# Netvox LoRaWAN Application Command V1.7

VersionHistory

| Date | Version | Description | Note |
|------|---------|-------------|------|
| 2017-05-03 | 0.1 | InitVersion | |
| 2017-05-09 | | Add ConfigureCmd,PQOSCmd | |
| 2017-06-07 | 0.2 | Add R311A、RB11E、R311G Cmd | |
| 2017-06-12 | 0.3 | Add　RA07 cmd | |
| 2017-07-05 | 0.4 | Add ADR Config cmd，LowBatteryIndicator | |
| 2017-07-06 | 0.5 | Add IRDectionTimeSupport | |
| 2017-08-02 | 0.6 | Add RA07 Reportcmd | |
| 2017-08-16 | 0.7 | Add R311W Reportcmd | |
| 2017-08-17 | 0.8 | Add ChangeActiveModeAndInfoCmd | |
| 2017-08-29 | 0.9 | Add RB11E,R801A Support | |
| 2017-09-08 | 1.0 | Add RA07 temp/humid/ WindSpeed/WindDirection /Atomsphere reportcmd | |
| 2017-09-14 | 1.1 | Add CayenneTxPeriodCmdSupport | |
| 2017-09-19 | 1.2 | Add resumenetworkinfocmd | |
| 2017-10-30 | 1.3 | Add R726 RA02A Devicetype Support | |
| 2017-11-01 | 1.4 | Add R718A Devicetype Support | |
| 2017-11-29 | 1.5 | Add 5TE Electrical Conductivity Suport in Reporttype=0x0A Add RA07W Devicetype Support | |
| 2017-12-28 | 1.5.1 | Add ReadLoRaWANStack Version Support Add R727 DevicetypeSupport | |
| 2018-01-13 | 1.5.2 | Add R809A DevicetypeSupport | |
| 2018-01-24 | 1.5.3 | Add RB02I　RA02C DevicetypeSupport | |
| 2018-02-02 | 1.6 | Add R718W DevicetypeSupport | |
| 2018-03-08 | 1.7 | Add R718 MultiDevice Support | |

## 1、 ReportDataCmd(UpDirection)

FPort：0x06

| Bytes | 1 | 1 | 1 | Var(Fix=8 Bytes) |
|-------|---|---|---|------------------|
| | Version | DeviceType | ReportType | NetvoxPayLoadData |

