# 1   RS-232 Communication Protocol

**The following is the COM port setting**:

Baud Rate: 9600bps
Parity: None
Data Bits: 8bits
Stop Bits: 1bit
Set CTS Mode: Off
Set XON/XOFF: Off

**Set and get command**

Set Command

Type in : Y■Control_Type■Function■Param■CR

Reply: Z■Control_Type■Function■Param■CRDone>CR

Get Command:

Type in : Y■Control_Type■Function■CR

Reply: Z■Control_Type■Function■Param■CR

**Example**:

1. "Y■1■16■32△CR"  -> set Brightness value as 32

"Z■1■16■32■CR>" --> Reply value

"DoneCR" --> command setting succeeded

2. "Y■4■21■CR" -> get current output resolution

"Z■4■21■2■CR>" -> current resolution is SVGA

*Table 1: RS-232 Protocol*

| Control Type | Function | Param (for Set) | Function Description | Comment |
|---|---|---|---|---|
| 0 | 0 | N/A | SIZE button on remote control | |
| 0 | 1 | N/A | POWER button on remote control | |
| 0 | 2 | N/A | FREEZE button on remote control | |
| 0 | 3 | N/A | 480p button on remote control | |
| 0 | 4 | N/A | 576p button on remote control | |
| 0 | 5 | N/A | 720p button on remote control | |
| 0 | 6 | N/A | 1080i button on remote control | |
| 0 | 7 | N/A | 1080p button on remote control | |
| 0 | 8 | N/A | VGA button on remote control | |
| 0 | 9 | N/A | SVGA button on remote control | |

| Control Type | Function | Param (for Set) | Function Description | Comment |
|---|---|---|---|---|
| 0 | 10 | N/A | XGA button on remote control | |
| 0 | 11 | N/A | SXGA button on remote control | |
| 0 | 12 | N/A | WXGA button on remote control | |
| 0 | 13 | N/A | UXGA button on remote control | |
| 0 | 14 | N/A | INFO button on remote control | |
| 0 | 15 | N/A | UP button on remote control | |
| 0 | 16 | N/A | NATIVE button on remote control | |
| 0 | 17 | N/A | LEFT button on remote control/Volume down | Volume down when not in OSD |
| 0 | 18 | N/A | OK button on remote control | |
| 0 | 19 | N/A | RIGHT button on remote control/Volume up | Volume up when not in OSD |
| 0 | 20 | N/A | MENU button on remote control | |
| 0 | 21 | N/A | DOWN button on remote control | |
| 0 | 22 | N/A | EXIT button on remote control | |
| 0 | 23 | N/A | AV1 button on remote control | |
| 0 | 25 | N/A | COMP1 button on remote control | |
| 0 | 26 | N/A | HDMI1 button on remote control | |
| 0 | 27 | N/A | HDMI2 button on remote control | |
| 0 | 28 | N/A | COMP2 button on remote control | |
| 0 | 29 | N/A | PC1 button on remote control | |
| 0 | 30 | N/A | BLANK button on remote control | |
| 0 | 31 | N/A | MUTE button on remote control | |
| 0 | 33 | N/A | Auto adjust | |
| 0 | 34 | N/A | AV2 button on remote control | |
| 0 | 35 | N/A | PC2 button on remote control | |
| 0 | 36 | N/A | HDMI3 button on remote control | |
| 0 | 37 | N/A | HDMI4 button on remote control | |
| 1: Set 2: Get | 4 | 0~100 | Color: Red | |
| 1: Set 2: Get | 5 | 0~100 | Color: Green | |
| 1: Set 2: Get | 6 | 0~100 | Color: Blue | |
| 1: Set 2: Get | 16 | 0~100 | Brightness | |
| 1: Set 2: Get | 17 | 0~100 | Contrast | |
| 1: Set 2: Get | 25 | 0~100 | Hue | |
| 1: Set 2: Get | 26 | 0~100 | Sharpness | |
| 1: Set 2: Get | 29 | 0~100 | Saturation | |
| 1 : SET 2 : GET | 33 | 0~100 | set an absolute volume for Output | |

