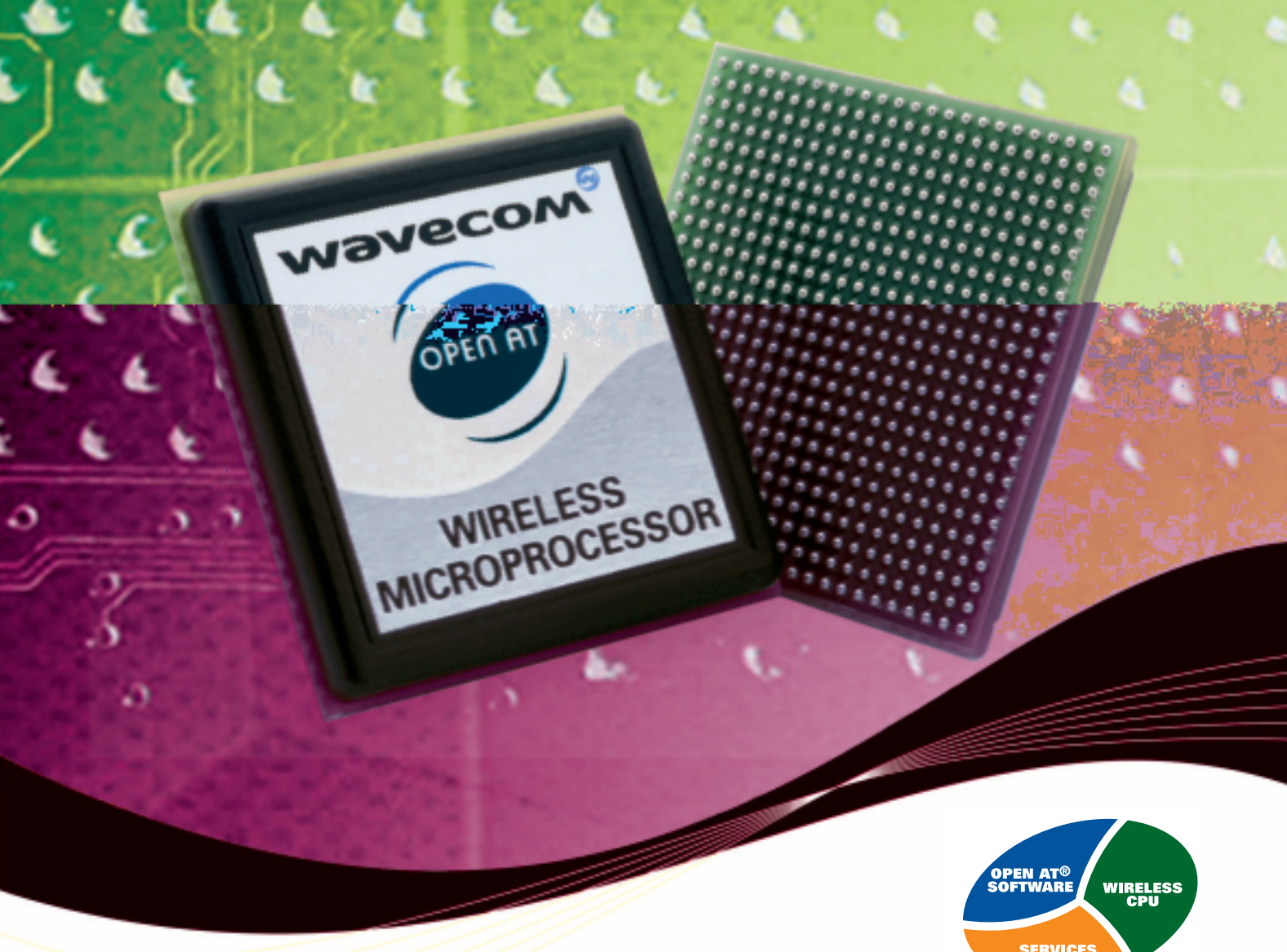
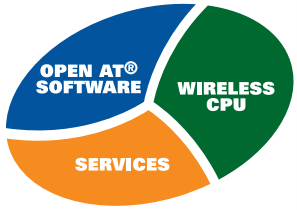




Wireless Microprocessor

Embedded processor capability and wireless connectivity in a single device

Wavecom is launching a revolutionary new breed of embedded wireless computing cores, providing industrial product developers with powerful central application processing and built-in support for global cellular wireless Internet connectivity, backed by a comprehensive operating system and application software development environment.

POWERFUL CORE APPLICATION PROCESSING

Wavecom's Wireless Microprocessor is a powerful central processing unit with an ARM9 32 bit core.

