Planar PS5580 RS232 and LAN Command Protocol

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Command Protocol Description

This document specifies the protocols used on the PS5580 RS232 and LAN connectors.

Command Protocol

Communications Link

Communication between the host and the display can be either a standard RS232 connection or a standard LAN connection.

Communication Settings

The RS232 connections uses these settings:

- Straight-thru DB9 male-to-female cable
- 115200 baud rate
- 8 data bits
- 1 stop bit
- No parity bit
- No HW (RTS/CTS or SW (XON/XOFF) flow control

The LAN connections is used by initiating a TCP connection to port 9761.

Directly Addressed Command Format

Commands that are sent to **only one** display are **directly addressed** commands. Directly addressed commands and responses have the following format:

	STX	Command	Length	Group ID	Multi ID	Mode	Data	Checksum	ETX
Send to Display	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	n bytes	N/A	1 byte
Received from Display	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	n bytes	1 byte	1 byte

Definition of terms in *Directly Addressed Command Format* table:

- STX is the ascii STX character (0x02).
- Command is the command code.
- Length is the number of bytes in the Group ID, Multi ID, Mode and Data fields.
- Group ID is the Group ID value in the display's Option menu. A=1, B=2, C=3, etc.
- Multi ID is the Monitor ID value in the display's Tiling menu.
- Mode selects whether the command is a Read command or a Write command.
  - Read = 0x00
  - Write = 0x02
- Data contains values specific to the selected command.
- Checksum is the one's complement of the following response fields: STX, Command, Length, Group ID, Multi ID, Mode, Data (i.e. the sum of these fields and the checksum field, modulo 256, will be 0xFF).
- ETX is the ascii ETX character (0x03).

Broadcast Command Format

Commands that are sent to **all** displays are **broadcast commands**. They have the this format:

	STX	Command	Length	Group ID	Multi ID	Data	ETX
Send to Display	1 byte	1 byte	1 byte	1 byte	1 byte	n bytes	1 byte

Definition of terms in *Broadcast Command Format* table:

- STX is the ascii STX character (0x02).
- Command is the command code.
- Length is the number of bytes in the Group ID, Multi ID and Data fields.
- Group ID is set to 0x00.
- Multi ID is set to 0x00
- Data contains values specific to the selected command.
- ETX is the ascii ETX character (0x03).

The displays do not send responses to broadcast commands.

Command / Response Examples

Example: Power query when unit is powered on (Group ID = A, Multi ID = 4)

	STX	CMD	LEN	GID	MID	MOD	DAT	CHK	ETX
Command	02	10	03	01	04	00			03
Response	02	10	04	01	04	00	01	E3	03

Example: Set power to off (Group ID = B, Multi ID = 1)

	STX	CMD	LEN	GID	MID	MOD	DAT	CHK	ETX
Command	02	11	03	02	01	02			03
Response	02	11	03	02	01	02		E4	03

Example: Set power to off (broadcast)

	STX	CMD	LEN	GID	MID	MOD	DAT	CHK	ETX
Command	02	11	02	00	00				03
Response	[None]								

Commands Supported in the PS5580 Display

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
Auto Calibration	0x61	Y	W	3	2	0x02 = Write	[None]	9	Byte 1: Red Gain (Range 0x00-0xFF) Byte 2: Green Gain (Range 0x00-0xFF) Byte 3: Blue Gain (Range 0x00-0xFF) Byte 4: Red Offset (Range 0x00-0xFF) Byte 5: Green Offset (Range 0x00-0xFF) Byte 6: Blue Offset (Range 0x00-0xFF)	Red Gain = 49 (0x31) Green Gain = 48 (0x30) Blue Gain = 47 (0x2F) Red Offset = 46 (0x2E) Green Offset = 45 (0x2D) Blue Offset = 44 (0x2C) Command: 02 61 03 01 04 02 03 Response: 02 61 09 01 04 02 31 30 2F 2E 2D 2C 75 03	Command: 02 61 02 00 00 03
Auto Power	0x64	Y	W	4	3	0x02 = Write	Byte 1: Auto Power -0x00 = Off -0x01 = On	4	Byte 1: Auto Power -0x00 = Off -0x01 = On	Set Auto Power = On Command: 02 64 04 01 04 02 01 03 Response: 02 64 04 01 04 02 01 8D 03	Set Auto Power = On: Command: 02 64 03 00 00 01 03
Auto Tracking	0x62	Y	W	3	2	0x02 = Write	[None]	7	Byte 1: H Position (Range 0x00-0x64) Byte 2: V Position (Range 0x00-0x64) Byte 3: Clock (Range 0x00-0x64) Byte 4: Clock Phase (Range 0x00-0x3F)	H Position = 51 (0x33) V Position = 52 (0x34) Clock = 53 (0x35) Clock Phase = 32 (0x20) Command: 02 62 03 01 04 02 03 Response: 02 62 07 01 04 02 33 34 35 20 D1 03	Command: 02 62 02 00 00 03
Backlight	0xDC	Y	W	4	3	0x02 = Write	Byte 1: Backlight (Range 0x00-0x64)	4	Byte 1: Backlight (Range 0x00-0x64)	Write 50 (0x32): Command: 02 DC 04 01 04 02 32 03 Response: 02 DC 04 01 04 02 32 E4 03	Write 50 (0x32): Command: 02 DC 03 00 00 32 03
Brightness	0x20	Y	W	4	3	0x02 = Write	Byte 1: Brightness (Range 0x00-0x64)	4	Byte 1: Brightness (Range 0x00-0x64)	Write 50 (0x32): Command: 02 20 04 01 04 02 32 03 Response: 02 20 04 01 04 02 32 A0 03	Write 50 (0x32) Command: 02 20 03 00 00 32 03
Color	0x25	Y	W	4	3	0x02 = Write	Byte 1: Color (Range 0x00-0x64)	4	Byte 1: Color (Range 0x00-0x64)	Write 50 (0x32): Command: 02 25 04 01 04 02 32 03 Response: 02 25 04 01 04 02 32 9B 03	Write 50 (0x32) Command: 02 25 03 00 00 32 03

