|  |  |  |
| --- | --- | --- |
| Command | **Description** | **NOTE** |
| <imx –h> | **Help me!** |  |
| <imx –s> | **Enables UART interface.**  **Every data will be forwarded to uart interface, enter <imx –a> for closing interface.**  **RESPONSE:**  **SUCCESS: “Serial interface selected”**  **INVALID: “unknown command”** | **1** |
| <imx –i> | **Enables I2C interface.**  **RESPONSE:**  **SUCCESS: “I2C interface selected”**  **INVALID: “unknown command”** | **2** |
| <imx –p> | **Enables SPI interface.**  **Every data will be forwarded to spi interface, enter <imx –a> for closing interface.**  **RESPONSE:**  **SUCCESS: “SPI interface selected”**  **INVALID: “unknown command”** | **3** |
| **<imx –a>** | **Close the communication interface previosly selected with** <imx –s> <imx –i> <imx –p>.  **SUCCESS: “XXX interface closed”**  **INVALID1: “unknown command”**  **INVALID2: “No interface selected”** |  |
| **<ser –bX>** | **Baudrate selections for UART interface:**  **X=0 , baudrate 1200**  **X=1 , baudrate 4800**  **X=2 , baudrate 9600**  **X=3 , baudrate 19200**  **X=4 , baudrate 19200**  **X=5 , baudrate 19200**  **X=6 , baudrate 19200**  **Default or wrong parameter: 9600**  **RESPONSE:**  **SUCCESS: “Serial baudrate set”**  **INVALID1: “unknown command”**  **INVALID2: “Error – interface must be closed”** |  |
| **<spi –ah>** | **Set SPI NSS pin active high.**  **Default: NSS active low.**  **RESPONSE:**  **SUCCESS: “SPI NSS active high”**  **INVALID1: “unknown command”** |  |
| **<spi –al>** | **Set SPI NSS pin active low.**  **Default: NSS active low.**  **RESPONSE:**  **SUCCESS: “SPI NSS active low”**  **INVALID1: “unknown command”** |  |
| **<i2c –a 0xXX>** | **Set Slave address.**  **RESPONSE:**  **SUCCESS: “Slave Address set”**  **INVALID1: “unknown command”** | **4** |
| **<i2c –mt>** | **Generation of Start/repeat start condition + address will be send in write mode.**  **RESPONSE:**  **SUCCESS: “Sending address in write mode”**  **INVALID: “unknown command”** |  |
| **<i2c –mr>** | **Generation of Start/repeat start condition + address will send in read mode.**  **RESPONSE:**  **SUCCESS: “Sending address in read mode”**  **INVALID: “unknown command”** |  |
| **<i2c –w 0xXX>** | **Byte Write request.**  **XX value in hexadecimal format [00 – FF]**  **RESPONSE:**  **SUCCESS: “Byte write enqueued”**  **INVALID: “unknown command”** |  |
| **<i2c –r>** | **Byte read request.**  **RESPONSE:**  **SUCCESS: “Byte read enqueued”**  **INVALID: “unknown command”** |  |
| **<i2c –q>** | **Get i2c commands in the queue.**  **RESPONSE:**  **SUCCESS: Output the i2c commands queue**  **INVALID: “unknown command”** |  |
| **<i2c –d>** | **Delete all i2C commands in the queue.**  **RESPONSE:**  **SUCCESS: “Queue free”**  **INVALID: “unknown command”** |  |
| **<i2c –x>** | **Starts i2c transfer.**  **RESPONSE:**  **SUCCESS: “Transfer Success” + byte read in HEX format if present.**  **INVALID: “Transfer Failure” + ERROR**  **ERROR1: “Bus Busy”**  **ERROR2: “Timeout”**  **ERROR3: “Address Nack”**  **ERROR4: “General Error”** |  |

|  |  |
| --- | --- |
| NOTE1 | |
| INTERFACE | LPUART2 |
| IMXRT\_1020 PINS | GPIO\_AD\_B1\_09 (UART RX)  GPIO\_AD\_B1\_08 (UART TX) |
| ARDUINO INTERFACE PINS | J17 pin 1 (UART RX)  J17 pin 2 (UART TX) |
|  | |
| RACCOMANDATIONS | Put at the output of each pin a series resistor of at least 100 Ohm. |

|  |  |
| --- | --- |
| NOTE2 | |
| INTERFACE | LPI2C1 |
| IMXRT\_1020 PINS | GPIO\_AD\_B1\_15 (SDA)  GPIO\_AD\_B1\_14 (SCL) |
| ARDUINO INTERFACE PINS | J18 pin 5 (SDA)  J18 pin 6 (SCL) |
|  | |
| RACCOMANDATIONS | Pull UP resistor must be external. |
| The speed of I2C bus for the current firmware release cannot be change and is fixed to 100 kHz. | |

|  |  |
| --- | --- |
| NOTE3 | |
| INTERFACE | LPSPI1 |
| IMXRT\_1020 PINS | GPIO\_AD\_B0\_15 (SDA)  GPIO\_AD\_B0\_11 (SCL)  GPIO\_AD\_B0\_12 (SDA)  GPIO\_AD\_B0\_13 (SCL) |
| ARDUINO INTERFACE PINS | J18 pin 5 (SDA)  J18 pin 6 (SCL) |
|  | |
| RACCOMANDATIONS | Put at the output of each pin a series resistor of at least 100 Ohm. |

|  |
| --- |
| NOTE4 |
| Slave address must be set following the table.   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | X | MSB |  |  |  |  | LSB | | 0 | A6 | A5 | A4 | A3 | A2 | A1 | |

|  |  |  |
| --- | --- | --- |
| REVISION HISTORY | | |
| VERSION | REVISION DATE | COMMENTS |
| 1 | 04/06/2021 | First Release |