

Function Codes

👤 Created by	A Aditya Chaudhary
🕒 Created time	@April 30, 2024 12:34 AM
🏷️ Tags	

START Sequence

ASCII char (HEX)	Symbol	Description	Role
0x3A	#	Number Sign	START_HIGH_BYTE
0x23	:	Colon	START_LOW_BYTE

END Sequence

ASCII char (HEX)	Symbol	Description	Role
0x0A	LF (\n)	Line feed	END_HIGH_BYTE
0x0D	CR (\r)	Carriage Return	END_LOW_BYTE

Ping 0x11

Request Data format

Frames
START Sequence
Device Address
Function Code (0x11 for ping)
0x00
0x00
END Sequence

? Ping command is used to test whether circuit is alive or not. If we don't get response to ping command, then probably device is dead or connections between host and device is improper.

WRITE_MEM 0x01

Description: Write data on drive

Request Data format

Frames
START Sequence
Device Address
Function Code (0x01)
payload (type : byte array)
payload length
END Sequence

READ_MEM 0x02

Description: Read data from drive

Request Data format

Frames
START Sequence
Device Address
Function Code (0x02)
payload (type : byte array)
payload length
END Sequence



Here, payload is an array which will contain two bytes first will represent HIGH BYTE and second will represent LOW BYTE. These two bytes are combined 16bit (2bytes) word address where our credential is stored on device



Communication direction will be from MSB to LSB, therefore first HIGH byte is stored in array then LOW byte.

READ_SPACE 0x04

Description: Calculates free space in memory (in %)

Request Data format

Frames
START Sequence
Device Address
Function Code (0x04)
dummy data (0x00)
dummy data (0x00)
END Sequence



Here we are sending dummy data, because only function code is enough to make device understand what operation should get executed and it does not need any extra information

READ_ENTRY 0x03

Description: Read all entries from lookup section

Request Data format

Frames
START Sequence
Device Address
Function Code (0x03)
dummy data (0x00)
dummy data (0x00)
END Sequence



Here we are sending dummy data, because only function code is enough to make device understand what operation should get executed and it does not need any extra information

DELETE_MEM 0x10

Description: Formats complete drive



It's a dangerous function. Remember, it will erase all the data on the drive.



Always put a confirmation popup before execution of this function code

Request Data format

Frames
START Sequence

Frames
Device Address
Function Code (0x10)
dummy data (0x00)
dummy data (0x00)
END Sequence

SET_PASSWORD 0x12

Description: Set master password



Password limit is set to 8, otherwise you will get an exception response from device

Request Data format

Frames
START Sequence
Device Address
Function Code (0x01)
payload (type : byte array)
payload length
END Sequence

AUTH_CHECK 0x13

Description: Authentication

Request Data format

same as SET_PASSWORD 0x12