

Tomorrow starts today!

Welcome to SCHUNK – a Pioneer of Modular Robotics

EXCEPTIONAL PRECISION FROM THE COMPETENCE LEADER.

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Tomorrow starts today!

SCHUNK is playing a leading role in Modular Robotics. Our philosophy “from the individual modules to the complex robot structure” forms the basis for implementing concepts in industrial and service robotics, which are designed for everyday life, but efficiently.

With compact and flexibly combinable rotary actuators, lightweight manipulators, and servo-electrically actuated grippers we are able to offer approaches to unique and modular designed special solutions.

It is our intention to provide robot modules for industrial and service applications, which are flexible enough for the usage in different robot applications.

www.schunk-modular-robotics.com



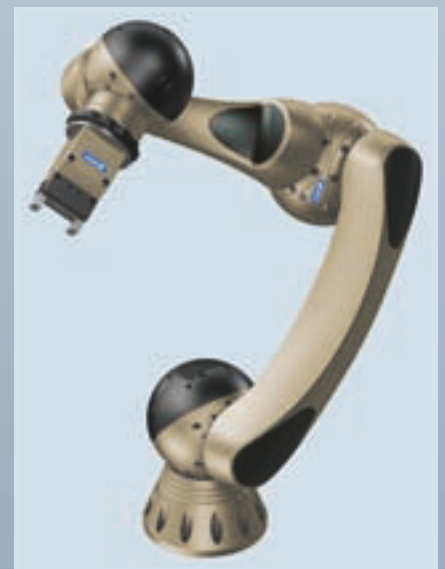
7 DOF LWA4-Arm



MM-500 NEOBOTIX



SCITOS G5 MetraLabs



6 DOF PowerBall-Arm PBA

Actuation



PSM
Compact Servo Drive with integrated control electronics



PDU
Compact Servo Drive with integrated control electronics and precision gear



MSM
High Power Servo Motor with integrated control electronics

Rotary Modules



PR
Universal rotary module with integrated control electronics



PW
Pan-Tilt-Unit with integrated control electronics



PRH
Miniature rotary module with integrated control electronics



PRL
Rotary module with integrated control electronics and hollow shaft



MRD
High Power Rotary module with integrated control electronics



STM
Rotary module with torque motor



SPB
Compact wrist module with integrated control electronics



PRM
Compact Rotary module with integrated control electronics

Gripping Modules and Robotic Hands



PG
Compact servo-electric gripper with integrated control electronics



EVG
2-Fingered parallel gripper with variable stroke



PEH
Long stroke gripper with integrated control electronics



EGN
Servo-electric 2-Fingered parallel gripper



EZN
Servo-electric 3-Fingered centric gripper



MEG
Gripper for small components



WSG
2-Fingered parallel gripper with integrated electronics in the fingers



SDH
3-Fingered dextrous robotic hand with 7 DOF

Linear Axes



PLS
Screw driven linear axis with servo drive PSM



PLB
Belt driven linear axis with servo drive PDU



SVS-VC
Vision sensor with integrated optics, lighting and analysis



FT
Multi-Axis Light-Weight-Arm F/T Sensing Package

Measuring

Configuration Software



Viro-Con
Efficient engineering tool for configuration and assembly of modular robotics

