

ARM CORPORATE BACKGROUNDER

Market Overview

Intellectual Property (IP) is one of the hottest and most highly-coveted commodities in the new economy. Nowhere is this more apparent than in the semiconductor arena, where an IP revolution is defining a new generation of digital electronic products. IP is forming the basis of today's ever-advancing processors and is driving innovation across a broad spectrum of consumer and business applications, pushing high-speed, high-bandwidth communications and wireless connectivity to new limits.

The use of processors in a wide range of electronic devices has escalated to the extent that the use of processor IP is now ubiquitous in system-on-chip (SoC) designs, providing the technology foundation for nearly everything electronic in the world today. This heavy use of processor IP is set to continue. The SIA projected that worldwide sales of semiconductors would increase 10.1 percent in 2003, 16.8 percent in 2004, 5.8 percent in 2005 and seven percent in 2006. The SIA also predicted industry sales to grow from \$141 billion in 2003 to \$205 billion in 2006.

ARM – The Architecture for the Digital World™

ARM Holdings plc [(LSE: ARM); (Nasdaq: ARMHY)], ranked by Dataquest as the number one semiconductor IP supplier in the world, emerged as a pre-eminent force in the semiconductor revolution. When ARM pioneered the concept of openly-licensable IP for the development of 32-bit RISC processor-based SoCs in the early 1990s, it changed the dynamics of the semiconductor industry forever. By licensing, rather than manufacturing and selling its chip technology, the company established a new business model that has redefined the way processors are designed, produced and sold. More importantly, ARM® technology has shaped a new era of next-generation electronics: ARM Powered® processors are pervasive in electronic products, driving key functions in a diverse variety of applications in key markets, including Home, Mobile, Enterprise, Embedded and Emerging.

ARM licenses its IP to a network of Partners, which includes some of the world's leading semiconductor and system companies, including 19 out of the top 20 semiconductor vendors worldwide, as ranked by iSuppli Corp. These Partners utilize low-cost, power-efficient ARM processor designs to create processors, peripherals and SoC solutions.

To support the company's RISC processors and SoC IP, ARM has developed a strong base of development tools, hardware and software products. Partners have access to an unrivalled range of software-based IP, operating systems (OS) ports, software design, verification tools and physical IP. In this way, ARM provides Partners with a full

portfolio of offerings that deliver significant risk reduction and faster time-to-market benefits.

As the foundation of the company's global technology network, these Partners have played a pivotal role in the widespread adoption of the ARM architecture and to date, ARM Partners have shipped more than 2.5 billion ARM processor-based devices.

The History of ARM

ARM was established in November 1990 as Advanced RISC Machines Ltd., a UK-based joint venture between Apple Computer, Acorn Computer Group and VLSI Technology. Apple and VLSI both provided funding, while Acorn supplied the technology and the 12 founding ARM engineers. Acorn, developer of the world's first commercial single-chip RISC processor, and Apple, intent on advancing the use of RISC technology in its own systems, chartered ARM with creating a new processor standard. ARM immediately differentiated itself in the market by creating the first low-cost RISC architecture. Conversely, competing architectures, which were more commonly focused on maximising performance, were first used in high-end workstations.

With the introduction of its first embedded RISC processor, the ARM6™ family of processors, in 1991, ARM signed VLSI as its initial licensee. One year later, Sharp and GEC Plessey entered into licensing agreements, with Texas Instruments and Cirrus Logic following suit in 1993. Over the years, ARM has significantly expanded both its IP portfolio and its Partner base. After the 1993 addition of Nippon Investment and Finance (NIF) as a shareholder, the company began establishing a global presence, opening new offices in Asia, the US and Europe. In April 1998, the company listed on the London Stock Exchange and Nasdaq. More recently, in December 2004, ARM acquired Artisan Components.

