



NEUROS

# Datasheet robobrain NEUROS®

Version 1.0

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# 1 robobrain NEUROS®

## 1.1 Technical data - tabular

<b>Hardware Platform</b>	<ul style="list-style-type: none"><li>• robobrain IPC V2.0</li></ul>
<b>Hardware Skills</b>	<p>&gt; 30 Hardware Skills available in Skill Store</p> <p>Robots</p> <ul style="list-style-type: none"><li>• Universal Robots</li><li>• FANUC</li><li>• Franka</li><li>• ...</li></ul> <p>Grippers</p> <ul style="list-style-type: none"><li>• ZIMMER</li><li>• WEISS</li><li>• SCHUNK</li><li>• Robotiq</li><li>• OnRobot</li><li>• ...</li></ul> <p>F/T Sensors</p> <ul style="list-style-type: none"><li>• OnRobot Grippers &amp; F/T Sensors</li><li>• Schmalz Grippers</li><li>• OPC/UA</li><li>• ...</li></ul> <p>Interfaces</p> <ul style="list-style-type: none"><li>• IO Link</li><li>• Modbus TCP</li><li>• OPC/UA</li><li>• ...</li></ul>
<b>AI Skills</b>	<p>&gt; 20 AI Skills available in Skill Store</p> <p>Automotive Skills</p> <ul style="list-style-type: none"><li>• Parallel Picking</li><li>• Vacuum Picking</li><li>• Landmark Detection</li><li>• Bin Handling</li><li>• Bin Status Analysis</li><li>• ...</li></ul> <p>Logistics Skills</p> <ul style="list-style-type: none"><li>• Palettizing Pattern</li><li>• Depalettizing Pattern</li><li>• Piece &amp; Item Picking</li><li>• Bin Handling</li><li>• ...</li></ul> <p>Medicial Skills</p> <ul style="list-style-type: none"><li>• Sample Tube Analysis</li><li>• Sample Tube Detection</li><li>• Insertion</li><li>• Code (QR, Barcode, ...)</li><li>• ...</li></ul> <p>Entertainment Skills</p> <ul style="list-style-type: none"><li>• Artist Skill (Paintbot)</li></ul> <p>Customizable over Skill SDK &amp; robobrain Physics Simulation</p>

<b>Updater</b>	Fully integrated update-mechanism via NEUROS.CLOUD (OTA) & File Upload
<b>Graphical Interface</b>	Webinterface
<b>Realtime capable</b>	Yes
<b>AI Network Acceleration</b>	Yes
<b>NEUROS API's</b>	JSON-RPC RAP (robominds Automation Protocol)
<b>Remote-Support</b>	Secured access via NEUROS.CLOUD VPN
<b>Skill Store</b>	Installation over NEUROS Skill Store (NEUROS.CLOUD)
<b>Skill-Security</b>	Skills are running in isolated environments (Docker Containers managed by NEUROS) Published Skills in NEUROS Skill Store are reviewed by robominds
<b>Skill API &amp; Skill Communication</b>	NEUROS V1 supports Skills developed with Skill SDK Interskill Communication via robobrain-flash (Realtime Interskill Communication Protocol)

