

ALCOM TIPS FOR ELECTRONIC DESIGNERS



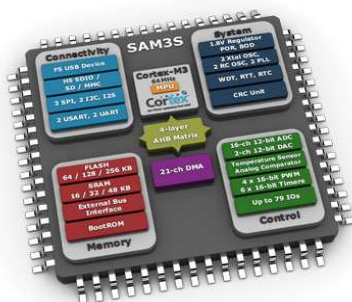
DEAR ELECTRONIC DESIGNER

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SEMICONDUCTORS

New Reference for Cortex-M3 based Flash MCUs



The SAM3S series includes 18 general-purpose Cortex®-M3 based Flash microcontrollers that improve impedance matching, simplify PCB design and save 50% power at 1 MHz operation with a consumption of only 2.3 mW. At maximum operating frequency of 64 MHz the device consumes 1.45 mW / MHz. Inspired by the market's best-selling ARM7TDMI®-based SAM7S series, these MCUs enable SAM7S customers to migrate to a 50% more powerful and feature-rich MCU, while preserving hardware and software investments. Atmel's SAM3S also expands market opportunities in applications including consumer, industrial control, metering, toys, medical, test and measurement, 802.15.4 wireless networking, PC, cell phone and gaming peripherals. Datasheet: [ATSAM3S](#)

Low-power MCU and Low-power LCD driver



The C8051F91x/0x product family is designed to increase battery lifetime - the number one requirement for most battery powered applications. The C8051F91x/0x has the industry's lowest active mode current consumption which saves power when the



application is running. It also has the industry's lowest current consumption sleep modes that save power when the device is sleeping. Also being released in conjunction with the C8051F91x/0x is the CP240x 64/128 segment LCD driver product family. When paired with the C8051F91x/0x, the combined solution from Silicon Labs offers the industry's lowest power solution for LCD applications. Designed for use in applications requiring an LCD, the CP240x is a standalone, fixed-function LCD driver that generates the drive signals for any static or multiplexed LCD.

Datasheet: [C8051F91x/0x](#), [CP240x](#)

AC Current Sensors Replace Bulky Transformers



The [Si85xx ac current sensors](#) provide a more reliable, cost-effective alternative to antiquated transformers for today's modern power delivery systems. Traditional transformers are large, bulky magnetic components that contribute significant supply losses and have parasitics that complicate system design. The highly integrated ISOpro accurate current sensors feature a sophisticated architecture that minimizes the need for costly discrete components for filtering and reset circuitry. An available small-footprint QFN package eases printed circuit board (PCB) space constraints with a small 4x4x1 mm profile.

[Current Sensors Product Matrix & Universal AC Current Sensor Evaluation Kit](#)

600mA Synch Buck DC/DC + Dual LDO



The XCM520 series is the latest multi chip module (MCM) to be released by Torex and features a 600mA synchronous step-down DC/DC plus a dual LDO enabling high efficiency, low noise and low output voltages to be supplied with minimal external component count! The DC/DC block has an operating voltage range of 2.7V~6.0V and switching frequency can be selected from 1.2MHz & 3MHz. Control can be either PWM or PWM/PFM automatic switching. Output voltage can be selected within a range of 0.8V~4.0V for the DC/DC output and 0.8V~5.0V for the dual LDO outputs.

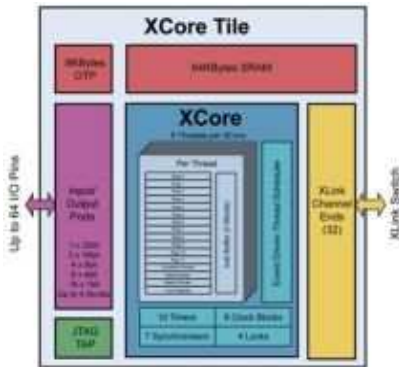
[Product Brief](#)
[Datasheet](#)

XMOS says programmability has no penalty



Programmable logic is really flexible but it's expensive because it's built on a gate-based fabric with inefficient memory architectures. However, the FPGA has given a huge boost to ease and speed of product development and opened up new applications to custom silicon.

