

Welcome to EMAC E-mail, a newsletter from EMAC, provider of single board computers, peripherals, and custom engineering to meet your embedded systems needs.

## FEATURES

1. **Product News :** SBCs Go End Of Life
2. **Newsletter Promotion:** SoM Power Supply
3. **Product Highlight:** Low Power Server in a Box (SIB)
4. **Technical Forum:** Freescale Alliance Member
5. **Engineering Success Story:** CTS C-24 Reference Story
6. **EMAC Extras:** EMAC Specials

## Product News:

### SBCs Go End of Life

#### PC Compatible SBCs

EMAC has recently received news from our suppliers that will affect many of the products we currently offer. VIA has discontinued the series of processors used in many EMAC products, which means that all of the VIA processor based products that are currently offered by EMAC will go end of life. Last time buy for products using via processors will be February 28, 2006.

In addition to the discontinuation of currently offered VIA products, items using the AMD Geode GX-1 are also being discontinued. The GX-1 processor will be replaced by the AMD Geode GX-3 in most items. The GX-3 will be faster and more efficient than the GX-1 and will operate at a lower temperature, making the products more useful in environments where heat dissipation is very important. Last time buy for products using the Geode processor will be February 28, 2006. The following chart shows the products that will be affected by this change, and lists immediate solutions as well as the suggested long term replacement products that will be available April 2006:

Discontinued Product	Immediate Replacement	Long Term Solution
PCM-3350	PCM-3370F	PCM-3353
PCM-4896L	PCM-4896L	PCM-5893
PCM-9575	PCM-9579F	PCM-9579F
PCM-5820	PCM-9371F	PCM-9375
PCM-5822	PCM-9371F	PCM-9375
PCM-5823	PCM-9371F	PCM-9375
PCM-5825	PCM-9371F	PCM-9375
PCM-9373	PCM-9371F	PCM-9371F
PCA-6753	PCA-6773	PCA-6773
PCA-6772	PCA-6773	PCA-6773

<b>SBC-657</b>	<b>CALL</b>	<b>CALL</b>
<b>PCI-6871</b>	<b>CALL</b>	<b>CALL</b>
<b>PPC-105T</b>	<b>PPC-106T</b>	<b>PPC-105T</b>
<b>SOM-4472</b>	<b>SOM-4475</b>	<b>SOM-4475</b>
<b>SOM-4450</b>	<b>SOM-4455</b>	<b>SOM-4455</b>

## **SBC Microcontrollers**

Due to RoHS compliance efforts, many of our SBC Microcontrollers are also being discontinued. The following products will be discontinued: Micropac HC11, Micropac 535, EPAC 3000, and the EPAC 3000 G2. Last time buy for these products will be March 30, 2006.

---

## **Newsletter Promotion:**

### **SODIMM System on a Module (SoM)**

System on a module (SoM) is an ideal alternative to custom engineering. With an SoM approach you get the best aspects of both buying Off-The-Shelf and of a Custom Engineered solution.

An SoM is comprised of a small processor module with CPU bus accessibility and standard I/O functionality. The SoM module does not have any connectorization and is designed to be plugged into a Carrier Board. The Carrier board contains the I/O connectors as well any other I/O requirement not provided on the SoM itself. This approach allows the customer to design a Custom Carrier Board, that meets the customer's I/O, dimensional, and connector requirements without having to worry about the processor, memory, and standard I/O functionality.

Right now, EMAC, Inc. is offering a free power supply with the purchase of any SODIMM SoM and Carrier Board. For more details about our SoM products and their wide array of configuration options, please visit <http://www.emacinc.com/som>

For additional details, contact the EMAC Sales department at [info@emacinc.com](mailto:info@emacinc.com).

---

## **Product Highlight:**

### **Low Power Server in a Box (SIB)**

EMAC, Inc., announces the Low Power Server in a Box (LP-SIB). The EMAC Low-Power Server-In-a-Box is an extremely rugged embedded multi-purpose Linux server. The LP-SIB does not require any fans, has no moving parts, and the Linux Operating System is resident in a embedded flash disk that is separate from the data flash disk. The low power requirements of the LP-SIB also means low heat generation and lends itself ideal for battery

operated or backed-up systems. Right out of the box, the LP-SIB is configured for Ethernet, serial IP, serial terminal, and raw serial connections. Other devices, including PPP modem links, may be added and configured by the user

## **HTTP Server**

The EMAC SIB uses an HTTP server which is quite small in terms of both disk space required and resources required while running. It is also relatively fast even under heavy load (50 hits/second), equaling or beating the industry standard Apache web server. The SIB supports standard HTML1.1 and CGI methods GET and POST. Other HTML features (client-side image maps and Java / Javascript) are implicitly supported by the server, but may or may not be supported by your browser.

## **FTP Server**

The SIB uses a small, stand-alone FTP server which you may use to transfer files to and from the SIB. (The SIB does not have or require an FTP client.) In its default configuration, the FTP server will allow only a single user FTP access (for security reasons). More FTP users may be added later. The server may also be configured to allow anonymous FTP access to the SIB, if desired.