| Control Type | Function | Param (for Set) | Function Description | Comment |
|---|---|---|---|---|
| 1 : SET<br>2 : GET | 34 | 0~100 | set an absolute volume for Input | |
| 1: Set<br>2: Get | 41 | 0~100 | OSD Setting :H-Position | |
| 1: Set<br>2: Get | 42 | 0~100 | OSD Setting: V-Position | |
| 1: Set<br>2: Get | 43 | 0~100 | OSD Timeout | |
| 1: Set<br>2: Get | 44 | 0~8 | OSD Background | |
| 1: Set<br>2: Get | 50 | 0~3 | NR (Noise Reduction) | 0: Off<br>1: Low<br>2: Mid<br>3: High |
| 1: Set<br>2: Get | 51 | 0~3 | Audio delay | 0: Off<br>1: 40ms<br>2: 110ms<br>3: 150ms |
| 1: Set<br>2: Get | 52 | 0~2 | HDMI AUDIO IN | 0 : AUTOMATIC<br>1 : EMBEDDED<br>2 : ANALOG |
| 1: Set<br>2: Get | 84 | 0~1 | Auto Sync Off | 0 : OFF<br>1 : ON |
| 1: Set<br>2: Get | 95 | 0 ~1 | DROP LINE | 0: OFF<br>1: ON |
| 1: Set<br>2: Get | 160 | 0~1 | HDCP ON INPUT | 0 : OFF<br>1 : ON |
| 1: Set<br>2: Get | 161 | 0~1 | HDCP ON OUTPUT | 0 : Follow input<br>1 : Follow output |
| 3: Set<br>4: Get | 0 | 1~10 | Select Input Source | 1: AV1<br>2: AV2<br>3: COMP1<br>4: COMP2<br>5: PC1<br>6:PC2<br>7: HDMI1<br>8: HDMI2<br>9: HDMI3<br>10: HDMI4 |
| 3: Set<br>4: Get | 1 | 0~6 | Size | 0: Full<br>1: Panscan<br>2: Overscan<br>3: Underscan<br>4: Letterbox<br>5: Underscan6<br>6. BEST FIT |
| 3: Set<br>4: Get | 21 | 0~27 | Output Resolution | 0: Native<br>1: VGA<br>2: SVGA |

| Control Type | Function | Param (for Set) | Function Description | Comment |
|---|---|---|---|---|
| | | | | 3: XGA |
| | | | | 4: SXGA |
| | | | | 5: UXGA |
| | | | | 6: 480i |
| | | | | 7: 480p |
| | | | | 8: 720p60 |
| | | | | 9: 1080i60 |
| | | | | 10: 1080p60 |
| | | | | 11: 576i |
| | | | | 12: 576p |
| | | | | 13: 720p50 |
| | | | | 14: 1080i50 |
| | | | | 15: 1080p50 |
| | | | | 16: WXGA |
| | | | | 17: WSXGA |
| | | | | 18: WUXGA |
| | | | | 19　　1280x800 |
| | | | | 20　　:WXGA+ (1440X900) |
| | | | | 21　　SXGA+ (1400X1050) |
| | | | | **22　　: 1600x900 (F/W#1.32)** |
| | | | | 23 : 480i59 ( V1.42 ) |
| | | | | 24 : 480p59 |
| | | | | 25: 720p59 |
| | | | | 26: 1080i59 |
| | | | | 27: 1080p59 |
| 3: Set | 23 | 1 | Factory Reset | |
| 4 : Get | 24 | 0~24 | INPUT Resolution (V1.41) | 0: Unknown<br>1: VGA<br>2. SVGA<br>3: XGA<br>4: SXGA<br>5: UXGA<br>6: 480i<br>7: 480p<br>8: 720p60<br>9: 1080i60<br>10: 1080p60<br>11: 576i<br>12: 576p<br>13: 720p50<br>14: 1080i50<br>15: 1080p50<br>16: WXGA<br>17: WSXGA<br>18: WUXGA<br>19: 1280x800<br>20　　WXGA+ ( 1440X900 )<br>21: SXGA+ ( 1400X1050 )<br>22: 1600X900<br>23: 2048X1080/50<br>24: 2048X1080/60 |

| Control Type | Function | Param (for Set) | Function Description | Comment |
|---|---|---|---|---|
| 6: Set<br>7: Get | 0 | 0~2 | Power | 0: Power Down<br>1: Power On<br>2 : Reboot |
| 6: Set<br>7: Get | 1 | 0~1 | Freeze | 0: Off<br>1: On |
| 6: Set<br>7: Get | 2 | 0~1 | Blank | 0: Off<br>1: On |
| 6: Set<br>7: Get | 3 | 0~1 | Mute | 0: Off<br>1: On |
| 6: Set<br>7: Get | 4 | 0~1 | Key lock | 0: Off<br>1: On |
| 6 : set<br>7 : get | 140 | 0~1 | Auto Tune (under fine tune) | 0 : Clear Auto Tune<br>1 : Set Auto Tune |