## 1.2 Illustration - NEUROS in a Nutshell

# NEUROS in a Nutshell

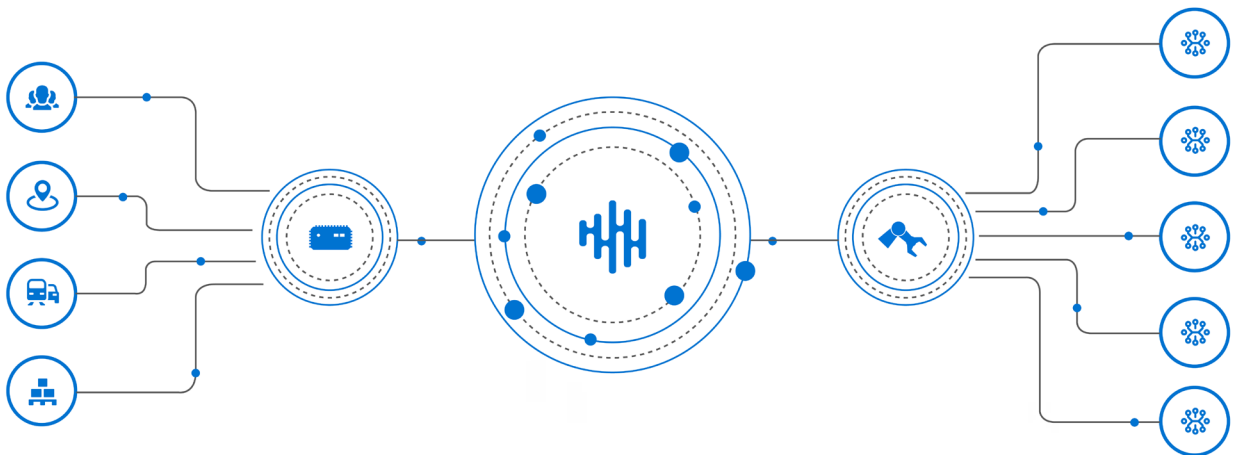
Requirements

Robobrain

NEUROS / Skills

Hardware

Solutions



## 2 robobrain® IPC

### 2.1 Technical data - tabular

<b>Dimensions</b>	261 mm x 227 mm x 128 mm
<b>Weight</b>	6,25 kg
<b>Power Consumption - computing</b>	~ 80 W
<b>Power Consumption - Idle</b>	~ 25 W
<b>Output included Power Supply</b>	~220 W
<b>Hardware Interfaces</b>	USB-3.0 (Type A) Ethernet (RJ-45)
<b>Temperature</b>	5°C - 40°C
<b>IP Protection Class</b>	IP20
<b>Conforms to</b>	CE
<b>Mounting options</b>	Wall-mount
<b>Supported interface protocols</b>	<ul style="list-style-type: none"><li>• JSON-RPC 2.0 (HTTP)</li><li>• RAP 1.0 (robominds automation protocol) (RPC-Protokoll via TCP/IP)</li></ul>
<b>Robot interfaces</b>	<ul style="list-style-type: none"><li>• UR Cap (for Universal Robots)</li><li>• OPC UA</li></ul>

### 2.2 robobrain® illustrations

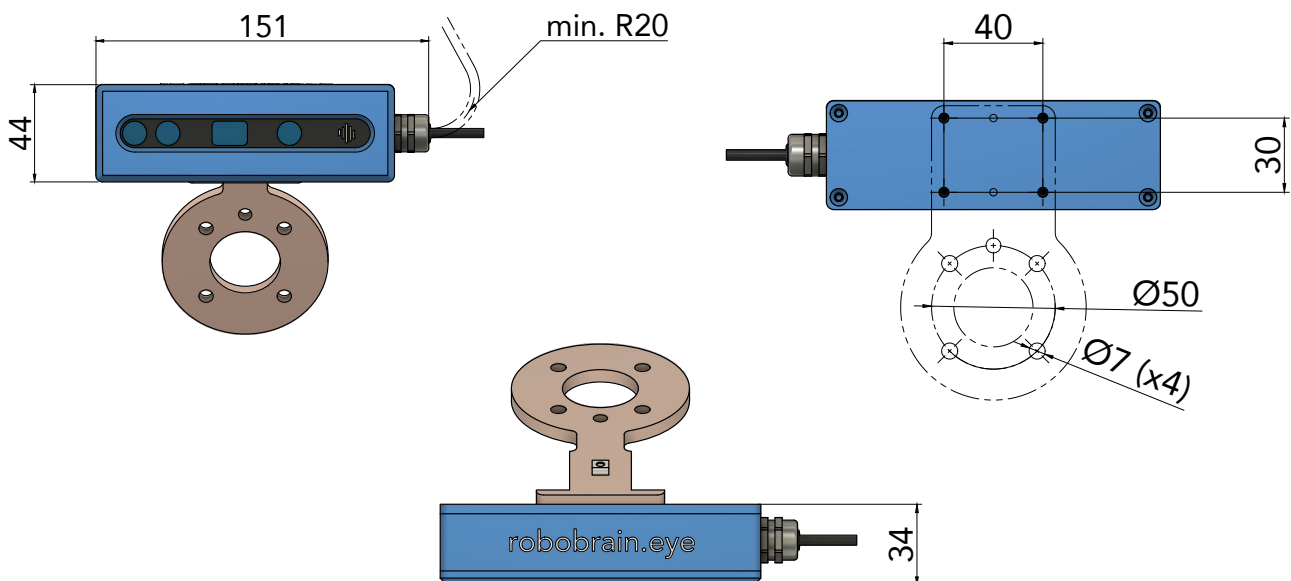


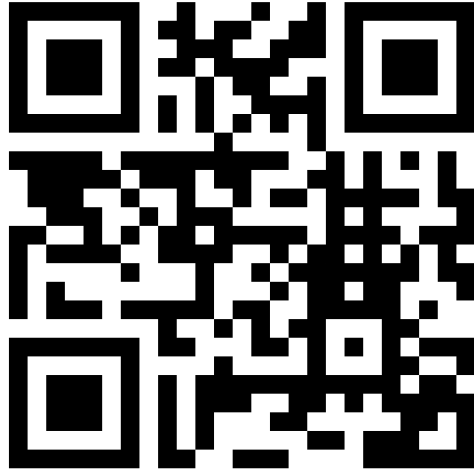
## 3 robobrain.eye

### 3.1 Technical data - tabular

Dimensions	151 mm x 44 mm x 34 mm
Weight	<ul style="list-style-type: none"><li>• 400g (Camera only)</li><li>• 760g (cable included)</li></ul>
Cameratype	2D/3D-Camera
Measurement method (depth image)	Active IR Stereo
Resolution RGB	Up to FullHD (1280 x 720)
Resolution Depth Image	Up to FullHD (1280 x 720)
FOV (angles)	$65^{\circ} \pm 2^{\circ} \times 40^{\circ} \pm 1^{\circ}$
Temperature	5°C - 40°C
Protection	Waterproof
Conforms to	<ul style="list-style-type: none"><li>• CE</li><li>• Laser Class 1</li></ul>
Mounting options	<ul style="list-style-type: none"><li>• Static</li><li>• Flange mount</li></ul>
Interface camera	industrialized USB 3.0
Power consumption	max. 700mA @5V
Cable length	10m (up to 50m upon request)
Min. bending radius (cable)	20mm

### 3.2 Hardware illustrations





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