

# SELECTING AN EMBEDDED RTOS



## FEATURED INTERVIEW:

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## BLUNK MICROSYSTEMS - RTOS PRODUCTS &amp; SERVICES, 2009

Blunk Microsystems: RTOS Products & Services, 2009

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**Q. First of all, tell us a little bit about yourself and your responsibilities at Blunk Microsystems.**

A. I am the founder and one of the developers at Blunk.

**Q. If you would, please give us a very brief, bulleted outline of your products. What sorts of real-time operating systems (RTOSes), tools, and/or services does your company offer?**

A. Blunk offers a fast traditional RTOS, easy to use and understand, with a small RAM footprint. We provide high performance components: particularly an extensive range of full-featured file systems (FAT, UNIX-like flash file systems, Flash Translation Layers, etc) and an IPv6 ready TCP/IP stack. Our products are targeted at providing full-featured high performance for 32-bit architectures.

We also provide a complete toolset with compiler, assembler, linker, and cross debugger. Our tools are based on the GNU software, but are augmented in three ways: 1) our *Debug Agent* supports connections over BDM, JTAG, or Ethernet, 2) our *gBuild GUI build tool* adds one-click checking of timestamp dependencies and recompilation, and 3) our kernel awareness extensions provide task scoping, kernel object status, and time versus kernel event plots.

**Q. What is Blunk Microsystems's "unique value proposition" for the embedded systems engineer or programmer who is considering an embedded RTOS? What do you and your products do to help him get his product to market faster, cheaper, better?**

A. We have several unique value propositions:

1. Our file system position is unique. We have a long history of supplying embedded file systems to a number of different cell phone vendors. As our business has continued and grown, we have expanded our offerings. We now have the widest range of embedded file systems of any vendor.
2. Our TCP/IP stack has a long lineage in Consumer Electronics products, where its high performance, stability, and portability have been key reasons for its adoption.
3. All of our products have been developed by Blunk and are supported by their original developers.

**Q. How are you different as a company from competitors? What sets your products apart from those of other RTOS companies?**

- A. While most RTOS vendors say they have a flash file system, Blunk has a line of flash file systems, both UNIX-like and FAT/FTL, supporting all types of flash memory: SPI, NOR, NAND SLC, NAND MLC. etc.

Our development tools and system software are integrated. This allows us to be one of the very few vendors to support fast downloads and debugging over Ethernet via a target monitor. This gives the lowest cost, most reliable, highest performance debug connection.

Again, all of our products have been developed by Blunk and are supported by their original developers.

**Q. What embedded architectures do you support - e.g., Intel architecture, MIPS, ARM, PowerPC, etc.?**

- A. We have ported our RTOS to ARM, ColdFire, MIPS, and PowerPC. Our file systems and TCP/IP components have been used on these and additional architectures: TriMedia, SPARC, etc.

**Q. What additional software do you offer such as networking, file systems, TCP/IP, security, IDE, GUIs etc.? What about development tools? Are there particular partnerships with other software companies that are especially helpful?**

- A. As discussed above, Blunk offers a range of components and a complete toolset. Our OEM relationships have helped us hone and expand our system components. Our relationships with key flash semiconductor vendors have allowed us to provide early support for new flash technologies.

**Q. How are your products sold? What is a typical fee arrangement? Is it royalty free? Per unit royalty?**

- A. We license our products both for use in a specific customer product (product license) with a one-time fee or as term licenses with an annual fee (subscription license). Our Premium Subscription license is a novelty. It includes our toolset, RTOS, and all components for \$5K per seat per year.

**Q. Finally, what sort of "try before buy" experiences does your company offer? Are there free demo downloads, webinars, seminars? What web URL's can you point us to for more information?**

- A. We offer 30-day full source evaluations to qualified prospects.

**Q. Thank you for this product interview.**