

Garrins Metà·lics Message Formats

Communications between Main Computer (MC) and the Arduino Motor Drivers (AMD)

Version 1 - 08/Mar/2018

Messages have the following format:

Command	1 byte
Type	1 byte
Value	4 bytes

Arduino Motor Driver ID

Requests the device's ID so that we know what wheel we are communicating with.

Request		
0x1	0xA	0
Response		
0x1	0xB	ID

Arduino Motor Driver FW Version

Requests the device's firmware version so we know the device API level.

Request		
0x2	0xA	0
Response		
0x2	0xB	FW Version

Arduino Motor Driver Running Time

Requests the device's running time so we know if there have been resets, for instance.

Request		
0x3	0xA	0
Response		
0x3	0xB	Arduino millis()

Arduino Motor Driver Current Speed

Requests the device's current speed.

Request		
0x4	0xA	0
Response		
0x4	0xB	Current speed (cm/s)

Arduino Motor Driver Set Speed

Sets the desired setpoint for the PID controller (in cm/s)

Request		
0x5	0xA	Speed setpoint (cm/s)
Response		
0x5	0xB	Echo speed setpoint (cm/s)

Arduino Motor Driver Current Steps

Requests the device's current odometry (in steps)

Request		
0x6	0xA	0
Response		
0x6	0xB	Current odometry

Arduino Motor Driver Set Steps Delta

Sets the desired increment of steps.

Request		
0x7	0xA	Delta steps
Response		
0x7	0xB	Echo delta steps