

Highlights at "booth 1234"

Display & Touch

SoM

Advanced IoT Modules & Cavli Seminar (Tech Theatre)

Antennas



Advanced Engineering 2025 & Alcom

Highlights at our booth:

Displays

- **ACTi³ 3.5" to 7" TFT's with one unified interface**, 2 touch systems and 3 product families in a total of 12 displays
- e-Ink and the diversity of **ePaper displays**

SoM

- System on Modules solutions including **OSM, SMARC, CoMe, Qseven, COM-HPC, GPU modules**

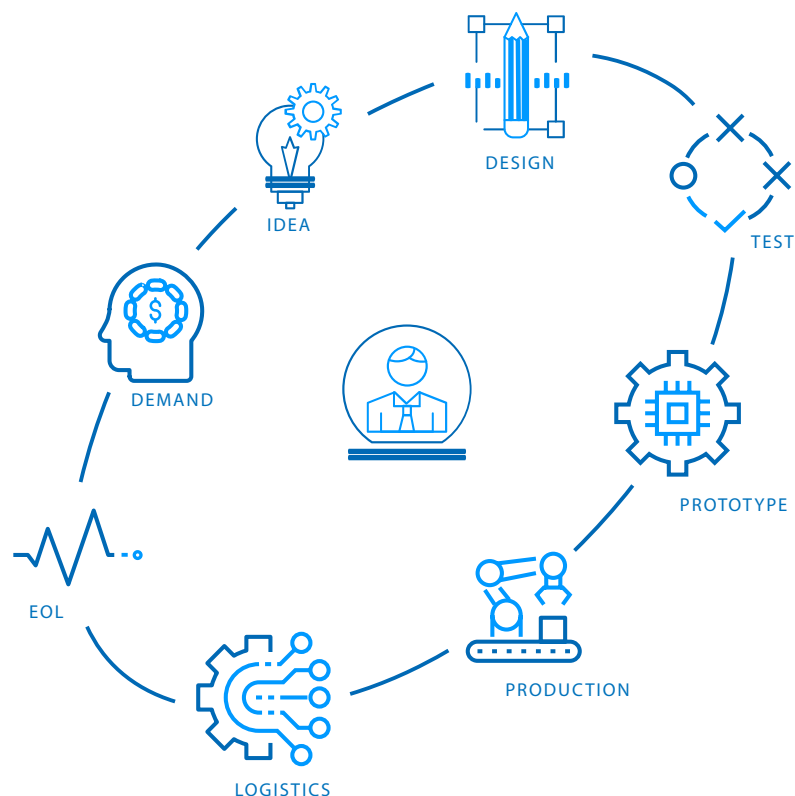
Advanced IoT modules

- **Seminar** on May 22nd at 14:30 h (Tech Theatre)
"Selecting the right cellular module in the current geopolitical and market turmoil"
- **Next-Gen IoT connectivity** with intelligent hardware modules, network access solution & modem management cloud

Antenna's

- Embedded and External antenna's.
Building custom-configured antenna solutions & cable assemblies the way you like it

Co-creation starts here



A new unified display standard

2 Touch-systems - 3 product families - 12 Displays - 1 unified interface



The ACT I³ series of displays is developed to create a new **unified display standard with a centered FPC and Common interface for TFT's between 3.5" and 7"**. This concept is the ideal basis to address the typical challenges that arise during the selection and design-in process of a small/medium TFT display.

Unique set of useful features:

- High Performance Backlight
- EMC optimized
- Convenient Control
- Commercially Smart



The result combines a **brightness of 1000 nits** with a lifetime of **50.000 hours**; a **low impedance ground reference** as the fundamental basis of a reliable signal integrity greatly **influencing the overall EMC-performance** that comes with a **50 pin interface** and a **long-term availability** and flexibility based on an **industrial standard**. All displays are optionally available with touch (resistive or capacitive), optically or air-gap bonded, customized cover lenses and many other modifications are possible. Alcom provides support during the design-in process and offer a comprehensive hardware and software development environment (the Lizard-Board) based on a powerful STM MCU to get the display up and running in only a few minutes.

Product lines:

- **PURE** 1st Gen ACT³ family of products available in 3.5"; 4.3"; 5" and 7"
- **PRO** Offering significant improved optical performance
- **PROX** integrating the newest TFT cells to further increase both contrast ratio and viewing angles in all directions in a wide temperature range and 2 mm cover lens

Pure/PRO/ PROX are upwards compatible and are easy to upgrade.

The diversity of ePaper displays

The world of E Ink technology is developing rapidly – new, innovative products are entering the market every year. This fascinating technology opens up numerous application possibilities, from digital signatures to large-format displays.

Spectra™ 6: Full color technology with wide temperature range

The latest full color technology Spectra™ 6 impresses with a temperature range of 0°C to +50°C and is used in particular in the field of digital signatures. A wide range of display sizes are available: from compact 13.3" or 25.3" and 31.5" from E Ink to large-format 40.5" (DIN A1), 28.5" (DIN A2) and 20.2" (DIN A3) with IGZO backplane from Sharp. Even smaller displays, such as 4.0", are ideal for applications such as digital picture frames, eBadges or cell phone covers.



