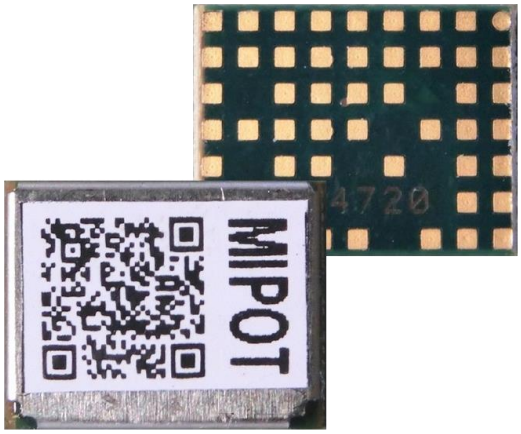
Wireless Protocol Modules MiP Series 32001505FEU

Command Reference



Description

This document provides list of commands that the 32001505FEU implement and the description of their use.

Contents

1. Communication interface: I²C/SPI/UART

I²C/SPI/UART interface allows Host both to configure the module and to exchange LoRa radio frame data messages.

1.1 Byte Order

Multiple byte values are transmitted in little endian order with least significant byte first (LSB).

1.2 Message Structure

The structure of the messages is the following:

HEADER	CMD	LENGTH	PAYLOAD (n Bytes)	CHECKSUM

Where:

HEADER = 0xAA
CMD = Command code to the module, see the following table
LENGTH = Payload length
Checksum = 2's complement on one byte of the sum of all preceding bytes

Each command from the host invokes an answer from the module in the same format. The answer to the host has the CMD field equal to host request OR 0x80.

2. Command Set Description

Current document describes only commands needed to move between stacks loaded into 32001505FEU module.
To get information about stack specific commands please refer to their own reference guides.

List of the implemented commands:

Command (CMD)	Value	Description
CHANGE_STACK_CMD	0x2A	Select the working stack without saving
GET_STACK_CMD	0x2B	Get currently used stack
CHG_STACK_SAVE_CMD	0x32	Select stack and save parameter in EEPROM
GET_SAVED_STACK_CMD	0x33	Reads saved stack value

2.1 CHANGE_STACK_CMD (0x2A)

This command performs a 'runtime' stack change without saving the new setting.
Host: 0xAA, 0x2A, 0x01, Stack, cks
Reply: 0xAA, 0xAA, 0x01, Status, cks
Stack: 0x00: LoRaModem, 0x01: LoRaWan
Status: 0x00: Success, 0xFF: Fail

2.2 GET_STACK_CMD (0x2B)

This command retrieves the code of the currently used stack.
Host: 0xAA, 0x2B, 0x00, 0x2B
Reply: 0xAA, 0xAB, Length, Status, Stack, cks
Stack: 0x00: LoRaModem, 0x01: LoRaWan
Status: 0x00: Success, 0xFF: Fail

If Status is Fail then Length is 0x01 and Stack is omitted.

2.3 CHG_STACK_SAVE _CMD (0x32)

This command performs a stack change and saves the new setting in EEPROM.
Host: 0xAA, 0x32, 0x02, 0x90, Stack, cks
Reply: 0xAA, 0xB2, 0x01, Status, cks
Stack: 0x00: LoRaModem, 0x01: LoRaWan
Status: 0x00: Success, 0xFF: Fail

2.4 GET_SAVED_STACK_CMD (0x33)

This commands reads from EEPROM the stored code of the stack to be used at startup. It may differ from the currently used stack.

Host: 0xAA, 0x33, 0x02, 0x90, 0x01, 0x90

Reply: 0xAA, 0xB3, 0x02, Status, Stack, cks

Stack: 0x00: LoRaModem, 0x01: LoRaWan

Status: 0x00: Success, 0xFF: Fail

3. Module Configuration

3.1 Module parameters

Parameter	Description	Address	Range	Default	Notes
Stack	Code of the stack to be used at startup	0x90	0-1	0	

4. Revision History

Revision	Date	Description
0.1	08.09.2021	Preliminary