**Version**– 1 bytes –0x01――the Version of NetvoxLoRaWAN Application Command Version

**DeviceType**– 1 byte – Device Type of Device

　　　　0x01――R711

　　　　0x02――R311A

0x03——RB11E

0x04——R311G

0x05——RA07

0x06——R311W

0x07——RB11E1

0x08——R801A

0x09——R726

0x0A——RA02A

0x0B——R718A

0x0C——RA07W

0x0D——R727

0x0E——R809A

0x0F——R211

0x10——RB02I

0x11——RA02C

0x12——R718WB

0x13——R718AB

0x14——R718B

0x15——R718CJ  0x16——R718CK  0x17——R718CT  0x18——R718CR

0x19——R718CE

0x1A——R718DA  0x1B——R718DB

0x1C——R718E

0x1D——R718F

0x1E——R718G

0x1F——R718H

0x20——R718I

0x21——R718J

0x22——R718KA  0x23——R718KB

0x24——R718LA  0x25——R718LB

0x26——R718MA  0x27——R718MB  0x28——R718MC

0x29——R718N

0x30——R718S

0x31——R718T

0x32——R718WA

0x33——R718WD

0x34——R718X

0xFF——ALL Device

Other ——Reserved

**ReportType** – 1 byte –the Presention of the NetvoxPayLoadData，according the devicetype

**NetvoxPayLoadData**– var bytes (Max=8bytes)–

| Device | Device Type | ReportType | NetvoxPayLoadData | | | |
|---|---|---|---|---|---|---|
| ALL | ALL(according device type not FF) | 0x00 | SoftwareVersion(1Byte) Eg.0x0A—V1.0 | HardwareVersion(1Byte) | DateCode(4Bytes,eg 0x20170503) | Reserved(2Bytes,fixed 0x00) |
| R711/R718A/R718AB | 0x01/0x0B/0x13 | 0x01 | Battery(1Byte, unit:0.1V) | Temperature(Signed2Bytes,unit:0.01°C) | Humidity(2Bytes,unit:0.01%) | Reserved(3Bytes,fixed 0x00) |
| R718CJ/CK/CR/CE | 0x15/16/17/18/19 | 0x01 | Battery(1Byte, unit:0.1V) | Temperature1(Signed2Bytes,unit:0.1°C) | Temperature2(Signed2Bytes,unit:0.1°C) | Reserved(3Bytes,fixed 0x00) |
| R718B | 0x14 | 0x01 | Battery(1Byte, unit:0.1V) | Temperature(Signed2Bytes,unit:0.01°C) | Reserved(5Bytes,fixed 0x00) | |
| R718DA/R718DB/R718J/R718LB | 0x1A/0x1B/0x21/0x25 | 0x01 | Battery(1Byte, unit:0.1V) | Status(1Byte 0:off 1:on) | Reserved(6Bytes,fixed 0x00) | |

| Device | Code | Cmd | Battery | Data1 | Data2 | Data3 | Data4 |
|---|---|---|---|---|---|---|---|
| R311A/ R718F | 0x02/0x1D | 0x01 | Battery(1Byte, unit:0.1V) | ContactSwitchOnOff(1Byte 0:off 1:on) | Reserved(6Bytes,fixed 0x00) | | |
| R718G | 0x1E | 0x01 | Battery(1Byte, unit:0.1V) | illuminance(4Bytes,unit:1Lux) | Reserved(3Bytes,fixed 0x00) | | |
| R718E | 0x1C | 0x01 | Battery(1Byte, unit:0.1V) | DataX(Signed2Bytes) | DataY(Signed 2Bytes) | DataZ(Signed2Bytes) | Reserved(1Bytes,fixed 0x00) |
| R718I | 0x20 | 0x01 | Battery(1Byte, unit:0.1V) | ADCRawValue(2Bytes,unit:1mv) | Reserved(5Bytes,fixed 0x00) | | |
| R718KA | 0x22 | 0x01 | Battery(1Byte, unit:0.1V) | Current(1Bytes,unit:1mA) | Reserved(6Bytes,fixed 0x00) | | |
| R718KB | 0x23 | 0x01 | Battery(1Byte, unit:0.1V) | Resistive(4Bytes,unit:1Ohms) | Reserved(3Bytes,fixed 0x00) | | |
| RB11E/ RB11E1 | 0x03/0x07 | 0x01 | Battery(1Byte, unit:0.1V) | Temperature(2Bytes,unit:0.01°C) | illuminance(2Bytes,unit:1 Lux) | Occupy(1Byte 0:Un Occupy 1: Occupy) | Reserved(2Bytes,fixed 0x00) |
| R311G | 0x04 | 0x01 | Battery(1Byte, unit:0.1V) | illuminance(2Bytes,unit:1Lux) | Reserved(5Bytes,fixed 0x00) | | |
| RA07/ R726/ R727 | 0x05/0x09/0x0D | 0x01 | Battery(1Byte, unit:0.1V) | PM1.0(2Byte ,CF=1,1ug/m3) | PM2.5(2Byte CF=1,ug/m3) | PM10(2Byte CF=1,ug/m3) | Reserved(1Bytes,fixed 0x00) |
| | | 0x02 | Battery(1Byte, unit:0.1V) | PM1.0(2Byte 1ug/m3) | PM2.5(2Byte 1ug/m3) | PM10(2Byte 1ug/m3) | Reserved(1Bytes,fixed 0x00) |
| | | 0x03 | Battery(1Byte, unit:0.1V) | 0.3um PM(2Byte ,1pcs) | 0.5um PM(2Byte ,1pcs) | 1.0um PM(2Byte ,1pcs) | Reserved(1Bytes,fixed 0x00) |