Kaleido™ 3 Outdoor: Colors that convince

With the Kaleido™ 3 Outdoor color filter technology, E Ink is expanding its range of products for outdoor use. A particular highlight: the largest 75" E Paper display. Series production of this impressive display is still pending, but underlines E Ink's continuous innovative strength.



Black and white remains relevant

High-resolution black and white displays also have a firm place on the market. The displays can support touch functions and front light even in the smallest sizes. The 2.9-inch NFC solutions, which are completely passive, can be updated within a few seconds via smartphone. The round EPDs are often required for wearable applications such as smartwatches. The 6-inch EPDs are used in eReaders, while 13.3-inch, 28-inch and 31.2-inch EPDs are intended for traffic information systems, digital price tags or information boards.



Selecting CoM & SoM form factors

System-on-Modules are so popular right now since they provide all the capabilities you need without requiring you to design, locate, and assemble the components yourself. If this is something new for you, don't worry. At Alcom electronics, our team of embedded system development experts are here to help you with the essential guide to understanding SoMs and to make it easier for the user selecting the right SoM.

Product matrix

	SELECTING THE FORM FACTOR FOR SOM / COM												
	ETX	COM EXPRESS	COM-HPC	Q SEVEN	SMARC	OSM	PROPRIETARY PINOUT	SODIMM	CONNECTED SOMS	CARRIER BOARDS	ACCESSORIES & SUPPORT PRODUCTS	GPU MODULES	STARTER KITS
AVALUE		✓	✓	✓	✓	✓				✓	✓		✓
ADLINK	✓	✓	✓	✓	✓	✓				✓		✓	✓
GENIATECH				✓	✓	✓	✓			✓			✓
ARBOR	✓	✓		✓	✓					✓			✓
CONGATEC		✓	✓		✓					✓	✓		✓
TQ		✓	✓		✓		✓			✓			✓
DH ELECTRONICS							✓	✓					✓
DIGI									✓				✓
ENGICAM		✓		✓	✓		✓	✓		✓	✓		✓

The form factor should be selected based on the product-specific requirements, with each option having its advantages and disadvantages. If your searching for a connected SoM, we provide best-in-class, **secure, scalable and reliable embedded SOM solutions with integrated wireless connectivity**. The selection of the SoM form factor plays an essential role - developers should therefore definitely make it at the beginning of a project.

Tech support and (free of charge) services

Alcom can provide free assistance from our application experts in cooperation with our manufacturing partner for major hardware and software problems.

- Hardware support
- Carrier boards

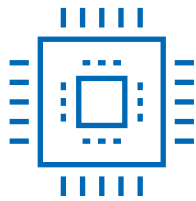
Our Partners:



Cellular Connectivity Modules

Engineered for Next-Generation IoT Devices for Seamless Network-Specific IoT Deployments

At **Cavli Wireless**, we are building the next generation of IoT connectivity management technology with our line of intelligent hardware, network access solution and modem management cloud. We bring to market a unique line of eSIM integrated smart IoT modules that are pre-loaded with local LTE, LPWAN, 5G* network connectivity and can be managed at scale with our flagship connectivity management platform solution - Cavli Hubble.



**IoT
Modules**



**Global
Connectivity**



**Modem
Intelligence Cloud**

5G RedCap (Reduced Capability)

Designed for sustained IoT applications, C-series LPWAN modules provide long-lasting operation with minimal power, enhancing connectivity and extending coverage efficiently.

LTE Cat 1 & Cat 1bis Technology

LTE Cat 1: Experience consistent long-range performance with wide-area IoT connectivity.

LTE Cat 1bis: Achieve reliable coverage with low-power power efficient IoT connectivity.

LTE Cat 4

Empower IoT devices with higher data rates in data transmission.

LTE Cat 6

Supercharge IoT solutions with faster speeds and improved network efficiency.

Automotive IoT Modules

Designed for safer driving experiences in connected vehicle ecosystems.

LPWAN | NB-IoT Technology

Ensure long-range, energy-efficient connectivity for low-power applications.



Choosing the right antenna

Alcom's technical experts will help you select and **optimize the antenna and cable selection** for stellar performance ready for your carrier certification. Whether you need custom antennas, off-the-shelf options, or pre-certification optimization, we have the expertise to meet all your antenna and wireless connectivity needs.

Alcom electronics provides:

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



The best solution for your unique antenna - & RF challenges

Tuning and tweaking to maximize antenna performance at specific frequencies. Customize antenna assemblies the way you like it with our **online antenna builder** (<https://alcom.be/antenna-builder>).

Our Partners:



New product introductions...

