

Planar QE Series RS232 User Manual



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RS232 Communication

RS232 control is not necessary for operation, but is a convenient way to control Planar® QE Series displays from a computer at a distance. Most things you can do with the remote, you can do with RS232 commands. Plus, you can send inquiries to the displays and find out the current settings and values. RS232 connections are made with standard straight-through cables.

Note: Serial communication can occur over RS232, USB-B or LAN.

Applicable Models

This RS-232 user manual applies to all Planar QE Series models. RS232 user manuals for other products can be found at www.planar.com/support/.

RS232 Setup

The RS232 connection must use the following settings:

- 19200 baud rate
- 8 data bits
- 1 stop bit
- No parity bit
- No HW (RTS/CTS) or SW (XON/XOFF) flow control

Connecting the RS232 Cable

The RS232 cable will connect to a PC or control system, depending on your setup.



RS232 Protocol

Command Structure

[OPCODE] (MODIFIERS) [OPERATOR] [OPERANDS] [TERM]

- OPCODE is the command code (e.g. "GAIN"). This can be written either using the named command code (see the "Command Code" column in the table) or the numeric command code (see the "Numeric Command Code" column in the table).
- MODIFIERS are modifier values [e.g. "(ZONE.1, ALL)"]. There are zero or more modifiers for each command. The modifiers can be written either with their named value or their numeric value (see "Examples" on page 7). See the "Modifiers" column in the table.
- OPERATOR is the action to be performed. See the "Operators" column in the table.
 - '=' writes the setting value.
 - '?' reads the setting value in name form (see "Examples" on page 7).
 - '#' reads the setting value in numeric form (see "Examples" on page 7).
 - '+' increments the setting value.
 - '-' decrements the setting value.
 - ':' indicates that the message is a response to one of the following operators: =?#+-
 - '!ERR' indicates that the message is a failure response. An error code will be listed after the "ERR", with a space before it. Error codes are as follows:
 - ERR 1: Invalid syntax
 - ERR 2: [Reserved for future use]
 - ERR 3: Command not recognized
 - ERR 4: Invalid modifier
 - ERR 5: Invalid operands
 - ERR 6: Invalid operator
 - '@ACK' indicates that the message is an acknowledgment (ACK) to a command that has no operator.
 - '^NAK' indicates that the message is a negative acknowledgment (NAK) to a command. This indicates that the command was received but cannot be processed at this time.
 - [No operator] denotes an action. In this case, there's no operator and no operand.

- OPERAND indicates the data to be sent with the message. In some cases, there can be multiple operands. See the “Operands” column in the table.
 - Enumerated operands can be written either with their named value or their numeric value (see “Examples” on page 7).
 - String operands are written with quotation marks at the beginning and end. Example: “this is a string operand”. Special characters, [CR], [LF], “ and \ can be included in a string by escaping them with the \ character (see “Examples” on page 7).
 - Integer (or signed integer / unsigned integer) are always numeric values.
 - Fixed point operands are numeric values with fractional parts. They use decimal point notation.
 - Note that enumerated and integer values can be written either in decimal or hexadecimal. For example, a decimal value of ‘50’ can be written in hexadecimal as ‘0x32’.
- TERM is the termination character for the command. This can either be the ASCII carriage return character (0x0D), the ASCII line feed character (0x0A) or a semicolon. The response will use the same termination character.

Protocol Encoding

- All parts of the command structure are case insensitive (e.g. “BRIGHTNESS”, “brightness” and BrIghTNeSs” are all the same). Responses will always be in capital letters.
- Excessive white space is allowed (e.g. “BRIGHTNESS=50”, “BRIGHTNESS = 50” and “BRIGHTNESS = 50” are all the same).
- Modifiers and operands can be separated by commas, spaces or both (e.g. “GAIN=100,100,100”, “GAIN=100 100 100” and “GAIN=100, 100, 100” are all the same). Responses will always separate with one space between modifiers and operands).

Examples

Note: [CR] is the ASCII carriage return character (0x0D).

| Command | Response | Notes |
|-----------------------|---------------------|--|
| brightness = 100 [CR] | BRIGHTNESS:100 [CR] | Sets the Brightness value to 100 |
| brightness = 100; | BRIGHTNESS:100; | Also sets the Brightness value to 100, but uses the ‘;’ termination character instead of [CR]. The response uses the same termination character. |
| 200=100 [CR] | 200:100 [CR] | “200” is the numeric command code for “BRIGHTNESS” |
| brightness+ [CR] | BRIGHTNESS:101 [CR] | Increments the current Brightness value |

| Command | Response | Notes |
|---|---|--|
| brightness- [CR] | BRIGHTNESS:100 [CR] | Decrements the current Brightness value |
| gain = 101 102 103 [CR] | GAIN:101 102 103 [CR] | Example command with multiple operators (sets Red Gain to 101, Green Gain to 102 and Blue Gain to 103, on the current zone) |
| gain(current red)+ | GAIN(CURRENT RED):102 | Increments the Red Gain on the current zone |
| gain(zone.1, all) = 104,105,106 | GAIN(ZONE.1 ALL):104 105 106 | Example command with multiple modifiers, multiple operators and different separators between the modifiers and operators (sets Red Gain to 104, Green Gain to 105 and Blue Gain to 106, on Zone 1) |
| ipv4.address(static)="10.15.0.220" [CR] | IPV4.ADDRESS(STATIC)="10.15.0.220" [CR] | Example command with a string operator |
| reset(user) [CR] | RESET(USER)@ACK [CR] | Example action command (no operator or operand) |
| reset(user) [CR] | RESET(USER)^NAK [CR] | Example action command that cannot be processed at this time |
| aspect? [CR] | ASPECT:AUTO [CR] | The name for the Aspect Ratio setting value is returned |
| aspect# [CR] | ASPECT:0 [CR] | The number for the Aspect Ratio setting value is returned |
| aspect=fill [CR] | ASPECT:FILL [CR] | Sets the Aspect Ratio to Fill |
| aspect=3 [CR] | ASPECT:3 [CR] | Also sets the Aspect Ratio to Fill |
| brightness @@ [CR] | BRIGHTNESS!ERR 1 [CR] | Example of an invalid syntax ("@" isn't a valid operator) |
| fake.command = 1 [CR] | FAKE.COMMAND:ERR 3 [CR] | Example of an invalid opcode ("FAKE.COMMAND" doesn't exist) |
| brightness(zone.999) = 100 [CR] | BRIGHTNESS(ZONE.999)!ERR 4 [CR] | Example of an invalid modifier ("ZONE.999" isn't a valid modifier for "BRIGHTNESS") |
| brightness="new value" [CR] | BRIGHTNESS!ERR 5 [CR] | Example of an invalid operand (the Brightness command doesn't accept a string operand) |
| model.id = 1 [CR] | MODEL.ID!ERR 6 [CR] | Example of an invalid operator (cannot write to this command) |
| display.name = "Name containing \" and \" | DISPLAY.NAME:"Name containing \" and \" | The name will appear on the remote monitor as Name containing " and \" |
| power.on.delay = .1 | POWER.ON.DELAY:0.1 | Example of a fixed point operand. Sets the Power On Delay to 0.1 seconds. |

RS232 Codes

Notes:

- The examples are written with the command first and the *response in italics*.
Example:
 - Command: ASPECT(ZONE.1)=AUTO
 - Response: *ASPECT(ZONE.1):AUTO*
- In many instances, a modifier may be omitted and the display will replace it with a default value. For example, the default modifier for the ASPECT command is CURRENT, so the following two commands are identical:
 - ASPECT(CURRENT)=AUTO
 - ASPECT=AUTO
- '!' in the Operators column indicates that the command accepts the execute operator, which uses no operator symbol. The '!' symbol is not included in the command.

