

Techsol Product Announcement: Gateway Express

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After designing custom and semi-custom embedded computers for years, Techsol is now offering a standard, off-the-shelf computer with a Sun-compliant Java Virtual Machine. This [SA2410 Medallion CPU Module](#) compatible Computer features:

- Ultra-Low-Power operation: consuming **less than 2 watts at full speed**
- 200 MHz ARM-920T processor running Techsol's **proven Medallion Linux OS** for performance and reliability
- **Low-power 10-BaseT Ethernet** interface
- 1 × **RS-232 serial interfaces** on DE-9 connectors
- 1 × **RS-485 serial interface** on RJ-12 connector, **OR** 1 × **Multi-tech Socket Modem** on RJ-12 connector
- 2 × **ultra-efficient SMPS with** the primary supply providing 5-volts for USB, GPS, and Audio, and a secondary switcher generating 3.3 volts for digital circuits
- High-quality **16-bit Audio Out** (for MP3s, Announcements, etc.)
- There is a **low-power Real-Time Clock** with Battery Backup (RTC)
- There's a **Memory Card Connector** for SD or MMC cards
- Of course, there is a **USB Host port** (USB-A connector)
- plus a **USB Device (Gadget) port** (USB-B connector)
- 4 × push buttons, etc.
- And, like all Medallion CPU Module powered devices, it ships with **Linux 2.6 plus drivers pre-installed!**

all packaged into a space barely 5.7# × 5.5# × 1.5#

But the most interesting features are that it includes a **Sun-compliant port of J2ME/CDC** with additional **database connectivity** classes available, and that it consumes so little power, that when used instead of a PC **it will pay for itself** in energy savings within 2 years.

Imagine: Save money and save the planet at the same time!

"This little computer provides many big computer features." said Brian Empey, P.Eng., CEO of Techsol. "It comes with a **Sun-compliant Java Runtime Environment (JRE)** that is a Medallion-targeted configuration of IBM's WEME (WebSphere Everywhere Micro Environment). It is comprised of Techsol Medallion-Linux/ARM920T-specific ports of the **CDC-J2ME-specific J9 VM and Foundation Class Library (FCL)**. Then we've added additional database-connectivity classes, as well as JAVAX.COM from J2SE. The result is a **JRE with the light foot-print and speed of J2ME, but with most of the useful functionality of J2SE.**"

And for serious developers, there is also a custom JDE based on **WebSphere Device Developer 5.6** for Linux. That's enterprise-grade tools for fan-less, disk-less, embedded industrial computers.

So, what does this mean? Well, in most markets **customers are trying to optimize ROI** from their in-house SW development expenditures. They've figured out that **standards and portability** are the way to go, hence the rise of **JAVA** as the planet's most popular programming language. However, portability isn't enough. **It can't just work — it has to work correctly** and that's a challenge with the myriad "Java-like" options out there.

"With our customers' **applications including safety-critical industrial systems, medical life-support systems, robotics, security, and building automation**, they need to know that the SW developed on the desktop is going to work the same on the embedded platform. That's why we went the extra step to **license IBM's J2ME/CDC** and develop a port that passes Sun Microsystems' entire, exhaustive compliance testing suite. It was a large investment on our part, but **our customers can sleep at night knowing that their systems will operate as designed!**"

The Gateway Express sports Sun's Coffee-cup Logo indicating that it is a compliant device. **"If it doesn't have the coffee-cup logo, then it's not real JAVA!"**

Speaking of software, the units ship with Medallion Linux (like all Techsol Medallion System products) pre-installed, with drivers. There is a development kit available for customers wishing to develop in C/C++ as well.

The Gateway Express is available from stock, with the [Medallion Linux Distribution](#) powering it. It features 32 MB of SDRAM and 64 MB of NAND FLASH (in addition to the 2 MB of NOR FLASH for fault-tolerant boot-loaders).

Pricing starts **UNDER \$300 each at quantities of 1000 pieces, including the JRE!**

Embedded Engineering is the same all over the world. Engineers face the same challenges of having too much to do, and not enough time or money to do it with. Techsol's **Medallion** CPU modules address this issue and provide a solution that extends into the production stages of a product, not just the *proof-of-concept* stage like most SBCs.

Techsol's **Medallion** system is unique in the embedded computer world. The **Medallion** Single-board computer product line encompasses multiple CPUs, and different configurations with the same CPU. However, the pin-out and form-factor remain the same. There is one **Medallion** module that is best matched to your application.

By designing with the **Medallion** system, you are effectively **out-sourcing** your CPU design and Linux porting **with no up-front NRE fees!** That lets your team concentrate on the hardware and software portions of your product that your customers see. The result is that **you can create a higher-quality product in a fraction of the time (and cost) of designing**

everything yourself from scratch! Plus, the **interchangeable modules extend product life-cycle times**.

For more details, or to request further information, please visit our Web site at [<medallionsystem.com>](http://medallionsystem.com), call 888 TECHSOL (888 832 4765) or 604 946 8324, or e-mail [<sales@techsol.ca>](mailto:sales@techsol.ca).

Techsol is headquartered in Delta, British Columbia, Canada, where the mighty Fraser River meets the Pacific Ocean.

See also

- [GWX product page](#)
- [DevKits](#)