# MAKING HEALTHCARE ROBOTS SMART

Autonomous mobile robots (AMR) recognize obstacles, avoid collisions and navigate on their own while applying localization techniques, high-resolution cameras and AI algorithms. By taking over various tasks in healthcare facilities, they help to both overcome labor shortages and improve operational efficiency.

Reliable processing modules with sufficient computing power are key to ensuring that healthcare robots can fulfill their vital mission.

CHERRY Embedded Solutions' industrial-grade modules are designed to meet the requirements of an AMR, for example in terms of connectivity, processing power, memory, and energy efficiency:

Rockchip RK3588 Octa-core ARM CPU	GPU Mali-G610 MP4 NPU (with 6 TOPS)	Power consumption less than 18W and 2,3W in idle mode	EAL6+ certified Secure Element	Operating system: Linux (Debian and Yocto)
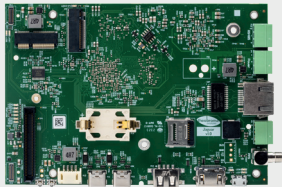
Single-Board Computer JAGUAR SBC-RK3588-AMR
- Connects up to 4 MIPI-CSI high-resolution cameras
- Connects to 2 LIDAR or ToF sensors
- Connectivity via WiFi, Bluetooth, 2 USB 3.1, 1 USB 2.0, Gigabit Ethernet and PCIe
- Extension board for various additional interfaces
- Dimensions: 135 mm x 93 mm

System-on-Module TIGER SOM-RK3588-Q7
- Provides up to 4 MIPI-CSI and 1 HDMI camera interfaces
- Supports connectivity via 3 USB 3.0 and 1 USB 2.0, Gigabit Ethernet, PCIe
- Development Kit
- Compact form factor Q7 (70 mm x 70 mm / 2.75" x 2.75")

TYPICAL APPLICATIONS

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Medical Service Robot
The features of JAGUAR and TIGER form the basis for service robots that navigate and behave intelligently in the vicinity of humans. This includes robust and precise 3D localization and mapping, accurate 3D obstacle detection, dynamic and unstructured environments, human detection, fast 3D map creation and much more.

THINK. DEVELOP. MANUFACTURE. THINGS!

CHERRY Embedded Solutions' modules
combine performance and cost efficiency:

- Production capacities from small batches to large-scale series
- Lead times of as little as two weeks
- Availability of up to ten years
- Seamlessly integrated software and hardware guarantee reliable operation
- The modules are supported mainline in Linux kernel and U-Boot bootloader
- Developed and manufactured in Austria, the heart of Europe

TALK TO OUR EXPERTS AND GET YOUR SAMPLE
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