

HDL Smart-Bus communication protocol for integration

I Define of system communication command

Leading code	Length of data package	Original subnet ID	Original device ID	Original device type	Operate code	Targeted subnet ID	Targeted device ID	content	CRC H (higher than 8)	CRC L (lower than 8)
16bit	8Bit	8Bit	8Bit	16Bit	16Bit	8Bit	8Bit	0-N	8Bit	8Bit
0xAAAA	13-128	0-254	0-254	0-0FFFF	0-0xFFFF	0-254	0-254	0-Nbyte		
1	2	3	4	5	6	7	8	9	10	

Pulse format as following

Leading code

Leading code is starting symbol of data package and fixed format is 0xAAAA, it will start to receive the whole package when the receiver get the fix format from the data and take a data as length of data package.

1. Length of data package:
11-78. content will be nil when length of data package are equal to 11. data content= length of data package-11
2. Original subnet ID
From 0-254
3. Original device ID
From 0-254
4. Original device type
From 0-65535
6. Operate code
From 0-65535, define all kind of operate command and info in the system.
7. Targeted subnet ID
Two : one From 0-254 and another is 255, 0-254is real ID of the subnet and 255 is full network broadcast ID. Assigned data should sent to right subnet via gateway, when subnet ID is 255, the assigned data should sent to all device in the subnet.
8. Targeted device ID
Two : one From 0-254 and another is 255, 0-254 is real ID of the device and 255 is broadcast ID. Assigned data should be sent to right device , when ID is 255, the assigned data should sent to all device.
9. **Content**
Optional item.
10. CRC H-CRC L
CRC verification result from data package length to data content