WIRELESS EMBEDDED CONNECTIVITY & SENSORS

# Wireless embedded connectivity & sensors



## Industrial embedded communication

- 5G/4G/3G/2G/GNSS
- Matter, Bluetooth, BLE, Thread, Zigbee, Z-Wave, Wi-Fi, Sub-Ghz multiprotocol and proprietary ICs and modules
- SBCs with integrated wireless



#### **Sensors**

- . Solid State Ultra-Low power CO2 gas sensors
- Humidity, light, magnetic, optical, temperature, vibration, angular • position, magnetic hall effect sensors, current sensors,
- Vibration Gyro sensors, inertial measurement, accelerometer,
- Piezo and ultrasonic transducers
- LoRaWAN wireless IoT sensors
- mmWave presence detection and sensing •



#### **KEY PARTNERS**

## Antennas

- Embedded & external antenna's
- Cellular, mmWave, Sub 6 GHz, GNSS, WiFl, Bluetooth & NFC, combo, ISM/ LoRa, UWB, Satcom,...
- In-building/outdoor & vehicular antennas
- Standard & Custom configured solutions
- Manufacturer-approved antenna solutions for each router or module
- RF Cables & connectors, Assemblies, accessories & mounts



## Managed IoT connectivity and services

- Full hardware and cellular connectivity solution sets
- IoT connectivity management for remote smart Connected products
- Edge-to-Cloud solutions for connecting industrial assets
- IoT device monitoring and cloud services
- Device configuration and programming
- Secure connected industrial devices
- Test and certification support services



#### Wireless connectivity SoC's & modules

- WiFi, Bluetooth, Lora, Zigbee, Sub-Ghz, Cellular, proprietary, Sigfox, Matter, Thread, Wi-SUN, Z-Wave, multiprotocol as SoC and/or module
- XBee cellular modems and RF wireless modules for 2.4 Ghz & Sub-1GHz
- WiFi 5 802.11ac/WiFi /6E 802.11ax/Wi-Fi 7 802.11be modules
- 5G/LTE-A/LTE-A Pro/LTE Cat1/Cat M, NB-IoT, 3G,2G wireless modules
- Cellular embedded modems
- Automotive-grade 5G, C-V2X, LTE Cat 6/Cat 4 modules
- GNSS repeaters & positioning modules, trackers & receivers





**BOXED WIRELESS & INDUSTRIAL CONTROLS NETWORKING** 

## **BOXED WIRELESS & INDUSTRIAL CONTROLS NETWORKING**

# Boxed wireless & industrial controls networking



## Industrial control networking

- Rackmount & DIN-Rail Managed/Unmanaged multiport Ethernet switches with or w/o PoE
- EN60155 Ethernet switches
- Serial and USB-connectivity, protocol switches, fieldbus gateways
- Media converters
- Wired RS-232, RS-422, RS-485, Ethernet and CAN solutions
- Network Management Software
- Time synchronization products



## Managed IoT connectivity and services

- Scalable system-on-modules and gateways including cellular connectivity
- IoT device monitoring of devices and data points
- Edge-to-Cloud solutions for connecting industrial assets
- IoT device monitoring and cloud services
   Edge-to-cloud solution services
- Edge-to-cloud solution services

#### Antennas

- Embedded/external/in-building/outdoor & vehicle mount antennas
- Cellular, mmWave, GNSS, WiFI, Bluetooth & NFC, combo, LPWA & ISM, Satcom,...
- Custom configured solutions
- Manufacturer-approved antenna solutions for each router or module
- Cables, connectors, accessories & mounts



## Industrial wireless & cellular

- Modems, routers and gateways
- Enterprise, industrial, transportation, vehicle routers
- Gateways for specific markets such as renewable energy & metering
- Wireless LAN access point
- Short-range wireless-Bluetooth, LoRa, Zigbee, ISM,...
- IoT platforms for easy management, monitoring and control
  Complete offerings including antennas, device management and support
- packages





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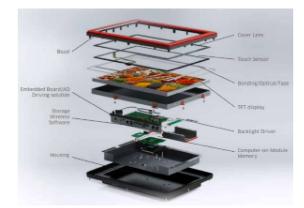
**DISPLAY & TOUCH** 

