LoRa Communication: Algorithm Flowcharts for Sender and Receiver

# Sender Algorithm

1. Prepare Data to Transmit: Gather and convert sensor or message data to string/byte array.  
2. Set LoRa to Standby Mode: Ensure LoRa is ready before loading data.  
3. Load Data into FIFO: Write payload to LoRa’s FIFO buffer.  
4. Set LoRa to Transmit Mode: Trigger transmission and wait for TX\_DONE.  
5. Wait for Transmission Completion: Monitor IRQ or polling for TX\_DONE flag.  
6. Go Back to Standby or Sleep Mode: Save power after transmission.

# Receiver Algorithm

1. Set LoRa to Receive Mode: Choose continuous or single mode as needed.  
2. Wait for Incoming Data: Monitor IRQ flags for RX\_DONE.  
3. Read Received Data: Access data from FIFO, check RSSI/SNR.  
4. Process and Display Data: Convert and send data via UART.  
5. Clear IRQ Flags: Reset interrupts to get ready for next packet.