GLOBAL WIRELESS CONNECTIVITY

With more than 100 interfaces for connecting a wide range of peripherals and wireless Internet connectivity to more than 600 GSM/GPRS networks worldwide, Wireless Microprocessor redefines the world connectivity.

OPEN AT® OS

The real-time Open AT® OS allows developers to natively execute their program with minimum processor resource overhead and minimum memory footprint.

OPEN AT® IDE

The world's most powerful cellular embedded development environment enables developers to code in C, compile, download, and debug wireless applications that are run directly on the Wireless Microprocessor.

OPEN AT® PLUG-INS

The Plug-In architecture of Open AT® Software allows developers to write their own Plug-Ins or take advantage of the off-the-shelf range from Wavecom.

PROFESSIONAL SERVICES

Choose from a range of services that accelerate your product design, ensuring you capitalize on market opportunities.

wavecom

Make it wireless

Operating Systems | Plug-Ins | Integrated Development Environments | Wireless CPUs | Services

Wireless Microprocessor

Real-time central wireless computing

In the early days of industrial wireless product design, the wireless element was a plain modem – an unintelligent device that receives data in one format and transmits it in another. These "modems" were typically added to existing wired or even disconnected products to give them a wireless connectivity lifeline.

This process of creating wireless products is now known not to be the most efficient approach from the perspectives of time to market, total product cost, size, performance and post deployment maintenance.

What is needed is a revolutionary approach. An approach which combines two basic elements inherent in all wireless products; processing and wireless connectivity.

A MICROPROCESSOR WITH BUILT-IN WIRELESS

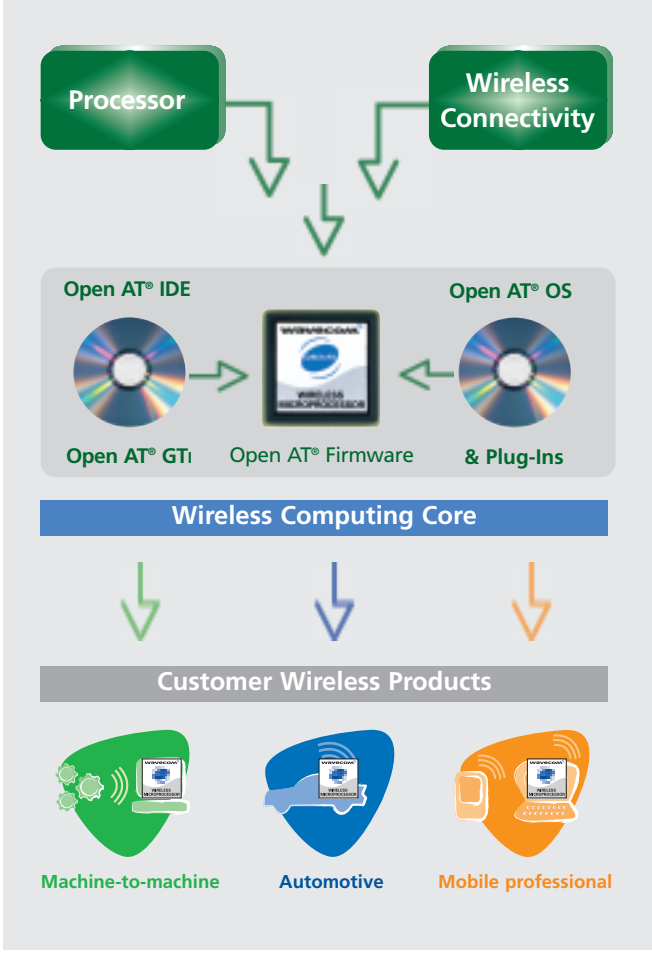
By combining embedded processor capability and wireless connectivity in a single device, and adding a comprehensive Operating System and IDE (Integrated Development Environment), developers can now design innovative products to be wireless from the start.

Such a wireless computing core paves the way for product designs that:

- Are volume built using standard manufacturing techniques for automated component placement thanks to the BGA (Ball Grid Array) form factor,
- Meet the most ambitious total product cost targets,
- May be maintained remotely over-the-air, throughout the extended lifetime expected of industrial products,
- Get to market in the fastest possible time, saving money in lost revenue,
- Occupy the least amount of physical space, allowing matchbox-sized product designs,
- Can be optimised to consume the least amount of power for longer running times.

Wavecom's new Wireless Microprocessor has, at its heart, a 32 bit ARM9 beating at up to 104MHz, which provides sufficient processing power for the most demanding M2M, Automotive and Mobile Professional products.