## **Dial In/Out Server and Client**

The SIB includes software and scripts which allow it to both dial out, and to answer incoming modem connections. Connections may be remote terminal sessions (similar to telnet), or PPP connections. Dial-in terminal sessions allow the user to configure and manage the SIB as if they were at the SIB's own keyboard. The PPP connection allows a user to use standard internet clients such as FTP clients and WWW browsers to access the SIB via telephone. The SIB may also dial out, either on command or as part of an automated script.

## **TELNET Server**

The SIB includes a standard TELNET server (daemon) which will allow remote TELNET (terminal-style) access over a LAN or the Internet. Once simple network configuration has been performed, you may telnet to your SIB from any computer which has network access to the SIB.

## **Periodic Command Scheduler (CRON)**

The SIB comes with the standard UNIX periodic command scheduler, CRON. This is a program which runs in the background, executing specified commands at specified times. Programs can be executable binaries or shell scripts. CRON is configured from the main system configuration utility.

## **LP-SIB uClinux Development**

EMAC provides a **Free** Eclipse IDE that is pre-integrated to provide everything the user needs for developing LP-SIB applications. All the compiling, converting and downloading inherent to LP-SIB development can be done from one easy to use high level interface. The distribution provides an SDK for the LP-SIB which contains source examples for all the LP-SIB's I/O. The EMAC Eclipse IDE is a powerful, yet flexible Integrated Development Environment for the LP-SIB and even features CVS version control support.

## **LP-SIB Features**

## **Hardware**

- Freescale Fanless Coldfire 66 Mhz based CPU
- Ultra Low Power uses less than 2 watts
- 16 MB RAM
- 2 MB (4 MB optional) of on-board Flash for uClinux Operating System
- 64 MB of Hot Swapable MMC/SD Flash Disk for File System expandable to 1Gig.
- 10/100 Base-T Ethernet
- Three RS-232 Serial Ports
- Extremely Reliable (No Moving Parts)
- Separate Wall-Mount Power Supply
- Data Acquisition & Control Server option

## Software

- uClinux 2.6 kernel
- Resident Flash Das Uboot Bootloader with TFTP provision (allows remote boot update of Flash Data)
- Minix shell with full File System support
- HTTP Server
- FTP Server
- PPP Dial In/Out Server and Client
- TELNET Server
- Periodic Command Scheduler (CRON)
- Many optional modules, such as Modbus, SNMP, CanOpen, SSH, etc.
- RTAI Real Time module option

The cost of the LP-SIB Starts at **\$320.00 USD**. For more information call (618) 529-4525 or email us at [info@emacinc.com](mailto:info@emacinc.com)

---

## Technical Forum:

### Freescall Alliance Member

EMAC is now an official Freescale ([www.freescale.com](http://www.freescale.com)) Alliance Member. EMAC has been given the Freescale stamp of approval to provide its customers with custom Freescale product engineering. EMAC has been providing Motorola now Freescale processor based Single Board Computers (SBCs) for over Ten years. We know Freescale Processors.

In addition to Freescale based SBCs, EMAC offers a comprehensive, off-the-shelf product line of x86 SBCs, Single Board Servers/Firewalls, and peripherals. Our x86 Single Board Computers are 100% PC compatible and come pre-loaded with Linux, Windows, or any other popular Operating System. From PC/104 to Modems to Software, EMAC, Inc. is your Partner of choice for End-to-End Solutions.

---

## Engineering Success Story:

### CTS C-24 Reference Story

When it came time for Cincinnati Test Systems to design their next generation compact leak tester they came back to EMAC who designed the first generation product known as the C-20. This next generation product needed a lot more horsepower than its predecessor in order to perform DSP filtering and control in real time. EMAC, integrated the Freescale Coldfire 5282 RISC processor on to a board with PWM valve control, a 4 channel 24-bit A/D, Isolated Digital I/O, Keypad and LCD interfaces. The result was a low cost product solution that can detect leaks in a Pneumatic system down to 1/10,000th of a PSI. EMAC is now

starting the design of CTS' next generation higher-end system called the I24 later.

---

## **EMAC Extras:**

### **EMAC Specials**

This month's SPECIAL is the: PCM-6892E ... Pentium Socket 370, EBX SBC with Video, Audio, & dual Ethernet ... \$220.00.

PCM-6892E - [ftp://ftp.emacinc.com/PCM-6892E\\_manual.pdf](ftp://ftp.emacinc.com/PCM-6892E_manual.pdf)

All the items on the EMAC Specials page are either discontinued or must leave our inventory. However, these products are NEW and have a one-year warranty. As always these products have EMAC's service and reliability to back them.

These items could serve as a prototype for a new product without the cost of newer more expensive boards. At the same time they could serve as an inexpensive alternative to the one time application or to the basement tinkering. So don't be the last to pick up these great specials as they are of limited quantities.

EMAC Specials - [http://www.emacinc.com/specials/emac\\_specials.htm](http://www.emacinc.com/specials/emac_specials.htm)

---

**EMAC, Inc. Homepage:**  
<http://www.emacinc.com>

**Copyright© EMAC, Inc.**  
**All Rights Reserved.**

All product names contained herein are the trademarks of their respective holders.

If you wish to unsubscribe to this newsletter, click on the following:  
<http://www.emacinc.com/newsletter/unsubscribe.php>