Discontinued

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|----------------|--------------|----------------------|-----------|--|----------|----------------------|---|--|
| Advanced Color | CMS | 211 | =?+- | Mod 1: Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 255 = CURRENT Mod 2: Gamut 0 = REC709 1 = SMPTEC 2 = EBU 5 = USER 6 = AUTO 255 = CURRENT Mod 3: Color Point 0 = RED.X 1 = RED.Y 2 = GREEN.X 3 = GREEN.Y 4 = BLUE.X 5 = BLUE.Y 6 = CYAN.X 7 = CYAN.Y 8 = MAGENTA.X 9 = MAGENTA.Y 10 = YELLOW.X 11 = YELLOW.Y 12 = WHITE.X 13 = WHITE.Y [None = Set all 14 values at once] | 0-800 | No | [Set REC709 red x color point in Zone 1 to 0.640] CMS(ZONE.1, REC709, RED.X)=640 CMS(ZONE.1 REC709 RED.X):640 [Set all color points in the User gamut for Zone 2] CMS(ZONE.2, USER)=640 330 300 600 150 060 225 329 321 154 419 505 313 329 CMS(ZONE.2 USER):640 330 300 600 150 060 225 329 321 154 419 505 313 329 | See Main -> Advanced Settings -> Advanced Color Note that the color point values for the Auto gamut cannot be written. When read, it returns the values for the auto-detected gamut. |



| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|-----------------------|-----------------|----------------------|-----------|---|-------------------|----------------------|--|---|
| Advanced Color Flag | CMSFLSAG | 212 | ? | Mod 1: Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 255 = CURRENT Mod 2: Gamut 0 = REC709 1 = SMPTEC 2 = EBU 5 = USER 6 = AUTO 255 = CURRENT Mod 3: Color Point 0 = RED.X 1 = RED.Y 2 = GREEN.X 3 = GREEN.Y 4 = BLUE.X 5 = BLUE.Y 6 = CYAN.X 7 = CYAN.Y 8 = MAGENTA.X 9 = MAGENTA.Y 10 = YELLOW.X 11 = YELLOW.Y 12 = WHITE.X 13 = WHITE.Y | String | No | [Zone 1 REC709 red x coordinate is achievable] CMSFLAG(ZONE.1, REC709, RED.X)? CMSFLAG(ZONE.1 REC709 RED.X):"" [Zone 2 EBU blue y coordinate is not achievable] CMSFLAG(ZONE.2, EBU, BLUE.Y)? CMSFLAG(ZONE.2 EBU BLUE.Y):"" | See Main -> Advanced Settings -> Advanced Color In some cases, the target color coordinates may not be achievable. In this case, "" will be returned by this command. Otherwise, an empty string will be returned. |
| Allow Pop Up Messages | OSD.ALLOW.POPUP | 1300 | =?+- | | 0 = NO 1 = YES | No | OSD.ALLOW.POPUP=YES OSD.ALLOW.POPUP:YES | See Main -> Advanced Settings -> Menus and Messages -> Allow Pop Up Messages |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|---------------------|---------------------|----------------------|-----------|---|---|----------------------|---|--|
| Aspect Ratio | ASPECT | 500 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] | 0 = AUTO 1 = 16X9 2 = 4X3 3 = FILL 4 = NATIVE 5 = LETTERBOX | No | [For Zone 1] ASPECT(ZONE.1)=AUTO ASPECT(ZONE.1):AUTO [For the current zone] ASPECT=16X9 ASPECT:16X9 | See Main -> Image Adjust -> Aspect Ratio |
| Audio Input | AUDIO.INPUT | 1003 | ? | | Source 0 = OPS 1 = HDMI.1 2 = HDMI.2 3 = HDMI.3 4 = HDMI.4 5 = DP | No | AUDIO.INPUT? AUDIO.INPUT:HDMI.1 | Returns the input source in the zone currently playing audio, as chosen by Audio Select |
| Audio Select | AUDIO.ZONE | 1007 | =?+- | | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 | No | AUDIO.ZONE=ZONE.1 AUDIO.ZONE:ZONE.1 | See Main -> Audio -> Audio Select |
| Audio Settings | AUDIO.SETTINGS | 1009 | =? | | Op 1: Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 Ops 2-8: Unsigned Integers | No | [For Zone 3, Volume=51, Treble=52, Bass=53, Balance=54, Mute Off, Internal Speakers On] AUDIO.SETTINGS=2 51 52 53 54 0 1 AUDIO.SETTINGS:2 51 52 53 54 0 1 | Values are set/returned in the order AUDIO.ZONE, AUDIO.VOLUME, AUDIO.TREBLE, AUDIO.BASS, AUDIO.BALANCE, AUDIO.MUTE, AUDIO.SPEAKERS |
| Auto Power On | AUTO.ON | 1407 | =?+- | | 0 = OFF 1 = ON | Yes | AUTO.ON=ON AUTO.ON:ON | See Main -> Advanced Settings -> Power -> Auto Power On |
| Auto Scan Sources | SOURCE.SCAN | 105 | =?+- | | 0 = OFF 1 = ON | No | SOURCE.SCAN=ON SOURCE.SCAN:ON | See Main -> Inputs and Views -> Auto Scan Sources |
| Backlight Intensity | BACKLIGHT.INTENSITY | 1400 | =?+- | | 1-100 | No | BACKLIGHT.INTENSITY=75 BACKLIGHT.INTENSITY:75 | See Main -> Advanced Settings -> Backlight -> Backlight Intensity |
| Balance | AUDIO.BALANCE | 1000 | =?+- | | 0-100 | No | AUDIO.BALANCE=50 AUDIO.BALANCE:50 | See Main -> Audio -> Balance |
| Bass | AUDIO.BASS | 1001 | =?+- | | 0-100 | No | AUDIO.BASS=50 AUDIO.BASS:50 | See Main -> Audio -> Bass |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|--------------------|--------------|----------------------|-----------|---|---|----------------------|--|---|
| Blank Screen Color | BLANK.COLOR | 1306 | =?+- | | 0 = RED 1 = GREEN 2 = BLUE 3 = CYAN 4 = MAGENTA 5 = YELLOW 6 = WHITE 7 = BLACK | No | BLANK.COLOR=BLUE <i>BLANK.COLOR:BLUE</i> | See Main -> Advanced Settings -> Menus and Messages -> Blank Screen Color |
| Brightness | BRIGHTNESS | 200 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] | 0-100 | No | [For Zone 1] BRIGHTNESS(ZONE.1)=50 <i>BRIGHTNESS(ZONE.1):50</i> [For the current zone] BRIGHTNESS=55 <i>BRIGHTNESS:55</i> | See Main -> Image Adjust -> Brightness |
| Color | COLOR | 202 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] | 0-100 | No | [For Zone 1] COLOR(ZONE.1)=50 <i>COLOR(ZONE.1):50</i> [For the current zone] COLOR=55 <i>COLOR:55</i> | See Main -> Image Adjust -> Color |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|-------------|--------------|----------------------|-----------|--|---|----------------------|--|--|
| Color Gamut | COLOR.GAMUT | 214 | =?+- | <p>Mod 1: Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 255 = CURRENT [None = CURRENT]</p> <p>Mod 2: Type 0 = SETTING 1 = ACTUAL 2 = COPY 3 = REVERT [None = SETTING]</p> <p>Mod 3: Gamut 0 = REC709 1 = SMPTE.C 2 = EBU 5 = USER 6 = AUTO 255 = CURRENT</p> | 0 = REC709 1 = SMPTE.C 2 = EBU 5 = USER 6 = AUTO 7 = DISABLE | No | <p>[Setting Color Gamut for Zone 1] COLOR.GAMUT(ZONE.1, SETTING)=REC709 COLOR.GAMUT(ZONE.1 SETTING):REC709</p> <p>[Setting Color Gamut for the current zone] COLOR.GAMUT(CURRENT, SETTING)=AUTO COLOR.GAMUT(CURRENT SETTING):AUTO</p> <p>[Reading the actual Color Gamut for the current zone] COLOR.GAMUT(CURRENT, ACTUAL)? COLORSPACE(CURRENT ACTUAL):RGB</p> <p>[Copy the Zone 2 REC709 gamut to all zones] COLOR.GAMUT(ZONE.2, COPY, REC709) COLOR.GAMUT(ZONE.2 COPY REC709)@ACK</p> | <p>"Setting" is the value that the color gamut is set to. This takes two modifiers and does not support the execute action. See Main -> Advanced Settings -> Advanced Color -> Color Gamut.</p> <p>"Actual" is the currently applied color gamut (cannot return AUTO). This is read only, takes two modifiers and does not support the execute action. See Main -> Information -> Image Information -> Color Gamut.</p> <p>"Copy" is an execute action that takes all three modifiers and no operands. See Main -> Advanced Settings -> Advanced Color -> Copy to All Zones.</p> <p>"Revert" is an execute action that takes all three modifiers and no operands. See Main -> Advanced Settings -> Advanced Color -> Revert to Defaults.</p> |
| Color Space | COLORSPACE | 207 | =?+- | <p>Mod 1: Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT</p> <p>Mod 2: Value Type 0 = SETTING 1 = ACTUAL</p> | 0 = REC601 1 = REC709 2 = RGB 3 = RGB.VIDEO 4 = AUTO | No | <p>[Setting Color Space for Zone 1] COLORSPACE(ZONE.1, SETTING)=REC709 COLORSPACE(ZONE.1 SETTING):REC709</p> <p>[Setting Color Space for the current zone] COLORSPACE(CURRENT, SETTING)=AUTO COLORSPACE(CURRENT SETTING):AUTO</p> <p>[Reading the actual Color Space for the current zone] COLORSPACE(CURRENT, ACTUAL)? COLORSPACE(CURRENT ACTUAL):RGB</p> | <p>"Setting" is the value that the color space is set to. See Main -> Image Adjust -> Color Space.</p> <p>"Actual" is the currently applied color space (cannot return AUTO). See Main -> Information -> Image Information -> Color Space.</p> |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|--------------------|-------------------|----------------------|-----------|--|---|----------------------|--|---|
| Color Sub-sampling | COLOR.SUBSAMPLING | 301 | ? | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 255 = CURRENT | String | No | [For Zone 1] COLOR.SUBSAMPLING(ZONE.1)? COLOR.SUBSAMPLING(ZONE.1):"4:4:4" [For the current zone] COLOR.SUBSAMPLING? COLOR.SUBSAMPLING:"4:2:0" | See Main -> Information -> Image Information -> Color Subsampling |
| Color Temperature | COLOR.TEMPERATURE | 208 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL.ZONE 255 = CURRENT | 0 = 3200K 1 = 5500K 2 = 6500K 3 = 7500K 4 = 9300K 5 = NATIVE | No | [For Zone 1] COLOR.TEMPERATURE(ZONE.1)=6500K COLOR.TEMPERATURE(ZONE.1):6500K [For the current zone] COLOR.TEMPERATURE=NATIVE COLOR.TEMPERATURE=NATIVE | See Main -> Image Adjust -> Color Temperature |
| Content Rotation | ROTATE | 504 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] | 0 = NONE 90 = 90 180 = 180 270 = 270 | No | [For Zone 1] ROTATE(ZONE.1)=90 ROTATE(ZONE.1):90 [For the current zone] ROTATE=NONE ROTATE:NONE | See Main -> Image Adjust -> Content Rotation |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|---------------------|---------------------|----------------------|-----------|---|--|----------------------|--|---|
| Contrast | CONTRAST | 201 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] | 0-100 | No | [For Zone 1] CONTRAST(ZONE.1)=50 CONTRAST(ZONE.1):50 [For the current zone] CONTRAST=55 CONTRAST:55 | See Main -> Image Adjust -> Contrast |
| Current Zone | CURRENT.ZONE | 100 | =?+- | | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 | No | CURRENT.ZONE=ZONE.1 CURRENT.ZONE:ZONE.1 | See Main -> Image Adjust -> Current Zone |
| Current Zone Layout | CURRENT.ZONE.LAYOUT | 108 | ? | | 0 = S.1 28 = Q.1 29 = Q.2 30 = Q.3 31 = Q.4 | No | CURRENT.ZONE.LAYOUT? CURRENT.ZONE.LAYOUT:Q.1 | See separate table on page 32 for operands |
| Default Gateway | IPV4.GATEWAY | 1206 | =? | 0 = STATIC [None = Current (for reads only)] [None = STATIC (for writes only)] | String | Yes | [Read the current default gateway value] IPV4.GATEWAY? IPV4.NETMASK:"10.15.0.1" [Write the default gateway for static IP] IPV4.NETMASK(STATIC)="192.168.12.1" IPV4.NETMASK(STATIC):"192.168.12.1" | See Main -> Advanced Settings -> Network -> Default Gateway |
| DHCP | NETWORK.DHCP | 1207 | =? | | 0 = OFF 1 = ON | Yes | NETWORK.DHCP=ON NETWORK.DHCP:ON | See Main -> Advanced Settings -> Network -> DHCP |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|------------------|------------------|----------------------|-----------|---|---|----------------------|---|--|
| Diagnostic Color | DIAGNOSTIC.COLOR | 206 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] | 0 = RED 1 = GREEN 2 = BLUE 255 = OFF | No | [For Zone 1] DIAGNOSTIC.COLOR(ZONE.1)=OFF DIAGNOSTIC.COLOR(ZONE.1):OFF [For the current zone] DIAGNOSTIC.COLOR=BLUE DIAGNOSTIC.COLOR:BLUE | See Main -> Image Adjust -> Diagnostic Color |
| Display Name | DISPLAY.NAME | 2404 | =? | | String | Yes | DISPLAY.NAME="Conference Room 1" DISPLAY.NAME:"Conference Room 1" | Sets the name shown on the title of the Remote Monitoring Software pages |
| Display Power | DISPLAY.POWER | 1408 | =?+- | | 0 = OFF 1 = ON | Yes | DISPLAY.POWER=ON DISPLAY.POWER:ON | See the IR remote control keys ON and OFF |
| DisplayPort Type | DP.TYPE | 1904 | =?+- | | 0 = 1.1 1 = 1.2 | No | DP.TYPE=1.2 DP.TYPE:1.2 | See Main -> Advanced Settings -> System Settings -> DisplayPort Type |
| DNS Server 1 | NETWORK.DNS1 | 1212 | =? | 0 = STATIC [None = Current (for reads only)] [None = STATIC (for writes only)] | String | Yes | [Read the current DNS server 1 value] NETWORK.DNS1? NETWORK.DNS1:"172.16.0.140" [Write the DNS server 1 for static IP] NETWORK.DNS1(STATIC)="8.8.8.8" NETWORK.DNS1(STATIC):"8.8.8.8" | See Main -> Advanced Settings -> Network -> DNS Server |
| DNS Server 2 | NETWORK.DNS2 | 1213 | =? | 0 = STATIC [None = Current (for reads only)] [None = STATIC (for writes only)] | String | Yes | [Read the current DNS server 2 value] NETWORK.DNS2? NETWORK.DNS2:"172.16.0.191" [Write the DNS server 2 for static IP] NETWORK.DNS2(STATIC)="8.8.4.4" NETWORK.DNS2(STATIC):"8.8.4.4" | Selects a secondary DNS server |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|--------------------------|------------------------|----------------------|-----------|---|--|----------------------|--|---|
