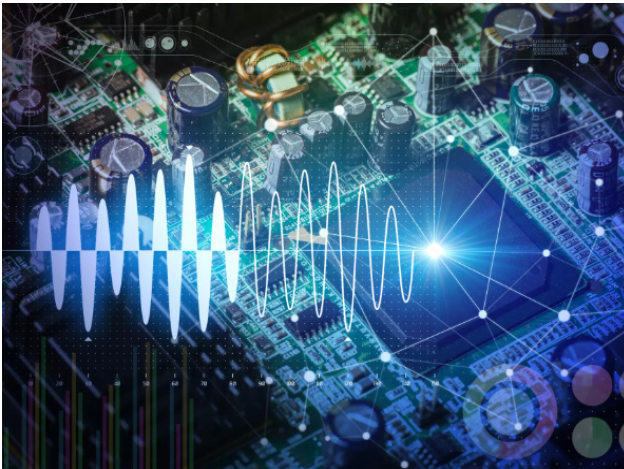# Featured

FPGA's, MCU, Analog & Mixed Signal, Timing Solutions offering pin -to-pin alternatives

Technology-driven replacements

The Semiconductor market reaches a more normalized supply-demand balance and is getting back to more standard lead times with exception of certain semiconductors. The long-term-outlook for the semiconductor market remains strong due to the ever-increasing role of chips in powering the critical technologies of today and tomorrow. Our customers are all requiring a more sustainable supply chain that can be trusted in terms of supply, availability, pricing and quality. Alcom listened to the needs of customers for both purchasing, production and design-in requirements.

During the last Months Alcom electronics have concluded Regional Specialist Distribution agreements with IC design Houses and manufacturers in the area of :

- **Programmable Logic** whereby we offer **Gowin** alternatives to vendors such as Xilinx, Altera and Lattice
- **Microcontrollers** from **Geehy** offering innovative Cortex M4-M3-M0+ including automotive grade and P/P replacements to STM and other vendors
- **MCU, MPU's, Audio Converters** from **Nuvoton**
- **Capacitive Isolation Technology** from **Chip Analog** replacing vendors such as Skyworks, ADI and TI
- **Analog and Mixed Signal products** including CAN transceivers; RS232/485 interfaces; Power Management, Data Converters incl TI and ADI replacements
- **Timing solutions** offering High Stability Clocks, Chips, X-Tals, Oscillators, MEMS-timing, Real-time Clock modules

Co-creation starts here
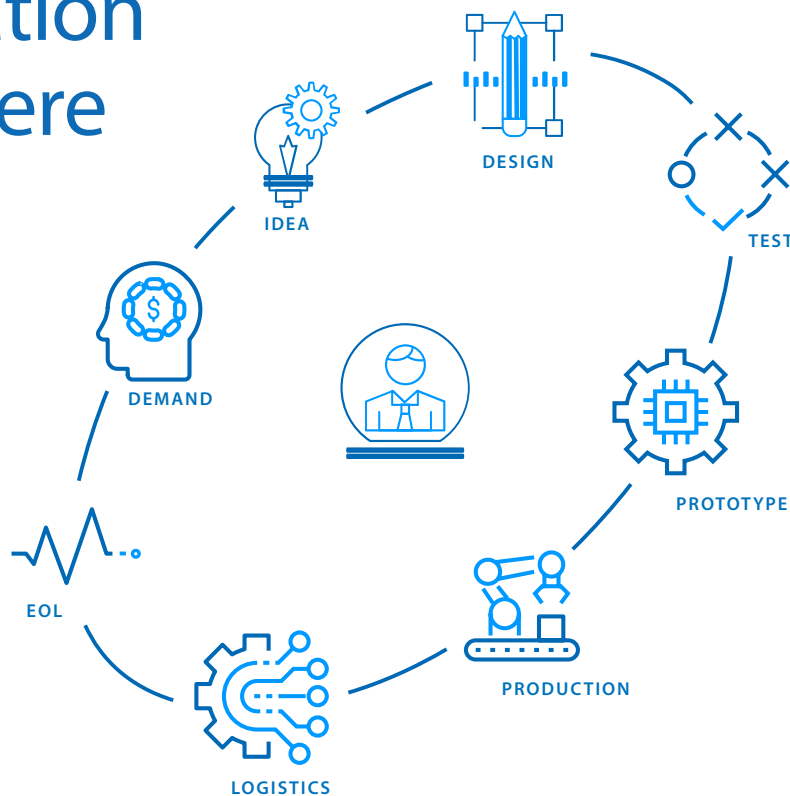
Alcom considers everybody an indispensable added value in the collaborative chain with all of its partners.
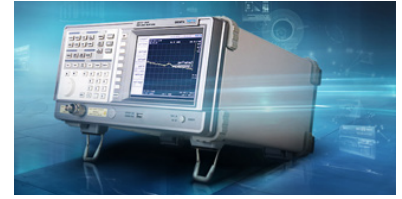
Applications & Markets

