

ALCOM TIPS FOR ELECTRONIC DESIGNERS



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SEMICONDUCTORS

AT91SAM 32-bit ARM-based Microcontrollers



Atmel's AT91SAM 32-bit ARM Flash MCUs and Embedded MPUs are designed for system control, wired & wireless connectivity, user interface management, low power and ease of use. They have received wide acceptance in markets like POS terminals, security, building automation, industrial control, medical, white goods, PC and gaming peripherals, toys and cellular phone accessories. A comprehensive and high-quality eco-system provides access to development tools, Flash programming, software and worldwide technical support. Atmel has a proven track record as a market leading ARM MCU and MPU vendor, a developer of high bandwidth architectures, an innovator of low power microcontrollers and a facilitator of software portability.

[SAM3U Series: 96 MHz Cortex-M3 Flash MCU with High-Speed](#)
[USBAT91SAM 32-bit ARM-based Microcontrollers - Overview](#)

APIX Industrial; Interface to connect Displays and Cameras over longer distances



APIX Industrial is a standardized Interface to connect Displays and Cameras over longer distances, fulfilling all the



requirements such as high temperature, EMI robustness and longterm supply to our customers. APIX provide a unique value for applications requiring long distance - up to 15m - transmission of uncompressed Video in realtime and full duplex communication over the same cable.. Optionally also the power can be supplied over the same cable for the display or camera subsystem. There are proposed Connectors and Cables to ensure interoperability between the connected systems, based on RJ45 / CAT5 or Rosenberger HSD /Leoni DACAR 538.

[Touch Screen kit Flyer](#)
[APIX Industrial - Standard Connectivity for industrial display applications](#)
[APIX Industrial Pinout](#)

USB powered Hi-Speed 2.0 USB to single/dual-port RS232, RS422 or RS485 modules



FTDI announced its USB-COM-PLUS family of multi-port serial to USB 2.0 Hi-Speed interface modules. The USB-COM-PLUS modules are a simple method of adapting legacy serial devices with RS232 (EIA-232), RS422 (EIA-422) or RS485 (EIA-485) interfaces to a USB host. The complete USB protocol and all level shifting is handled by the modules. Royalty-free drivers are available for all popular operating system platforms for an easy plug and play installation. Product overview: [USB-COM-PLUS](#)

QuickSense™ Family of Human Interface Solutions



Optimized for power efficiency, the QuickSense Si1102 proximity and Si1120 proximity and ambient light sensors enable touchless human interface sensing with superior detection range. These sensors are ideal for applications that can benefit from system power savings, tamper detection/prooofing, motion sensing and gesture interpretation.

When paired with the C8051F700 and C8051F800 touch sense microcontrollers (MCUs), the QuickSense family of products enables smart motion sensing, giving designers a complete array of human interface technologies to improve the end-user experience.

[Human Interface Solution Guide](#)

PoE/PoE+ Single/Quad PSE Controller

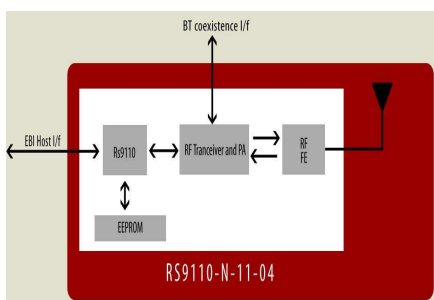


The Si3452 is the industry's most highly integrated quad-port PoE PSE (power sourcing equipment) controller. It supports PSE systems complying with IEEE's existing 15 W per port PoE standard, as well as the recently-ratified 30 W per port "PoE+ standard".

The Si3461 is a single-port, IEEE 802.3at D4.2 compliant, Power over Ethernet (PoE) and PoE+ PSE controller IC. The Si3461 and its comprehensive reference design simplify development efforts, reduce system costs, and eliminate specification compliance risks for designers of a broad range of systems with embedded Ethernet ports requiring the higher power capabilities of IEEE's new PoE+ standard.