| EDID Timing | EDID.TIMING | 400 | =?+! | Mod 1: Input 0 = OPS 1 = HDMI.1 2 = HDMI.2 3 = HDMI.3 4 = HDMI.4 5 = DP 6 = ALL Mod 2: Param 0 = UPDATE 1 = HACTIVE 2 = VACTIVE 3 = VREFRESH 4 = FULL.SPEC 5 = PCLK 6 = HBLANK 7 = HFP 8 = HSYNC 9 = VBLANK 10 = VFP 11 = VSYNC 12 = FACTORY 13 = TYPE | Signed Integer -3 = 4K60 -2 = 4K30 -1 = 1080P | No | [Read the EDID type for HDMI 1] EDID.TIMING(HDMI.1, TYPE)? EDID.TIMING(HDMI.1 TYPE):4K60 [Set the HDMI 2 EDID horizontal active to 3840] EDID.TIMING(HDMI.2, HACTIVE)=3840 EDID.TIMING(HDMI.2 HACTIVE):3840 [Update the HDMI 2 EDID] EDID.TIMING(HDMI.2, UPDATE) EDID.TIMING(HDMI.2 UPDATE):@ACK | See Main -> Advanced Settings -> EDID UPDATE modifier is the only one that supports the action operator |
| EDID Zone | EDID.SELECTEDCONNECTOR | 401 | =?+- | | 0 = OPS 1 = HDMI.1 2 = HDMI.2 3 = HDMI.3 4 = HDMI.4 5 = DP 6 = ALL | No | EDID.SELECTEDCONNECTOR=HDMI.1 EDID.SELECTEDCONNECTOR:HDMI.1 | See Main -> Advanced Settings -> EDID -> Selected Connector |
| Enable Internal Speakers | AUDIO.SPEAKERS | 1004 | =?+- | | 0 = OFF 1 = ON | No | AUDIO.SPEAKERS=ON AUDIO.SPEAKERS:ON | See Main -> Audio -> Enable Internal Speakers |
| Enable Status LED | LED.ENABLE | 1902 | =? | | 0 = DISABLE 1 = ENABLE | Yes | LED.ENABLE=ENABLE LED.ENABLE:ENABLE | See Main -> Advanced Settings -> System Settings -> Enable Status LED |
| Error Log | ERROR.LOG | 2311 | ? | Log Entry Number 1-65535 | | No | ERROR.LOG(1)? ERROR.LOG(1):"Wed Sep 16 13:39:33 2015 - CRIT- Power supply 2 issue" | Lists any faults that have occurred in the system. Entry #1 is the most recent. An empty string returned means that there are no more error log entries after that entry. |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|-----------------|-----------------|----------------------|-----------|---|---|----------------------|---|---|
| Factory Reset | RESET | 2400 | ! | 0 = USER 1 = FACTORY1 | | No | RESET(USER) RESET(USER)@ACK | USER is the same as Main -> Advanced Settings -> System Settings -> Factory Reset. FACTORY1 resets everything that USER resets plus EDID customizations, network settings and presets. |
| Firmware Update | FIRMWARE.UPDATE | 2200 | =?! | Mod 1: Firmware 0 = AUTO 1 = VP.AP 2 = HDMI Mod 2: Type 0 = START 1 = PACKET 2 = FINISH 3 = URL | String | Yes | FIRMWARE.UPDATE FIRMWARE.UPDATE(AUTO START)@ACK | See Main -> Advanced Settings -> System Settings -> Firmware Update |
| Gain | GAIN | 209 | =?+- | Mod 1: Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] Mod 2: Color 0 = RED 1 = GREEN 2 = BLUE 255 = ALL [None = ALL] | For RED, GREEN and BLUE modifiers, one operand: 0-200 For ALL operand, three operands: Red Gain: 0-200 Green Gain: 0-200 Blue Gain: 0-200 | No | [For red gain on Zone 1] GAIN(ZONE.1, RED)=100 GAIN(ZONE.1 RED):100 [For all three gains on the current zone: Red Gain = 101, Green Gain = 102, Blue Gain = 103] GAIN=101 102 103 GAIN=101 102 103 | See Main -> Image Adjust -> Red/Green/Blue Gain. ALL modifier adjusts all three gains at the same time. The first modifier can only be missing if both modifiers are missing. |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|---------|--------------|----------------------|-----------|---|---|----------------------|--|---|
| Gamma | GAMMA | 1504 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] | 0 = 1.5 1 = 1.55 2 = 1.6 3 = 1.65 4 = 1.7 5 = 1.75 6 = 1.8 7 = 1.85 8 = 1.9 9 = 1.95 10 = 2.0 11 = 2.05 12 = 2.1 13 = 2.15 14 = 2.2 15 = 2.25 16 = 2.3 17 = 2.35 18 = 2.4 19 = 2.45 20 = 2.5 21 = 2.55 22 = 2.6 23 = 2.65 24 = 2.7 25 = 2.75 26 = 2.8 | No | [For Zone 1] GAMMA(ZONE.1)=2.2 GAMMA(ZONE.1):2.2 [For the current zone] GAMMA=2.5 GAMMA:2.5 | See Main -> Image Adjust -> Gamma |
| Help | HELP | 2300 | =? | 0 = FIRST 2147483647 = NEXT | String | Yes | [To get help on the OSD.STATUS command] HELP=OSD.STATUS HELP:"OSD.STATUS\ <i>Numeric Value: 1308\ Operators: ?\ No Modifiers\ 1 Operand(s) Operand #1: Unsigned Integer\ DISABLE 0\ ENABLE 1\ OFF 0\ ON 1\ NO 0\ YES 1\ FALSE 0\ TRUE 1</i> | Displays information for each serial command. To get a list of all serial commands, first enter the following command: HELP(FIRST)? Then enter the following command continuously until it returns NAK: HELP(NEXT)? |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|-------------------|--------------|----------------------|-----------|--|------------------|----------------------|--|--|
| Hostname | HOSTNAME | 2403 | =? | | String | Yes | <p>[Read the current hostname value] HOSTNAME? HOSTNAME:"QE Series"</p> <p>[Set the hostname to "MyDisplay"] HOSTNAME="MyDisplay" HOSTNAME:"My Display"</p> <p>[Invalid host name - can't use spaces] HOSTNAME="My Display" HOSTNAME!ERR 5</p> | <p>Sets the network hostname for the display. Default string is "QE Series".</p> <p>The hostname must be 1-65 characters in length and may only contain letters and numbers.</p> |
| Image Information | SIGNAL.INFO | 300 | ? | <p>Mod 1: Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 255 = CURRENT [None = CURRENT]</p> <p>Mod 2: Parameter 0 = HACTIVE 1 = VACTIVE 2 = PCLK 3 = HTOTAL 4 = VTOTAL 5 = VREFRESH 6 = HREFRESH 7 = INTERLACE 8 = VFIELDRATE 9 = VREFRESH.X. 100 10 = COLORDEPTH 11 = TMDS [None = ALL]</p> | Unsigned Integer | No | <p>SIGNAL.INFO(CURRENT, HACTIVE)? SIGNAL.INFO(CURRENT, HACTIVE):1920</p> | See Main -> Information -> Image Information |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|----------------|---------------|----------------------|-----------|--|---------------------------|----------------------|--|--|
| Image Position | PAN | 502 | =?+- | Mod 1: Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT Mod 2: Direction 0 = X 1 = Y 255 = ALL [None = ALL] | -1000 ~ 1000 | No | [For horizontal position on Zone 1] PAN(ZONE.1, X)=0 PAN(ZONE.1 X):0 [For horizontal and vertical position on the current zone: Horizontal Position = 10, Vertical Position = 20] PAN(CURRENT)=10 20 PAN(CURRENT):10 20 | For the 'X' modifier, see Main -> Image Adjust -> Image Position -> Move Horizontal. For the 'Y' modifier, see Main -> Image Adjust -> Image Position -> Move Vertical. |
| IP Address | IPV4.ADDRESS | 1205 | =? | 0 = STATIC [None = Current (for reads only) [None = STATIC (for writes only] | String | Yes | [Read the current IP address value] NETWORK.DNS1? NETWORK.DNS1:"10.15.0.60" [Write the DNS server 1 for static IP] NETWORK.DNS1(STATIC)="192.168.12.12" NETWORK.DNS1(STATIC):"192.168.12.12" | See Main -> Advanced Settings -> Network -> IP Address |
| IR Code | IR.CODE | 1210 | =?+- | | 0-65535 | Yes | IR.CODE=12345 IR.CODE:12345 | See Menu -> Advanced Settings -> System Settings -> IR Remote ID Code |
| IR Remote Lock | IR.LOCK | 1202 | =? | | 0 = DISABLE 1 = ENABLE | Yes | IR.LOCK=ENABLE IR.LOCK:ENABLE | See Menu -> Advanced Settings -> System Settings -> IR Remote Lock |
| Key | KEY | 1200 | = | | [See separate table] | Yes | [To send the MENU key] KEY=MENU KEY:MENU | See separate table on page 32 for key codes |
| Keypad Lock | KEY.LOCK | 1201 | =? | | 0 = DISABLE 1 = ENABLE | Yes | KEY.LOCK=ENABLE KEY.LOCK:ENABLE | See Menu -> Advanced Settings -> System Settings -> Keypad Lock |
| Layout | LAYOUT | 103 | =?+- | | 0 = SINGLE 12 = QUAD | No | [To change to Quad layout] LAYOUT(DUAL)=QUAD LAYOUT(DUAL):QUAD | See Main -> Inputs and Views -> Multi-Source View See Main -> Inputs and Views -> Multi-Source View -> Advanced Layouts |
| Local Dimming | LOCAL.DIMMING | 1415 | =?+- | | 0 = OFF 1 = ON | No | LOCAL.DIMMING=ON LOCAL.DIMMING:ON | See Main -> Advanced Settings -> Backlight -> Local Dimming |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|-------------------|--------------|----------------------|-----------|-----------|--|----------------------|--|--|
| MAC Address | NETWORK.MAC | 1203 | ? | | String | Yes | NETWORK.MAC? NETWORK.MAC="12:34:56:AB:CD:EF" | See Main -> Advanced Settings -> Network -> MAC Address |
| MEMC | MEMC.LEVEL | 1503 | =?+- | | 0 = OFF 1 = LOW 2 = MEDIUM 3 = HIGH | No | MEMC.LEVEL=LOW MEMC.LEVEL:LOW | See Main -> Advanced Settings -> System Settings -> MEMC |
| Menu Position | OSD.POSITION | 1301 | =?+- | | 0 = CENTER 1 = UPPER.LEFT 2 = UPPER.RIGHT 3 = LOWER.LEFT 4 = LOWER.RIGHT | No | OSD.POSITION=CENTER OSD.POSITION:CENTER | See Main -> Advanced Settings -> Menus and Messages -> Menu Position |
| Model ID | MODEL.ID | 2306 | ? | | String | No | MODEL.ID? MODEL.ID="QE4050" | See Main -> Information -> System Information -> Model |
| Model Series | MODEL.SERIES | 2316 | ? | | String | No | MODEL.SERIES? MODEL.SERIES:"QE Series" | Always returns "QE Series" for this product. Other products using this protocol will have a different response for this command. |
| Multi-Source View | MULTI.VIEW | 102 | =?+- | | 0 = SINGLE 3 = QUAD | No | MULTI.VIEW=QUAD MULTI.VIEW:QUAD | See Main -> Inputs and Views -> Multi-Source View |
| Mute | AUDIO.MUTE | 1002 | =?+- | | 0 = OFF 1 = ON | No | AUDIO.MUTE=ON AUDIO.MUTE:ON | See Main -> Audio -> Mute |
| Network Ping | NETWORK.PING | 1211 | = | | String | Yes | NETWORK.PING="www.google.com" NETWORK.PING:"SUCCESS" | Attempts to ping the selected network address. Response string will either be "SUCCESS" or "FAILED" |
| Next Source | SOURCE.NEXT | 104 | ! | Zone | 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 254 = ALL 255 = CURRENT | No | [For Zone 1] SOURCE.NEXT(ZONE.1) SOURCE.NEXT(ZONE.1)@ACK [For the current zone] SOURCE.NEXT SOURCE.NEXT@ACK | See IR remote control keys ZONE 1/2/3/4 |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|--------------------|--------------------|----------------------|-----------|---|--|----------------------|---|---|
| Noise Reduction | NOISE.REDUCTION | 205 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] | 0 = OFF 1 = LOW 2 = MEDIUM 3 = HIGH | No | [For Zone 1] NOISE.REDUCTION(ZONE.1)=OFF NOISE.REDUCTION(ZONE.1):OFF [For the current zone] NOISE.REDUCTION=LOW NOISE.REDUCTION:LOW | See Main -> Image Adjust -> Noise Reduction |
| Notification Event | NOTIFICATION.EMAIL | 1222 | =? | Event 0 = POWER.STATE. CHANGED 1 = ERROR.OCCURRED 2 = SOURCE.DETECTED 3 = SOURCE.LOST 4 = SOURCE.SELECTED | Op 1: Enable 0 = DISABLE 1 = ENABLE Op 2: Recipients List String Op 3: User Message String | Yes | NOTIFICATION.EMAIL(SOURCE.DETECTED)=ENABLE, "test@planar.com", "Your custom message here" NOTIFICATION.EMAIL(SOURCE.DETECTED):ENABLE "test@planar.com" "Your custom message here" | See Remote Monitoring Software -> Notifications -> Notification Events |
| NTP Server | NETWORK.NTPSERVER | 1214 | =? | | String | Yes | NETWORK.NTPSERVER="pool.ntp.org" NETWORK.NTPSERVER:"pool.ntp.org" | Selects the NTP server to be used with the Use Network Time setting. Default = "0.pool.ntp.org" |
| Offset | OFFSET | 210 | =?+- | Mod 1: Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] Mod 2: Color 0 = RED 1 = GREEN 2 = BLUE 255 = ALL [None = ALL] | For RED, GREEN and BLUE modifiers, one operand: 0-100 For ALL operand, three operands: Red Offset: 0-100 Green Offset: 0-100 Blue Offset: 0-100 | No | [For red offset on Zone 1] OFFSET(ZONE.1, RED)=50 OFFSET(ZONE.1 RED):50 [For all three offsets on the current zone: Red Gain = 51, Green Gain = 52, Blue Gain = 53] OFFSET=51 52 53 OFFSET=51 52 53 | See Main -> Image Adjust -> Red/Green/Blue Offset. ALL modifier adjusts all three offsets at the same time. The first modifier can only be missing if both modifiers are missing. |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|------------------|-------------------|----------------------|-----------|--|--|----------------------|--|--|
| OSD Close | OSD.CLOSE | 1310 | ! | | | No | OSD.CLOSE OSD.CLOSE@ACK | Forces any menus or message boxes that are currently on screen to close |