Processing power is nothing without peripheral connectivity and Wireless Microprocessor packs a punch here too with the ability to connect just about any kind of peripheral devices. These include a range of memory, keypad, GPIO, ADC, DAC, SPI, I²C, USB, RS232 UART, parallel port, and analogue and digital audio interfaces.

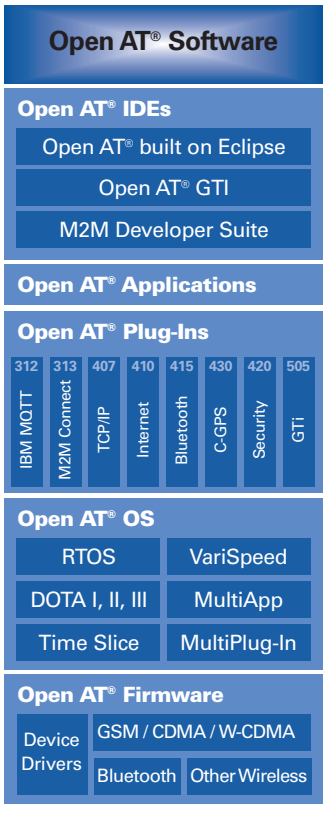


Open AT® Software

Industrial software for industrial design demands

Wavecom has made it a priority to make application development a serene experience for companies using our Open AT® software and Wireless CPUs. Therefore, Wavecom offers a unique family of application-targeted Integrated Development Environments providing developers with the ability to write applications, compile them, download them to the Wireless CPU and monitor them during the debugging phase of development.

The vast array of software value provided by Wavecom is unique in the embedded cellular (GSM & GPRS) wireless market. This is made possible by one primary factor: Wavecom owns, writes and maintains its own software. This fact alone means we can innovate, adapt and customize to market needs faster than anyone else.



OPEN AT® FIRMWARE: *Essential communications & drivers*

Inside the firmware that is provided with all Wireless CPUs, you'll find Wavecom's wireless expertise in the cellular and complimentary wireless communications stacks in addition to the drivers for peripheral devices such as serial and parallel ports, analogue digital converters and buses.

OPEN AT® IDEs: *Imagine it, code it, test it, run it*

Whether you are developing a stand-alone software application, a medium to complex HMI (Human Machine Interface) that utilizes a display, or a complete end-to-end client/server system, there is an Integrated Development Environment tailored to meet your needs.

- Open AT® built on Eclipse™ is the primary development environment for creating natively executed C applications.
- Open AT® GTi is a powerful extension to the standard IDE which provides a GUI (Graphical User Interface) based IDE for developing display-driven HMI applications. It includes an embedded state machine and display engine for the chosen Wireless CPU.
- M2M Developer Suite from Anyware Technologies is a GUI-based client/server IDE that enables the embedded Open AT® client to be developed in parallel with the Java™ server client.

OPEN AT® APPLICATIONS: *Use ours or develop your own*

Supplied with the standard IDE is a range of licence free sample applications. In addition, a number of more comprehensive examples are backed up by Application Notes on our web site, including our Graphics Engine & LCD driver, Bluetooth® example and many others. The Open AT® GTi offer also includes the option to use a pre-written and fully validated reference HMI application for use in a ready-to-go fixed wireless phone product, or to be used as a starting point for developing other wireless products.

OPEN AT® PLUG-INS: *Get the value, save time and money*

Plug-Ins are an optional range of software feature packages that you selected when you order your wireless computing core. The standard range provides access to Internet clients & protocols, controllerless companion wireless peripherals such as Bluetooth® & GPS, and the Open AT® GTi state machine and display engine. The prescriptor range allows interworking with IBM® WebSphere® or Orange M2M Connect. Of course, the powerful flexibility of Open AT® Software means that you can also develop your own Plug-Ins and own custom AT commands.

