



Control Protocol Guidance for MeetUs Meeting Room Display

Applicable: All MeetUs products

Version: V1.0

Change History

Date	Version	Description	Modified By	Approved By
2021-3-24	V1.0	Initial version	Bai Chuanchuan	

XI'AN NOVASTAR TECH CO., LTD

Contents

1	Overview	4
2	Supported Functions and Their Descriptions	4
2.1	Sending Card Functions	4
2.1.1	link Status	4
2.1.2	Set to Manual or Automatic Brightness Adjustment Mode	4
2.2	Receiving Card Functions	4
2.2.1	Brightness	4
2.2.2	Voltage	5
2.2.3	Temperature	5
2.3	Monitoring Functions at the Android Card End	5
2.3.1	USB Drive Status	5
2.3.2	HDMI Status	5
2.3.3	Screen Mirroring Status	5
2.3.4	Input Port of Current Output Image	5
2.3.5	Volume and Mute or Not	6
2.3.6	Wi-Fi Status	6
2.3.7	Wired Network	6
2.3.8	Hotspot	6
2.3.9	Bluetooth	6
2.4	Remote Control Functions	7
2.4.1	Home	7
2.4.2	Back	7
2.4.3	Menu	7
2.4.4	Power Off/Standby	7
2.4.5	Switch Signal Source	7
2.4.6	Increase Volume	7
2.4.7	Decrease Volume	7
2.4.8	Up	7
2.4.9	Down	8
2.4.10	Left	8
2.4.11	Right	8
2.4.12	OK	8
2.5	Android Card Control Functions	8
2.5.1	Standby	8
2.5.2	Wake Up from Standby	8
2.5.3	Power Off	8
2.5.4	Switch to a Specified HDMI Source	8
3	Instructions for Using the Debugging Tool for Windows	9

1 Overview

This document introduces functions of the control protocol for the MeetUs meeting room display and the brief use of these functions.

This document also introduces how to use a debugging tool for Windows to perform common function debugging and verification. If you need joint debugging and development, please contact the related developer.

2 Supported Functions and Their Descriptions

2.1 Sending Card Functions

2.1.1 link Status

Read: 55AA0001FC00000000000002A00000001007D56

Reply: AA 55 00 01 00 FC 00 00 00 00 00 00 2A 00 00 00 01 00 00 7D 56 no link

Reply: AA 55 00 01 00 FC 00 00 00 00 00 00 2A 00 00 00 01 00 01 7E 56 Ethernet port 1 link

Reply: AA 55 00 01 00 FC 00 00 00 00 00 00 2A 00 00 00 01 00 02 7F 56 Ethernet port 2 link

Reply: AA 55 00 01 00 FC 00 00 00 00 00 00 2A 00 00 00 01 00 04 81 56 Ethernet port 3 link

Reply: AA 55 00 01 00 FC 00 00 00 00 00 00 2A 00 00 00 01 00 08 85 56 Ethernet port 4 link

2.1.2 Set to Manual or Automatic Brightness Adjustment Mode

(1) Set to automatic mode

Write: 55AA0001FC00000000001000000000A01007DDB56

Reply: AA55000100FC000000000100000000A00005D56 (Successful)

AA55010100FC000000000100000000A00005E56 (Failed)

(2) Set to manual mode

Write: 55AA0001FC00000000001000000000A01009DFB56

Reply: AA55000100FC000000000100000000A00005D56 (Successful)

AA55010100fc000000000100000000a00005e56 (Failed)

2.2 Receiving Card Functions

2.2.1 Brightness

(1) Set the receiving card brightness to 0x32

Write: 55AA0001FC0001FFFFFF0100010000020100328759

Reply: AA 55 00 01 00 FC 01 FF FF FF 01 00 01 00 00 02 00 00 54 59

(2) Read brightness value of the first receiving card on Ethernet port 1 of the sending card

Read: 55 AA 00 01 FC 00 01 00 00 00 00 00 01 00 00 02 01 00 57 56

Reply: AA 55 00 01 00 FC 01 00 00 00 00 00 01 00 00 02 01 00 32 89 56

2.2.2 Voltage

(1) Read voltage of the first receiving card on Ethernet port 1 of the sending card

Read: 55AA0001FC0001000000000000300000A01006156

Reply: AA 55 00 01 00 FC 01 00 00 00 00 00 03 00 00 0A 01 00 **A9** 0A 57

Note: Taking the lower 7 bits of A9, it is 41. The unit is 0.1 V. Therefore, the actual value is 4.1 V.

2.2.3 Temperature

(1) Read temperature of the first receiving card on Ethernet port 1 of the sending card

Read: 55AA0001FC0001000000000000100000A01005F56

Reply: AA 55 00 01 00 FC 01 00 00 00 00 00 01 00 00 0A 01 00 **48** A7 56

Note: Converting 48 to a decimal, it is 72. The unit is 0.5°C. Therefore, the actual value is 36°C.