| OSD Rotation | ORIENTATION | 1302 | =?+- | | 0 = LANDSCAPE 1 = PORTRAIT | No | ORIENTATION=LANDSCAPE ORIENTATION:LANDSCAPE | See Main -> Advanced Settings -> Menus and Messages -> OSD Rotation |
| OSD Status | OSD.STATUS | 1308 | ? | | 0 = DISABLE 1 = ENABLE | No | OSD.STATUS? OSD.STATUS=ENABLE | Indicates whether the OSD (menu, message box or confirmation dialog) is currently being shown on the display |
| OSD Timeout | OSD.TIMEOUT | 1304 | =?+- | | 0 = OFF 10 = 10.SECONDS 30 = 30.SECONDS 60 = 60.SECONDS 120 = 120.SECONDS 240 = 240.SECONDS | No | OSD.TIMEOUT=60.SECONDS OSD.TIMEOUT:60.SECONDS | See Main -> Advanced Settings -> Menus and Messages -> OSD Timeout. Numeric value is in seconds and can be used to program any delay value. |
| OSD Transparency | OSD. TRANSPARENCY | 1303 | =?+- | | 0-5 | No | OSD.TRANSPARENCY=3 OSD.TRANSPARENCY:3 | See Main -> Advanced Settings -> Menus and Messages -> OSD Transparency |
| Overscan | OVERSCAN | 501 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] | 0-20 | No | [For Zone 1] OVERSCAN(ZONE.1)=0 OVERSCAN(ZONE.1):0 [For the current zone] OVERSCAN=5 OVERSCAN:5 | See Main -> Image Adjust -> Overscan |
| Pixel Orbit | PIXEL.ORBIT | 1906 | =?+- | | 0 = OFF 1 = ON | No | PIXEL.ORBIT=ON PIXEL.ORBIT:ON | See Main -> Advanced Settings -> System Settings -> Pixel Orbit |
| Power On Delay | POWER.ON.DELAY | 1420 | =?+- | | Unsigned fixed point 0.0-10.0 | Yes | POWER.ON.DELAY=1.4 POWER.ON.DELAY:1.4 | See Main -> Advanced Settings -> Power -> Power On Delay |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|---------------------------|-----------------------|----------------------|-----------|---|--|----------------------|--|---|
| Power Saving Delay | POWER.SAVE.DELAY | 1406 | =?+- | | 60 = 1.MINUTE 300 = 5.MINUTES 900 = 15.MINUTES 1800 = 30.MINUTES 3600 = 60.MINUTES | Yes | POWER.SAVE.DELAY=5.MINUTES POWER.SAVE.DELAY:5.MINUTES | See Main -> Advanced Settings -> Power -> Power Saving Delay. Numeric value is in seconds and can be used to program any delay value. |
| Power Saving Mode | POWER.SAVE.MODE | 1405 | =?+- | | 0 = DISABLED 1 = LOW.POWER 2 = WAKE.ON.SIGNAL | Yes | POWER.SAVE.MODE=LOW.POWER POWER.SAVE.MODE:LOW.POWER | See Main -> Advanced Settings -> Power -> Power Saving Mode |
| Reboot | SYSTEM.REBOOT | 2402 | ! | | | No | SYSTEM.REBOOT SYSTEM.REBOOT@ACK | Forces the system to restart |
| Revert Image Settings | REVERT.IMAGE.SETTINGS | 215 | ! | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 255 = CURRENT [None = CURRENT] | | No | [For Zone 1] REVERT.IMAGE.SETTINGS(ZONE.1) REVERT.IMAGE.SETTINGS(ZONE.1)@ACK [For the current zone] REVERT.IMAGE.SETTINGS REVERT.IMAGE.SETTINGS@ACK | See Main -> Image Adjust -> Revert to Defaults |
| Save and Restore Settings | CLONE.SETTINGS | 2315 | ! | Mod 1: Operation 0 = COPY 1 = PASTE Mod 2: Location 0 = USB | | No | CLONE.SETTINGS(COPY, USB) CLONE.SETTINGS(COPY, USB)@ACK | See Main -> Advanced Settings -> System Settings -> Save All Settings to USB See Main -> Advanced Settings -> System Settings -> Restore All Settings from USB |
| Save Diagnostics | SAVE.DIAGNOSTICS | 2314 | ! | Location 0 = USB | | No | SAVE.DIAGNOSTICS(USB) SAVE.DIAGNOSTICS(USB)@ACK | See Main -> Advanced Settings -> System Settings -> Save Diagnostics to USB |
| Schedule | SCHEDULE | 2100 | =? | Mod 1: Slot 1-20 Mod 2: Parameter 0 = FREQ 1 = MINUTE 2 = HOUR 3 = DAY 4 = ACTION 5 = DATA 6 = ENABLE [None = ALL] | Unsigned int | Yes | [Change the action for event 3 to Turn On] SCHEDULE(3, ACTION)=0 SCHEDULE(3, ACTION):0 | See Main -> Advanced Settings -> Schedule -> Set Event 1-20 Reference the Schedule Action, Schedule Day and Schedule Frequency settings for operand values. |
| Schedule Action | SCHEDULE.ACTION | 2102 | =? | Slot 1-20 | 0 = TURN.ON 1 = TURN.OFF 3 = PANEL.BRIGHTNESS | Yes | [Change the action for event 3 to Turn On] SCHEDULE.ACTION(3)=TURN.ON SCHEDULE.ACTION(3):TURN.ON | See Main -> Advanced Settings -> Schedule -> Set Event 1-20 -> Action |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|----------------------|-----------------------------|----------------------|-----------|---|--|----------------------|--|--|
| Schedule Day | SCHEDULE.DAY | 2101 | =? | Slot 1-20 | 0 = MON 1 = TUE 2 = WED 3 = THU 4 = FRI 5 = SAT 6 = SUN | Yes | [Change the day for event 3 to Monday] SCHEDULE.DAY(3)=MON SCHEDULE.DAY(3):MON | See Main -> Advanced Settings -> Schedule -> Set Event 1-20 -> Day |
| Schedule Description | SCHEDULE.DESCRPTION | 2104 | ? | Slot 1-20 | String | Yes | [Read the schedule description string for event 3] SCHEDULE.DESCRPTION(3)? SCHEDULE.DESCRPTION(3):"Daily 08:15 Backlight 25" | This is the string used for the schedule slots in the Main -> Advanced Settings -> Schedule menu. |
| Schedule Frequency | SCHEDULE.FREQUENCY | 2103 | =? | Slot 1-20 | 0 = DAILY 1 = WEEKLY 2 = WEEKDAYS 3 = WEEKENDS | Yes | [Change the frequency for event 3 to Daily] SCHEDULE.FREQUENCY(3)=DAILY SCHEDULE.FREQUENCY(3):DAILY | See Main -> Advanced Settings -> Schedule -> Set Event 1-20 -> Frequency |
| Serial Device | SERIAL.DEVICE | 1220 | =? | Mod 1: Port 0 = DB9 1 = USB 2 = OPS Mod 2: Setting 0 = BAUD | String | No | SERIAL.DEVICE(DB9, BAUD)="19200" SERIAL.DEVICE(DB9 BAUD):"19200" | Changes the serial parameters for the various serial connections: - "DB9" is the RS232 connector - "USB" is the USB-B connector - "OPS" is the serial connection on the OPS connector |
| Serial Number | SERIAL.NUMBER | 2303 | ? | | String | No | SERIAL.NUMBER? SERIAL.NUMBER="ABCD1234" | See Main -> Information -> System Information -> Serial Number |
| Sharpness | SHARPNESS | 204 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] | 0-100 | No | [For Zone 1] SHARPNESS(ZONE.1)=5 SHARPNESS(ZONE.1):5 [For the current zone] SHARPNESS=10 SHARPNESS:10 | See Main -> Image Adjust -> Sharpness |
| SMTP Authentication | NETWORK.SMTP.AUTHENTICATION | 1227 | =? | | 0 = NONE 1 = AUTO 2 = PLAIN 3 = SCRAM_SHA1 4 = CRAM_MD5 5 = DIGEST_MD5 6 = LOGIN 7 = NTLM | Yes | NETWORK.SMTP.AUTHENTICATION=AUTO NETWORK.SMTP.AUTHENTICATION:AUTO | See Remote Monitoring Software -> Notifications -> Authentication |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|----------------------------|--------------------------|----------------------|-----------|---|--------------------------------------|----------------------|--|--|
| SMTP Connection Encryption | NETWORK.SMTP. ENCRYPTION | 1226 | =? | | 0 = NONE 1 = TLS 2 = START.TLS | Yes | NETWORK.SMTP.ENCRYPTION=TLS NETWORK.SMTP.ENCRYPTION:TLS | See Remote Monitoring Software -> Notifications -> Connection Encryption |
| SMTP Email From Address | NETWORK.SMTP. FROM | 1228 | =? | | String | Yes | NETWORK.SMTP.FROM="myemailaddress@comcast.net" NETWORK.SMTP.FROM:"myemailaddress@comcast.net" | See Remote Monitoring Software -> Notifications -> Email From Address |
| SMTP Password | NETWORK.SMTP. PASSWORD | 1225 | =? | | String | Yes | NETWORK.SMTP.PASSWORD="mypassword" NETWORK.SMTP.PASSWORD:"mypassword" | See Remote Monitoring Software -> Notifications -> Password |
| SMTP Port | NETWORK.SMTP. PORT | 1223 | =? | | Unsigned Integer | Yes | NETWORK.SMTP.PORT=465 NETWORK.SMTP.PORT:465 | See Remote Monitoring Software -> Notifications -> Port |
| SMTP Server | NETWORK.SMTP. SERVER | 1215 | =? | | String | Yes | NETWORK.SMTP.SERVER="smtp.comcast.net" NETWORK.SMTP.SERVER:"smtp.comcast.net" | See Remote Monitoring Software -> Notifications -> SMTP Server |
| SMTP Username | NETWORK.SMTP. USERNAME | 1224 | =? | | String | Yes | NETWORK.SMTP.USERNAME="myusername" NETWORK.SMTP.USERNAME:"myusername" | See Remote Monitoring Software -> Notifications -> User Name |
| Source Message | SOURCE.MESSAGE | 111 | ? | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 255 = CURRENT [None = CURRENT] | String | No | [For Zone 1] SOURCE.MESSAGE(ZONE.1)? SOURCE.MESSAGE(ZONE.1):"1920x1080i 60Hz" [For the current zone] SOURCE.MESSAGE? SOURCE.MESSAGE:"Searching" | Returns a string with the input resolution and frame rate for the selected zone. If no signal is detected in that zone, the string will read "Searching" or "No Signal". |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|---------------|-------------------|----------------------|-----------|---|---|----------------------|--|--|
| Source Select | SOURCE.SELECT | 101 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 254 = ALL 255 = CURRENT [None = CURRENT] | Source 0 = OPS 1 = HDMI.1 2 = HDMI.2 3 = HDMI.3 4 = HDMI.4 5 = DP | No | [For Zone 1] SOURCE.SELECT(ZONE.1)=HDMI.1 SOURCE.SELECT(ZONE.1):HDMI.1 [For the current zone] SOURCE.SELECT=HDMI.2 SOURCE.SELECT:HDMI.2 | See Main -> Inputs and Views -> Zone 1/2/3/4 |
| Splash Screen | SPLASH.SCREEN | 1305 | =?+- | | 0 = DISABLE 1 = ENABLE | No | SPLASH.SCREEN=ENABLE SPLASH.SCREEN:ENABLE | See Main -> Advanced Settings -> Menus and Messages -> Allow Splash Screen |
| Subnet Mask | IPV4.NETMASK | 1205 | =? | 0 = STATIC [None = Current (for reads only)] [None = STATIC (for writes only)] | String | Yes | [Read the current subnet mask value] IPV4.NETMASK? IPV4.NETMASK:"255.255.254.0" [Write the subnet mask for static IP] IPV4.NETMASK(STATIC)="255.255.255.0" IPV4.NETMASK(STATIC):"255.255.255.0" | See Main -> Advanced Settings -> Network -> Subnet Mask |
| System State | SYSTEM.STATE | 2310 | ? | | 0 = STANDBY 1 = POWERING.ON 2 = ON 3 = POWERING.DOWN 4 = BACKLIGHT.OFF 5 = FAULT | No | SYSTEM.STATE? SYSTEM.STATE:STANDBY | Indicates the current state of the system: - STANDBY: The system is in its lowest power mode. Not all functions are available. - POWERING.ON: The system is transitioning from the STANDBY state to the ON state. - ON: The system is on with the backlight on. - POWERING.DOWN: The system is transitioning from the ON state to the STANDBY state. - FAULT: A system failure has occurred. Use the Error Log command to get more information. |
| Test Email | NETWORK.SMTP.TEST | 1229 | ! | Event 0 = POWER.STATE.CHANGED 1 = ERROR.OCCURRED 2 = SOURCE.DETECTED 3 = SOURCE.LOST 4 = SOURCE.SELECTED | | Yes | NETWORK.SMTP.TEST(SOURCE.LOST) NETWORK.SMTP.TEST(SOURCE.LOST)@ACK | See Remote Monitoring Software -> Notifications -> Test Email |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|---------------|--------------|----------------------|-----------|--|--------------|----------------------|--|---|
| Test Pattern | PATTERN | 1307 | ! | Pattern 0 = NONE 1 = BLACK 2 = WHITE 3 = GRAY 4 = RED 5 = GREEN 6 = BLUE 7 = CYAN 8 = MAGENTA 9 = YELLOW 11 = GRAYBAR 12 = REDBAR 13 = GREENBAR 14 = BLUEBAR 16 = CHECKERBOARD 18 = COLORBAR | | No | PATTERN(GRAYBAR) PATTERN(GRAYBAR)@ACK | See Main -> Advanced Settings -> Test Pattern |
| Time | TIME | 1100 | =? | 0 = YEAR 1 = MONTH 2 = DATE 3 = HOUR 4 = MINUTE [None = ALL] | Unsigned int | Yes | [Set the month to March] TIME(MONTH)=3 TIME(MONTH):3 | See Main -> Advanced Settings -> Schedule -> Set Date and Time |
| Time - Day | TIME.DAY | 1101 | ? * | 0 = MON 1 = TUE 2 = WED 3 = THU 4 = FRI 5 = SAT 6 = SUN | | Yes | TIME.DAY? TIME.DAY:TUE | See Main -> Advanced Settings -> Schedule -> Set Date and Time -> Day |
| Time - Month | TIME.MONTH | 1102 | =? | 1 = JANUARY 2 = FEBRUARY 3 = MARCH 4 = APRIL 5 = MAY 6 = JUNE 7 = JULY 8 = AUGUST 9 = SEPTEMBER 10 = OCTOBER 11 = NOVEMBER 12 = DECEMBER | | Yes | TIME.MONTH=MARCH TIME.MONTH:MARCH | See Main -> Advanced Settings -> Schedule -> Set Date and Time -> Month |
| Time - String | TIME.STRING | 1103 | ? | | String | Yes | TIME.STRING? TIME.STRING:"2015-09-01 13:21" | See Main -> Advanced Settings -> Schedule -> Set Date / Time |