COMMUNICATION NETWORK

POWER GRID

INSTRUMENT & METER

INTELLIGENT SECURITY

AUTOMOTIVE

CONSUMER ELECTRONICS

SMART HOME

INDUSTRY CONTROL

MEDICAL EQUIPMENT

Pin-to-pin alternatives

GOWIN	Geehy SEMICONDUCTOR	3PEAK	CHIPANALOG	DAPU
Lattice X02	STM 8	TI	ISO: TI	PHY: RTK
Lattice X03	STM 32		ADI	
Lattice ECP3		ON	Skyworks	RTC: Micro Crystal
Lattice ECP5	NXP LPC			NXP
		ST	CAN/LIN: TI	MAX
Altera MAX II	MCHP PIC		MAX	
Altera MAX I0		ADI	NXP	Silicon Ocsillators:
Altera Cyclone IV	ATMEGA		...	Skyworks
Altera Cyclone V		MAXIM		
	RENESAS		RS485/232: TI	...
Xilinx Spartan 6	...	INTERSIL	MAX	
Xilinx Artix 7		...	ADI	All
			LTC	timing manufacturers
			...	

Get in touch with your Alcom sales contact or application engineer and ask for
an alternative or compatible device/replacement or mail to *marcom@alcom.be*.

GOWIN

Easy to use, high performance, low-cost FPGA solutions for consumer, industrial, automotive, and communications applications.

- Arora V SRAM Based FPGAs
- LittleBee Flash Based FPGAs
- Arora SRAM Based FPGAs
- GoBridge ASSP
- GOWIN ® EDA

Low-Density / Low Power (LUTs < 10K): GW1N, GW1NR, GW1NS, GW1NRF
Mid-Density (10K < LUTs < 100K): GW2A, GW2AR, GW2ANR
High-Density (LUTs > 100K): GW5AT, GW4ST

Geehy SEMICONDUCTOR

32-bit APM32 Industrial & Automotive Grade MCU GW Series Wireless MCU

Top Fabless & Chip design IC manufacturer driving industry innovation

- APM series industry grade MCU's ARM Cortex -M0+, M3, M4
- APM 32 Series Automotive grade MCU's: M0+, M3, M4
- GW Series wireless MCU: GW8811-BLE4.2/GW3323-BLE5.2

3PEAK

High performance analog, mixed signal power management

- >1600products, 9 R&D centers
- Many new analog product announcements within the next 2 years
- Fast growing company, short lead times & competitive prices
- Qualified ecosystems with wafer foundry, assembly, test subcontractor, ...

CHIPANALOG

To build the analog world on chips

- Providing industrial & automotive IC's
- Isolation : Driver & Power
- Interface : High performance analog

DAPU
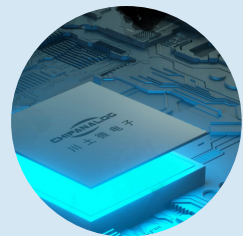
Global technology leader in the field of frequency, clock, timing & RF solutions

- High stability clocks
- Full chain clock chips
- RF components

GOWIN
PROGRAMMING FOR FUTURE

Little Bee

**Flash based FPGA
(1-10K logic element density)**

Consumer, Mobile and IoT
- As small as 1.8 x 1.8mm
- Interface Bridging and Multiplexing

Industrial, Commercial and Server
- TQFP, QFN and BGA (0.8mm) Packaging
- CPLD Replacement, Power/Platform Management

Arora

**S-RAM based FPGA
(20-55K logic element density)**

Communications, Industrial and Automotive

- As small as 8 x 8mm
- Up to 607 user interface pins
- 1.2 Gbps LVDS, DDR3, MIPI D-PHY, PCI
- High Speed Interfacing and IO Expansion

Differentiating FPGA Features

Hardened MCUs Arm Cortex-M3	On-chip memory Up to 16MB	More interfaces ADC, USB, SPMI, I3C	Ultra-low power 10µW sleep	Security PUF based RoT

