RS485 RF (BLE compatible) Receiver

Model: AC-BW-R110

Industrial grade RF beacon receiver

AC-BW-R110 is specialy designed to identify RF (BLE compatible) tag for locating applications.

Electrical Specification

- Bluetooth 5 compatible
- Chipset: Nordic NRF52840
- 256kB RAM, 1MB Flash
- Frequency: 2.4GHz
- Interface: RS485
- Power: 9-36 VDC
- Anti-surge protection

Application Mode

- Active and Passive Mode
  - In active mode, Receiver will send all the beacon data to controller through RS485 channel immediately.
  - In Passive mode, receiver will only receive beacon data with request command
- Filter Mode ON/OFF
  - With filter mode ON, only Aroco RF beacons data will be reported through RS485 channle
  - With filter mode OFF, baroadcast message of any BLE beacons will be reported through RS485

Environmental Specification

- Operating temperature: : -25°C to +75°C
- IP68
- UV resisitance
- Material: PC/ABS

RS485 Communication Protocol example

[STX], ID, BC, CMD/DATA, CSM, [ETX]

- STX   : ASCII 'STX' CODE (0x02)
- ID   : Command Target Device I.D. (0x01 – Rodsum Tracker, 0x60 or 0x61 – RX+485board) (1 Byte)
- TXID   : Transaction I.D. (2 Byte, Little Endian, RX+485 board will reply the command by same TXID)
- PLEN : Total Length by CMD and DATA (2 Bytes : Little Endian)
- CMD   : Command Type(1 Byte)
- DATA : Detail Data(< 1024 bytes)
- CSM   : Checksum – Check digits of the packet from ID to data by XOR(1 Byte)
- ETX   : ASCII 'ETX' CODE (0x03)

Checksum Calculation:

```
unsigned char rsprot_cksum( unsigned char *buf, int len )
{
    int i;
    unsigned char cks;

    cks = 0;
    for ( i=1; i < len; i++ )
    {
        cks ^= buf[i];
```