# **Display & touch**



#### Input systems

- Complete HMI solutions incl input system, display, electronics and housing
- · Standard and customized front panels & touch solutions
- PCAP, resistive, IR, SAW touchscreens
- EMI shield windows for TFT modules
- Open frame monitors
- Capacitive switches
- Membrane switches



#### **Touchscreen technologies**

- Resistive/P-cap/infrared and SAW touch
- Optical bonding and assembly of display and touchscreen
- Touch screen controllers
- Capacitive touch switches, sliders and/or wheels
- Custom-configured display & touch integration
- Customized cover glass



### **KEY PARTNERS**

# e-Paper - OLED - VFD - LCM

- Standard & customized monochrome character/graphic LCD displays
- Intelligent displays with RS-232, SPI and I<sup>2</sup>C
  - VFD displays and modules
- OLED graphic and character display modules
- Mono and color ePaper displays up to 42"
- Controller boards and embedded system solutions for public displays and healthcare



#### **TFT-LCD displays**

- Standard & modified or enhanced TFT Mono & color displays
- Small, medium, large industrial & public information displays
- Curved/outdoor/stretched bar/square and round displays
- High brightness, high resolution, wide view & wide temperature displays
- Sunlight readable displays
- Smart interactive displays
- Automotive, In-vehicle, Medical, Marine displays
- GUI Design Tool supported PCAP TFT Modules Display driving boards, cables, accessories and value-add panel integration
- Customized display kits & complete solutions
- IC display controllers



#### **Total Touch solutions**

- Aqua-proof & outdoor PCAP touch
- Optical Bonding Technology
- 3 in 1 PCAP Touch solutions
- Resistive Multi touch
- Open frame touch monitors
- Coating Solutions



Light is perception, generates inspiration and intensifies emotion

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**LED & SOLID STATE LIGHTING** 

## LED & SOLID STATE LIGHTING

# LED & solid state lighting



## **LED light sources**

- LED light sources- Chip-on-Board (CoB) arrays for lighting markets
- UV, IR, horticulture, specialty white, dynamic COB LEDs
- SMD, lamp & 7 segment displays
- LED modules & subsystems

#### LED ecosystem support & solutions

- LED heatsinks, heatpipes, liquid cooling
- Optics, holders and connectors
- LED power drivers & power-to-light solutions
- Smart driving controllers
- LED controllers & IC drivers
- LED lighting backlight, illumination & signalling, monitoring, supervision
- AC/DC non-isolated/isolated & LED lighting



#### **LED power drivers & controls**

- Programmable LED power-constant current; constant power; constant voltage
- Standard and smart outdoor/indoor LED power drivers
- Power-to-light solutions
- DC powered LED drivers
- Light management by voice command
- Wireless and smart intelligent control and dimming
- Flush mount solutions

## **LED strips**

- Linear and square modules
- Strips for indoor/outdoor usage
- 12/24/48VDC & 230VAC LED strips
- Dot-free and COB LED strips
- Human centric, dim to warm and tuneable white LED strips
- RGB and RGBW LED strips
- Consumer & industrial vertical market-specific lighting LED strips
- Matching dimmable or non-dimmable CV drivers in different form factors with optional PIR sensors.
- LED strip accessories

#### **KEY PARTNERS**



APEX	bridgelux.	cooliance	CUVÉE	FRIWO	HERCULUX	INVENTRONICS	<b>ICT</b> light
LEDIL	LinkCom Manufacturing Co., Ltd.	C LUMINUS	MOSO®		SNAPPY KNOW HOW, NO LIMITS.		

Balancing the essential power solution between performance, reliability and cost

"

**POWER & EMC** 

## **Power conversion & batteries**



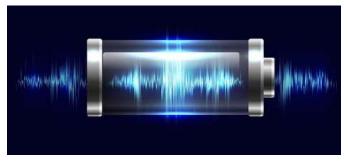
#### Power solutions >1000 Watt

- Modular high density configurable and conduction cooled power supplies up to 1200W
- Coolant power supplies providing conduction, convection, air and liquid cooling
- Power distribution units



#### **DC/AC inverters**

- Medical-grade UPS systems
- UPS for residence, retail, edge computing, server rooms, cloud & datacenter infrastructure
- MilQor military-grade UPS



#### **Battery chargers**

- Battery management ICs
- Compact interchangeable AC-plug & desktop chargers
- · Intelligent eco-friendly battery charge modules
- Battery chargers for lead acid and lithium-ion batteries
- E-Mobility converters including on board DC/DC, OBC and OBC + DC/ DC combo's