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
Color Space Configuration	0xB4	Y	W	4	3	0x02 = Write	Byte 1: Color Space - 0x00 = Auto - 0x01 = RGB PC - 0x02 = RGB Video	4	Byte 1: Color Space - 0x00 = Auto - 0x01 = RGB PC - 0x02 = RGB Video	Set Color Space = Auto: Command: 02 B4 04 01 04 02 00 03 Response: 02 B4 04 01 04 02 00 3E 03	Set Color Space = Auto Command: 02 B4 03 00 00 00 03
Color Temperature	0x26	Y	W	4	3	0x02 = Write	Byte 1: Color Temp - 0x01 = 4000K - 0x02 = 6500K - 0x03 = 10000K - 0x04 = User Mode	4	Byte 1: Color Temp - 0x01 = 4000K - 0x02 = 6500K - 0x03 = 10000K - 0x04 = User Mode	Set Color Temperature = 6500K Command: 02 26 04 01 04 02 02 03 Response: 02 26 04 01 04 02 02 CA 03	Set Color Temp = 6500K: Command: 02 26 03 00 00 02 03
Contrast	0x21	Y	W	4	3	0x02 = Write	Byte 1: Contrast (Range 0x00-0x64)	4	Byte 1: Contrast (Range 0x00-0x64)	Write 50 (0x32): Command: 02 21 04 01 04 02 32 03 Response: 02 21 04 01 04 02 32 9F 03	Write 50 (0x32) Command: 02 21 03 00 00 32 03
DHCP Off	0x74	Y	W	3	2	0x02 = Write	[None]	3	[None]	Command: 02 74 03 01 04 02 03 Response: 02 74 03 01 04 02 7F 03 [1]	Command: 02 74 02 00 00 03
DHCP On	0x73	Y	W	3	2	0x02 = Write	[None]	3	[None]	Command: 02 73 03 01 04 02 03 Response: 02 73 03 01 04 02 80 03 [1]	Command: 02 73 02 00 00 03
Factory Reset	0xBB	Y	W	3	2	0x02 = Write	[None]	3	[None]	Command: 02 BB 03 01 04 02 03 Response: 02 BB 03 01 04 02 38 03	Command: 02 BB 02 00 00 03
Frame Comp - Off	0x2D	Y	W	3	2	0x02 = Write	[None]	3	[None]	Command: 02 2D 03 01 04 02 03 Response: 02 2D 03 01 04 02 C6 03	Command: 02 2D 02 00 00 03
Frame Comp - On	0x2C	Y	W	3	2	0x02 = Write	[None]	3	[None]	Command: 02 2C 03 01 04 02 03 Response: 02 2C 03 01 04 02 C7 03	Command: 02 2C 02 00 00 03
Gamma	0x35	Y	W	4	3	0x02 = Write	Byte 1: Gamma - 0x00 = 1.8 - 0x01 = 2.2	4	Byte 1: Gamma - 0x00 = 1.8 - 0x01 = 2.2	Set Gamma = 2.2: Command: 02 35 04 01 04 02 01 03 Response: 02 35 04 01 04 02 01 BC 03	Set Gamma = 2.2: Command: 02 35 03 00 00 01 03

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
Get Firmware Version	0xF9	N	R	3	N/A	0x00 = Read	[None]	19	Bytes 1-2: Scaler Firmware Year (last two digits) Bytes 3-4: Scaler Firmware Month (two digits) Bytes 5-6: Scaler Firmware Day (two digits) Bytes 7-8: Scaler Firmware Revision (two digits) Bytes 9-10: Micom Firmware Year (last two digits) Bytes 11-12: Micom Firmware Month (two digits) Bytes 13-14: Micom Firmware Day (two digits) Bytes 15-16: Micom Firmware Revision (two digits)	Scaler Firmware Year = 2013 Scaler Firmware Month = November Scaler Firmware Day = 21 Scaler Firmware Revision = 00 Micom Firmware Year = 2013 Micom Firmware Month = October Micom Firmware Day = 15 Micom Firmware Revision = 02 Command: 02 F9 03 01 04 00 03 Response: 02 F9 13 01 04 00 01 03 01 01 02 01 00 00 01 03 01 00 01 05 00 02 D6 03	N/A
Get IP Address	0x7A	N	R	3	N/A	0x00 = Read	[None]	30	Byte 1: LAN On/Off - 0x00 = Off - 0x01 = On Byte 2: DHCP - 0x00 = Off - 0x01 = On Bytes 3-6: IP Address Bytes 7-10: Subnet Mask Bytes 11-14: Default Gateway Bytes 15-18: Primary DNS Bytes 19-22: Secondary DNS Bytes 23-27: Port Number	LAN On/Off = On DHCP = On IP Address = 192.168.12.2 Subnet Mask = 255.255.255.0 Default Gateway = 192.168.12.1 Primary DNS = 192.168.12.100 Secondary DNS = 192.168.12.101 Port Number = 9761 Cmmand: 02 7A 03 01 04 00 03 Response: 02 7A 1E 01 04 00 01 01 C0 A8 0C 02 FF FF FF 00 C0 A8 0C 01 C0 A8 0C 64 C0 A8 0C 65 00 09 07 06 01 AE 03	N/A