| | | | Battery(1Byte, unit:0.1V) | | | |
|---|---|---|---|---|---|---|
| | | 0x04 | Battery(1Byte, unit:0.1V) | 2.5um PM(2Byte ,1pcs) | 5.0um PM(2Byte ,1pcs) | 10um PM(2Byte ,1 pcs) | Reserved(1Bytes,fixed 0x00) |
| | | 0x05 | Battery(1Byte, unit:0.1V) | O3(2Byte ,0.1ppm) | CO(2Byte ,0.1ppm) | NO(2Byte ,0.1ppm) | Reserved(1Bytes,fixed 0x00) |
| | | 0x06 | Battery(1Byte, unit:0.1V) | NO2(2Byte ,0.1ppm) | SO2(2Byte ,0.1ppm) | H2S(2Byte , 0.1ppm) | Reserved(1Bytes,fixed 0x00) |
| | | 0x07 | Battery(1Byte, unit:0.1V) | CO2(2Byte ,0.1ppm) | NH3(2Byte ,0.1ppm) | Noise(2Byte ,0.1db) | Reserved(1Bytes,fixed 0x00) |
| | | 0x08 | Battery(1Byte, unit:0.1V) | PH(2Byte ,0.01pH) | TemperaturewithPH(2Bytes,unit:0.01°C) | ORP(Signed 2Byte ,1mv) | Reserved(1Bytes,fixed 0x00) |
| | | 0x09 | Battery(1Byte, unit:0.1V) | NTU(2Byte ,0.1ntu) | TemperaturewithNTU(2Bytes,unit:0.01°C) | EC5SoildHumidtiy(2Bytes,unit:0.01%) | Reserved(1Bytes,fixed 0x00) |
| | | 0x0A | Battery(1Byte, unit:0.1V) | 5TESoildHumidtiy(2Bytes,unit:0.01%) | 5TESoildTemp(2Bytes,unit:0.01°C) | WaterLevel(2Bytes,unit:1cm) | 5TEEC(1Bytes,unit:0.1db/m) |
| | | 0x0B | Battery(1Byte, unit:0.1V) | TemperaturewithLDO(2Bytes,unit:0.01°C) | LDO'DO Value(2Bytes,unit:0.01ppm) | LDO'Sat Value(2Bytes,unit:0.1%) | Reserved(1Bytes,fixed 0x00) |
| | | 0x0C | Battery(1Byte, unit:0.1V) | Temperature(Signed2Bytes,unit:0.01°C) | Humidity(2Bytes, unit:0.01%) | WindSpeed(2Bytes,unit:0.01m/s) | Reserved(1Bytes,fixed 0x00) |
| | | 0x0D | Battery(1Byte, unit:0.1V) | WindDirection(2Bytes) | Atomsphere(4Bytes,unit:0.01mbar) | | Reserved(1Bytes,fixed 0x00) |
| R311W | 0x06 | 0x01 | Battery(1Byte, unit:0.1V) | Water1Leak(1Byte 0:noleak 1:leak) | Water2Leak(1Byte 0:noleak 1:leak) | Reserved(5Bytes,fixed 0x00) |

| | | | | | | |
|---|---|---|---|---|---|---|
| R801A | 0x08 | 0x01 | Battery(1Byte, unit:0.1V) | Temperature1(Signed2Bytes,unit:0.01°C) | Temperature2(Signed2Bytes,unit:0.01°C) | Reserved(3Bytes,fixed 0x00) |
| RA02A | 0x0A | 0x01 | Battery(1Byte, unit:0.1V) | FireAlarm(1Byte 0:noalarm 1:alarm) | HighTempAlarm(1Byte 0:noalarm 1:alarm) | Reserved(5Bytes,fixed 0x00) |
| RA07W | 0x0C | 0x01 | Battery(1Byte, unit:0.1V) | WaterLeakLocation(2Bytes ,10cm)(Normal_0000,SenorNotConnected_FFFF,OtherValue_LeakLocation) | Reserved(5Bytes,fixed 0x00) | |
| R809A | 0x0E | 0x01 | OnOff(1Byte, OFF_0x00, ON_0x01) | Energy(4Byte, unit:1wh) | | Reserved(3Bytes,fixed 0x00) |
| | | 0x02 | Vol(2Bytes, Unit:1V) | Current(2Bytes,Unit:1ma) | Power(2Bytes,Unit:1W) | Reserved(2Bytes,fixed 0x00) |
| RB02I/R718T | 0x10/0x31 | 0x01 | Battery(1Byte, unit:0.1V) | Alarm(1Byte 0:noalarm 1:alarm) | Reserved(6Bytes,fixed 0x00) | |
| RA02C | 0x11 | 0x01 | Battery(1Byte, unit:0.1V) | COAlarm(1Byte 0:noalarm 1:alarm) | HighTempAlarm(1Byte 0:noalarm 1:alarm) | Reserved(5Bytes,fixed 0x00) |
| R718WB/R718WA | 0x12/0x32 | 0x01 | Battery(1Byte, unit:0.1V) | WaterLeak (1Byte 0:noLeak1:Leak) | Reserved(6Bytes,fixed 0x00) | |
| R718WD | 0x33 | 0x01 | Battery(1Byte, unit:0.1V) | TankRawData(2Bytes ,Unit：1mv) | TankLevl(1Byte,Unit:1%) | Reserved(5Bytes,fixed 0x00) |