## **AC/DC power supplies**

- Open frame, Enclosed, encapsulated, board mount, din rail, rack mount, HiRel and MIL-COTS
- External plug-in adapters; desktop,wall-mount, flush-mount and USB power supplies
- Industrial, ITE, household, gaming, medical, MIL, aero- approved power
- Standard/modular/configurable & customer-specific power
   Military power systems-rackmount, VPX, configurable
- Military pow
  LED power



#### **DC/DC converters**

- Open frame, enclosed, encapsulated, board mount, external, rack mount
- DC/DCs for general industrial, data & telecom, pv, medical and rail
- Brick DC/DC Converters
- Low stand-by power modules
- Isolated & non-isolated DC/DC converters
- Power modules with integrated inductors
- Power management ICs
- DC/DC Conduction cooled converters
- Hi-Rel & MIL-COTS converters & filters



#### **Batteries**

- Lithium, silver oxide & tabbed lithium coin cells
- Rechargeable lithium and lithium-lon polymer batteries
- Thin-film batteries
- Battery holders and hearing aids
- Battery packs & Battery Management Systems
- Driving solutions for e-mobility

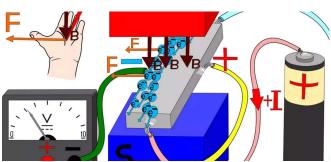


# Magnetics, transformers & EMC



#### Magnetics, inductors & choke coils

- Chip/surface mount/DIP, high power inductors & ferrite beads
- Common-mode & storage chokes, magnetic cores, bobbins and plastic parts
- Active and noise filters
- Telecom, broadband, LAN magnetics & connector modules
- RF Magnetics
- Low & high frequency transformers
- BMS transformers, data bus couplers, delay lines
- Automotive magnetics
- Space, MIL, Aerospace and high-rel magnetics



#### **EMC/EMI/RFI filters**

- EMI and RFI filter components
- Suppression components including capacitors, coils, transformers and HF chokes
- Power entry modules with filter, single and 3-phase block filters
- EMI shield windows for TFT modules
- Custom RF Shielding cases
- Avionics Line filters & PFC modules



#### Transformers

- PCB & flat laminated transformers
- AC/DC power modules for PCB mounting
- Single/three-phase mains transformers
- Toroidal transformers
- Linear, Telecom, Audio transformers
- Planar Transformers
- Water cooling Ultra large size reactors
- Ultra large size power transformers/reactors



#### **Current & hall effect sensors**

- Hall effect current sensors
- Hall effect linear current sensors ICs
- Current sense magnetics & transformers



#### Wireless charging

- Wireless power transceiver, receiver and transmitter modules
- Wireless charger Tx/Rx flash MCU's
- Inductive charging
- Qi2 Wireless Charger
- Wireless Coils and coil modules

## POWER & EMC

# Power semi, -components & -modules

## Power semiconductors & modules

- Diodes, rectifiers, power MOSFET & JFETs, thyristors
- Power modules with integrated inductors
   Cate Driver medules for SC//CDT
- Gate Driver modules for SiC/IGBTs





#### **Circuit protection & discrete semiconductors**

- Diodes, rectifiers, transistors, MOSFETs, GaN JFETs, thyristors
- TVS diodes & ESD suppressors, avalanche breakdown diodes, steering
- diode TVS, high power TVS, PPTC devices, multilayer varistors & MOVs • Fuses, resettable fuses, thermofuses, fuseholders, fuse blocks & clips
- Fuses, reservable fuses, thermoloses, fuse block
   Thermal circuit breakers and accessories; voltage selectors
- Multi-discrete modules & power modules
- Hi-Rel, Mil and Spacelite components

#### Power management ICs

- AC/DC & DC/DC power management
- PMIC, LDO, supvervisory & power management
- Single & multiple output power modules with integrated inductor
- Semi-shielded, molded inductors supporting power management ICs
- Automotive buck, boost, PMIC, linear regulators
- LED lighting automotive backlight, illumination & signalling, monitoring, supervision
- Power switches & modules
- Transient voltage suppressors



#### **PoE power management modules**

- PoE PD & PSE ICs & integrated modules
- High power PoE transformers
- PoE systems including injectors/midspan and switches



