# 网关通讯协议

Interface

RS485, 9600, 8 bit data

1 start bit, 1 stop bit, no parity

Idle between bytes to be < 1ms

Delay between Packets to be > 10ms

Logical Message

Protocol 8 byte packet

Checksum = Negative 8 bit 2's complement sum of bytes 1-7

All numbers in hexadecimal

Message Structure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Byte Number** | **Description** | **Byte Number** | **Description** |
| Byte 0: | 1C – Logical Sync byte | Byte 0: | 5C – Physical Sync byte |
| Byte 1: | Area number | Byte 1: | Device code |
| Byte 2: | Data Byte 1 | Byte 2: | Box Number |
| Byte 3: | Opcode | Byte 3: | Opcode |
| Byte 4: | Data Byte 2 | Byte 4: | Data Byte 1 |
| Byte 5: | Data Byte 3 | Byte 5: | Data Byte 2 |
| Byte 6: | Join Byte | Byte 6: | Data Byte 3 |
|  | Byte 7: | Checksum | Byte 7: | Checksum |

**功能格式说明**

**Select Current Preset //发送区域场景控制**

Byte 0: 1C hex

Byte 1: Area

Byte 2: Fade Rate low byte (usually 100)

Byte 3: Preset: 0= P1, 1= P2, 2= P3, 3= P4, A= P5, B= P6, C= P7, D= P8

Byte 4: Fade Rate high byte (usually 0)

Byte 5: Preset Bank: 0= P1 – P8, 1= P9 – P16, 2= P17 – P24 etc.

Byte 6: Join

Byte 7: Checksum

Example: Select Preset 4 in Area 1:

[1C] [01] [20] [03] [00] [00] [FF] [C1]

**Request Preset (sent to dimmer) //获取区域场景**

Byte: 1C hex

Byte 1: Area

Byte 2: 0 (Unused)

Byte 3: 63 hex

Byte 4: 0 (Unused)

Byte 5: 0 (Unused)

Byte 6: Join (usually FF hex)

Byte 7: Checksum

Example: Request Current Preset of Area 4:

[1C] [04] [00] [63] [00] [00] [FF] [7E]

**Report Preset (reply from dimmer) //返回区域场景**

Byte 0: 1C hex

Byte 1: Area

Byte 2: Preset (0 origin)

Byte 3: 62 hex

Byte 4: 0 (Unused)

Byte 5: 0 (Unused)

Byte 6: Join (usually FF hex)

Byte 7: Checksum

Example: Area 4 is currently in Preset 6:

[1C] [04] [06] [62] [00] [00] [FF] [7A]

Ramp Channel/Area to a Level (0,1 sec to 25.5 sec)

Byte 0: 1C hex

Byte 1: Area

Byte 2: Channel (0 origin, FF = All Channels in the Area)

Byte 3: 71 hex

Byte 4: Channel Level (01 = 100%, FF = 0%)

Byte 5: Ramp Rate (100 ms steps. Ramp Rate is the time to fade from 0:100%)

Byte 6: Join (usually FF hex)

Byte 7: Checksum

*Example:* Area 2 Channel 3 Fade to 50% over 5 seconds:

[1C] [02] [02] [71] [82] [32] [FF] [BC]

**Request Channel Level (sent to dimmer) //**

Byte 0: 1C hex

Byte 1: Area

Byte 2: Channel (0 origin)

Byte 3: 61 hex

Byte 4: 0 (Unused)

Byte 5: 0 (Unused)

Byte 6: Join (usually FF hex)

Byte 7: Checksum

Example: Request Level of Channel 5 in Area 2:

[1C] [02] [04] [61] [00] [00] [FF] [7E]

**Report Channel Level (reply from dimmer)**

Byte 0: 1C hex

Byte 1: Area

Byte 2: Channel (0 origin)

Byte 3: 60 hex

Byte 4: Target Level (01 = 100%, FF = 0%)

Byte 5: Current Level (01 = 100%, FF = 0%)

Byte 6: Join (usually FF hex)

Byte 7: Checksum

Example: Report from Channel 5 in Area 2 Target Level is 58% & Current Level is 58%:

[1C] [02] [04] [60] [70] [70] [FF] [9F]

**Request Sensor Lux (sent to sensor) //获取光照度传感器的Lux值**

Byte 0: 5C hex

Byte 1: B3(Device Code)

Byte 2: Box Number

Byte 3: B7 hex

Byte 4: 01

Byte 5: 00

Byte 6: 00

Byte 7: Checksum

Example: Request current lux value of sensor. Box number is 107（6B hex）.