2.3 Monitoring Functions at the Android Card End

2.3.1 USB Drive Status

Read: 55AA0001FC0006000000000000100000001005A56

Reply: AA55000100FC0600000000000010000000100**01**5B56 USB drive inserted

AA55000100FC0600000000000010000000100**00**5A56 USB drive not inserted

Note: 1: The USB drive is inserted; 0: The USB drive is not inserted.

2.3.2 HDMI Status

Read: 5AA0001FC0006000000000000200000004005E56

Reply: AA55000100FC0600000000000020000000400000000005E56 No HDMI accessed

AA55000100FC0600000000000020000000400**01000000**5F56 Only HDMI1 accessed

AA55000100FC0600000000000020000000400**00010000**5F56 Only HDMI2 accessed

AA55000100FC0600000000000020000000400**00000100**5F56 Only HDMI3 accessed

AA55000100FC0600000000000020000000400**00000001**5F56 Only HDMI4 accessed

Note: In the byte array in red, the data that has index 0 indicates whether HDMI1 is accessed. The data that has index 1 indicates whether HDMI2 is accessed. The data that has index 2 indicates whether HDMI3 is accessed. The data that has index 3 indicates whether HDMI4 is accessed. (1: accessed; 0: not accessed)

2.3.3 Screen Mirroring Status

Read: 55AA0001FC0006000000000000300000001005C56

Reply: AA55000100FC0600000000000030000000100**00**5C56 (No screen mirroring)

AA55000100FC0600000000000030000000100**01**5D56 (1 screen mirroring)

Note: The data in red indicates the quantity of accessed screen mirroring.

2.3.4 Input Port of Current Output Image

Read: 55AA0001FC0006000000000000400000001005D56

Reply: AA55000100FC0600000000000040000000100**00**5D56 Android's own source

AA55000100FC0600000000000040000000100**01**5E56 HDMI1 source

AA55000100FC0600000000000040000000100**02**5F56 HDMI2 source

AA55000100FC060000000000040000000100036056 HDMI3 source

AA55000100FC060000000000040000000100046156 HDMI4 source

Note: 0: It is Android's own source; 1: It is HDMI1 source; 2: It is HDMI2 source; 3: It is HDMI3 source; 4: It is HDMI4 source.

2.3.5 Volume and Mute or Not

Read: 55AA0001FC000600000000000500000002005F56

Reply: AA55000100FC06000000000005000000020000329156 (Not mute, volume at 50)

AA55000100FC06000000000005000000020001329256 (Mute, volume at 50)

Note: In the byte array in red, the data that has index 0 indicates whether it is mute (1: mute; 0: not mute). The data that has index 1 indicates the volume. The data that is read is hexadecimal. Please convert it to a decimal.

2.3.6 Wi-Fi Status

Read: 55AA0001FC000600000000000600000003006156

Reply: AA55000100FC06000000000006000000030002013A9E56 (Wi-Fi turned on, connected, signal strength at -58)

AA55000100FC0600000000000600000003000100006256 (Wi-Fi turned off)

Note: In the byte array in red, the data that has index 0 indicates the Wi-Fi switch status (0: unknown; 1: turned off; 2: turned on; 3: turning off; 4: turning on). The data that has index 1 indicates whether Wi-Fi is connected (1: connected; 0: not connected). The data that has index 2 indicates the strength of the connected Wi-Fi signal (This value is the absolute value of the actual value. The strength is a negative number.)

2.3.7 Wired Network

Read: 55AA0001FC000600000000000700000001006056

Reply: AA55000100FC060000000000070000000100006056 (Wired network not connected)

AA55000100FC060000000000070000000100016156 (Wired network connected)

Note: 0: not connected; 1: connected.

2.3.8 Hotspot

Read: 55AA0001FC000600000000000800000001006156

Reply: AA55000100FC060000000000080000000100016256 (Hotspot turned on)

AA55000100FC060000000000080000000100006156 (Hotspot turned off)

Note: 0: turned off; 1: turned on.

2.3.9 Bluetooth

Read: 55AA0001FC000600000000000900000002006356

Reply: AA55000100FC06000000000009000000020002016656 (Bluetooth turned on, cannot be scanned, but can be connected to the devices that has connected to it before)

AA55000100FC06000000000009000000020000006356 (Bluetooth turned off, cannot scan or be scanned)

AA55000100FC06000000000009000000020002026756 (Bluetooth turned on, can be scanned, can be connected)

Note: In the byte array in red, the data that has index 0 indicates the Bluetooth switch status

(0: turned off; 1: turning on; 2: turned on; 3: turning off). The data that has index 1 indicates the Bluetooth scanning status (0: cannot scan and connect; 1: cannot be scanned, but can be connected to devices that have connected to it before; 2: can be scanned and connected).