		LittleBee *GW1N	Arora *GW2A
Product Features	Ultra-low power SPMI power management	*Z	*R
	Hardcore MCU ARM Cortex-M3	*S/*SR/ *SE/*SER	
	Extended Memory Chip	*R/*SR/ *SE/*SER	
	Security SRAM PUF Root-of-Trust	*SE/*SER	
	Arora Embedded Flash		*N
	Arora Flash & Memory		*NR

Product Series	Density (LUTs)	LittleBee	Arora
GW1N	1K, 1P5K, 2K, 4K, 9K	Traditional Flash-based FPGA	N/A
GW1NR	1K, 2K, 4K, 9K	Extended Memory	
GW1NZ	1K	Ultra-low power	
GW1N-A	1K, 4K	Automotive	
GW1NS	4K	Hardcore MCU	
GW1NSR	4K	MCU, Memory	
GW1NSER	4K	MCU, security, Memory	
GW1NRF	4K	MCU, BLE transceiver	
GW2A	20K, 55K	N/A	RAM based FPGU
GW2AR	20K		Extended Memory
GW2A-A	20K		Automotive
GW2AN	10K, 20K, 55K		Embedded Flash
GW2ANR	20K		Embedded Flash Plus Memory

Rich portfolio meets diversified customer needs

	ARM CORTEX -M0+	ARM CORTEX -M3	ARM CORTEX -M4	ASIC
High Performance			APM32F411*** APM32F407* APM32F417/F415* APM32F405*	
Mainstream		APM32E103* APM32F103* APM32F107/F105* APM32S103*		
Basic	APM32F051* APM32F091* APM32F072* APM32F030* APM32F003*			
Ultra-Low Power	APM32L0732/L083***			
Motor dedicated	APM32F035** APMSPIN32F020**			
Automotive	APM32A091RCT7* APM32F072RBT7* APM32F02CBT7*	APM32A103RET7* APM32A103VET7* APM32A103CBT7* APM32F103RCT7*	APM32A407ZGT7* APM32A407VGT7* G32A144***	Ultrasonic Radar V1**

*Released   **Coming Soon   ***In Development

APM32 MCU	Security SOC	BLE 5.1 SOC	APM32A Automotive Grade MCUs
Industrial grade Low-power consumption High performance APM32 MCUs can contribute to reducing product development time and cost, while at the same time optimizing product performance.	Multicore heterogeneous secure encrypted architecture Strong physical unclonability and anti-attack ability guarantee data security.	Utra-low power High sensitivity High security Intelligent interaction among data devices provides a better user experience.	The full series obtains AEC-Q100 certification and meets automotive-grade reliability standards Based on Arm® Cortex®-M0+/M3/M4 cores Operating temperature range: -40°C~125°C
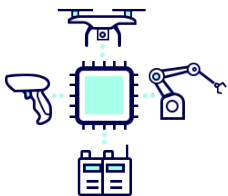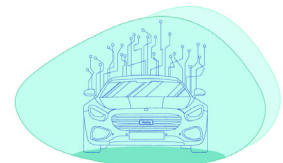
High Performance Analog & Mixed signal products portfolio

