

Phaenovum RaspiCar: Interface biard command list

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Interface description

The interface board is connected to the Raspberry Pi via USB port 0 (typically /dev/ttyUSB0). Communication is established by a serial interface at (baudrate 115200, no parity bit). The communication is bidirectional. The Raspberry Pi sends a command and receives a response. Blanks and white space are ignored. All commands must be terminated by a “carriage return” symbol (code 13, \n). The submitting script must wait for processing time (e.g. 0.1 seconds) before drawing the response. The submitting script may use the response to check whether the command was processed as expected. The default response is ‘OK’.

Motor commands:

- MD <int>, <int>
Sets the direction for both motors. The value 1 stands for forward, and the value 0 for backwards.
Example: MD0, 1
- ME <0 | 1>, <0 | 1>
Enables or disables the motors. The value 1 stands for enabled, and the value 0 for disabled.
Example: ME1, 0
- MP <0 | 1>, <0 | 1>
Activates the motor power. The value 1 stands for power on, and the value 0 for power off. This command enables the motors implicitly.
Example: MP1, 1
- MR <int>, <int>
Sets the motor speed. The valid range is 0 to 1250. The motor must be enabled and powered on in order to start rotation.
Example: MR200, 500

Display commands:

- DC
Clears the display.
Example: DC
- DT <message>
Prints a title line. The maximum length is 20 characters.
Example: DTVersion2.1
- DM <message>
Prints a message to the display. The content of the display will be scrolled up.
Example: DMRaspPi connected

Battery commands:

- BV
Get battery voltage. The system will respond with the current voltage of the power supply.
- BS
Get battery status. The system will respond with one of the following codes:
 - 'OK' STATUS_OK
 - 'BL' STATUS_BAT_LOW
 - 'BS' STATUS_BAT_SHUTDOWN
 - 'BE' STATUS_BAT_EXTERNAL
 - 'SR' STATUS_SHUTDOWN_REQUESTED
 - 'SX' STATUS_SHUTDOWN_ACTIVE

- BX
Request a system shutdown.

Info commands:

- P
Just returns a prompt (OK)
- I
Returns information and version number.

Config commands:

- CG
Returns the current setting for the ramp (1 ... 100)
- CR <int>
Sets the ramp (1 ... 100).