| Setting | Command Code | Numeric Command Code | Operators | Modifiers | Operands | Available in Standby | Example | Notes |
|------------------|--------------|----------------------|-----------|--|----------------------|----------------------|--|---|
| Time Zone | TIMEZONE | 1208 | =?+- | | [See separate table] | Yes | TIMEZONE=UTCM0800.PACIFIC.TIME.US. CANADA TIMEZONE:UTCM0800.PACIFIC.TIME.US. CANADA | See Main -> Advanced Settings -> Schedule -> Set Date and Time -> Time Zone. See table on page 34 for valid values |
| Tint | TINT | 203 | =?+- | Zone 0 = ZONE.1 1 = ZONE.2 2 = ZONE.3 3 = ZONE.4 253 = ALL.INPUT 254 = ALL 254 = ALL.ZONE 255 = CURRENT [None = CURRENT] | 0-100 | No | [For Zone 1] TINT(ZONE.1)=50 TINT(ZONE.1):50 [For the current zone] TINT=55 TINT:55 | See Main -> Image Adjust -> Tint |
| Treble | AUDIO.TREBLE | 1005 | =?+- | | 0-100 | No | AUDIO.TREBLE=50 AUDIO.TREBLE:50 | See Main -> Audio -> Treble |
| Use Network Time | NETWORK.NTP | 1209 | =? | | 0 = OFF 1 = ON | Yes | NETWORK.NTP=ON NETWORK.NTP:ON | See Main -> Advanced Settings -> Schedule -> Set Date and Time -> Use Network Time |
| Version Info | BUILD.INFO | 2302 | ? | 0 = DATE.SCP 1 = VERSION.SCP 3 = DATE.VP 4 = VERSION.VP 5 = SRC.INFO.VP 6 = VERSION. HDMI 7 = VERSION.FRC 8 = PKG.DATE 9 = PKG.VERSION | String | Yes | BUILD.INFO(PKG.VERSION)? BUILD.INFO(PKG.VERSION):"1.0.600" | See Main -> Information -> System Information |
| Volume | AUDIO.VOLUME | 1006 | =?+- | | 0-100 | No | AUDIO.VOLUME=50 AUDIO.VOLUME:50 | See Main -> Audio -> Volume |