Nano OPA
Low Noise OPA
Zero Drift OPA
General OPA
HV Current Sense Amp

High Speed ADC
12/14/16bit SAR ADC
16~24bit Σ-Δ ADC

RS232
RS485 MLVDS
I2C
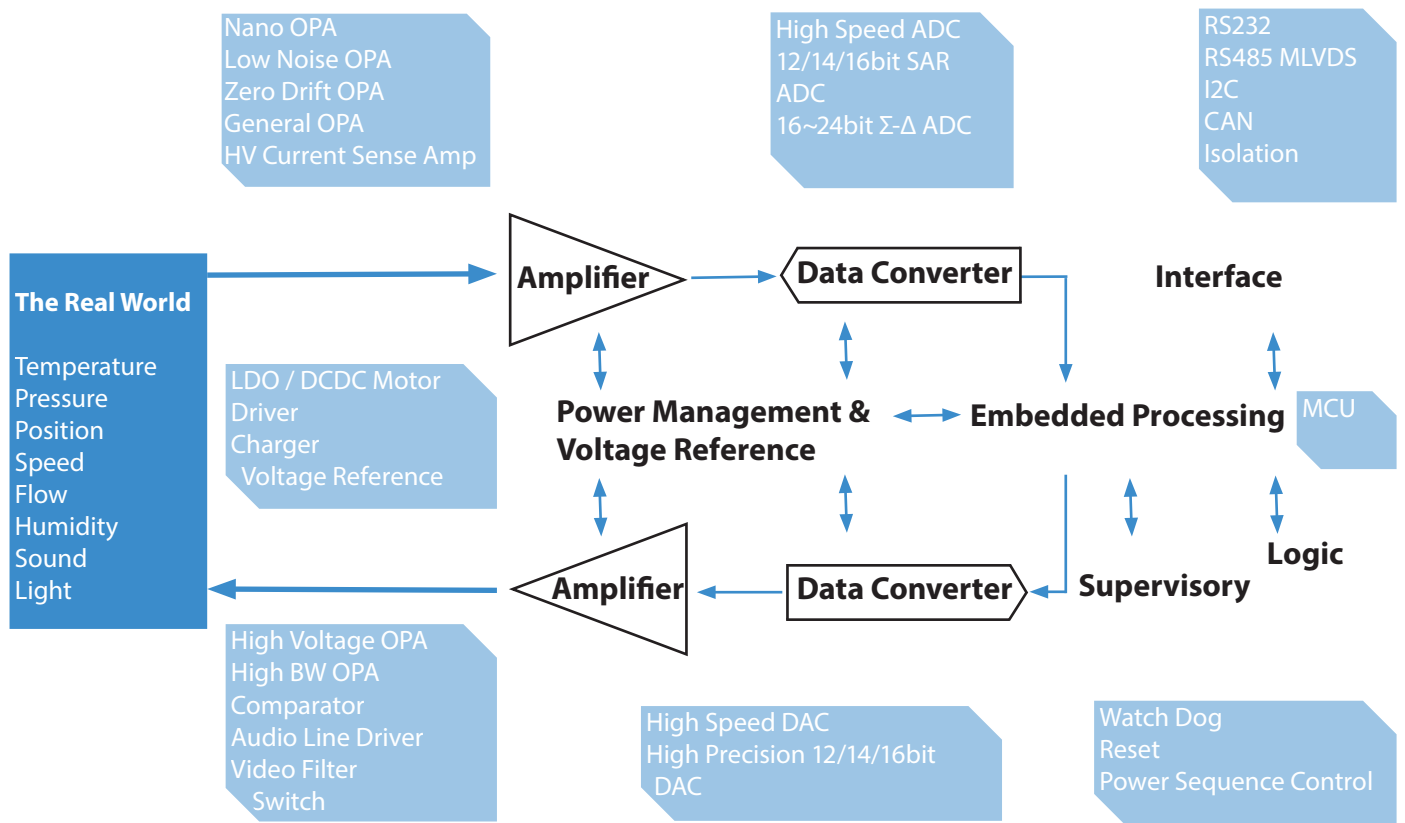CAN
Isolation

The Real World

Temperature
Pressure
Position
Speed
Flow
Humidity
Sound
Light

LDO / DCDC Motor Driver
Charger
Voltage Reference

Amplifier

Data Converter

Interface

Power Management & Voltage Reference

Embedded Processing

MCU

Amplifier

Data Converter

Supervisory

Logic

High Voltage OPA
High BW OPA
Comparator
Audio Line Driver
Video Filter
Switch

High Speed DAC
High Precision 12/14/16bit DAC

Watch Dog
Reset
Power Sequence Control

Analog product Line

Power Management				Signal Chain		
POWER	ASSP	DCDC	DRIVER	INTERFACE	LINEAR	CONVERTER
Charger LDO Power SW REF SEQ Supervisory	BMS	Boost Buck Isolated Power POE	Gate Driver Motor Driver	CAN & LIN SBC HSI & CLK I2C ISO LVDS RS232 RS485 & RS422 SWITCH	COMP OPA RES SAMP SINCON	High Speed Converter Precision Con- verter Special Converter T-Sensor
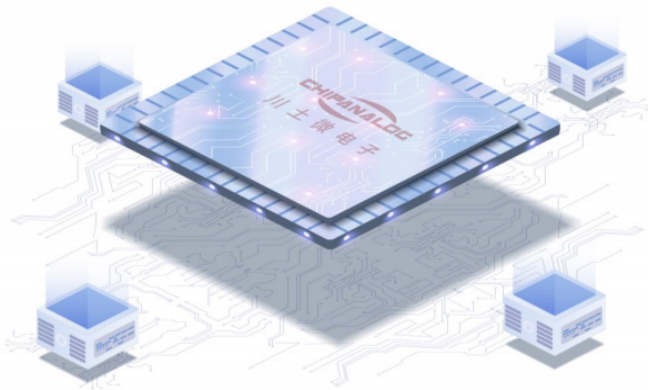
Isolation	Driver & Power
Digital Isolator Isolated Interface Isolated Signal Chain isolated Power Supply isolated Driver Isolating Switch	Motor Driver LED Driver Power Switch Power Management IC