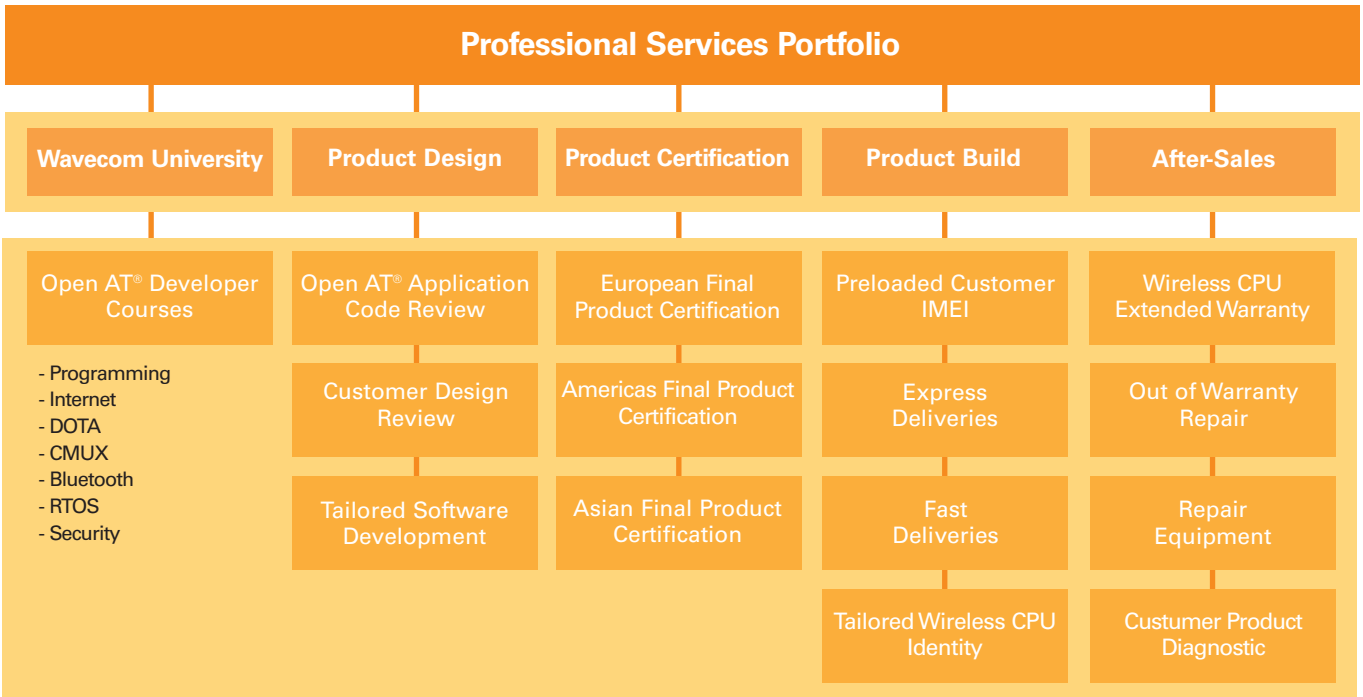
OPEN AT® OS: *Intelligence, stability, upgradeability*

The Real-Time OS supported by Wireless Microprocessor is your key to creating long lasting product value and security in post deployment field maintenance. The OS supports a rich set of over 440 APIs, MOTA (maintenance-over-the-air) including patch upgrades for Open AT® Software, multitasking and multiapps, fast interrupt latency, direct timer and memory access, cache memory.

Professional Services

Making your development and production easier

At Wavecom, we realise that the business you are creating is, more often than not, very complex. With this in mind, we have created the third element of our portfolio: A range of services to help you be faster, sleeker and more adaptable to the ever-changing demands of your market. The range of services is not only comprehensive but is expanding rapidly to meet the needs you have of us. These services are grouped along the typical product lifecycle timeline and include Wavecom University, Product Design, Product Certification, Product Build, and After-Sales.



See the Wireless Microprocessor online:
www.wavecom.com/wirelessmicroprocessor

Join the Open AT® Developer community:
www.wavecom.com/forum

Wavecom®, Open AT®, and certain other trademarks and logos appearing on this document, are filed or registered trademarks of Wavecom S.A. in France or in other countries. The Bluetooth® word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Wavecom is under licence. Eclipse™ and Built on Eclipse are trademarks of Eclipse foundation, Inc. IBM® and WebSphere® are trademarks of International Business Machines Corporation in the United States, other countries, or both. Java™ is a registered trademark of Sun Microsystems, Inc. in the United States and other countries. All other company and/or product names mentioned may be filed or registered trademarks of their respective owners. 03/06

wavecom

Make it wireless

WAVECOM S.A. - 3, esplanade du Foncet - 92442 Issy-les-Moulineaux Cedex - France - Tel: +33 (0)1 46 29 08 00 - Fax: +33 (0)1 46 29 08 08
Wavecom, Inc. - 4810 Eastgate Mall - Second Floor - San Diego, CA 92121 - USA - Tel: +1 858 362 0101 - Fax: +1 858 558 5485
WAVECOM Asia Pacific Ltd. - Unit 201-207, 2nd Floor - Bio-Informatics Centre - No. 2 Science Park West Avenue - Hong Kong Science Park, Shatin - New Territories, Hong Kong - Tel: +852 2824 0254 - Fax: +852 2824 0255

Wavecom S.A. may, at any time and without notice, make changes or improvements to the products and services offered and/or cease producing or commercializing them.

Designed by Franklin Partners - Groupe Mediagérance.