2.4 Remote Control Functions

2.4.1 Home

Write: 55AA0001FC00070000000100010000000100005C56

Reply: AA55000100FC070000000100010000000005B56 Successful execution

AA55010100FC070000000100010000000005C56 Execution failed

2.4.2 Back

Write: 55AA0001FC00070000000100020000000100005D56

Reply: AA55000100FC070000000100020000000005C56 Successful execution

AA55010100FC070000000100020000000005D56 Execution failed

2.4.3 Menu

Write: 55AA0001FC00070000000100030000000100005E56

Reply: AA55000100FC070000000100030000000005D56 Successful execution

AA55010100FC070000000100030000000005E56 Execution failed

2.4.4 Power Off/Standby

Write: 55AA0001FC00070000000100040000000100005F56

Reply: AA55000100FC070000000100040000000005E56 Successful execution

AA55010100FC070000000100040000000005F56 Execution failed

2.4.5 Switch Signal Source

Write: 55AA0001FC00070000000100050000000100006056

Reply: AA55000100FC070000000100050000000005F56 Successful execution

AA55010100FC070000000100050000000006056 Execution failed

2.4.6 Increase Volume

Write: 55AA0001FC00070000000100060000000100006156

Reply: AA55000100FC070000000100060000000006056 Successful execution

AA55010100FC070000000100060000000006156 Execution failed

2.4.7 Decrease Volume

Write: 55AA0001FC00070000000100070000000100006256

Reply: AA55000100FC070000000100070000000006156 Successful execution

AA55010100FC070000000100070000000006256 Execution failed

2.4.8 Up

Write: 55AA0001FC00070000000100080000000100006356

Reply: AA55000100FC070000000100080000000006256 Successful execution

AA55010100FC070000000100080000000006356 Execution failed

2.4.9 Down

Write: 55AA0001FC00070000000100090000000100006456

Reply: AA55000100FC070000000100090000000006356 Successful execution

AA55010100FC070000000100090000000006456 Execution failed

2.4.10 Left

Write: 55AA0001FC000700000001000A0000000100006556

Reply: AA55000100FC0700000001000A0000000006456 Successful execution

AA55010100FC0700000001000A0000000006556 Execution failed

2.4.11 Right

Write: 55AA0001FC000700000001000B0000000100006656

Reply: AA55000100FC0700000001000B0000000006556 Successful execution

AA55010100FC0700000001000B0000000006656 Execution failed

2.4.12 OK

Write: 55AA0001FC000700000001000C0000000100006756

Reply: AA55000100FC0700000001000C0000000006656 Successful execution

AA55010100FC0700000001000C0000000006756 Execution failed

2.5 Android Card Control Functions

2.5.1 Standby

Write: 55AA0001FC00080000000100010000000100005D56

Reply: AA55000100FC080000000100010000000005C56 Successful execution

AA55010100FC080000000100010000000005D56 Execution failed

2.5.2 Wake Up from Standby

Write: 55AA0001FC00080000000100020000000100005E56

Reply: AA55000100FC080000000100020000000005D56 Successful execution

AA55010100FC080000000100020000000005E56 Execution failed

2.5.3 Power Off

Write: 55AA0001FC00080000000100030000000100005F56

Reply: AA55000100FC080000000100030000000005E56 Successful execution

AA55010100FC080000000100030000000005F56 Execution failed

2.5.4 Switch to a Specified HDMI Source

(1) HDMI1

Write: 55AA0001FC00080000000100040000000100016156

Reply: AA55000100FC080000000100040000000005F56 Successful execution

AA55010100FC080000000100040000000006056 Execution failed

(2) HDMI2

Write: 55AA0001FC00080000000100040000000100026256

Reply: AA55000100FC080000000100040000000005F56 Successful execution

AA55010100FC08000000100040000000006056 Execution failed

(3) HDMI3

Write: 55AA0001FC000800000010004000000100036356

Reply: AA55000100FC08000000100040000000005F56 Successful execution

AA55010100FC08000000100040000000006056 Execution failed

(4) HDMI4

Write: 55AA0001FC000800000010004000000100046456

Reply: AA55000100FC08000000100040000000005F56 Successful execution

AA55010100FC08000000100040000000006056 Execution failed

3 Instructions for Using the Debugging Tool for Windows

Customers can download a TCP/UDP debugging tool to use it for debugging. Different tools may have different user interfaces. Some key parameter settings are described below.

Step 1. Run the debugging tool.

Step 2. Select the TCP type.

Step 3. Fill in the target remote host parameter (namely the IP address of the wired network of the product, such as 192.168.43.XX) and set the target port number to 5200.

Step 4. Set the wired network IP addresses of the local computer and the product to be on the same network segment.

Step 5. Click **Connect** to connect the target remote host.

Step 6. Select hexadecimal for the send data and received data.

Step 7. After the above settings are done, fill in the command in the send data area, click **Send**, and view the received packet in the received data area.