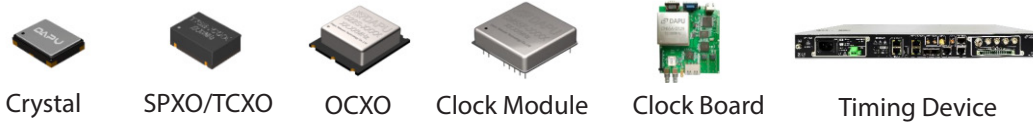| Interface	HPA
CAN/LIN RS-485/422/232 SBC Others	Operational Amplifier High Precision Voltage Reference AD/DA

Isolation Portfolio

Digital isolator	Isolated Interface	Isolated Power Supply	Isolated Signal Chain	Isolated driver	Isolating Switch
Digital Isolators with Isolated Power Supply CA-IS36XX	I2C Isolators CA-IS302X	Isolated DC-DC Converter CA-IS3105	Isolated Amp for current sensing CA-IS1200/1300	Isolated Gate Driver CA-IS3211	
Standard Digital Isolators CA-IS37XX	Isolated CAN Tranceivers CA-IS305X		Isolated ADC CA-IS1204/1305/1306	Isolated Half-bridge Driver CA-IS3221	
Reinforced Digital Isolators CA-IS38XX	Isolated CAN Transceivers with integrated isolating power CA-IS306X-206X				
Low-power Digital Isolators CS817X	Isolated Transceivers CA-IS308X/208X				
	Isolated RS-485 Transceiver with Integrated Isolating power CA-IS309X/209X				
	Isolated DI CA-IS398X				

Interface Portfolio

CAN/LIN	RS-485/422/232	SBC	Others
CAN CA-IF1051/4420	**RS-485** CA-IF48XX		**AISG** CA-IF4023
CAN CA-IF1051-Q1	**RS-422** CA-IF4220NF		**HOMEBUS** CA-IF4288/4289
CAN CA-IF1042-Q1	**RS-485** CS485XX/ CS485XXA		
CAN CA-IF1044-Q1			
LIN CA-IF1021-Q1			

Clock Module

Crystal	SPXO/TCXO	OCXO	Clock Module	Clock Board	Timing Device

Clock Chip

TC-IC	OC-IC	RTC	Silicon XO	1588 clock Chip	Clock Buffer	PHY	PLL (ongoing)

RF Component

Circulator	Isolator	Low Power Isolator	Coaxial	Microstrip	Wave Guide	Ferrite
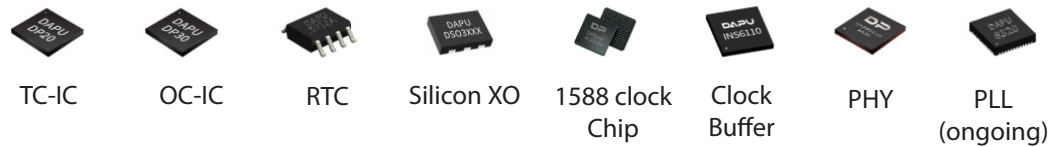
Manufacturer Catalogs

GOWIN — GOWIN Semiconductor Corporation

PRODUCT SELECTION GUIDE — 32-bit APM32 Industrial&Automotive Grade MCU, GW Series Wireless MCU

模拟产品选型 ANALOG PRODUCTS SELECTION — 3PEAK

PRODUCTS SELECTION GUIDE — CHIPANALOG 川土微电子

DAPU — Product Catalog

GOWIN Geehy SEMICONDUCTOR 3PEAK CHIPANALOG DAPU

Get in touch with your Alcom sales contact or application engineer and ask for compatible devices, catalogs and brochures or mail to *marcom@alcom.be.*

New product releases

FLASH & S-RAM BASED FPGA SERIES

World's fastest growing FPGA Company

Low-Density / Low Power (LUTs < 10K): GW1N, GW1NR, GW1NS, GW1NR
Mid-Density (10K < LUTs < 100K): GW2A, GW2AR, GW2AN
High-Density (LUTs > 100K): GW5AT, GW4ST

FPGA FOR XILINX & ALTERA'S ARTIX 7, SPARTAN 6 & CYCLONE IV

Arora-V 22nm High-Performance FPGA family Arora-V high performance FPGA family utilizing advanced 22nm SRAM technology and integrating 270Mbps12.5Gbps high speed SerDes interfaces, PCIe 2.1 hard core with support for PCIe x1, x2, x8 modes, along with MIPI hard core single lane module at up to 2.5Gbps, and DDR3 interfacing at speeds up to 1333 Mbps.

