How To Use library

When FSK modulation

1) Call the module reset function: SX1276_77_78_79_Reset;
2) Call the initialization function of the FSK modulation: SX1276_77_78_79_FSK_Init
3) Call the initialization function of the receive buffer of a fixed-length packet SX1276_77_78_79_setReceivingBuffer
4) When receiving a correct packet the following function is called: SX1276_77_78_79_readFifoCallback and at the moment of calling this function, the buffer that was specified using the SX1276_77_78_79_setReceivingBuffer function will already contain correct data. The function is defined as __weak so it can be overridden by the user.
5) In the while (1) loop, call the SPI_dma_handler function
6) To send a packet, use the function SX1276_77_78_79_sendData

When LoRa modulation

1) Call the module reset function: SX1276_77_78_79_Reset;
2) Call the initialization function of the module with LoRa modulation: SX1276_77_78_79_LORA_Init
3) Call the initialization function of the receive buffer of a fixed-length packet SX1276_77_78_79_setReceivingBuffer
7) When receiving a correct packet the following function is called:SX1276_77_78_79_readFifoCallback and at the moment of calling this function, the buffer that was specified using the SX1276_77_78_79_setReceivingBuffer function will already contain correct data. The function is defined as __weak so it can be overridden by the user.
8) In the while (1) loop, call the SPI_dma_handler function
9) To send a packet, use the function SX1276_77_78_79_sendData

Function parameters and examples

SX1276_77_78_79_Reset no parameters

SX1276_77_78_79_FSK_Init parameters:

uint8_t nodeAddress – own device address

uint8_t broadcastAddress – broadcast address of the device (at the moment it does not work, since only the device's own address is worth filtering)

uint8_t payloadSize – payload size (the device address is included in the payload so 1 byte is the destination device address byte)

float frequency_kHz – center frequency in kHz (maximum deviation 5 kHz)

SX1276_77_78_79_setReceivingBuffer parameter:

uint8_t* buffer pointer to the buffer where the data from the fifo is added

SX1276_77_78_79_readFifoCallback no parameters

SPI_dma_handler no parameters

SX1276_77_78_79_sendData parameters:

uint8_t* data pointer to the data buffer to send

uint8_t size the amount of data to send from the send data buffer

places to be replaced

Line 67 if(GPIO_Pin == GPIO_PIN_6) change to interrupt pin to your interrupt pin

Line 14 extern SPI_HandleTypeDef hspi1 change to your spi and everywhere else where hspi1 is mentioned

Features

1. the library does not implement the function of calculating the time on air for the lora modulation, so send data at the calculated interval. Use LoRa calculator.
2. The size of the preamble affects the stability of packet reception.
3. The library implements only packet modes for FSK and LoRa modulation, keep this in mind.