G-WAM

Barrett Technologies and **Robotnik** fuse their main expertise areas to create a new mobile manipulator, able to handle almost any object and interact with the environment in the most dexterous way.

WAM

The WAM™ Arm is a highly dexterous, naturally backdrivable manipulator. The only arm sold in the world with direct-drive capability supported by Transparent Dynamics™ between the motors and joints, so its control of contact forces is robust – independent of mechanical force or torque sensors. It is built to outperform conventional robots with unmatched human-like grace and dexterity.

BHand

The BH8-series BarrettHand™ is a multi-fingered programmable grasper with the dexterity to secure target objects of different sizes, shapes, and orientations. Even with its low weight (1.18kg) and compact form, it is totally self-contained. Communicating by industry-standard serial communications or high-speed CANbus (USB adapters included), integration with any arm is fast and simple. The BH8-series immediately multiplies the value of any arm requiring flexible automation.

Guardian

The Guardian robot is a medium-sized mobile platform that offers high mobility and is suitable for indoor/outdoor applications. Thanks to the tracks, this robot can overcome obstacles such as curbs, steps and even stairs.

This modular robot is able to integrate several sensors (rangefinders, pan-tilt cameras, RTK-DGPS, IMU, …) and actuators, like a robotic arm.

Applications

The *G-WAM* is the best framework for intelligent mobile manipulation in indoor/outdoor environments. The new mobile manipulator is suited for research (motion planning, advanced haptics, perception in mobile manipulation, robust motion control, learning by *demonstration/instruction*) and application development (service robotics, defence, ambient assisted living).

Barrett Technology® Inc.

Robotnik

www.barrett.com   www.robotnik.eu

Main Features

WAM

Configurations of 4 and 7 degrees-of-freedom.

Superb payload-to-weight ratio.

High backdrivability.

Direct-teach recording without force sensors, with or without power, for safety.

Cartesian force control.

Gravity compensation.

Human-like kinematics.

Brushless motors.

1kHz motor torque.

Joints never locked, for safety.

BHand

Light weight.

Compact fist.

Self-contained.

Fail-safe, non-backdrivable fingers.

Brushless rare-earth motors.

RealTime control mode.

Flexible communications.

Supervisory control mode.

Optional F/T and tactile sensors.

Guardian

Rough platform.

High mobility.

Modular system.

High performance hybrid under carriage with tracks and wheels.

Wifi/Wimax/Radio/Cable Communications.

Configurable IP protection up to IP65.

System

PC controller.

Open-source control software.

Software architecture based on ROS.