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
Get LCD Status	0x87	N	R	3	N/A	0x00 = Read	[None]	12	Byte 1: Power Status - 0x00 = Off - 0x01 = On Byte 2: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 3: Resolution[2] Byte 4: Color Temp - 0x01 = 4000K - 0x02 = 6500K - 0x03 = 10000K - 0x04 = User Mode Byte 5: Power Save - 0x00 = Off - 0x01 = On Byte 6: Auto Power - 0x00 = Off - 0x01 = On Byte 7 = Frame Comp - 0x00 = Off - 0x01 = On Byte 8: Scan Mode - 0x00 = Overscan Off - 0x01 = Overscan On Byte 9: Loop Source - 0xD2 = HDMI 1 - 0xD3 = HDMI 2 - 0xD4 = DVI	Power Status = On Input Source = DVI Resolution = 1080p/60 Color Temp = User Mode Power Save = On Auto Power = On Frame Comp = On Scan Mode = Overscan Off Loop Source = HDMI 1 Command = 02 87 03 01 04 00 03 Response: 02 87 0C 01 04 00 01 04 3A 04 01 01 01 00 D2 4D 03	N/A
Get MAC Address	0xD0	N	R	3	N/A	0x00 = Read	[None]	9	Bytes 1-6: MAC Address in hex	MAC Address = 00:0A:36:E0:00:01 Command: 02 D0 03 01 04 00 03 Response: 02 D0 09 01 04 00 00 0A 36 E0 00 01FE 03	N/A

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
Get Model Name and Serial Number	0xB9	N	R	3	N/A	0x00 = Read	[None]	25	Bytes 1-9: Model Name Bytes 10-22: Serial Number	Model Name = PS5580 Serial Number = ABCDEFGHIJKLM Command: 02 B9 03 01 04 00 03 Response: 02 B9 19 01 04 00 50 53 35 35 38 30 00 00 00 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 16 03	N/A
Get OSD Control Data	0x98	N	R	3	N/A	0x00 = Read	[None]	10	Byte 1: OSD Language - 0x00 = English Byte 2: OSD Timeout (Range 0x05-0x78) Byte 3: OSD H Position (Range 0x00-0x64) Byte 4: OSD V Position (Range 0x00-0x64) Byte 5: OSD Rotation - 0x00 = No Rotation - 0x01 = H Mirror - 0x02 = V Mirror Byte 6: Info Timeout (Range 0x00, 0x03-0x0A)[4] Byte 7: Transparency (Range 0x00-0x0F)	OSD Language = 0 OSD Timeout = 10 seconds[3] H Position = 50 V Position = 50 OSD Rotation = No Rotation Info Timeout = 10 Transparency = 0 Command: 02 98 03 01 04 00 03 Response: 02 98 0A 01 04 00 00 0A 32 32 00 0A 00 DE 03	N/A
Get PC Setup Control Data	0x96	N	R	3	N/A	0x00 = Read	[None]	13	Byte 1: ADC Red Gain (Range 0x00-0x64) Byte 2: ADC Green Gain (Range 0x00-0x64) Byte 3: ADC Blue Gain (Range 0x00-0x64) Byte 4: ADC Red Offset (Range 0x00-0x64) Byte 5: ADC Green Offset (Range 0x00-0x64) Byte 6: ADC Blue Offset (Range 0x00-0x64) Byte 7: H Position (Range 0x00-0x64) Byte 8: V Position (Range 0x00-0x64) Byte 9: Clock (Range 0x00-0x64) Byte 10: Clock Phase (Range 0x00-0x3F)	ADC Red Gain = 51 ADC Green Gain = 52 ADC Blue Gain = 53 ADC Red Offset = 49 ADC Green Offset = 48 ADC Blue Offset = 47 H Position = 50 V Position = 50 Clock = 50 Clock Phase = 32 Command: 02 96 03 01 04 00 03 Response: 02 96 0D 01 04 00 33 34 35 31 30 2F 32 32 32 20 73 03	N/A