Current Zone Layout

| Value | Name | Layout | Current Zone |
|-------|------|-------------|--------------|
| 0 | S.1 | Single View | Zone 1 |
| 28 | Q.1 | Quad View | Zone 1 |
| 29 | Q.2 | Quad View | Zone 2 |
| 30 | Q.3 | Quad View | Zone 3 |
| 31 | Q.4 | Quad View | Zone 4 |

Key

| Value | Name | Equivalent Remote Control Button | Description |
|-------|--------------|----------------------------------|--|
| 0 | UP | UP | Navigate up |
| 1 | DOWN | DOWN | Navigate down |
| 2 | MENU | MENU | Opens the menu |
| 3 | SOURCE | [None] | Toggles the source on the current zone |
| 5 | VOLUME.PLUS | VOL + | Volume increase |
| 6 | VOLUME.MINUS | VOL - | Volume decrease |
| 9 | EXIT | [None] | Exits the menu |
| 12 | LEFT | LEFT | Navigate left |
| 13 | ENTER | ENTER | Selects the current menu item |
| 14 | PREV | PREV | Returns to the previous menu |
| 15 | RIGHT | RIGHT | Navigate right |
| 17 | KEY.1 | 1 | Number button 1 |
| 18 | KEY.2 | 2 | Number button 2 |
| 19 | KEY.3 | 3 | Number button 3 |
| 20 | KEY.4 | 4 | Number button 4 |
| 21 | KEY.5 | 5 | Number button 5 |
| 22 | KEY.6 | 6 | Number button 6 |
| 23 | KEY.7 | 7 | Number button 7 |
| 24 | KEY.8 | 8 | Number button 8 |
| 25 | KEY.9 | 9 | Number button 9 |
| 26 | MUTE | MUTE | Audio mute |
| 32 | KEY.0 | 0 | Number button 0 |
| 256 | STDBY.TOGGLE | [None] | Toggles the power on and off |

| Value | Name | Equivalent Remote Control Button | Description |
|-------|--------------|----------------------------------|--|
| 257 | STDBY.ENTER | OFF | Power off |
| 258 | STDBY.EXIT | ON | Power on |
| 259 | MENU.PREV | [None] | Returns to the previous menu |
| 260 | TOP | TOP | Selects the top line in the current menu |
| 261 | PRESETS | PRESETS | Not used |
| 262 | PRESET1 | PRESET 1 | Not used |
| 263 | PRESET2 | PRESET 2 | Not used |
| 264 | PRESET3 | PRESET 3 | Not used |
| 265 | PRESET4 | PRESET 4 | Not used |
| 266 | ZONE1 | ZONE 1 | Selects the input for Zone 1 |
| 267 | ZONE2 | ZONE 2 | Selects the input for Zone 2 |
| 268 | ZONE3 | ZONE 3 | Selects the input for Zone 3 |
| 269 | ZONE4 | ZONE 4 | Selects the input for Zone 4 |
| 270 | PIP.MODE | PIP MODE | Not used |
| 271 | PIP.SWAP | PIP SWAP | Not used |
| 272 | HDMI1 | HDMI 1 | Selects HDMI 1 for the current zone |
| 273 | HDMI2 | HDMI 2 | Selects HDMI 2 for the current zone |
| 274 | HDMI3 | HDMI 3 | Selects HDMI 3 for the current zone |
| 275 | HDMI4 | HDMI 4 | Selects HDMI 4 for the current zone |
| 276 | DISPLAY.PORT | DP | Selects DP for the current zone |
| 277 | DVI | DVI | Not used |
| 278 | VGA | VGA | Not used |
| 279 | OPS | OPS | Not used |
| 280 | WALL | VIDEO WALL | Not used |
| 281 | COLOR | COLOR | Not used |
| 282 | MISC | MISC | Opens the Image Information menu |
| 283 | ARROW.LEFT | ◀ | Not used |
| 284 | ARROW.RIGHT | ▶ | Not used |
| 285 | STAR.STAR | ** | Not used |

