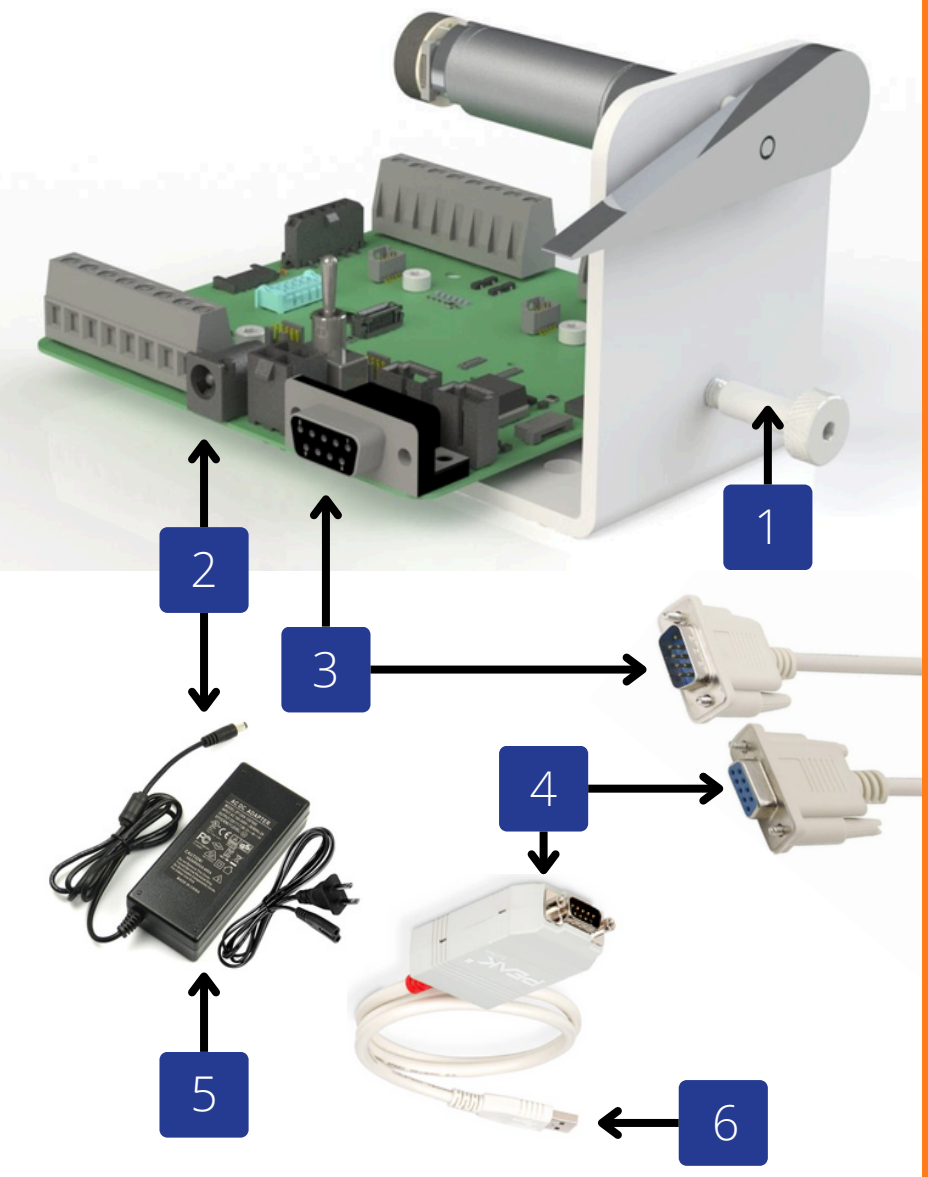
Barrett™
ADVANCED ROBOTICS

Puck® P4™ Quick Start Manual

Follow this manual to get the P4 Dev Kit up and running with ease.



ASSEMBLY

Hardware

1 Thumb screw can be removed to allow free spin (optional).

Electrical

2 Plug the barrel jack of the 24V adapter into J16 on the Dev Board.

3 Attach the male end of the Serial Cable to J1 on the Dev Board.

4 Connect the female end of the cable to the CAN Adapter and hand tighten.

5 Plug the DC Adapter into an outlet (110-220VAC) to power to the board.

6 Connect the CAN Adapter to a USB port on the computer.

\+ The Dev Board automatically regulates 12V logic on-board from the 24V input.

SOFTWARE INSTALLATION

Contact Us

(617) 252-9000 barrett.com support@barrett.com

Document B7296 Rev AD

Barrett™
ADVANCED ROBOTICS

Puck® P4™ Quick Start Manual

SOFTWARE INSTALLATION

WINDOWS

Software

1. Download the latest release package from barrett.com/puck.
2. Unzip the package in the desired directory path.
3. From the release package, run PeakOemDrv.exe and install the driver. (Use default installation settings)
4. Double-click PuckUtilityApp.exe to launch the program. Right click on the icon and add to taskbar (optional).

LINUX

Software

1. Download the latest release package from barrett.com/puck.
2. Unzip the package in the desired directory path.
3. From the PuckUtilityApp directory, open terminal and run ./setup.sh (Enter the password when prompted).
4. Double-click PuckUtilityApp.exe to launch the program. Right click on the icon and add to taskbar (optional).

PUCK UTILITY APP

Contact Us (617) 252-9000 barrett.com support@barrett.com

Barrett™
ADVANCED ROBOTICS

Puck® P4™ Quick Start Manual

Follow this manual to get the P4 Dev Kit up and running with ease.