KEY PARTNERS								
ELECTRONICS CORP		CHINEA	n Elec & Ellek 仮測支護	FRIWO	FSP GROUP	<b>INVENTRONICS</b>	LinkCom Manufacturing Co., Ltd.	
<b>≪≫</b> MINMAX®	GAW		A NetPower	PAIRUI	renata batteries		Silvertel	
		SynQor	TANNURA	<b>©</b> TPEG	VOXPOWER			



# **RUGGED MOBILE COMPUTING**

## **RUGGED MOBILE COMPUTING**

# Rugged tablets/PDA's/vehicle mount computers



# Why rugged?

## What's the difference?

**Semi-rugged:** Often referred to as business rugged for professional use.

**Fully-rugged:** Often tested to withstand various military grade specifications, extreme temperatures, can be dropped and resistant against water or dust.

**Ultra-rugged:** Often tend to cost more than the rest because they are designed to withstand the absolute harshest conditions and are developed to be pretty much indestructible.

## For whom?

Whether or not to invest in a rugged versus consumer device is the first key question that is often overlooked.

Rugged devices provide **peace of mind** for your mission critical information and are built to withstand the demands of a truly mobile workforce.

The rugged mobile devices are designed for **anyone** who works in a **tough environment**. Whether the challenges come from weather, extreme temperatures or tough work situations, our devices measure up to all of them.

Be assured your Rugged device is seamlessly integrated into your company's environment.

#### Rugged PDA's, tablets, vehicle mount computers

- Rugged PDAs, tablets and computers for harsh environments
- Military tablets/panel PCs
- Semi-rugged tablets & medical tablets for clinical environments
- Explosion proof PDAs
- Mobile data terminals and vehicle mount computers
- IoT devices, wearables and hands-free scanning wearables Barcode scanners
- Accessories, software solutions, extended warranty programs

## Your benefits?

**Total Cost of Ownership** is the total amount estimated to help business managers assess the costs related to the purchase of any capital investment, spread out over the life of the item.

Tangible and intangible costs are both to be considered when purchasing or investing in a major asset.

**Tangible costs:** Purchase price, installation and implementation costs

**Intangible costs:** The percentage of time you'll be without your device, service and repair costs including hassle and time, lost sales, customer service impact, data loss, employee down time, customer satisfaction impact, employee morale, time wasted to diagnose the issue.

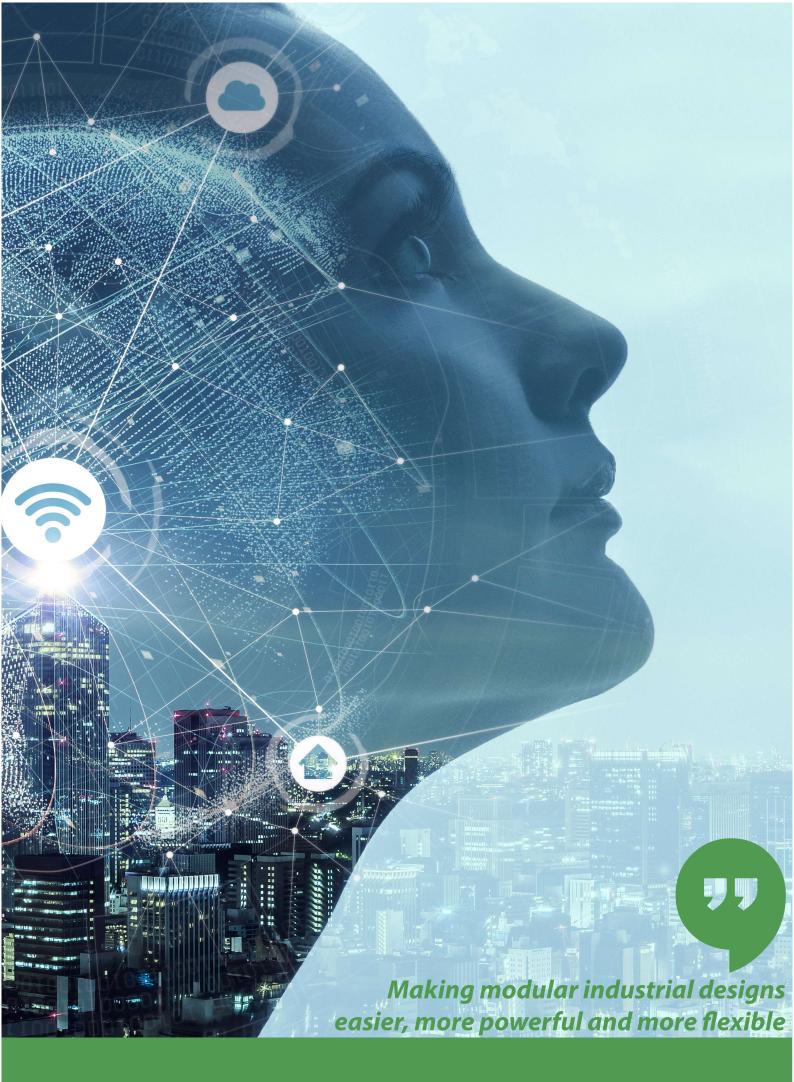
The cost of having your company's IT administrator perform the required maintenance can further increase the overall cost of a non-working device.







