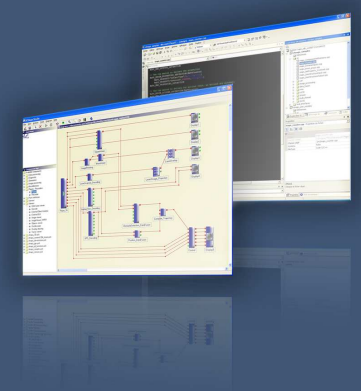
RTMaps® for Wifibot - RTM4W®

A powerful OEM software
to build multisensor robotics applications

parallel computing | asynchronous | modular | powerful API | optimized for image processing



RTMaps® for Wifibot is a powerful component based software specially designed to easily develop complex robotics applications with Wifibot platforms. It controls the robot and supports any kind of embedded sensors.

Enjoying a long-standing reputation in the real-time multisensor applications prototyping, RTMaps® has been adapted for Wifibot. It provides developers & engineers with the best professional software solution thanks to its several instrumental characteristics.

RTM4W suite contains a stable and high performing embedded engine, an intuitive and extensible Studio to graphically design applications and a software development kit to create components which will extend the provided standard library.

RTMaps® for wifibot is a product of :

Intempora SA
2, place Jules Gévelot
92 130 Issy-les-Moulineaux
France
+33 (1) 41 90 03 59
contact@intempora.com

Intempora

www.intempora.com

Wifibot sarl designs & builds Wifibot Lab
www.wifibot.com

A complete and friendly development software

Graphically design your robotics applications. RTMaps for Wifibot RTM4W Studio enables anyone to create and debug robotics programs very easily. Just drag and drop components from the library to create building blocks. Then connect them graphically to design your robotics applications.

Configure components in a few clicks. All available options for each component are accessible through graphically editable properties.

Speed up your robotic development projects via 3D environment simulation. RTM4W provides a connectivity to famous simulation engines. You will be able to test your applications with virtual sensors as realistic and precise as your real ones.

A powerful and asynchronous engine

Handle multiple sources of data asynchronously in seperated threads. RTM4W provides also a set of tools based on data timestamping to manage the resynchronization of the different incoming streams (see example of application & data fusion on p.3).

Speed up calculation thanks to parallel processing, which acquires a large amount of data from sensors independantly, and carrying out simultaneous process requests for real time applications.

Image processing is essential to mobile robotics. RTM4W is optimized to easily handle several kinds of such data. Simple functions are provided to access each image's data characteristics and to modify their contents.

An extensible and adaptable platform

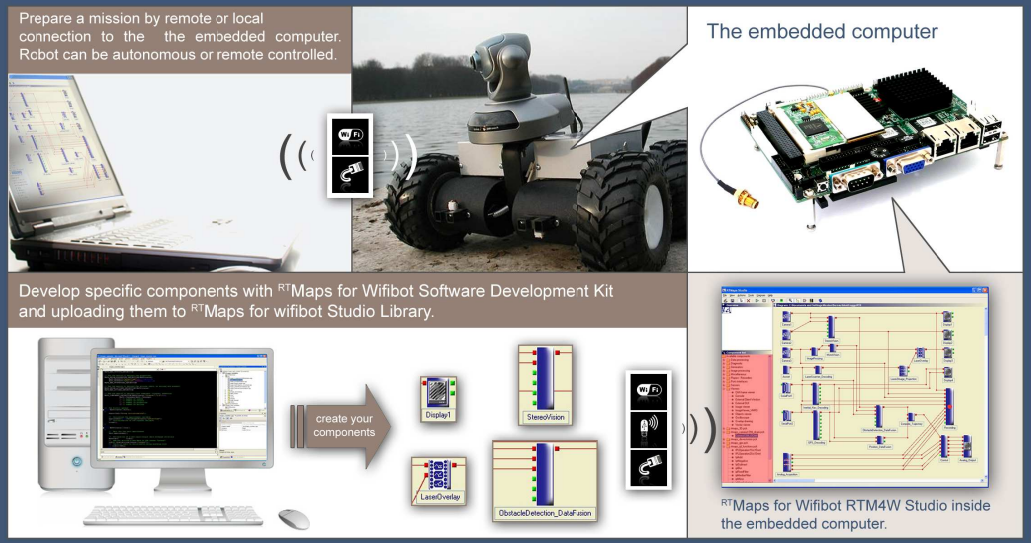
Extend the power of RTM4W through the software development kit (SDK) which provides a fully cross-platform and well documented API to develop your own specific components in C++. Add them to the Studio library to extend the provided set of components.

Share your packages. RTM4W packages can be shared with wifibot's community, enabling users to transfer their skills to multiple projects.

A professional tool for industrials, academics and hobbyists

A tool to save money, time and energy. RTM4W ensures the connectivity of all kind of sensors and actuators which can be linked to a computer. When devices are connected, they can be used instantly and require no specific developments to work.

An homogeneous work environment
RTM4W will be your only tool to build your project A to Z and requires no third-party software. So, managing your project is easier, compatibility is full, and the robotic architecture is robust and reliable.



An example of application (data fusion)

A wifibot is equipped with infrared sensors, detection sensor system and the embedded RTMaps for Wifibot platform RTM4W. Its mission is to patrol the house in order to alert the owner when an intruder is detected.

RTM4W will acquire and process data simultaneously to perceive the environment, to detect obstacles, and to enable robot to act accordingly to its mission.

Data are asynchronously collected (yellow markers on the graphic). Whole information is captured at the same time by several sensors running at different frequencies. Thanks to powerful resynchronization mechanisms, RTM4W will carry out data fusion to use robust results.

At the "A" intersection, a static object is detected. The robot passes by the object and carries on its way. At the "B" intersection, a moving human intruder is detected. Wifibot stops and alerts the house owner.