**Battery(1Byte, unit:0.1V):Bit7 represent lowbattery　　Bit6-0 represent batteryvoltage**
**When Battery is 0x00,it represet is powered by DC/AC powersource**
**For RA07/R726/R727, when report data is all FF，it represent the sensor is disconnected**

PayLoadDecodeExample:

010B012409EA1A90000000

01—protocalversion

0B—ReportType,represent R718A

01---reporttype

24------battery,represent 3.6v

09EA---temperature,represent 25.38℃

1A90---humidity,represent 68.00%

000000---reserveddata


## 2、 ConfigureCmd(Bi-Direction)

FPort：0x07

| Bytes | 1 | 1 | Var(Fix =9 Bytes) |
|-------|-----|------------|-------------------|
| | CmdID | DeviceType | NetvoxPayLoadData |

**CmdID**– 1 bytes –

**DeviceType**– 1 byte – Device Type of Device

    0x01——R711

    0x02——R311A

    0x03——RB11E

    0x04——R311G

    0x05——RA07

    0x06——RA311W

    0x07——RB11E1

    0x08——R801A

    0x09——R726

    0x0A——RA02A

    0x0B——R718A

    0x0C——RA07W

    0x0D——R727

    0x0E——R809A

    0x0F——R211

    0x10——RB02I

    0x11——RA02C

    0x12——R718WB

    0x13——R718AB

    0x14——R718B

    0x15——R718CJ 0x16——R718CK 0x17——R718CT 0x18——R718CR

    0x19——R718CE

    0x1A——R718DA 0x1B——R718DB

    0x1C——R718E

    0x1D——R718F

0x1E——R718G

0x1F——R718H

0x20——R718I

0x21——R718J

0x22——R718KA  0x23——R718KB

0x24——R718LA  0x25——R718LB

0x26——R718MA  0x27——R718MB  0x28——R718MC

0x29——R718N

0x30——R718S

0x31——R718T

0x32——R718WA

0x33——R718WD

0x34——R718X

0xFF——ALL Device

Other ——Reserved

**NetvoxPayLoadData**– var bytes (Max=9bytes)–

| Description | Device | CmdID | DeviceType | NetvoxPayLoadData | | | | |
|---|---|---|---|---|---|---|---|---|
| Off | R809A | 0x90 | 0x0E | Reserved (9Bytes,Fixed 0x00) | | | | |
| On | | 0x91 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| Toggle | | 0x92 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| ClearEnergy | | 0x93 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| ConfigReportReq | | 0x01 | | MinTime(2bytes Unit:s) | MaxTime(2bytes Unit:s) | CurrentChange(2byte Unit:1mA) | PowerChange（2byte Unit:1W） | Reserved (1Byte,Fixed 0x00) |
| ConfigReportRsp | | 0x81 | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |
| ReadConfigReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| ReadConfigReportRsp | | 0x82 | | MinTime(2bytes Unit:s) | MaxTime(2bytes Unit:s) | CurrentChange(2byte Unit:1mA) | PowerChange（2byte Unit:1W） | Reserved (1Byte,Fixed 0x00) |
| | | | | | | | | |
| ConfigReportReq | R711/R718A/R718AB | 0x01 | 0x01 | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | Temperature Change(2byte Unit:0.01℃) | HumidityChange（2byte Unit:0.01%） |
| ConfigReportRsp | | 0x81 | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |

| Command | Device | CmdID | Channel | | | | | |
|---|---|---|---|---|---|---|---|---|
| ReadConfigReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| ReadConfigReportRsp | | 0x82 | | MinTime (2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | TemperatureChange(2byte Unit:0.01℃) | HumidityChange（2byte Unit:0.01%） |
| | | | | | | | | |
| ConfigReportReq | R718 CJ/CK/CR/CE | 0x01 | 0x15/16/17/18/19 | MinTime (2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | Temperature1Change(2byte Unit:0.1℃) | Temperature2Change(2byte Unit:0.1℃) |
| ConfigReportRsp | | 0x81 | | Status(0x00_sucess) | Reserved (8Bytes,Fixed 0x00) | | | |
| ReadConfigReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| ReadConfigReportRsp | | 0x82 | | MinTime (2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | TemperatureChange(2byte Unit:0.1℃) | Temperature2Change(2byte Unit:0.1℃) |
| SetThermocoupleTypeReq | | 0x03 | 0x15 or 0x16 or 0x17 or 0x18 Or 0x19 | ThermocoupleType(1Byte,0x00_Jtype 0x01_Ktype,0x02_Ttyep,0x03_Rtype, 0x04_Etype) | | | Reserved (8Bytes,Fixed 0x00) | |
| SetThermocoupleTypeRsp | | 0x83 | | Status(0x00_sucess) | Reserved (8Bytes,Fixed 0x00) | | | |
| GetThermocoupleTypeReq | | 0x04 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| GetThermocoupleTypeRsp | | 0x84 | | ThermocoupleType(1Byte,0x00_Jtype 0x01_Ktype,0x02_Ttyep,0x03_Rtype, 0x04_Etype) | | | Reserved (8Bytes,Fixed 0x00) | |
| | | | | | | | | |
| ConfigReportReq | R718 B | 0x01 | 0x14 | MinTime (2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | Temperature1Change(2byte Unit:0.1℃) | Reserved (2Bytes,Fixed 0x00) |
| ConfigReportRsp | | 0x81 | | Status(0x00_sucess) | Reserved (8Bytes,Fixed 0x00) | | | |
| ReadConfigReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| ReadConfigReportRsp | | 0x82 | | MinTime (2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | TemperatureChange(2byte Unit:0.1℃) | Reserved (2Bytes,Fixed 0x00) |

| Command | Device | Cmd | | Field1 | Field2 | Field3 | Field4 | Field5 |
|---|---|---|---|---|---|---|---|---|
| ConfigReportReq | R718KA | 0x01 | 0x22 | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | CurrentChange(1byte Unit:1mA) | Reserved (3Bytes,Fixed 0x00) |
| ConfigReportRsp | | 0x81 | | Status(0 x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |
| ReadConfigReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| ReadConfigReportRsp | | 0x82 | | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | CurrentChange (1byte Unit: 1mA) | Reserved (3Bytes,Fixed 0x00) |
| ConfigReportReq | R718I | 0x01 | 0x20 | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | ADCRawValueChange(2byte Unit:1mV) | Reserved (2Bytes,Fixed 0x00) |
| ConfigReportRsp | | 0x81 | | Status(0 x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |
| ReadConfigReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| ReadConfigReportRsp | | 0x82 | | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | ADCRawValue Change (2byte Unit: 1mV) | Reserved (2Bytes,Fixed 0x00) |
| ConfigReportReq | R718WD | 0x01 | 0x33 | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | TankLevelChange(1Byte,Unit:1%) | Reserved (3Bytes,Fixed 0x00) |
| ConfigReportRsp | | 0x81 | | Status(0 x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |
| ReadConfigReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| ReadConfigReportRsp | | 0x82 | | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | TankLevelChange(1Byte,Unit:1%) | Reserved (3Bytes,Fixed 0x00) |
| SetTankLevelRangeReq | | 0x03 | | MinSensorVoltage(1Byte, Unit:100mv) | MaxSensorVoltage (1Byte,Unit: 100mv) | Reserved (7Bytes,Fixed 0x00) | | |
| SetTankLevelRangeRsp | | 0x83 | | Status(0 x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |

| GetTankLev elRangeReq | | 0x04 | | Reserved (9Bytes,Fixed 0x00) | | | |
|---|---|---|---|---|---|---|---|
| GetTankLev elRangeRsp | | 0x84 | | MinSens orVoltag e (1Byte,U nit: 100mv) | MaxSenso rVoltage (1Byte,Uni t: 100mv) | Reserved (7Bytes,Fixed 0x00) | |
| | | | | | | | |
| | | | | | | | |
| ConfigRepo rtReq | R311 A/ R718 DA/R 718D B/R7 18J/ R718 LB/ R718 F/R7 18E | 0x01 | 0x02/ 0x1A/ 0x1B/ 0x21/ 0x25/ 0x1D/ 0x1C | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChang e(1byte Unit:0.1v) | Reserved (4Bytes,Fixed 0x00) |
| ConfigRepo rtRsp | | 0x81 | | Status(0 x00_suc cess) | Reserved (8Bytes,Fixed 0x00) | | |
| ReadConfig ReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | |
| ReadConfig ReportRsp | | 0x82 | | MinTime( 2bytes Unit:s) | MaxTime (2bytes Unit:s) | BatteryChang e(1byte Unit:0.1v) | Reserved (4Bytes,Fixed 0x00) |
| ConfigRepo rtReq | R311 W | 0x01 | 0x06 | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChang e(1byte Unit:0.1v) | Reserved (4Bytes,Fixed 0x00) |
| ConfigRepo rtRsp | | 0x81 | | Status(0 x00_suc cess) | Reserved (8Bytes,Fixed 0x00) | | |
| ReadConfig ReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | |
| ReadConfig ReportRsp | | 0x82 | | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChang e(1byte Unit:0.1v) | Reserved (4Bytes,Fixed 0x00) |
| | | | | | | | |
| ConfigRepo rtReq | RB02 I/R71 8T | 0x01 | 0x10/ 0x31 | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChang e(1byte Unit:0.1v) | Reserved (4Bytes,Fixed 0x00) |
| ConfigRepo rtRsp | | 0x81 | | Status(0 x00_suc cess) | Reserved (8Bytes,Fixed 0x00) | | |
| ReadConfig ReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ReadConfig ReportRsp | | 0x82 | | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChang e(1byte Unit:0.1v) | Reserved (4Bytes,Fixed 0x00) |
| | | | | | | | |
| ConfigRepo rtReq | R718 WB/ R718 WA | 0x01 | 0x12/ 0x32 | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChang e(1byte Unit:0.1v) | Reserved (4Bytes,Fixed 0x00) |
| ConfigRepo rtRsp | | 0x81 | | Status(0 x00_suc cess) | Reserved (8Bytes,Fixed 0x00) | | |
| ReadConfig ReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | |
| ReadConfig ReportRsp | | 0x82 | | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChang e(1byte Unit:0.1v) | Reserved (4Bytes,Fixed 0x00) |
| | | | | | | | |
| ConfigRepo rtReq | RA02 A | 0x01 | 0x0A | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChang e(1byte Unit:0.1v) | Reserved (4Bytes,Fixed 0x00) |
| ConfigRepo rtRsp | | 0x81 | | Status(0 x00_suc cess) | Reserved (8Bytes,Fixed 0x00) | | |
| ReadConfig ReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | |
| ReadConfig ReportRsp | | 0x82 | | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChang e(1byte Unit:0.1v) | Reserved (4Bytes,Fixed 0x00) |
| | | | | | | | |
| ConfigRepo rtReq | RA02 C | 0x01 | 0x11 | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChang e(1byte Unit:0.1v) | Reserved (4Bytes,Fixed 0x00) |
| ConfigRepo rtRsp | | 0x81 | | Status(0 x00_suc cess) | Reserved (8Bytes,Fixed 0x00) | | |
| ReadConfig ReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | |
| ReadConfig ReportRsp | | 0x82 | | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | BatteryChang e(1byte Unit:0.1v) | Reserved (4Bytes,Fixed 0x00) |
| | | | | | | | |
| ConfigRepo rtReq | RA07 W | 0x01 | 0x0C | MinTime (2bytes Unit:s) | MaxTime( 2bytes Unit:s) | Reserved (5Bytes,Fixed 0x00) | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ConfigReportRsp | | 0x81 | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |
| ReadConfigReportReq | | 0x02 | Reserved (9Bytes,Fixed 0x00) | | | | |
| ReadConfigReportRsp | | 0x82 | MinTime(2bytes Unit:s) | MaxTime(2bytes Unit:s) | Reserved (5Bytes,Fixed 0x00) | | |
| SetSensorParaReq | | 0x03 | LineLength(2Bytes,Unit:10cm) | Sensitivity(1Byte,Hihg_0x00,Mid_0x01,Low_0x02) | Reserved (6Bytes,Fixed 0x00) | | |
| SetSensorParaRsp | | 0x83 | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |
| GetSensorParaReq | | 0x04 | Reserved (9Bytes,Fixed 0x00) | | | | |
| GetSensorParaRsp | | 0x84 | LineLength(2Bytes,Unit:10cm) | Sensitivity(1Byte,Hihg_0x00,Mid_0x01,Low_0x02) | Reserved (6Bytes,Fixed 0x00) | | |
| | | | | | | | |
| ConfigReportReq | | 0x01 | MinTime(2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | TemperatureChange(2byte Unit:0.01℃) | illuminance（2byte Unit: 1Lux） |
| ConfigReportRsp | | 0x81 | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |
| ReadConfigReportReq | RB11E/RB11E1 | 0x02 | Reserved (9Bytes,Fixed 0x00) | | | | |
| ReadConfigReportRsp | | 0x82 | 0x03/0x07 | MinTime(2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | TemperatureChange(2byte Unit:0.01℃) | illuminance Change（2byte Unit: 1Lux） |
| SetIRDisableTImeReq | | 0x03 | IRDisableTime(2bytes Unit:s) | IRDectionTime(2bytes Unit:s) | Reserved (7Bytes,Fixed 0x00) | | |
| SetIRDisableTImeRsp | | 0x83 | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |
| GetIRDisableTImeReq | | 0x04 | Reserved (9Bytes,Fixed 0x00) | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| GetIRDisableTImeRsp | | 0x84 | | IRDisableTime(2bytes Unit:s) | IRDectionTime(2bytes Unit:s) | Reserved (7Bytes,Fixed 0x00) | | |
| | | | | | | | | |
| ConfigReportReq | R311G | 0x01 | 0x04 | MinTime(2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | Illuminancechange(2bytes Unit：1Lux) | Reserved (2Bytes,Fixed 0x00) |
| ConfigReportRsp | | 0x81 | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |
| ReadConfigReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| ReadConfigReportRsp | | 0x82 | | MinTime(2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | Illuminancechange(2bytes Unit：1Lux) | Reserved (2Bytes,Fixed 0x00) |
| | | | | | | | | |
| ConfigReportReq | R718G | 0x01 | 0x1E | MinTime(2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | Illuminancechange(4bytes Unit：1Lux) | |
| ConfigReportRsp | | 0x81 | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |
| ReadConfigReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| ReadConfigReportRsp | | 0x82 | | MinTime(2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | Illuminancechange(4bytes Unit：1Lux) | |
| | | | | | | | | |
| ConfigReportReq | R718KB | 0x01 | 0x23 | MinTime(2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | Resistive (4bytes Unit：1Ohm) | |
| ConfigReportRsp | | 0x81 | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | | | |
| ReadConfigReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | | | |
| ReadConfigReportRsp | | 0x82 | | MinTime(2bytes Unit:s) | MaxTime(2bytes Unit:s) | BatteryChange(1byte Unit:0.1v) | Resistive (4bytes Unit：1Ohm) | |