M2M & WIRELESS MODULES

Ultra Low Power and High Speed 802.11n Wi-Fi® Connectivity for Analog Devices Blackfin Processor



Redpine Signals announced the integration of ultra low power 802.11n Lite-Fi™ SoC products with the Analog Devices' Blackfin processor, enabling a complete video streaming solution with 802.11n Wi-Fi® connectivity. The integrated solution includes the Blackfin ADSP-BF561 and the Redpine 802.11n module RS9110-N-11-04. The Redpine RS9110 802.11n chipset is interfaced to the Blackfin processor via a memory mapped interface. A uClinux™ operating system runs on the processor and the solution demonstrates full throughput and compliance to the single stream modes of 802.11n, including WPA2 security modes. With minimal host overhead, the integrated platform enables a wide variety of applications such as multimedia equipped handheld devices and Media boxes. [Datasheet: RS9110-N-11-04](#)

Rabbit Expands MiniCore Family of Ultra-Compact, Low Cost Wired and Wireless Networking Modules



Available in pin-compatible wired and Wi-Fi versions, the family now includes the Ethernet RCM5760 and Wi-Fi RCM5650W. The new modules offer increased memory for data intensive applications such as building automation and security applications where it is necessary to store large amounts of data. The products also allow a customer to wirelessly update firmware from anywhere an Internet connection is available to reduce maintenance costs. The MiniCore family provides a rich embedded feature set on an ultra-compact mini PCI Express form factor. Its small size makes it easy for customers to place wired or wireless network connectivity anywhere on a mother board. The family includes the pin compatible and interchangeable wired RCM5700, Wi-Fi RCM5600W, wired RCM5760 and Wi-Fi RCM5650W. Systems developers can easily interchange MiniCore family products to tailor connectivity for any given application. [RCM5600W](#), [RCM5700](#)

TFT & EMBEDDED COMPUTING

Revolutionary Series of Rugged I/O Platforms are Atom-based, fanless and cable-free @ -20°C to 70°C



ADLINK released the Matrix MXE-1000 and MXC-2000 series of rugged and fanless I/O platforms based on the Intel® Atom™ N270. The MXE-1000 provides embedded I/O functions and the MXC-2000 series offers configurable PCI and/or PCI Express®



slots.

These platforms are the result of combining ADLINK's expertise in x86 platform design, versatile I/O function development, and thermal design to push fanless systems to a higher standard, including a temperature range of minus 20 degrees to 70 degrees, 5 G vibration, and cable-free durable structure.

Applications:

- intelligent transportation
- facility management
- environment monitoring
- industrial automation
- factory control
- test instrumentation

[Press Release](#)

Intel Atom based Qseven module, the most compact Computer-On-Module



Qseven is a compact (70x70mm² only) and open COM standard primary focusing towards mobile and ultra mobile applications. It ideally supports today's as well as future CPUs and chipsets.

[Conga Qseven description](#)

[Conga-QKIT - Reference Starter Kit Qseven](#)

[Qseven Mobility Kit - Eval kit for all kind of mobile applications](#)

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DISPLAYS & OPTO

New H-Series of DOMINANT- Cost Competitive and High Brightness

DOMINANT Semiconductors



DOMINANT introduced the new high intensity and cost competitive 5mm round and oval lamp InGaN LED series Lxx-Hxxxx as alternative to their Lxx-Nxxxx products. At an operating current of 20 mA, the 5mm round LEDs feature a typical luminous intensity of 4000mcd for blue, 12000mcd for true green. For their 5mm oval lamp part are two versions of viewing angle available; 70/35° and 100/40°. With these angles a typical brightness of 1000mcd (70/35° viewing angle) and 800mcd (100/40° viewing angle) for blue, 4200mcd (70/35° viewing angle) and 3500mcd (100/40° viewing angle) for true green are specified. This package is available with and without a stand-off option and is the ideal choice for interior and exterior automotive lighting, signage, RGB display, backlighting (button) and indicators. Datasheet: [5mm lamp \(L5x-Hxx\)](#), [5mm Oval lamp \(L6x-H73\)](#)