Microprocessors function in stark contrast to FPGAs and work on the basis of reusing the silicon resources on every clock cycle. If you need all the gates, all the time, the FPGA make sense. However most applications need some of the gates, some of the time, so it's back to the processor.



The limitation of conventional microcontrollers and CPUs is that they either provide a lot of computing power or they're very responsive to outside stimuli. Most applications need both, not one or the other.

An approach that's now bridging the gap, and indeed replacing both FPGAs and traditional microprocessors in many applications, is the multi-tasking event-driven microprocessor.

[Read more ...](#)
[XMOS Silicon](#)
[XS1-G4 Product Brief](#)
[XS1-L1 Product Brief](#)

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M2M & WIRELESS MODULES

SocketWireless® Wi-Fi® New 802.11b/g Embedded Wi-Fi Device Servers



The SocketWireless® Wi-Fi® device server connects serial devices to an IP network via 802.11b/g wireless networking. It enables you to build wireless networking into virtually any device allowing for remote monitoring, control and configuration. The space efficient communications device (1" x 2.5") integrates Multi-Tech's Universal IP™ stack, and can make your existing and next generation device, machine or system, IP-ready while you focus on developing its core features.

Key Features:

- Complete serial-to-Wi-Fi wireless connectivity solution including network processor, media access controller and air interface
- 802.11b/g compliant wireless networking
- Wi-Fi security using WEP, WPA and WPA2
- Universal Socket connectivity
- Intelligent Universal IP stack for enhanced M2M functionality
- Supports ad-hoc and infrastructure mode
- Serial interface supports DTE speeds to 921.6K bps
- UFL antenna connector
- Two LED driver outputs for visual monitoring of link and activity
- Configuration and management via AT commands
- Flash memory to update firmware with the latest enhancements
- Developer's kit available for testing, programming and evaluation
- Two-year warranty

Datasheet: [MT810](#)

WISMO228 GSM-GPRS modem for M2M applications



With quad band GSM/GPRS class 10 connectivity, an extended temperature range of -40°C to +85°C as well as a very low power consumption, the WISMO228 provides wireless voice and data connectivity in a highly compact form factor using LCC castellation packaging technology. Datasheet: [WISMO family](#)

TFT & EMBEDDED COMPUTING

Digital Signage Applied Mini-ITX Motherboards



Avalue introduced Digital Signage applied Mini-ITX motherboards. The purposes of setting a Digital Signage are varied, from tourist guiding, information providing, promotional advertising, to interactive multimedia service supplying, yet for lifting the environment beauty. The Digital Signage is widespread. Therefore Avalue developed +12V DC input supported motherboards, focusing on large screens, high definition effects, and multi-functional manageability, and providing customers the best choice of Digital Signage systems. Avalue's fanless Digital Signage motherboard, ACP-945GDS, is powered by Intel® Atom™ N270 low voltage processor, and the other with a smart fan control ability motherboard, ACP-GM45DS, is powered by Intel® Core™ 2 Due mobile processor. Both of them come with built-in SODIMM sockets, supporting 2GB-4GB DDR2 SDRAM. Datasheets: [ACP-945GDS](#), [ACP-GM45DS](#)

New COM Express small form factor module offers power savings



congatec AG has extended the company's COM Express product family with its highest performance module, the conga-BM57. The module features the latest Intel Core i7-620M processor with a core speed of 2.66 GHz, with 4 MByte L2 cache and up to 8 GByte fast (1066 MT/s) dual channel DDR3 memory. The conga BM57 is a two chip solution which utilizes the Mobile Intel QM57 Express Chipset. The integrated graphics controller is supporting the Intel Flexible Display Interface (FDI) in order to allow for two independent video channels on VGA, LVDS, HDMI, DisplayPort or SDVO interfaces. [Read more ...](#)