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
Get Picture Control Data	0x90	N	R	3	N/A	0x00 = Read	[None]	24	Byte 1: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Brightness (Range 0x00-0x64) Byte 3: Contrast (Range 0x00-0x64) Byte 4: Sharpness (Range 0x00-0x18) Byte 5: Tint (Range 0x4D-0xB1)[5] Byte 6: Color (Range 0x00-0x64) Byte 7: Backlight (Range 0x00-0x64) Byte 8: Color Temp - 0x01 = 4000K - 0x02 = 6500K - 0x03 = 10000K - 0x04 = User Mode Byte 9: Digital Red Gain (Range 0x00-0x64) Byte 10: Digital Green Gain (Range 0x00-0x64) Byte 11: Digital Blue Gain (Range 0x00-0x64) Byte 12: Digital Red Offset (Range 0x00-0x64) Byte 13: Digital Green Offset (Range 0x00-0x64) Byte 14: Digital Blue Offset (Range 0x00-0x64) Byte 15: Analog Red Gain (Range 0x00-0x64) Byte 16: Analog Green Gain (Range 0x00-0x64) Byte 17: Analog Blue Gain (Range 0x00-0x64) Byte 18: Analog Red Offset (Range 0x00-0x64) Byte 19: Analog Green Offset (Range 0x00-0x64) Byte 20: Analog Blue Offset (Range 0x00-0x64) Byte 21: Gamma - 0x00 = 1.8 - 0x01 = 2.2	Input Source = DVI Brightness = 50 (0x32) Contrast = 51 (0x33) Sharpness = 10 (0x0A) Tint = 0 (0x7F) Color = 52 (0x34) Backlight = 53 (0x35) Color Temp = 6500K Digital Red Gain = 49 (0x31) Digital Green Gain = 48 (0x30) Digital Blue Gain = 47 (0x2F) Digital Red Offset = 46 (0x2E) Digital Green Offset = 45 (0x2D) Digital Blue Offset = 44 (0x2C) Analog Red Gain = 43 (0x2B) Analog Green Gain = 42 (0x2A) Analog Blue Gain = 41 (0x29) Analog Red Offset = 40 (0x28) Analog Green Offset = 39 (0x27) Analog Blue Offset = 38 (0x26) Gamma = 2.2 Command: 02 90 03 01 04 00 03 Response: 02 90 18 01 04 00 04 32 33 0A 7F 34 35 02 31 30 2F 2E 2D 2C 2B 2A 29 28 27 26 01 E8 03	N/A

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
ID Configuration	0xFF	N	W	5	N/A	0x02 = Write	Byte 1: Group ID (Range 0x01-0xFF) Byte 2: Multi ID (Range 0x01-0xFF)	5	Byte 1: Group ID (Range 0x01-0xFF) Byte 2: Multi ID (Range 0x01-0xFF)	Command: 02 FF 05 01 04 02 01 04 03 Response: 02 FF 05 01 04 02 01 04 ED 03	N/A
Input Source DisplayPort	0xD1	N	W	3	N/A	0x02 = Write	[None]	3	[None]	Command: 02 D1 03 01 04 02 03 Response: 02 D1 03 01 04 02 22 03	N/A
Input Source DisplayPort with Multi Scale	0xD1	N	W	7	N/A	0x02 = Write	Byte 1: Number of Horizontal Monitors Byte 2: Number of Vertical Monitors Byte 3: Unused Byte 4: Unused	7	Byte 1: Number of Horizontal Monitors Byte 2: Number of Vertical Monitors Byte 3: Unused Byte 4: Unused	H Monitors = 5 V Monitors = 6 Command: 02 D1 07 01 04 02 05 06 00 00 03 Response: 02 D1 07 01 04 02 05 06 00 00 13 03	N/A
Input Source DVI	0xD4	N	W	3	N/A	0x02 = Write	[None]	3	[None]	Command: 02 D4 03 01 04 02 03 Response: 02 D4 03 01 04 02 1F 03	N/A
Input Source DVI with Multi Scale	0xD4	N	W	7	N/A	0x02 = Write	Byte 1: Number of Horizontal Monitors Byte 2: Number of Vertical Monitors Byte 3: Unused Byte 4: Unused	7	Byte 1: Number of Horizontal Monitors Byte 2: Number of Vertical Monitors Byte 3: Unused Byte 4: Unused	H Monitors = 5 V Monitors = 6 Command: 02 D4 07 01 04 02 05 06 00 00 03 Response: 02 D4 07 01 04 02 05 06 00 00 10 03	N/A
Input Source HDMI 1	0xD2	N	W	3	N/A	0x02 = Write	[None]	3	[None]	Command: 02 D2 03 01 04 02 03 Response: 02 D2 03 01 04 02 21 03	N/A
Input Source HDMI 1 with Multi Scale	0xD2	N	W	7	N/A	0x02 = Write	Byte 1: Number of Horizontal Monitors Byte 2: Number of Vertical Monitors Byte 3: Unused Byte 4: Unused	7	Byte 1: Number of Horizontal Monitors Byte 2: Number of Vertical Monitors Byte 3: Unused Byte 4: Unused	H Monitors = 5 V Monitors = 6 Command: 02 D2 07 01 04 02 05 06 00 00 03 Response: 02 D2 07 01 04 02 05 06 00 00 12 03	N/A
Input Source HDMI 2	0xD3	N	W	3	N/A	0x02 = Write	[None]	3	[None]	Command: 02 D3 03 01 04 02 03 Response: 02 D3 03 01 04 02 20 03	N/A

