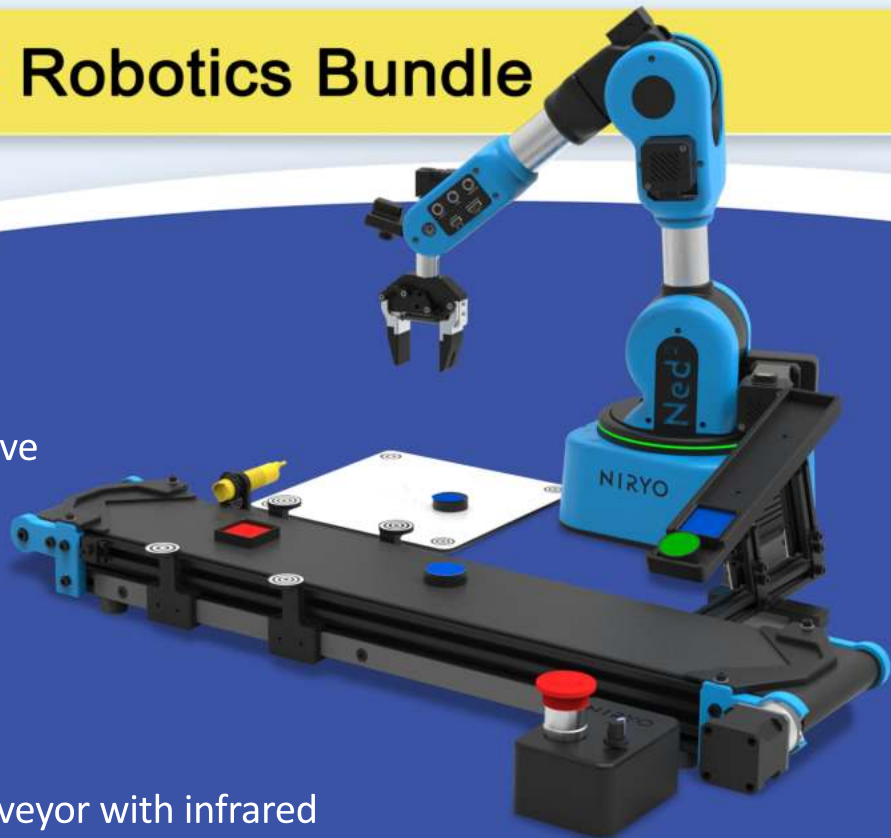


# Niryo Ned2 Robotics Bundle

## Robot Features:

The Ned2 is a six-axis collaborative robot perfect for Engineering, STEM, Manufacturing, and Computer Science programs.



## Bundle Includes:

- Bidirectional variable speed conveyor with infrared sensor and gravity parts feeder
- Vision package with camera, workspace, built-in recognition system (colors and shapes), and six round and square pawns of different colors
- Large gripper
- Adaptive gripper
- Vacuum pump with suction cup end effector
- Electromagnetic end effector



Wrist Mounted Camera



Adaptive Gripper



Large Gripper



Electromagnetic End Effector



Vacuum Pump and Suction Cup End Effector



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# Technical Specifications

Parameters	Value
Weight (kg)	7
Payload (g)	300
Reach (mm)	440
Degree of freedom	6 rotating joints
Joints range (rad)	$-2,949 \leq \text{Joint 1} \leq 2,949$ $-2,09 \leq \text{Joint 2} \leq 0,61$ $-1,34 \leq \text{Joint 3} \leq 1,57$ $-2,089 \leq \text{Joint 4} \leq 2,089$ $-1,919 \leq \text{Joint 5} \leq 1,922$ $-2,53 \leq \text{Joint 6} \leq -2,53$
Joints speed limit (rad/s)	$\text{Joint 1} \leq 0.785$ $\text{Joint 2} \leq 0.5235$ $\text{Joint 3} \leq 0.785$ $\text{Joint 4} \leq 1.57$ $\text{Joint 5} \leq 1.57$ $\text{Joint 6} \leq 1.775$
TCP max speed (mm/s)	468
Repeatability (mm)	+/- 0,5
Footprint (mm)	200x200
Mounting	Table
Temperature (°C)	5 - 45
Human-Machine interface	3 control buttons ("FreeMotion" button, button to save a pose and "Custom" button) LED Ring Speakers Microphone
Power supply	Input: AC100-240V / 50-60Hz, 2,5A Output: DC 12V - 7A ; 5V - 7A
I/O power supply	5V
Inputs/ Outputs Back panel	Digital inputs x3 Digital outputs x3 Analog outputs x2 Analog inputs x2
Inputs/ Outputs Control panel	Digital inputs x1 Digital outputs x1
Robot interface	2 x USB2.0 2 x USB3.0 1 x ETHERNET GIGABIT
Communication	Modbus TCP (master) TCP/IP
Materials	Aluminum ABS-PC (injection moulding)
Programming Environment	Niryo Studio C++ PyNiryoRos PyNiryo ROS
Collision detection	Accelerometer and gyroscope in the control panel
Certification	CE Conformity