Example Kinematics

4 DOF PowerCube-Arm
with 3 kg payload*



5 DOF PowerCube-Arm
with 5 kg payload*



6 DOF PowerCube-Arm
with 3 kg payload*



6 DOF PowerCube-Arm
with 6 kg payload*



7 DOF PowerCube-Arm
with 3 kg payload*



6 DOF LWA-Arm
with 4 kg payload*



7 DOF LWA-Arm
with 3 kg payload*



7 DOF LWA-Arm
with 10 kg payload*



7 DOF LWA4-Arm
with 10 kg payload*

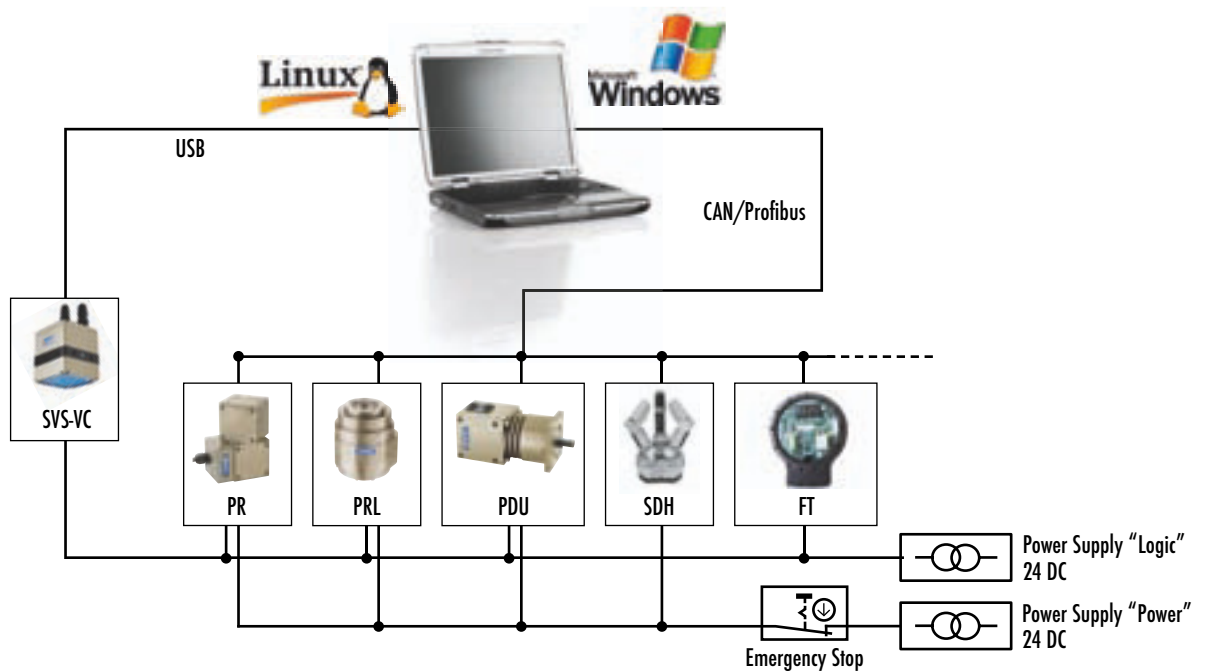


6 DOF PBA-Arm
with 3 kg payload*



* related to the arm

Control



Robot-Control-Software and Standard Libraries



Modular Robotics

From single modules to complex robot structure

Industrial robotics – just like service robotics – places high standards on mechanical construction, gripping and sensor technology, as well as control and feedback control technology. It is not economically feasible to develop specific robot types for each application, but standard modules, which form the basis for flexible robot structures.

As a pioneer of the modular robotics SCHUNK focuses on the expansion of usable approaches for market-ready and everyday products for:

- Service robotics
- Industrial robotics
- Modular robotics for research and development

Example Applications

Care-O-bot®

Household robots of the next generation.

The Care-O-bot® is the innovation platform for controlling, sensors, kinematics, multimedia and ambient intelligence.

Vital robotic components of the Care-O-bot® come from the modular SCHUNK robotics system. The modular LWA 3 lightweight arm is an arm with high mobility and low weight that is ideal for use in mobile, battery-operated systems. The SCHUNK SDH hand is an extremely versatile gripping instrument, which is suitable for the forms and weights of typical household objects such as cups, plates or glasses. Furthermore, it is equipped with tactile sensors. An additional force-torque-sensor allows delicate handling.

Care-Providing Robot FRIEND

The care-providing robotic system FRIEND (Functional Robot arm with user-friENdly interface for Disabled people) is a semi-autonomous robot designed to support disabled and elderly people in their daily life activities, like preparing and serving a meal, or reintegration in professional life.

Both platforms are available for R&D.



4TH INTERNATIONAL EXPERTDAYS SERVICE ROBOTICS

FEBRUARY 23-24, 2011 · HAUSEN · GERMANY

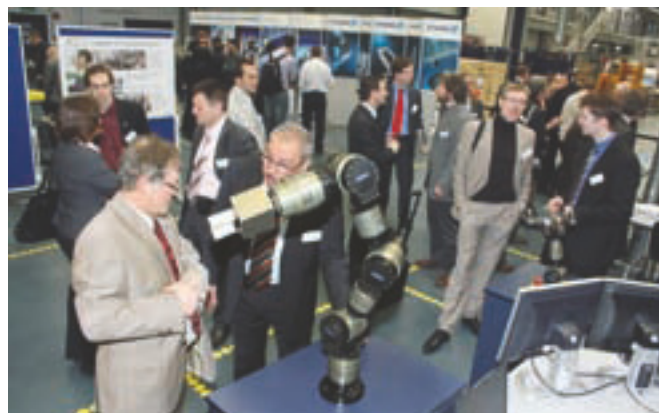
The world-wide leading symposium for applied Service Robotics.

3rd SCHUNK ExpertDays: A great success!



Henrik A. Schunk

"For the third year in a row SCHUNK organized the ExpertDays as a platform for an intensive, worldwide exchange of the Service Robotics community. The two-day event was a full success with more than 100 experts from around the world. 20 high level presentations were given presenting research projects and trends. The intensive discussions helped to identify demand-based and marketable Service Robotics applications and to extend the network of individual experts and institutions."



Henrik A. Schunk

The next ExpertDays will be hold on February 23-24, 2011. Please check expertdays.schunk.com for program, registration and further details.



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