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
Input Source HDMI 2 with Multi Scale	0xD3	N	W	7	N/A	0x02 = Write	Byte 1: Number of Horizontal Monitors Byte 2: Number of Vertical Monitors Byte 3: Unused Byte 4: Unused	7	Byte 1: Number of Horizontal Monitors Byte 2: Number of Vertical Monitors Byte 3: Unused Byte 4: Unused	H Monitors = 5 V Monitors = 6 Command: 02 D3 07 01 04 02 05 06 00 00 03 Response: 02 D3 07 01 04 02 05 06 00 00 11 03	N/A
Input Source PC	0xD5	N	W	3	N/A	0x02 = Write	[None]	3	[None]	Command: 02 D5 03 01 04 02 03 Response: 02 D5 03 01 04 02 1E 03	N/A
Input Source PC with Multi Scale	0xD5	N	W	7	N/A	0x02 = Write	Byte 1: Number of Horizontal Monitors Byte 2: Number of Vertical Monitors Byte 3: Unused Byte 4: Unused	7	Byte 1: Number of Horizontal Monitors Byte 2: Number of Vertical Monitors Byte 3: Unused Byte 4: Unused	H Monitors = 5 V Monitors = 6 Command: 02 D5 07 01 04 02 05 06 00 00 03 Response: 02 D5 07 01 04 02 05 06 00 00 0F03	N/A
Input Source Resolution Display	0x2A	Y	W	3	2	0x02 = Write	[None]	3	[None]	Command: 02 2A 03 01 04 02 03 Response: 02 2A 03 01 04 02 C9 03	Command: 02 2A 02 00 00 03
IP Address	0x75	N	W	23	N/A	0x02 = Write	Bytes 1-4: IP Address Bytes 5-8: Subnet Mask Bytes 9-12: Default Gateway Bytes 13-16: Primary DNS Bytes 17-20: Secondary DNS	23	Bytes 1-4: IP Address Bytes 5-8: Subnet Mask Bytes 9-12: Default Gateway Bytes 13-16: Primary DNS Bytes 17-20: Secondary DNS	IP Address = 192.168.12.2 Subnet Mask = 255.255.255.0 Default Gateway = 192.168.12.1 Primary DNS = 192.168.12.100 Secondary DNS: 192.168.12.101 Command: 02 75 17 01 04 02 C0 A8 0C 02 FF FF FF 00 C0 A8 0C 01 C0 A8 0C 64 C0 A8 0C 65 03 Response: 02 75 17 01 04 02 C0 A8 0C 02 FF FF FF 00 C0 A8 0C 01 C0 A8 0C 64 C0 A8 0C 65 D1 03	N/A
IP Reset	0x7B	Y	W	3	2	0x02 = Write	[None]	23	Bytes 1-4: IP Address Bytes 5-8: Subnet Mask Bytes 9-12: Default Gateway Bytes 13-16: Primary DNS Bytes 17-20: Secondary DNS	IP Address = 192.168.12.2 Subnet Mask = 255.255.255.0 Default Gateway = 192.168.12.1 Primary DNS = 192.168.12.100 Secondary DNS: 192.168.12.101 Command: 02 7B 03 01 04 02 03 Response: [1] 02 75 17 01 04 02 C0 A8 0C 02 FF FF FF 00 C0 A8 0C 01 C0 A8 0C 64 C0 A8 0C 65 D1 03	Command: 02 7B 02 00 00 03