4.3" HIGH-RESOLUTION TFT-LCD MODULE

The new 4.3" module now also offers this high-resolution display and thus makes it possible to use the same user interface unchanged for three modules. The four display sizes of the ACT I³ series – 3.5", 4.3", 5.0" and 7.0" – are easily interchangeable with each other thanks to the compatible interface cable. Until now, however, only the variants in 5.0" and 7.0" were equipped with a resolution of 800x480.



EXPERIENCE THE DIVERSITY OF E PAPER DISPLAYS

The world of E Ink technology is developing rapidly – new, innovative products are entering the market every year. This fascinating technology opens up numerous application possibilities, from digital signatures to large-format displays.

RUGGED DISPLAYS FOR MARINE, VEHICLE, INDUSTRY AND MEDICAL

Data Image displays are sold primarily into applications such as Industrial HMI, Marine MFT, Automotive, Kiosk, Payment terminals etc. The factory is IATF16949 certified for automotive applications, ISO13485 for medical devices and ISO 9001, ISO14001 and QC080000. Data Image is creating innovative user experiences based on touch technology. We are experts at innovating and finding suitable solutions for all challenges.



OPEN STANDARD MODULE™ (OSM)

OSM form factor is the first computer-on-module form factor for solderable BGA mini modules that is natively capable of supporting both ARM and x86 designs. OSM modules are significantly smaller than previously available modules, with the largest measuring 45mm x 45mm. Alcom electronics provides comprehensive development kits and versatile carrier boards for easier prototyping and testing.

CREDIT-CARD-SIZED SMARC MODULE

Specially designed for industrial requirements, they deliver eight processor cores – which is double the previous generation – while maintaining the same power consumption. The credit-card-sized conga-SA8 modules therefore set a new performance benchmark for future-facing industrial edge computing and powerful virtualization.

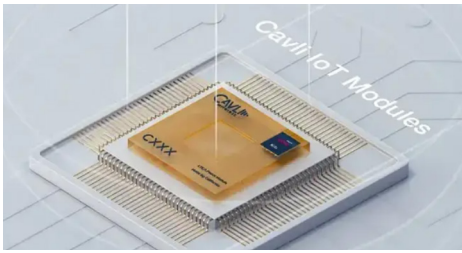


NEW HIGH-PERFORMANCE COM-HPC MODULE

The new COM-HPC Client Size C (120x160 mm) modules are based on the performance hybrid architecture of the Intel Core S processors (codenamed Bartlett Lake S) with up to 16 Efficient (E) and up to 8 Performance (P) cores for up to 32 threads. These modules are designed for applications demanding exceptional multi-core and multi-thread performance, large caches, vast memory capacities, high bandwidth, and advanced I/O



... At our booth



IOT MODULES TO DELIVER RELIABLE AND SCALABLE CONNECTIVITY

Cavli C-Series IoT modules are enterprise grade cellular connectivity modules with built-in eSIM/iSIM technology, pre-loaded with global cellular connectivity subscriptions powered by Cavli Hubble. The C-Series provides a wide range of options in terms of footprint, power consumption, network capabilities, and interface options, making Cavli C-Series IoT modules an ideal choice to build, connect and scale any IoT use case globally.

CELLULAR IOT MODULES WITH INTEGRATED ESIM AND GNSS

Cavli has developed a cutting-edge cellular IoT Solution product range offering a full product portfolio of competitive non-Chinese wireless modules, some of them pin-to-pin alternatives to leading Chinese vendors.. The combination of the US/Indian development and India-based manufacturer positioned Cavli in no-time as one the innovative leaders combing reliability, sustainability, innovation and cost/performance ratio's.



AQ20 is an Automotive Grade Cat 4 IoT module with 2G fall back supporting 3GPP release 10 designed for IoT and M2M applications. It delivers a maximum data rate of 150 Mbit/s DL & 50 Mbit/s UL. AQ20 supports in-built GNSS with Qualcomm® IZat™ location technology Gen8C Lite (GPS, GLONASS, BeiDou/ Compass, Galileo and QZSS), for precise and dependable positioning.



AUTOMOTIVE GRADE IOT MODULE

TOOL TO BUILD YOUR OWN CUSTOM-CONFIGURED ANTENNA SOLUTION

The Antenna builder configures your custom antenna and allows you to customize and order your antenna assemblies quickly and easily. Configure your assembly in real-time on our intuitive builder and ask to provide your quotation.



EMBEDDED CELLULAR ANTENNAS TO MEET 4G LTE AND 5G NETWORKS

Whether your design calls for on-board or off-board integration, Alcom electronics offers an extensive range of proven, off-the-shelf antennas that deliver exceptional performance, flexibility, and reliability for your applications. Below you'll find a snapshot of some of our featured antennas.

MULTI-BAND GPS/GNSS ANTENNAS FOR POSITIONING ACCURACY

New family of active, multi-band GNSS antennas. Levity Series' AHP24510 (L1/L2/L-Band) and AHP54510 (L1/L5/L-Band) directional patch antennas are optimized for GPS, Galileo, GLONASS, and BeiDou satellite constellations.



Notes

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



ALCOM THE NETHERLANDS

Get to know us

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.