| | | | | | | |
|---|---|---|---|---|---|---|
| ConfigReportReq | | 0x01 | | MinTime(2 bytes Unit:s) | MaxTime(2bytes Unit:s) | Reserved (5Bytes,Fixed 0x00) |
| ConfigReportRsp | | 0x81 | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | |
| ReadConfigReportReq | | 0x02 | | Reserved (9Bytes,Fixed 0x00) | | |
| ReadConfigReportRsp | | 0x82 | | MinTime(2 bytes Unit:s) | MaxTime(2bytes Unit:s) | Reserved (5Bytes,Fixed 0x00) |
| SetLDOSettingReq | | 0x03 | | LDO's Altiud(2bytes) | LDO's PSU(2bytes) | Reserved (5Bytes,Fixed 0x00) |
| SetLDOSettingRsp | | 0x83 | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | |
| GetLDOSettingReq | | 0x04 | | Reserved (9Bytes,Fixed 0x00) | | |
| GetLDOSettingRsp | | 0x84 | | LDO's Altiud(2bytes) | LDO's PSU(2bytes) | Reserved (5Bytes,Fixed 0x00) |
| ORPCalibrateReq | RA07/R726/R727 | 0x05 | 0x05/0x09/0x0D | StandORP(2bytes,86mv Or 256 mv) | Reserved (7Bytes,Fixed 0x00) | |
| ORPCalibrateRsp | | 0x85 | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | |
| PHCalibrateReq | | 0x06 | | StandPH(2bytes,0PH Or 4PH Or 9PH) | Reserved (7Bytes,Fixed 0x00) | |
| PHCalibrateRSP | | 0x86 | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | |
| NTUCalibrateReq | | 0x07 | | StandNTU(2bytes,0 or fullscalentu*10) | Reserved (7Bytes,Fixed 0x00) | |
| NTUCalibrateRsp | | 0x87 | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | |
| SetWireLengthReq | | 0x08 | | Lenght(2bytes,Unit:1cm) | Reserved (7Bytes,Fixed 0x00) | |
| SetWireLengthRsp | | 0x88 | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) | |
| GetWireLengthReq | | 0x09 | | Reserved (9Bytes,Fixed 0x00) | | |