Reflex LCDs on Top Shelf for Electronic Labels





Low Cost, No-Power Image Retention, and Superior Optical Characteristics Make Reflex LCDs Increasingly Popular for Electronic Shelf Label Applications. Reflective and bi-stable, and with many options from which to choose, Reflex LCDs will help you overcome the traditional ESL adoption barriers of price and power consumption. Reflex displays require no power to retain an image and only minimal power from a small battery for updates. Reflex LCDs also provide superior optical characteristics for excellent readability (without backlighting) and bar code scanning: high contrast/brightness, wide viewing angles, and no polarizers or filters. Available on glass substrates, and in a variety of standard and custom sizes, Reflex LCDs will integrate seamlessly into your ESL design.

- No power image retention
- Excellent readability without backlighting
- Multiple sizes, color combinations, resolutions and electronics configurations
- Bar Code Scannable (select color combinations and resolutions)

[More about Reflex LCD's](#)

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PASSIVES & ELECTROMECHANICAL

High Frequency Inductors for Core Power Applications



Inductor selection in high current core power applications is based on a need for high peak current ratings and low high frequency losses. These two requirements lead designers in different directions resulting in a compromise solution. Designers are forced to select low inductance values to reduce inductor size (and ensure fast transient responses which results in high ripple currents needing to be absorbed by the inductor increasing losses) or select higher inductance values to reduce the ripple current and losses - but at a sacrifice of inductor size, efficiency and transient responses.

[Inductors for Core Power Applications](#)
[High Frequency Inductor Catalog](#)

Seven new Tactile Switches



W+P PRODUCTS launched 7 new series tactile switches with high safeguarding against failure. The new product line (series 505,506,508,514-517) provides a wide range of sizes and various options. Four new series are miniature tactile switches, which need only little space on the PCB. Various fitting caps are available as well. The mini switches require an area on the PCB of only 2.9 x 4.00 mm, the minimal component height is 1.5 mm. The maximum size of the switches' footprint is 12 x 12 mm, the maximum component height is 13 mm. Datasheets: [505](#), [506](#), [508](#), [514](#), [515](#),

[516](#), [517](#)

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POWER CONVERSION

New Medical & Commercial Open Frame Power Supplies



Red Rocket announced that it has released its new MWLT150 & WLT150 Series of Open Frame AC/DC power supplies for use in the Global Medical and Commercial Industries. The M (W) LT150 Series of single output products are one of the smallest and most efficient 150-watt power supply packages available in the industry today. The M (W) LT150 Series features Universal AC inputs from 90v to 264v, measures a mere 2 inches x 4 inches x 1.3 inches, and has a rated efficiency of greater than 86%. It is configured in all popular single output voltages and its flexible design allows for simple modification to alternate voltages as required. Additionally, the M (W) LT150 Series comes with a standard 12v auxiliary output and can be ordered in Class 1 or Class 2 configurations. Datasheets: [MWLT150](#) & [WLT150](#)

Slim Adapter Series



FSP launched the brand new external power supply – Slim Adapter! As its name, Slim Adapter emphasizes on the features of “slim, thin and mini to challenge the notebook adapter and the ultimate in consumer’s taste! With the increasing consumers’ demands for thin and pretty 3C products, the 3C industry tends to design smaller and thinner products. In addition to the improvement of the efficiency, many large manufacturers focus on development of product miniaturization and sophistication. The minimized square measure of FSP’s brand new Slim Adapter series is only 9.5cm x 5.0cm in length/width. Its size is even smaller than a poker card and its thickness is just 1.65cm. Slim Adapter perfectly meets the market trend of slim, thin and mini. Once again, FSP creates a miracle in the power supply industry! [Read more](#)

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