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
IR Lock Configuration	0xB2	Y	W	4	3	0x02 = Write	Byte 1: IR Lock - 0x00 = Lock disabled - 0x01 = Lock enabled	4	Byte 1: IR Lock - 0x00 = Lock disabled - 0x01 = Lock enabled	IR Lock = Enabled: Command: 02 B2 04 01 04 02 01 03 Response: 02 B2 04 01 04 02 01 3F 03	IR Lock = Enabled: Command: 02 B2 03 00 00 01 03
Keypad Lock Configuration	0xB1	Y	W	4	3	0x02 = Write	Byte 1: Keypad Lock - 0x00 = Off - 0x01 = On	4	Byte 1: Keypad Lock - 0x00 = Off - 0x01 = On	Set Key Lock = On: Command: 02 B1 04 01 04 02 01 03 Response: 02 B1 04 01 04 02 01 40 03	Set Key Lock = On: Command: 02 B1 03 00 00 01 03
Loop Out Input Source Select	0xE9	Y	W	4	3	0x02 = Write	Byte 1: Loop Source - 0xD2 = HDMI 1 - 0xD3 = HDMI 2 - 0xD4 = DVI	4	Byte 1: Loop Source - 0xD2 = HDMI 1 - 0xD3 = HDMI 2 - 0xD4 = DVI	Loop Source = HDMI 1: Command: 02 E9 04 01 04 02 D2 03 Response: 02 E9 04 01 04 02 D2 37 03	Loop Source = HDMI 1: Command: 02 E9 03 00 00 D2 03
OSD H Position	0x7E	Y	W	4	3	0x02 = Write	Byte 1: H Position (Range 0x00-0x64)	4	Byte 1: H Position (Range 0x00-0x64)	Write 50 (0x32): Command: 02 7E 04 01 04 02 32 03 Response: 02 7E 04 01 04 02 32 42 03	Write 50 (0x32): Command: 02 7E 03 00 00 32 03
OSD Info Display	0x81	Y	W	4	3	0x02 = Write	Byte 1:[6] Info Timeout (Range 0x00, 0x03-0x0A)	4	Byte 1: [6] Info Timeout (Range 0x00, 0x03-0x0A)	Set Info Timeout = 10 seconds: Command: 02 81 04 01 04 02 0A 03 Response: 02 81 04 01 04 02 0A 67 03	Set Info Timeout = 10 seconds: Command: 02 81 03 00 00 0A 03
OSD Rotation	0x80	Y	W	4	3	0x02 = Write	Byte 1: OSD Rotation - 0x00 = No Rotation - 0x01 = H Mirror - 0x02 = V Mirror	4	Byte 1: OSD Rotation - 0x00 = No Rotation - 0x01 = H Mirror - 0x02 = V Mirror	Set OSD Rotation = No Rotation: Command: 02 80 04 01 04 02 00 03 Response: 02 80 04 01 04 02 00 72 03	Set OSD Rotation = No Rotation: Command: 02 80 03 00 00 00 03
OSD Transparency	0x82	Y	W	4	3	0x02 = Write	Byte 1: Transparency (Range 0x00-0x0F)	4	Byte 1: Transparency (Range 0x00-0x0F)	Set Transparency = 0: Command: 02 82 04 01 04 02 00 03 Response: 02 82 04 01 04 02 00 70 03	Set Transparency = 0: Command: 02 82 03 00 00 00 03
OSD Turn Off	0x7D	Y	W	4	3	0x02 = Write	Byte 1[7] OSD Timeout (Range 0x05-0x78)	4	Byte 1: [7] OSD Timeout (Range 0x05-0x78)	Set OSD Timeout = 10 seconds: Command: 02 7D 04 01 04 02 0A 03 Response: 02 7D 04 01 04 02 0A 6B 03	Set OSD Timeout = 10 seconds: Command: 02 7D 03 00 00 0A 03

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
OSD V Position	0x7F	Y	W	4	3	0x02 = Write	Byte 1: V Position (Range 0x00-0x64)	4	Byte 1: V Position (Range 0x00-0x64)	Write 50 (0x32): Command: 02 7F 04 01 04 02 32 03 Response: 02 7F 04 01 04 02 32 41 03	Write 50 (0x32): Command: 02 7F 03 00 00 32 03
Power Off	0x11	Y	RW	3	2	0x00 = Read 0x02 = Write	[None]	Read: 4 Write: 3	Byte 1: Power Status - 0x00 = Off - 0x01 = On	Power Off Write: Command: 02 11 03 01 04 02 03 Response: 02 11 03 01 04 02 E2 03 Power Read (display is off): Command: 02 11 03 01 04 00 03 Response: 02 11 04 01 04 00 00 E3 03	Power Off Write: [8] Command: 02 11 02 00 00 03
Power On	0x10	Y	RW	3	2	0x00 = Read 0x02 = Write	[None]	Read: 4 Write: 3	Byte 1: Power Status - 0x00 = Off - 0x01 = On	Power On Write: Command: 02 10 03 01 04 02 03 Response: 02 10 03 01 04 02 E3 03 Power Read (display is on): Command: 02 10 03 01 04 00 03 Response: 02 10 04 01 04 00 01 E3 03	Power On Write: [8] Command: 02 10 02 00 00 03
Power On Delay	0x9E	Y	W	4	3	0x02 = Write	Byte 1: Delay Time (Range 0x00-0x32)	4	Byte 1: Delay Time (Range 0x00-0x32)	Delay Time = 25: Command: 02 9E 04 01 04 02 19 03 Response: 02 9E 04 01 04 02 19 3B 03	Delay Time = 25: [6] Command: 02 9E 03 00 00 19 03
Power Save	0x63	Y	W	4	3	0x02 = Write	Byte 1: Power Save - 0x00 = Off - 0x01 = On	4	Byte 1: Power Save - 0x00 = Off - 0x01 = On	Set Power Save = On: Command: 02 63 04 01 04 02 01 03 Response: 02 63 04 01 04 02 01 8E 03	Set Power Save = On: Command: 02 63 03 00 00 01 03
Scan Mode (Overscan Off)	0x9B	Y	W	3	2	0x02 = Write	[None]	3	[None]	Command: 02 9B 03 01 04 02 03 Response: 02 9B 03 01 04 02 58 03	Command: 02 9B 02 00 00 03
Scan Mode (Overscan On)	0x9A	Y	W	3	2	0x02 = Write	[None]	3	[None]	Command: 02 9A 03 01 04 02 03 Response: 02 9A 03 01 04 02 59 03	Command: 02 9A 02 00 00 03
Screen Clock	0x38	Y	W	4	3	0x02 = Write	Byte 1: Clock (Range 0x00-0x64)	4	Byte 1: Clock (Range 0x00-0x64)	Write 50 (0x32): Command: 02 38 04 01 04 02 32 03 Response: 02 38 04 01 04 02 32 88 03	Write 50 (0x32) Command: 02 38 03 00 00 32 03
Screen Clock Phase	0x39	Y	W	4	3	0x02 = Write	Byte 1: Clock Phase (Range 0x00-0x3F)	4	Byte 1: Clock Phase (Range 0x00-0x3F)	Write 32 (0x20): Command: 02 39 04 01 04 02 20 03 Response: 02 39 04 01 04 02 20 99 03	Write 32 (0x20) Command: 02 39 03 00 00 20 03
Screen H Position	0x36	Y	W	4	3	0x02 = Write	Byte 1: H Position (Range 0x00-0x64)	4	Byte 1: H Position (Range 0x00-0x64)	Write 50 (0x32): Command: 02 36 04 01 04 02 32 03 Response: 02 36 04 01 04 02 32 8A 03	Write 50 (0x32) Command: 02 36 03 00 00 32 03

