For each component intelligent control software is available. The complete system can be controlled with the FRIEND::Architecture.

FRIEND::Architecture

FRIEND::Safety

- FRIEND::HumanMachineInterface
- FRIEND::TaskPlanner
- FRIEND::MachineVision
- FRIEND::RobotMotion

FRIEND::Architecture:

- extensible software framework
- shared-control concept: interaction with user if necessary
- intelligent task and motion planning
- robust machine vision
- graphic programming interfaces
- integrates any input device
- safety concept

Free Software license available for research institutions.

for quotation contact:

Dipl.-Ing. Roko Tschakarow
SCHUNK GmbH & Co. KG
Spann- und Greiftechnik
Bahnhofstr. 106 - 134
D-74348 Lauffen/Neckar
+49-7133-103-2892
roko.tschakarow@de.schunk.com

www.friend4you.eu

FRIEND has been developed and tested by the following industrial/academic consortium

iat
www.iat.uni-bremen.de
info@iat.uni-bremen.de

Universität Bremen
www.uni-bremen.de

MEYRA ORTOPEDIA
Wir bewegen Menschen.
www.meyra.de
info@meyra-ortopedia.de

SCHUNK
www.schunk.de
info@de.schunk.com

Otto Bock
QUALITY FOR LIFE
www.ottobock.de
healthcare@ottobock.de

IGEL
www.igel.rehavista.de
bremen@rehavista.de

Stiftung Friedehorst
www.friedehorst.de
nrz@friedehorst.de

:i/i/d
www.iidbremen.de
iid@iidbremen.de

Federal Ministry of Education and Research
Funded by German Federal Ministry of Education and Research
www.service-robotik.de
service-robotik@dlr.de

Care-Providing Robot FRIEND

Now available for research and for supervised tests by disabled users

www.friend4you.eu

FRIEND is a care-providing robot built from commercially available, reliable industrial components.

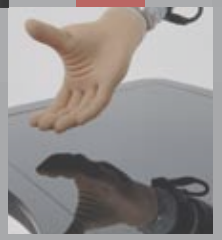
FRIEND is a construction set of adapted components.

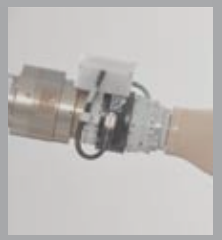
You can buy this system

- as a complete system
- as a subset of components to build your own system for research and user tests

Available Components

- **Wheelchair** based on Nemo-platform
- **7 DOF-lightweight robot arm** mounted on automated pan-unit
- **Prosthetic hand** – "SensorHand Speed" – with force and slip sensor
- **Force torque sensor**, wrist mounted
- **Intelligent tray** for position and weight measurement
- **Energy-management**





- **Pan-tilt-unit** for **stereo camera** systems and **3D-cameras**
- **10"-TFT-touch screen,** mounted on automated pan-unit
- **Command unit(s)** – adapted to the impairment of the user
  - **Chin joystick**
  - **Speech control**
  - **Eye control**
  - **Hand joystick**
  - **Brain-computer interface**
- **IR/Wireless environmental control unit**, e.g. for control of doors
- **High-end PC-unit**