ARM is now a global corporation with more than 1,250 employees and facilities in 12 countries on three continents, with design centers in: Blackburn, Cambridge and Sheffield in the UK; Sophia Antipolis in France; Bangalore in India; Sunnyvale, San Diego and Walnut Creek in California; Cary in North Carolina and Austin in Texas. The company also maintains sales, administrative and support offices in Belgium, China, France, Germany, Israel, Japan, Korea, Taiwan, Singapore, the UK and the US.

Partner Technology Programs

The ARM Connected Community is a global network of companies aligned to provide a complete solution, from design to manufacture, for products based on the ARM architecture. Today the ARM Connected Community comprises more than 320 companies spanning the entire semiconductor design chain including providers of software, development tools, systems, design tools and services, operating environments, training and support, and silicon and systems manufacturers. Members of the ARM

Connected Community cover a wide range of market applications from the mobile and home spaces, through to the embedded and enterprise solution areas.

The overall goal of the ARM Connected Community is to facilitate networking opportunities between member companies in an effort to increase design win opportunities and shorten the time-to-market. Members promote their solutions through a mix of branding tools, online and printed collateral, events, press activity and the IQ Magazine.

In recent years, ARM has extended its business model to include Partnership programs in key areas:

The ARM EDA Partnership Program brings together expertise from ARM in system design, reusable IP generation and IP modeling, with the electronic design automation (EDA) methodology expertise of leading EDA tool vendors to develop faster, more accurate, routes to SoC products.

The ARM Approved Design Center Program is an extension and formalization of relationship between ARM and external design service companies. It provides a framework for selecting and enabling competent design centers with the ARM technology necessary for SoC designs and now has more than 2,900 engineers working on ARM Powered products.

The ARM Foundry Program enables Original Equipment Manufacturers (OEMs) in emerging markets to gain access to ARM processor technology, for use in the design and manufacture of advanced SoC solutions. The ARM Foundry Program builds a three-way Partnership between ARM, an approved silicon foundry and an OEM that accelerates the time-to-market for ARM processor-based designs. In addition, this Partnership enables OEMs without access to fabrication facilities, to work directly with an approved ARM semiconductor foundry.

The ARM DesignStart™ Program was developed to augment the ARM Foundry Program by providing early and, easy access to ARM7TDMI® processor design materials. Under this program, qualified customers may download an ARM7TDMI DesignStart Kit, at no charge via the ARM web site. The DesignStart license enables the designer to do the majority of their design activities, including SoC integration and verification, software development and chip layout, prior to obtaining a full ARM Foundry Program License.

The ARM Approved Training Center Program is part of the ARM Connected Community, and has been established to satisfy the growing demand for training in ARM technology among ARM semiconductor Partners, OEMs and design centers worldwide. Through the programme, ARM recruits and works with a network of approved Partners who are trained, qualified and equipped with ARM materials and software tools. This enables these Partners to provide high-quality, certified training to their own markets and regions.

The ARM RealView® Model Library Access Program

This program provides access to ARM Microarchitectural RTL and SystemC models enabling integration of RealView Model library models with the products of EDA vendors. Participating EDA vendors will also gain access interface specifications and integration guides in order to ensure their products will suit the needs of ARM processor-based developers. In turn, these developers will benefit from an increasingly wide range of EDA tools with which to build ARM processor-based solutions in a timely and cost-efficient manner.

ARM Powered Applications

ARM focuses on meeting emerging customer requirements for high-performance, high-integration, low power and small die sizes in its five key markets: Home, Mobile, Enterprise, Embedded and Emerging.

Home: The ARM architecture is driving innovation and cost savings in the high-growth consumer electronics (CE) market. The range of cost/performance points that licensees of ARM technology can meet, means that a single processor architecture can provide an ideal solution for a range of consumer devices, from digital set-top boxes to high-performance, hand-held audio devices such as minidisk and MP3 personal audio players. ARM has more than 40 partners in the CE market including Cirrus Logic, Motorola, NEC, Nintendo, Sega, Sony, Thomson Multimedia and Toshiba.

In particular, the security aspect of the home consumer electronics market is a key issue when considering the growth of the market, whether it is for smart cards in banking, identification, pay TV, mass transit solutions, SIM cards in mobile phones or secure devices that handle Digital Rights Management (DRM) for audio and video content.