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
Screen V Position	0x37	Y	W	4	3	0x02 = Write	Byte 1: V Position (Range 0x00-0x64)	4	Byte 1: V Position (Range 0x00-0x64)	Write 50 (0x32): Command: 02 37 04 01 04 02 32 03 Response: 02 37 04 01 04 02 32 89 03	Write 50 (0x32) Command: 02 37 03 00 00 32 03
Serial Control (LAN Off)	0x71	Y	W	3	2	0x02 = Write	[None]	3	[None]	Command: 02 71 03 01 04 02 03 Response: 02 71 03 01 04 02 82 03	Command: 02 71 02 00 00 03
Serial Control (LAN On)	0x70	Y	W	3	2	0x02 = Write	[None]	3	[None]	Command: 02 70 03 01 04 02 03 Response: 02 70 03 01 04 0283 03	Command: 02 70 02 00 00 03
Sharpness	0x22	Y	W	4	3	0x02 = Write	Byte 1: Sharpness (Range 0x00-0x18)	4	Byte 1: Sharpness (Range 0x00-0x18)	Write 50 (0x32): Command: 02 22 04 01 04 02 32 03 Response: 02 22 04 01 04 02 32 9E 03	Write 50 (0x32) Command: 02 22 03 00 00 32 03
Test Pattern Mode	0xE7	Y	W	4	3	0x02 = Write	Byte 1: Test Pattern - 0x00 = Disabled - 0x01 = White Pattern	4	Byte 1: Test Pattern - 0x00 = Disabled - 0x01 = White Pattern	Test Pattern = White Pattern: Command: 02 E7 04 01 04 02 01 03 Response: 02 E7 04 01 04 02 01 0A 03	Test Pattern = White Pattern: Command: 02 E7 03 00 00 01 03
Tiling Menu Lock Configuration	0xB3	Y	W	4	3	0x02 = Write	Byte 1: Tiling Lock - 0x00 = Lock disabled - 0x01 = Lock enabled	4	Byte 1: Tiling Lock - 0x00 = Lock disabled - 0x01 = Lock enabled	Tiling Lock = Enabled: Command: 02 B3 04 01 04 02 01 03 Response: 02 B3 04 01 04 02 01 3E 03	Tiling Lock = Enabled: Command: 02 B3 03 00 00 01 03
Tint	0x24	Y	W	4	3	0x02 = Write	Byte 1: Tint (Range 0x4D-0xB1)	4	Byte 1: Tint (Range 0x4D-0xB1)	Write 0 (0x7F): [9] Command: 02 24 04 01 04 02 7F 03 Response: 02 24 04 01 04 02 7F 4F 03	Write 0 (0x7F) Command: 02 24 03 00 00 7F 03
White Balance Control: Blue Gain	0xBE	N	W	5	N/A	0x02 = Write	Byte 1: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Blue Gain (Range 0x00-0x64)	5	Byte 1: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Blue Gain (Range 0x00-0x64)	Input Source = PC Blue Gain = 50 Command: 02 BE 05 01 04 02 05 32 03 Response: 02 BE 05 01 04 02 05 32 FC 03	N/A

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
White Balance Control: Blue Offset	0xC2	N	W	5	N/A	0x02 = Write	Byte 1: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Blue Offset (Range 0x00-0x64)	5	Byte 1: Input Source 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Blue Offset (Range 0x00-0x64)	Input Source = PC Blue Gain = 50 Command: 02 C2 05 01 04 02 05 32 03 Response: 02 C2 05 01 04 02 05 32 F8 03	N/A
White Balance Control: Green Gain	0xBD	N	W	5	N/A	0x02 = Write	Byte 1: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Green Gain (Range 0x00-0x64)	5	Byte 1: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Green Gain (Range 0x00-0x64)	Input Source = PC Green Gain = 50 Command: 02 BD 05 01 04 02 05 32 03 Response: 02 BD 05 01 04 02 05 32 FD 03	N/A
White Balance Control: Green Offset	0xC1	N	W	5	N/A	0x02 = Write	Byte 1: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Green Offset (Range 0x00-0x64)	5	Byte 1: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Green Offset (Range 0x00-0x64)	Input Source = PC Green Offset = 50 Command: 02 C1 05 01 04 02 05 32 03 Response: 02 C1 05 01 04 02 05 32 F9 03	N/A

