



ROBOTS MEET HUMANS

Smart Robots provides advanced perception and intelligent capabilities to robots that work side by side with humans, enabling effective human robot collaboration.

HOW IT WORKS

Smart Robots device SRv1 integrates 3D vision capabilities and artificial intelligence layers, which allow to transform a collaborative robot in a co-worker.



Human tracking

Monitoring of the operator's movements and prediction of the occupied space.



Human gestures

The ability to correctly detect and interpret human gestures.



Objects recognition

Recognition and classification of known objects based on matching with a 3D model.



PRODUCT FEATURES

Human Avoidance

The system can detect human presence in the working area, slow down the robot to avoid a collision and generate alternative trajectories to guarantee task efficiency.

Gestures Interaction

The robot can be controlled without the need of a physical interface; the operator can directly interact with the robot and command it through gestures.

Autonomous Scheduling

Robot's activities are re-planned in real time to optimise the efficiency of the process, based on human position, prediction of the next human action, pieces availability.

Manual Rescheduling

The operator can select the desired operation by simply moving the robot to a specific area while in manual driving. To different areas are assigned different robot programs.

INSTALLATION AND CONFIGURATION

Installation

The system has to be placed to an elevated location with respect to the work area. Communication with the robot is ensured by ethernet connection.

Compatibility

Compatible with the majority of cobots brands. Universal Robots (UR3, UR5, UR10), ABB YuMi, Kawasaki DUARO, Comau AURA. Software update with Rethink Robotics and

Kuka compatibility will be soon released.

Programming

APIs and template programs available on robot controller.

User experience

A dedicated HMI can be displayed on a monitor connected to the system; it provides feedback regarding the robot status and operations, a natural user interface for gestures interaction and customizable fields.

EXAMPLE APPLICATIONS

1. Collaborative Assembly

The robot assists the human in low-value added activities (pieces preparation, loading, unloading, repetitive operations), and it adapts to human cycle and operations. SRv1 commands the robot to perform the operations exactly when needed.

2. Flexible Robotic Station

When the task assigned to the robot has to be changed, gestures interaction and manual rescheduling features are used by the operator to command the robot without any software knowledge, in a fast and intuitive way.

TECHNICAL SPECS



VISION TECHNOLOGY	RGB and Infrared
CAMERA	RGB: 1920x1080@30fps Depth: 512x424@30fps
RECOGNITION DISTANCE	1 - 4 mt
FIELD OF VIEW	70°H - 60°V
N° OF TRACKED USERS	5
GESTURES	3 different types for each hand
ELECTRICAL INTERFACE	220 V - max 3 A
PORTS	Ethernet, Mini DisplayPort, USB 3.0



**Do you have a question regarding the technology,
price or delivery time?**

We are looking forward to hearing from you.

Write us at: info@smartrobots.it

Smart Robots
Via San Martino, 12
20122 Milan, Italy
VAT N. 09672040962