| | | | | | |
|---|---|---|---|---|---|
| GetWireLengthRsp | | 0x89 | | Lenght(2 bytes,Unit:1cm) | Reserved (7Bytes,Fixed 0x00) |
| | | | | | |
| SetAckOnOffReq | ALL(0xFF) | 0x0F | 0xFF | ACKOnOff(1Byte 1_Ack ON 0_AckOff) | Reserved (8Bytes,Fixed 0x00) |
| SetAckOnOffRsp | | 0x8F | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) |
| GetAckOnOffReq | | 0x0E | | Reserved (9Bytes,Fixed 0x00) | |
| GetAckOnOffRsp | | 0x8E | | ACKOnOff(1Byte 1_Ack ON 0_AckOff) | Reserved (8Bytes,Fixed 0x00) |
| | | | | | |
| ResetReq | ALL(0xFF) | 0x0D | 0xFF | Reserved (9Bytes,Fixed 0x00) | |
| ResetRsp | | 0x8D | | Reserved (9Bytes,Fixed 0x00) | |
| | | | | | |
| SetADROnOffReq | ALL(0xFF) | 0x0C | 0xFF | ADROnOff(1Byte 1_ADR ON 0_ADROff) | Reserved (8Bytes,Fixed 0x00) |
| SetADRRspRsp | | 0x8C | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) |
| GetADROnOffReq | | 0x0B | | Reserved (9Bytes,Fixed 0x00) | |
| GetADRRspRsp | | 0x8B | | ADROnOff(1Byte 1_ADR ON 0_ADROff) | Reserved (8Bytes,Fixed 0x00) |
| | | | | | |
| SetResumeNetOnOffReq | ALL(0xFF) | 0x0A | 0xFF | ResumeNetOnOff(1Byte 1_ResumeNet ON 0_ResumeNetOff) | Reserved (8Bytes,Fixed 0x00) |
| SetResumeNetRsp | | 0x8A | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) |

| Command | | CmdID | | Data | |
|---|---|---|---|---|---|
| GetResumeNetOnOffReq | | 0x09 | | Reserved (9Bytes,Fixed 0x00) | |
| GetResumeNetRsp | | 0x89 | | ResumeNetOnOff(1Byte 1_ResumeNet ON 0_ResumeNetOff) | Reserved (8Bytes,Fixed 0x00) |
| | | | | | |
| SetRejoinDurationReq | ALL(0xFF) | 0x07 | 0xFF | RejoinDuration(2Bytes Unit:1Min) | Reserved (7Bytes,Fixed 0x00) |
| SetRejoinDurationRsp | | 0x87 | | Status(0x00_success) | Reserved (8Bytes,Fixed 0x00) |
| GetRejoinDurationReq | | 0x06 | | Reserved (9Bytes,Fixed 0x00) | |
| GetRejoinDurationRsp | | 0x86 | | RejoinDuration(2Bytes Unit:1Min) | Reserved (7Bytes,Fixed 0x00) |
| | | | | | |

**Note：mintime present the sensor's sampleperiod,but dont apply on interrupted type sensor's report,such as PIR Sensor, Contact Switch Sensor ,etc.**
**If interrupted type sensor's state change, it send report immediately.**

**Ack's default value is OFF**
**ADR 's default value is ON**
**ResumeNet's default value is OFF**