KEY PARTNERS



# EMBEDDED SYSTEMS, AI & EDGE COMPUTING

## **Boards & systems**



### **Computer & System-on-Modules**

- ARM, x86, Power Architecture, GPU-base
- Modular concepts offering replaceable and upgradable solutions
- SMARC, Qseven, ETX, MXM, DIMM, SODIMM, MicroSoM, LGA
- COM express type 7/6/2/10
- COM-HPC (COM-HPC server/client type)
- SoM's with integrated wireless connectivity
- COM cooling solutions
- Google Coral Edge TPU Modules & SoM's
- Proprietary standard solderable/pluggable SoM's
- Open standard modules, Starter Kits, Evaluation and carrier boards



#### GPU and Edge computing

- Embedded Graphics based on Nvidia Quadro & Intel Arc
- MXM GPU modules and PCI Express based on Nvidia Quadro GPU's
- Edge Al platforms based on Nvidia Jetson
- Edge Al solutions with Nvidia Jetson Orin
- Edge AI computing platforms and complete systems
- High performance AI Computing Systems



#### Industrial embedded communication

- 5G/4G Cat1bis Cat-20/Cat-M/NB-IoT/3G/2G/GNSS
- Bluetooth, BLE, Thread, Zigbee, Matter, Z-Wave, Wi-Fi, Sub-Ghz multiprotocol and proprietary ICs and modules
- System-on-modules & SBCs with integrated wireless
- Smart automotive-grade modules
- Antenna's, cables and connectors

#### 19 inch, VPX, cPCI, xTCA

- CPCI/ CPCI-serial/ serial-blades, enclosures, systems, backplanes
- VPX, OpenVPX rugged platforms & peripherals
- AdvancedTCA platforms; switch and processor blades
- 19" 1U-4U rackmount systems & tower workstations
- Rackmount integrated system solutions
- 19" Chassis, backplane & power supplies
- Accessories



#### Embedded I/O expansion modules & systems

- Data acquisition, digitizers, GPIB
- CAN, CAN FD and LIN fieldbus communication
- Bus converter modules
- Analog output, digital & remote I/O modules
- Digital & Analog for test, Measurement and manufacturing
- Controllers and distributed I/O with integrated Codesys control



#### Industrial & embedded motherboards

- 3,5"-5,25" SBC, PC/104 & PC/104+, EPIC, Pico-ITX, ATX Thin Mini-ITX, Mini-ITX, PICMG
- Single Board Computers SBC's, supporting multiple wireless interfaces
- Chassis/backplane/power supplies, peripherals & accessories



## **Boards & systems**



## Edge AI Computing for Machine vision

- Full spectrum of frame grabbers, video capturing cards, embedded vision systems & more
- Al Smart camera, vision system & Al vision software
- Compact-integrated PC systems with flexible expansion •

#### **Industrial PC & systems**

- Modular embedded computers, IPC systems & IoT gateways
- GPU and Edge AI
- Compact/Expandable/integrated fanless embedded PCs
- NUC Mini PCs, kits and elements Tinker Board ultrasmall SBC- the best industrial Raspberry Pi alternative
- Industrial multi-touch displays, open-frame monitors and panel PCs
- Industrial & stainless steel panel PCs & HMI
- ATEx certified box Pcs
- In-vehicle, medical, Rail, Marine specific Embedded Computing
- Standard and custom-configured 19" rackmount form



