AMERICAN ARIUM CORPORATE BACKGROUNDER

■ THE COMPANY

American Arium is a leading supplier of JTAG in-circuit emulators and debuggers for embedded system development and the personal computing industry. Our product line supports ARM®- and Intel®-architecture processors including ARM 7™, ARM9™, and ARM11™, Intel Xscale®, TI OMAP™, and Xeon®, Pentium® M/II/III/4, Itanium® 1 and 2, and Celeron® processors. In addition, Arium's products support AMD64 processors. Throughout the industry, Arium's products are used to debug embedded applications, BIOS/Intel® Platform Innovation Framework for EFI, device drivers, and OS kernels.

American Arium's mission is to meet and exceed the needs of hardware and software developers by providing them with the right tools to help them minimize their debug cycle. Our focus is to provide solutions to best meet our customers' needs. This not only includes excellent hardware and software products, but also in-depth technical support.

■ SOLUTIONS

American Arium's products are designed to make the developer's job easier. To that extent, we take great care in developing hardware and software that is easy for the user to set up and configure to help him or her be productive in a relatively short period of time. Our tight integration of hardware and software for emulation lends itself to a robust debugging environment, helping to minimize the challenges associated with debugging code. With our tools, Arium provides its customers solutions for:

- Hardware bring-up
- Driver development/debug
- BIOS development/debug
- EFI Framework development/debug
- OS (including Linux) and application development/debug
- 3rd party support for OEM system development

Arium's products are developed in-house and include our own debugging software interface, SourcePoint™, and numerous hardware emulator offerings.

Software

SourcePoint is Arium's flagship software debugger for ARM-core-based and Intel-processor-based platforms. The interface gives the developer unsurpassed visibility to and manipulation of code via a series of intuitive screens and dialogs with numerous viewing and customization options, supports industry-standard input file formats, and includes a robust C-like command language. Key features include "hot plugging," Linux OS aware debug (ARM), and support for the Intel Platform Innovation Framework for EFI. SourcePoint operates in real time with all core frequencies and works with today's most popular compiler tool chains.

Emulators

ARM-Based Solutions - Arium JTAG emulators support ARM-based (ARM7, ARM9, ARM11), Intel XScale, and TI OMAP™ processors. Currently, Arium offers the GT-1000D with 1 GByte of ETM trace at 640 MHz trace capture rate, the SC-1000A with ETM trace capability, and the robust LC-500 run controller.

Intel Architecture Solutions - The ECM-50 emulator was developed specifically for use with Intel IA-32 and IA-64 processors, Intel 64-bit extensions to 32-bit processors, and AMD64 Opteron™ and Athlon™ processors. The ITP features outstanding run control and execution trace functionality.

■ CUSTOMERS

American Arium's customer base spans a wide range of industries, with a broad presence in:

- Major PC original equipment manufacturing
- High-end embedded computing platforms (routers, switches and network devices)
- Peripheral card development (SCSI, Fibre Channel, graphics)
- Embedded devices (PDAs, disk drives, industrial controls, wireless phones)

■ SERVICE AND SUPPORT

American Arium offers a wealth of technical support options, from telephone to e-mail to interactive online support, from application notes to white papers. Our support staff members have strong computer engineering backgrounds ranging from complex hardware design to embedded application coding. These people are also our trainers; they not only know our products, but they understand how our customers use them. And unlike many other companies in this industry, we continue to support our emulators well after our new products hit the market. Internationally, Arium provides sales and support through a network of highly qualified distributors, well trained to service and support the product lines. With a presence throughout the world, Arium is well suited to meet its clients' needs, wherever they arise.

■ FUTURE EFFORTS

American Arium continues provide new, elegant and innovative yet simple solutions to make developers' jobs easier. We work with major processor vendors to integrate their latest innovations into our tools offerings and provide insight to them on developers' needs. In addition, we are working with operating system vendors to provide links and hooks into these OSs and are planning several new offerings around them.

■ HISTORY

American Arium, a privately held corporation, offers its customers many years of experience in the field of microprocessor development and debug tools. The combination of American Automation and Arium Corporation formed American Arium in March of 1991. American Automation, which began its business in 1977, developed expertise in providing engineers with reliable and inexpensive in-circuit emulator tools for the development and debug of embedded microprocessor designs. The in-circuit emulator line, called EZ-Pro, offered not only the necessary hardware to connect to many different microprocessor targets, but offered many assemblers, linkers, compilers, and debuggers, as well.

Arium Corporation had its roots in Integrated Digital Systems, a consulting firm founded in 1977. In 1983, the company officially changed its name to Arium and introduced to the logic analyzer market a very low cost, easy-to-use, portable logic analyzer, model ML4100. In the course of a few years, well over 5,000 ML4100s were sold worldwide.

After the merger in 1991, American Arium worked with Intel Corporation to develop in-circuit emulation tools to support the Intel Pentium processor. Utilizing American Arium's expertise in logic analysis and in-circuit emulation, the resulting product line, called LA/ICE, was introduced to the market in 1992.

Throughout the 1990s, Arium focused on building and expanding its line of feature-rich hardware-assisted debug tools for Intel processors, eventually dominating the market. Currently, the company supports the Intel Pentium family of processors as well as the Intel Platform Innovation Framework for EFI.

In 2001, Arium announced its move into the ARM market, following shortly with the launch of the SC-1000 JTAG emulator and SourcePoint™ 5.0. Today the company offers the SC-1000A with ETM trace capability, the robust LC-500 run controller, and the GT-1000 trace port analyzer featuring 1 GByte of trace memory and a 640MHz trace capture rate.

Arium's flagship SourcePoint debug interface runs on a Microsoft® Windows® or Linux host. In the last two years the company has added Linux OS aware debug to its list of capabilities. It supports full symbolic, source-level debugging of Linux kernel code and source-level debug of Linux embedded applications, operates from reset through OS boot even on headless targets, and handles debug of dynamically loaded and relocatable kernel modules, the latter two of which are industry firsts.