Name	Command	Broadcast Supported	Read/Write	Length	Length (Broadcast	Mode	Data Bytes	Response Length	Response Data	Example (Group ID = 'A', Multi ID = 4)	Example (Broadcast)
White Balance Control: Red Gain	0xBC	N	W	5	N/A	0x02 = Write	Byte 1: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Red Gain (Range 0x00-0x64)	5	Byte 1: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Red Gain (Range 0x00-0x64)	Input Source = PC Red Gain = 50 Command: 02 BC 05 01 04 02 05 32 03 Response: 02 BC 05 01 04 02 05 32 FE 03	N/A
White Balance Control: Red Offset	0xBF	N	W	5	N/A	0x02 = Write	Byte 1: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Red Offset (Range 0x00-0x64)	5	Byte 1: Input Source - 0x01 = DisplayPort - 0x02 = HDMI 1 - 0x03 = HDMI 2 - 0x04 = DVI - 0x05 = PC Byte 2: Red Offset (Range 0x00-0x64)	Input Source = PC Red Offset = 50 Command: 02 BF 05 01 04 02 05 32 03 Response: 02 BF 05 01 04 02 05 32 FB 03	N/A

Notes for Commands Table

Note #	Note Text
1	The response is followed by a response in the same format as the IP address response, including the IP address command byte.
2	See table below for Response values. (Click here for table)
3	Byte 2: Value is in seconds.
4	Byte 6: Value is in seconds. 0x00 = Off.
5	Byte 5: Values: 0x4D = -50; 0xB1 = +50
6	Data byte values are in seconds. 0x00 = Off
7	Data byte values are in seconds.
8	No broadcast Read commands. Response data bytes apply to Read commands only.
9	0x4D = -50; 0xB1 = +50

The following table lists the values for the Resolution data byte in the Get LCD Status response.

Get LCD Status Response

Resolution	Value	Resolution	Value	Resolution	Value
640 x 480 @ 60Hz	0 (0x00)	720P @ 50Hz	29 (0x1D)	1360 x 768 @ 60Hz	25 (0x19)
640 x 480 @ 85Hz	1 (0x01)	576P @ 50Hz	30 (0x1E)	640 x 350 @ 85Hz	46 (0x2E)
800 x 600 @ 56Hz	2 (0x02)	480P @ 60Hz	31 (0x1F)	640 x 480 @ 75Hz	47 (0x2F)
800 x 600 @ 60Hz	3 (0x03)	1920 x 1080i @ 60Hz	32 (0x20)	640 x 480 @ 72Hz	48 (0x30)
800 x 600 @ 75Hz	4 (0x04)	1920 x 1080i @ 50Hz	33 (0x21)	1152 x 864 @ 75Hz	49 (0x31)
800 x 600 @ 85Hz	5 (0x05)	1280 x 720P @ 60Hz	34 (0x22)	1280 x 720 @ 60Hz	50 (0x32)
853 x 480 @ 60Hz	6 (0x06)	1280 x 720P @ 50Hz	35 (0x23)	1280 x 768 @ 75Hz	51 (0x33)
1024 x 768 @ 60Hz	7 (0x07)	PAL	36 (0x24)	1280 x 1024 @ 75Hz	52 (0x34)
1024 x 768 @ 70Hz	8 (0x08)	SECAM	37 (0x25)	1366 x 768 @ 50Hz	53 (0x35)
1024 x 768 @ 75Hz	9 (0x09)	PALP	38 (0x26)	1400 x 1050 @ 50Hz	54 (0x36)
1024 x 768 @ 85Hz	10 (0x0A)	NTSC	39 (0x27)	1440 x 900 @ 60Hz	55 (0x37)
1280 x 768 @ 60Hz	11 (0x0B)	NTSCP	40 (0x28)	576i @ 50Hz	56 (0x38)
1280 x 960 @ 60Hz	12 (0x0C)	Unknown	42 (0x2A)	480i @ 60Hz	57 (0x39)
1280 x 1024 @ 60Hz	13 (0x0D)	No Signal	43 (0x2B)	1080P @ 60Hz	58 (0x3A)
1366 x 768 @ 60Hz	14 (0x0E)	853 x 480 @ 50Hz	18 (0x12)	1080P @ 50Hz	59 (0x3B)
1600 x 1200 @ 60Hz	15 (0x0F)	1280 x 1024 @ 50Hz	19 (0x13)	1920 x 1080p @ 60Hz	60 (0x3C)
1400 x 1050 @ 60Hz	16 (0x10)	1360 x 768 @ 50Hz	20 (0x14)	1920 x 1080p @ 50Hz	61 (0x3D)
1706 x 960 @ 60Hz	17 (0x11)	1600 x 900 @ 50Hz	21 (0x15)	1024 x 576 @ 50Hz	62 (0x3E)
1080i @ 60Hz	26 (0x1A)	1600 x 900 @ 60Hz	22 (0x16)	1024 x 576 @ 60Hz	63 (0x3F)
1080i @ 50Hz	27 (0x1B)	1600 x 1200 @ 50Hz	23 (0x17)	640 x 400 @ 85Hz	71 (0x47)
720P @ 60Hz	28 (0x1C)	800 x 600 @ 50Hz	24 (0x18)	800 x 600 @ 72Hz	72 (0x48)
1152 x 864 @ 60Hz	73 (0x49)	1152 x 864 @ 70Hz	74 (0x4A)	720 x 400 @ 85Hz	75 (0x4B)