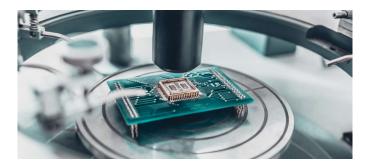


## **PXI** products

- PXI products for test & measurement
- PXI/PXIe modules, controllers, and chassis
- Remote controller

#### **Motion/motor control**

- Motion control & I/O
- Pulse motion controllers
- EtherCAT motion control products
- Frequency inverters & servo motion
- Smart motor modules
- Robot and motor drive technology including e-mobility



#### Smart camera

- AR/VR and XR digital wearable products/smart tracking solutions .
- AI smart & embedded vision camera

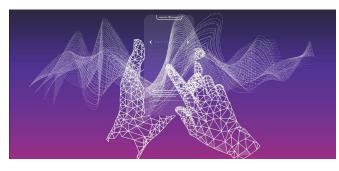


## Panel PC's & HMI, Memory & storage



## Panel PC's & HMI

- Industrial displays & panel PCs; medical & open frame panel PC
- Industrial multitouch panel PCs, displays & touch monitors
- Harsh-and extreme environment panel PCs & HMI
- ATEx-certified panel PC's, displays & box PCs
- In-vehicle panel PCs
- E-paper public display and healthcare IoT solutions
- Military Panel PC



## Memory & storage

- Managed NAND-e.MMC, Securstor and NVMe
- Embedded/industrial memory cards
- Solid state drives and modules
- DRAM modules

#### Input systems

- Complete HMI solutions incl input system, display, electronics and housing
- Standard and customized front panels & touch solutions
- PCAP, resistive, IR, SAW touchscreens
- EMI shield windows for TFT modules
- Open frame monitors
- Capacitive switches
- Membrane switches



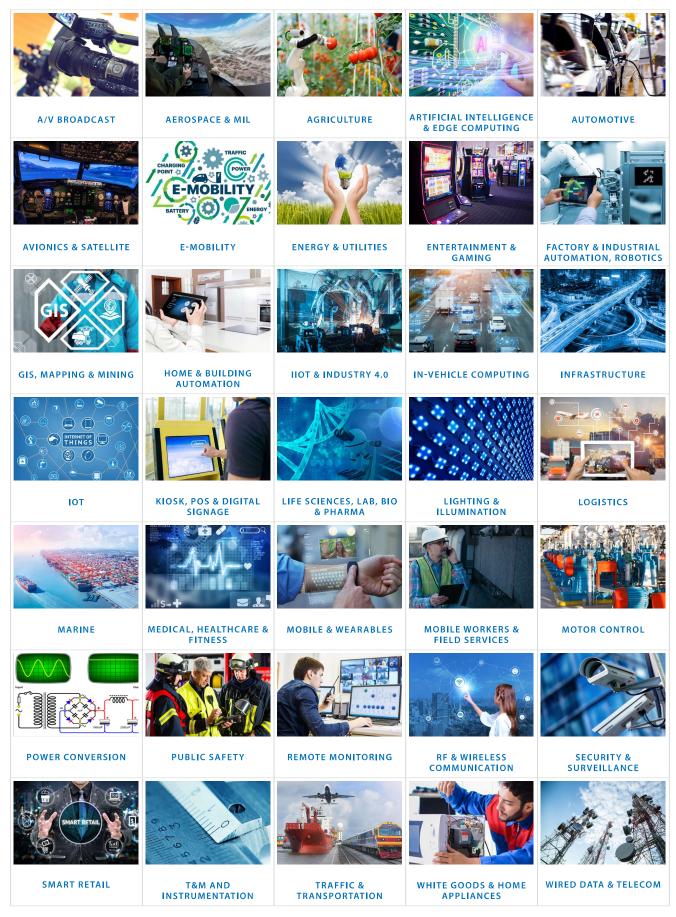
#### **Touchscreen technologies**

- Resistive/P-cap/infrared and SAW touch
- Advanced & cost-effective optical bonding solutions
- Touch screen controllers
- UV-resistant, high brightness, flat, multifunctional touch displays
- ePaper displays with cover lenses (in glass, PC, or PMMA)
- ePaper display services including front light guides, touch and driving board
- Capacitive touch switches, sliders and/or wheels
- Custom-configured cover glass, display & touch integration
- LVDS and FCC cables, circuit adapters, video cables, power supply



KEY PARTNERS								
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# **APPLICATIONS & MARKETS**





2024 Technology & product overview

#### ALCOM BELGIUM

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