**Communication Arduino to Raspberry PI**

Raspberry PI is the master and initiates all communication. Arduino is the slave and responds to commands.

|  |  |  |
| --- | --- | --- |
| **Command ID** | **Parameters** | **Description** |
| **Status info:** | | |
| 0x01 | - | Error status (TBD) |
| 0x02 | - | Get Command queue length (ready to accept commands) |
| 0x03 | - | Reset all peripherals |
| 0x04 | - | Test sequence |
|  |  |  |
| **Motor Control:** | | |
| 0x11 | DIR SPEED | Set left motor speed and direction |
| 0x12 | DIR SPEED | Set right motor speed and direction |
|  |  |  |
| **Power Information:** | | |
| 0x21 | - | Get battery current |
| 0x22 | - | Get system current |
|  |  |  |
| **Turret Control:** | | |
| 0x31 | ANGLE | Set turret horizontal angle |
| 0x32 | ANGLE | Set turret vertical angle |
| 0x33 | - | Fire missile from turret 1 |
| 0x34 | - | Fire missile from turret 2 |
| 0x35 | - | Fire all missiles turret 1 |
| 0x36 | - | Fire all missiles turret 2 |
| 0x37 | - | Fire all missiles both turret |
| 0x38 | ON/OFF | Turn laser on/off |
|  |  |  |
| 0x41-0xFF |  | RESERVED |

**Packet Structure:**

|  |  |  |
| --- | --- | --- |
| Command ID (1 byte) | Data (Fixed length) | Checksum (1 byte) |

Checksum is simple XOR of Command ID and Data.