PUCK UTILITY APP

Main Features

1 **Calibrate Menu -** options for automatic motor calibration.

Note: The Dev Kit comes pre-calibrated for easy setup. Calibration is only required for use with new motors.

2 **CAN Port** - allows CAN bus selection from up to 4 different CAN ports.

Note: This feature allows for multiple CAN busses to operate on a single computer.

3 **Scan Pucks** - scans all nodes and automatically connects to lowest ID.

Note: Scan runs automatically at startup. Scan is only required if power or CAN were not connected at startup.

4 **Select ID** - select the current Puck from any active node on the CAN bus.

Note: This feature allows for control over multiple Pucks. Simply select the desired Puck ID to switch Pucks.

5 **New ID** - enter a new ID (1-127) and press 'Set' to change the Puck ID.

Note: The Puck ID is limited to the 7-bit CAN-ID specified by CANopen standard.

6 **Version** - displays firmware version and enables future updates.

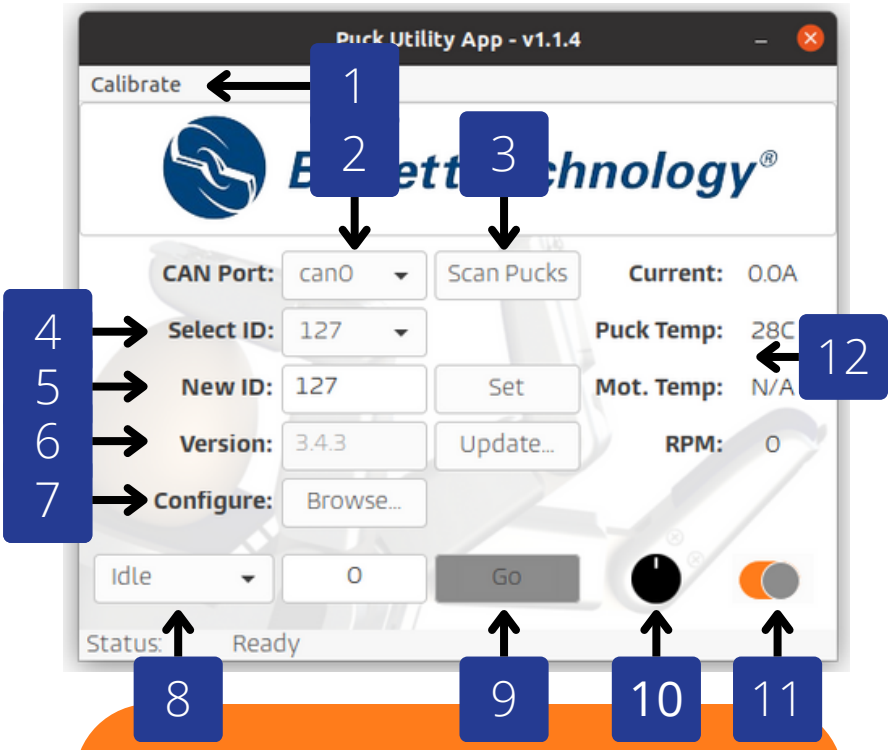
Note: Future updates will be available for download. Clicking the logo automatically opens the webpage.

7 **Configure** - file browser for selecting CANopen motor configurations.

Note: Selecting a file automatically updates the motor configuration stored on the Puck.

8 **Mode Select** - choose active mode; Torque, Vel, Pos, and Homing.

Note: Input ranges are as follows:
Torque: ± 420 mNm, Vel: ± 350 RPM, Pos: ± 175,780 Deg



9 **Go** - press Go to begin movement. Each click sends the value to the Puck.

Note: In position mode, 'Go' adds the value to the current target position.

10 **Position Dial** - displays motor shaft position when ADC Monitor is on.

Note: The position dial shows the orientation of the motor shaft, not the gearhead output.

11 **ON/OFF** - toggles the ADC Monitor on/off.

Note: The ADC Monitor may cause lagging on older computers and is optional for optimized performance.

12 **ADC Monitor** - when on, the ADC Monitor frequently updates useful info.

Note: The ADC Monitor displays Bus Voltage, Temperature, Motor Temperature, and Output Velocity.

TROUBLESHOOTING

Contact Us

(617) 252-9000 barrett.com support@barrett.com

Barrett™
ADVANCED ROBOTICS

Puck® P4™ Quick Start Manual

TROUBLESHOOTING

No CAN bus Found!

CAN network was unable to initialize. This could be a missing driver or an issue with the CAN adapter.

Verify the CAN driver is installed and active on the computer.
Check connections between the computer and Peak CAN adapter.

No Pucks found!

CAN network is initialized, but no active Pucks were found on the bus. This could be an issue with power or CAN connection.

Ensure cables are properly connected.
Verify 5V and 3.3V LEDs are on.
If the issue persists, try reconnecting the CAN adapter to the computer.

Motor not spinning

A test is run but the motor does not spin or has significant cogging.
This could be caused by a bad calibration or insufficient bus voltage.

Use the ADC Monitor to verify correct The Puck is operating.
Open the Calibrate menu and run through each calibration.

Other issues

ID already in use! - Every Puck on the bus must have a unique CAN ID.
No active node! - Modes cannot be set without an active Puck selected.
No input value! - Tests cannot be run without input data.
No test selected! - A test must be selected to command input data.

If a new issue occurs, please reach out for support from Barrett Engineers!

Contact Us (617) 252-9000 barrett.com support@barrett.com

Document B7296 Rev AD