DISPLAYS & OPTO

Slimline with Touch



With its 39mm width and 40mm height the new EA DOGS102-6 is the most compact graphic display by ELECTRONIC ASSEMBLY. Even with this small size an analogue touch panel is available. All touch areas are defined by software. With a typical touch area of 10x10mm up to 8 touch keys have room. Thanks to the extreme compact outline, the EA DOGS102-6 is perfect to become assembled into a 19" rack with 1 RU. It is also ideal for wall-mounted switches in premises; it could become a simple display, switch or control unit there. With 102x64 dots there is enough space for multi-line text and graphics. Congenial to the display EA provides backlight units in white and amber color, as well as a duo colored version in green and red. The white backlight does reach a brightness of incredible 2000cd/m². This leads together with the new super-



white polarizer an extreme brilliant display. Important for the quality is to know that 4(!) pcs. long-life NICHIA LED's are assembled. The connection to a microcontroller is done via serial interface SPI.. The power supply is single 2.7 ~ 3.3V. Current consumption stays below 150uA. The EA DOG series provides some more display sizes as character and graphic types. Datasheet: [EA DOGS102-6](#)

Sunlight readable 7.0 inch WVGA



Chi Mei Optoelectronic's new industrial G070Y2-L01 has a contrast ratio of 600:1, brightness of 500cd/m² and an industrial temperature range of -30 up to +85°C. The low reflection coating that is applied to the TFT makes it perfectly suited for use in outdoor applications where sunlight readability is required. The TFT is fitted with an LVDS interface and the additional "Reverse-Scan-Feature" allows the integration of the panel in 6 o'clock or 12 o'clock viewing direction. CMO also offers TFTs in wide format from 6.95" up to 15.4" display sizes. All products are available for 3 to 5 years minimum. [Datasheet](#)

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PASSIVES & ELECTROMECHANICAL

Dual-Band Ceramic Antenna for US 850MHz and 1900MHz Bands



Pulse announced its new dual-band diversity ceramic antenna that operates at both 850 and 1900 MHz bands. Designed for use in the US, the antenna provides a high-quality radio interface for multi-purpose machine-to-machine (M2M) devices such as broadband access, monitoring, automated meter reading (AMR), and security. The W3047A dual-band antenna is compact, measuring just 3 mm wide by 12mm long by 3mm high with a low weight of 530 mg. Datasheet: [Ceramic Antenna](#)

Connectors toughen up for next-generation digital display interfaces



New JAE FI-XP series for DisplayPort/LVDS interfaces withstand harsh use in consumer and professional equipment. JAE has introduced the FI-XP connector series for low-profile display interfaces including LVDS and DisplayPort, combining low overall height with enhanced strength to support robust connections to the latest thin LCDs. The insulator and metal shell are optimised for high resilience against pulling and lifting of the cable, to withstand rough handling by equipment installers or end users. A mechanical lock also prevents un-mating due to shock and vibration. The FI-XP bottom-mount board receptacle has 30 positions,

1.0mm pitch, and a low mounted height of 1.0mm suitable for ultra-low-profile displays.

[Datasheet](#)

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POWER CONVERSION

Single & Dual output, 3W ultra-wide input range DC/DC converters



The A300RU series is a family of compact 3W DC/DC converters. The A300RU family is packaged in a compact 1.25 x 0.80 x 0.40 inch 24 pin DIP compatible case. The pin-out is industry standard. Each model is specified for operation over the wide temperature range of -40°C to +70°C ambient. Cooling is by free -air convection. The A300RU series is an ideal choice for a variety of board level applications requiring compact size, a wide input range, and tight output regulation.

Key Features:

- 3W Output Power
- Compact DIP Case
- Single & Dual Outputs
- 1,500 VDC Isolation
- Meets EN55022 "A"
- 4:1 Input Voltage Range
- EN60950 Compliant
- 1.0 MH MTBF

Datasheet: [A300RU](#)

High Efficiency Medical Power Supplies



- Open Frame & Adapters: 40-watts to 200-watts
- Smallest and most efficient
- Single output DC and multi output DC voltages
- Safety/Regulatory :
 - Approved to UL2601, IEC601-1and CSA22.2 No. 601.1-M90 and EN60601;1990
 - Meets EMC directive
 - EMI compliance to CISPR11, FCC Class A, IEC601-1-2
 - CE LVD

Newest Released Medical Products

M(W)LT150 Series

- 2 x 4 Inch 150 Watt
- Medical and Commercial Versions
- 12v Auxiliary Output as standard

ZVC Series Extension

- Energy Star and CEC compliant range of adapters up to 180 Watts

M(W)LT200 Series

- 3 x 5 Inch 200 Watt

[Product Overview](#)

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