This factor is driving up the security requirements of many end equipment solutions and ARM is addressing these requirements with its attack-hardened SecurCore™ CPU family and the ARM TrustZone™ technology which protects both of on and off-chip memory and peripherals from software attack.

Mobile: Mobile devices are applications designed with ARM technology, which are battery powered. ARM licensable solutions have become the industry-leading standard, powering the majority of mobile manufactured devices. ARM works with the leaders in all facets of the marketplace to ensure complete and comprehensive partnership solutions to manufactures of wireless handsets. High performance and low-power ARM processors provide ideal solutions for a wide range of portable communications and consumer electronics devices. ARM processing technology is also powering popular portable video game applications such as the Nintendo Dual Screen and the Sony PSP.

ARM places strong focus on the wireless market and works with the leaders in all facets of the low-power, portable device marketplace to ensure complete and comprehensive

partnership solutions to manufacturers of wireless chipsets and handsets. ARM processors are currently used in around 80 percent of digital cellular phones shipped worldwide. All the major chipset providers use ARM, including: ADI, Agere, Broadcom, Fujitsu, Infineon, Intel, NEC, Nokia, Philips, Qualcomm, Skyworks, TI, Toshiba. ARM processor-based devices are currently being used in innovative smart phone devices such as the Nokia 9500 Communicator and the Sony Ericsson P910i. This market also includes PDA devices and ARM technology is used in leading products such as the HP iPAQ h6325 Pocket PC Phone Edition.

Enterprise: Enterprise solutions capture, store, transfer and alter data. These are devices we use in our daily lives, both at work and at home, such as PC peripherals and printers. These are also devices that support our work activities, enabling our communications and help with daily tasks, such as networking switches, DSL modems and hard disk drives. In 2004, ARM Partners shipped more than 420 million ARM Powered Enterprise devices.

ARM's networking solutions offers faster time-to-market, ease of design and suitability to SoC design, and a wide variety of network applications software, such as TCP, IP, PPP, embedded web server, and other networking functionality such as voice coders, is available for the ARM architecture from several third-party developers. The standardization of the ARM architecture across so many semiconductor suppliers makes it an ideal choice for this market, enabling end equipment manufactures to protect the investment they have made in software.

Embedded: Embedded electronics transforms traditional products by adding more convenience, improving functionality and ultimately lowering the device cost. The most significant example of this is the automotive industry where electronics has become increasingly important in today's vehicle. Further examples can be found in industrial control, measurement, metering, through to everyday products such as washing machines and toys. The industrial market covers a wide range of applications including building management, motor control, utility metering, process control and instrumentation, and domestic appliances. These markets are served by general-purpose products, targeted at multiple applications within an end market, rather than the more customized devices found in other markets. These "standard products" are available off-the-shelf from a multitude of ARM silicon Partners and their franchised distributors.

In the automotive market, ARM Powered processors can be found at the heart of in-car electronics, powering functions such as vehicle dynamics and anti-lock breaking systems, instrument clusters, central body controllers, engine management, in-car infotainment and telematic systems. The major factors of growth in automotive electronics are safety and environmental regulations, as well as the need to replace expensive mechanical parts by more economic electro-mechanical and electronic systems. To meet this demand, the automotive market is moving from 8-bit microcontrollers to 32-bit solutions, making it an ideal market for ARM technology.

Emerging: Innovation in the emerging technology market is increasingly a high-risk and high-reward proposition. Revolutionary products and services face steep challenges of mass adoption that only reward solutions in line with existing marketplace infrastructure, volume and economics. ARM delivers market proven technology that quickly and easily translates innovation into successful volume production. The ARM business model is built upon advanced R&D investment along with close relationships with Partners. The ARM business model is built upon advanced R&D investment along with close relationships with partners and customers. The existing investments and infrastructure in place for today's high-volume applications can easily be leveraged for emerging applications.

For more information on ARM, visit the Company web site at www.arm.com

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