[5C] [B3] [6B] [B7] [01] [00] [00] [CE]

**Report Sensor Lux (sent to sensor) //返回光照度传感器的Lux值**

Byte 0: 5C hex

Byte 1: B3(Device Code)

Byte 2: Box Number

Byte 3: B7 hex

Byte 4: 01

Byte 5: hi//光照度值高八位

Byte 6: low //光照度值低八位

Byte 7: Checksum

Example: Request current lux value of sensor. Box number is 107（6B hex）.

[5C] [B3] [6B] [B8] [01] [01] [25] [A7]

**Query device serial number //获取设备的序列号，判断设备是否在线**

Byte 0: 5C hex

Byte 1: B3(Device Code)

Byte 2: Box Number

Byte 3: 40 hex

Byte 4: 00

Byte 5: 00

Byte 6: 0D //0D取低位字节，0E取高位字节

Byte 7: Checksum

Example: Request current lux value of sensor. Box number is 107（6B hex）.

[5C] [B3] [6B] [40] [00] [00] [0D] [39]

**Reply device serial number //返回设备序列号，如果无返回，说明不在线**

Byte 0: 5C hex

Byte 1: B3(Device Code)

Byte 2: Box Number

Byte 3: 41 hex

Byte 4: 00

Byte 5: 00

Byte 6: 0D //0D取低位字节，0E取高位字节

Byte 7: Checksum

Example: Request current lux value of sensor. Box number is 107（6B hex）.

[5C] [B3] [6B] [41] [1F] [C4] [0D] [55]

Devices Codes

|  |  |
| --- | --- |
| **Device Type** | **Device Code (hex)** |
| *DALI Combi Controller* | *08* |
| *D4 Dimmer* | *48* |
| *D6 Dimmer* | *49* |
| *DRC-GRMS* | *4A* |
| *DMC-GRMS* | *4B* |
| *Relay Controller* | *4C* |
| *D2 Dimmer* | *50* |
| *Fan Coil Unit Controller* | *58* |
| *Fan Coil Unit Controller v2* | *59* |
| *D3 Dimmer* | *60* |
| *DALI Multi-Master v2* | *65* |
| *DMC modular controller* | *66* |
| *DALI 3 universe Controller v3* | *67* |

|  |  |  |
| --- | --- | --- |
| *DALI Multi-Master* | *69* |  |
| *Captivation* | *6B* |  |
| *OLED Panel* | *78* |  |
| *Universal Panel 9* | *80* |  |
| *Slim Dim PWM Controller* | *91* |  |
| *LED Controller* | *92* |  |
| *Wireless Area Controller* | *AD* |  |
| *D3 Sensor* | *B1* |  |
| *D4 Sensor* | *B2* |  |
| *D5 Sensor* | *B3* |  |
| *Temperature Sensor* | *B8* |  |
| *System Manager* | *BA* |  |
| *DLLI low level Interface* | *BF* |  |
| *DALI Controller* | *C2* |  |
| *Time Clock* | *c9* |  |
| *Touch Panel H8* | *CF* |  |
| *BACnet Gateway* | *D9* |  |
| *System Builder* | *DA* |  |
| *LM-IP Luminaire* | *DB* |  |
| *Ethernet Gateway* | *DC* |  |
| *D5 Dimmer* | *DD* |  |
| *LMM Lon Gateway* | *E3* |  |
| *KNX Gateway* | *E4* |  |
| *Bridge H8* | *F3* |  |
| *Bridge M16* | *F4* |  |
| *Bridge 3 Port* | *F5* |  |
| *Multi-Function Input* | *F9* |  |
| *Multi-Function Input* | *FA* |  |
| *Antumbra* | *FD* |  |