32-BIT ARM® CORTEX -M0+,M3, M4 MCU

Based on Arm® Cortex®-M4F core, the APM32F405/407 series supports single-precision FPU, enhanced DSP, and high-speed OTG with on-chip PHY. Its large memory meets the needs of complex programs and extensive resource peripherals to fully enhance the product's diverse control and extensive connectivity.

ANALOG, SIGNAL, POWER, MIXED SIGNAL CIRCUITS

Analog and Mixed Signal products including CAN transceivers; RS232/485 interfaces; Power Management, Data Converters incl TI and ADI replacements Established in 2012, 3PEAK is one of the fastest growing semiconductor companies having 1600 different products, 9 R&D centers and >3700 current customers worldwide.

CHIP ANALOG'S ISOLATOR PRODUCTS

Our broad portfolio of isolation products use Chipanalog's capacitive isolation technology based on silicon oxide (SiO2) insulation barrier that provide complete galvanic isolation between two power domains. We offer standard digital isolators, low-power digital isolators, dedicated digital isolators for smart meter and the complete digital isolators with integrated power supply
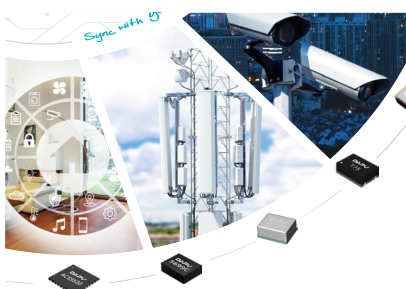
HIGH STABILITY CLOCKS, CHIPS AND RF PASSIVE DEVICES

High stability clock series: Crystal 32.768KHz, Crystal MHz, SPXO, TCXO, OCXO, Clock Module, Timing Server
Chip Server: Real Time Clock (RTC), Clock Buffer, Phase locked loop (PLL), IEEE1588v2, All-Silicon Oscillator, Ethernet PHY
RF Passive Devices - Circulator / Isolator: SMD Circulator / Isolator, Drop-In Circulator / Isolator, SMT Circulator / Isolator

Alcom product portfolio

ELECTRONIC COMPONENT SOLUTIONS	WIRELESS EMBEDDED CONNECTIVITY & SENSORS	WIRELESS & INDUSTRIAL CONTROLS NETWORKING	DISPLAY & TOUCH

LED & SOLID STATE LIGHTING	POWER & EMC	RUGGED MOBILE COMPUTING	EMBEDDED SYSTEMS, AI & EDGE COMPUTING

- Semiconductors
- Frequency & timing
- Power management
- Circuit protection & discretes
- Magnetics
- Passives & electromechanical
- Connectors & cable assemblies
- Photonics

- Wireless modules
- Antenna's
- Sensors

- Routers & gateways
- Wireless embedded computers
- Industrial ethernet and IP variations
- Wired & wireless machine networking
- Antenna's
- Device to cloud solutions
- Connectivity & remote management services
- Networking & connectivity

- Displays
- Touch screens
- Optical bonding
- Total display solutions

- LED light sources
- Optics
- Thermal management
- Power & intelligent controls
- LED modules

- AC/DC power supplies
- DC/DC converters
- Power management modules
- Wireless charging
- E-mobility solutions
- Transformers & power inductors
- UPS
- EMC filters

- Tablets
- PDA's
- Vehicle mount computers
- Accessories

- Computer-on-modules
- Embedded boards
- Industrial PC & automation
- System integration

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

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www.alcom.nl

Get to know us

ALCOM PROVIDES THE WORLD'S MOST ADVANCED TECHNOLOGIES.

With a team of like-minded entrepreneurs, Alcom will continue to inspire its valued customers to use advanced innovative building blocks in vertical markets. The importance of providing high-level services and a human interface based on specialism, knowledge and design-in expertise will remain key differentiators.

Alcom is positioned for growth. We invite all our customers to discuss their current and future concepts and designs. Let's connect, work and grow together.