Timezone

| Value | Name | Description |
|-------|--|--|
| 0 | UTCM1200.INTERNATIONAL.DATE.LINE.WEST | (UTC-12:00) International Date Line West |
| 1 | UTCM1100.COORDINATED.UNIVERSAL.TIMEM11 | (UTC-11:00) Coordinated Universal Time -11 |
| 2 | UTCM1000.HAWAII | (UTC-10:00) Hawaii |
| 3 | UTCM0900.ALASKA | (UTC-09:00) Alaska |
| 4 | UTCM0800.BAJA.CALIFORNIA | (UTC-08:00) Baja California |
| 5 | UTCM0800.PACIFIC.TIME.US.CANADA | (UTC-08:00) Pacific Time (US and Canada) |
| 6 | UTCM0700.ARIZONA | (UTC-07:00) Arizona |
| 7 | UTCM0700.CHIHUAHUA.LA.PAZ.MAZATLAN | (UTC-07:00) Chihuahua, La Paz, Mazatlan |
| 8 | UTCM0700.MOUNTAIN.TIME.US.CANADA | (UTC-07:00) Mountain Time (US and Canada) |
| 9 | UTCM0600.CENTRAL.AMERICA | (UTC-06:00) Central America |
| 10 | UTCM0600.CENTRAL.TIME.US.CANADA | (UTC-06:00) Central Time (US and Canada) |
| 11 | UTCM0600.GUADALAJARA.MEXICO.CITY.MONTERREY | (UTC-06:00) Guadalajara, Mexico City, Monterrey |
| 12 | UTCM0600.SASKATCHEWAN | (UTC-06:00) Saskatchewan |
| 13 | UTCM0500.BOGOTA.LIMA.QUITO.RIO.BRANCO | (UTC-05:00) Bogota, Lima, Quito |
| 14 | UTCM0500.CHETUMAL | (UTC-05:00) Chetumal |
| 15 | UTCM0500.EASTERN.TIME.US.CANADA | (UTC-05:00) Eastern Time (US and Canada) |
| 16 | UTCM0500.INDIANA.EAST | (UTC-05:00) Indiana (East) |
| 17 | UTCM0430.CARACAS | (UTC-04:30) Caracas |
| 18 | UTCM0400.ASUNCION | (UTC-04:00) Asuncion |
| 19 | UTCM0400.ATLANTIC.TIME.CANADA | (UTC-04:00) Atlantic Time (Canada) |
| 20 | UTCM0400.CUIABA | (UTC-04:00) Cuiaba |
| 21 | UTCM0400.GEORGETOWN.LA.PAZ.MANAUS.SAN.JUAN | (UTC-04:00) Georgetown, La Paz, Manaus, San Juan |
| 22 | UTCM0330.NEWFOUNDLAND | (UTC-03:30) Newfoundland |
| 23 | UTCM0300.BRASILIA | (UTC-03:00) Brasilia |
| 24 | UTCM0300.CAYENNE.FORTALEZA | (UTC-03:00) Cayenne, Fortaleza |
| 25 | UTCM0300.CITY.OF.BUENOS.AIRES | (UTC-03:00) Buenos Aires |
| 26 | UTCM0300.GREENLAND | (UTC-03:00) Greenland |
| 27 | UTCM0300.MONTEVIDEO | (UTC-03:00) Montevideo |
| 28 | UTCM0300.SALVADOR | (UTC-03:00) Salvador |
| 29 | UTCM0300.SANTIAGO | (UTC-03:00) Santiago |
| 30 | UTCM0200.COORDINATED.UNIVERSAL.TIMEM02 | (UTC-02:00) Coordinated Universal Time -02 |

| Value | Name | Description |
|-------|--|--|
| 31 | UTCM0100.AZORES | (UTC-01:00) Azores |
| 32 | UTCM0100.CABO.VERDE.IS | (UTC-01:00) Cabo Verde Is. |
| 33 | UTC.CASABLANCA | (UTC) Casablanca |
| 34 | UTC.COORDINATED.UNIVERSAL.TIME | (UTC) Coordinated Universal Time |
| 35 | UTC.DUBLIN.EDINBURGH.LISBON.LONDON | (UTC) Dublin, Edinburgh, Lisbon, London |
| 36 | UTC.MONROVIA.REYKJAVIK | (UTC) Monrovia, Reykjavik |
| 37 | UTCP0100.AMSTERDAM.BERLIN.BERN.ROME. STOCKHOLM.VIENNA | (UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna |
| 38 | UTCP0100.BELGRADE.BRATISLAVA.BUDAPEST. LJUBLJANA.PRAGUE | (UTC+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague |
| 39 | UTCP0100.BRUSSELS.COPENHAGEN.MADRID.PARIS | (UTC+01:00) Brussels, Copenhagen, Madrid, Paris |
| 40 | UTCP0100.SARAJEVO.SKOPJE.WARSAW.ZAGREB | (UTC+01:00) Sarajevo, Skopje, Warsaw, Zagreb |
| 41 | UTCP0100.WEST.CENTRAL.AFRICA | (UTC+01:00) West Central Africa |
| 42 | UTCP0100.WINDHOEK | (UTC+01:00) Windhoek |
| 43 | UTCP0200.AMMAN | (UTC+02:00) Amman |
| 44 | UTCP0200.ATHENS.BUCHAREST | (UTC+02:00) Athens, Bucharest |
| 45 | UTCP0200.BEIRUT | (UTC+02:00) Beirut |
| 46 | UTCP0200.CAIRO | (UTC+02:00) Cairo |
| 47 | UTCP0200.DAMASCUS | (UTC+02:00) Damascus |
| 48 | UTCP0200.HARARE.PRETORIA | (UTC+02:00) Harare, Pretoria |
| 49 | UTCP0200.HELSINKI.KYIV.RIGA.SOFIA.TALLINN.VILNIUS | (UTC+02:00) Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius |
| 50 | UTCP0200.ISTANBUL | (UTC+02:00) Istanbul |
| 51 | UTCP0200.JERUSALEM | (UTC+02:00) Jerusalem |
| 52 | UTCP0200.KALININGRAD.RTZ.1 | (UTC+02:00) Kaliningrad (RTZ 1) |
| 53 | UTCP0200.TRIPOLI | (UTC+02:00) Tripoli |
| 54 | UTCP0300.BAGHDAD | (UTC+03:00) Baghdad |
| 55 | UTCP0300.KUWAIT.RIYADH | (UTC+03:00) Kuwait, Riyadh |
| 56 | UTCP0300.MINSK | (UTC+03:00) Minsk |
| 57 | UTCP0300.MOSCOW.ST.PETERSBURG.VOLGOGRAD. RTZ.2 | (UTC+03:00) Moscow, St. Petersburg, Volgograd (RTZ 2) |
| 58 | UTCP0300.NAIROBI | (UTC+03:00) Nairobi |
| 59 | UTCP0330.TEHRAN | (UTC+03:30) Tehran |
| 60 | UTCP0400.ABU.DHABI.MUSCAT | (UTC+04:00) Abu Dhabi, Muscat |
| 61 | UTCP0400.BAKU | (UTC+04:00) Baku |

| Value | Name | Description |
|-------|---|---|
| 62 | UTCP0400.IZHEVSK.SAMARA.RTZ.3 | (UTC+04:00) Izhevsk, Samara (RTZ 3) |
| 63 | UTCP0400.PORT.LOUIS | (UTC+04:00) Port Louis |
| 64 | UTCP0400.TBILISI | (UTC+04:00) Tbilisi |
| 65 | UTCP0400.YEREVAN | (UTC+04:00) Yerevan |
| 66 | UTCP0430.KABUL | (UTC+04:30) Kabul |
| 67 | UTCP0500.ASHGABAT.TASHKENT | (UTC+05:00) Tashkent |
| 68 | UTCP0500.EKATERINBURG.RTZ.4 | (UTC+05:00) Ekaterinburg (RTZ 4) |
| 69 | UTCP0500.ISLAMABAD.KARACHI | (UTC+05:00) Islamabad, Karachi |
| 70 | UTCP0530.CHENNAI.KOLKATA.MUMBAI.NEW.DELHI | (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi |
| 71 | UTCP0530.SRI.JAYAWARDENEPURA | (UTC+05:30) Sri Jayawardenepura |
| 72 | UTCP0545.KATHMANDU | (UTC+05:45) Kathmandu |
| 73 | UTCP0600.ASTANA | (UTC+06:00) Astana |
| 74 | UTCP0600.DHAKA | (UTC+06:00) Dhaka |
| 75 | UTCP0600.NOVOSIBIRSK.RTZ.5 | (UTC+06:00) Novosibirsk (RTZ 5) |
| 76 | UTCP0630.YANGON.RANGOON | (UTC+06:30) Yangon (Rangoon) |
| 77 | UTCP0700.BANGKOK.HANOI.JAKARTA | (UTC+07:00) Bangkok, Hanoi, Jakarta |
| 78 | UTCP0700.KRASNOYARSK.RTZ.6 | (UTC+07:00) Krasnoyarsk (RTZ 6) |
| 79 | UTCP0800.BEIJING.CHONGQING.HONG.KONG.URUMQI | (UTC+08:00) Beijing, Chongqing, Hong Kong, Urumqi |
| 80 | UTCP0800.IRKUTSK.RTZ.7 | (UTC+08:00) Irkutsk (RTZ 7) |
| 81 | UTCP0800.KUALA.LUMPUR.SINGAPORE | (UTC+08:00) Kuala Lumpur, Singapore |
| 82 | UTCP0800.PERTH | (UTC+08:00) Perth |
| 83 | UTCP0800.TAIPEI | (UTC+08:00) Taipei |
| 84 | UTCP0800.ULAANBAATAR | (UTC+08:00) Ulaanbaatar |
| 85 | UTCP0900.OSAKA.SAPPORO.TOKYO | (UTC+09:00) Osaka, Sapporo, Tokyo |
| 86 | UTCP0900.SEOUL | (UTC+09:00) Seoul |
| 87 | UTCP0900.YAKUTSK.RTZ.8 | (UTC+09:00) Yakutsk (RTZ 8) |
| 88 | UTCP0930.ADELAIDE | (UTC+09:30) Adelaide |
| 89 | UTCP0930.DARWIN | (UTC+09:30) Darwin |
| 90 | UTCP1000.BRISBANE | (UTC+10:00) Brisbane |
| 91 | UTCP1000.CANBERRA.MELBOURNE.SYDNEY | (UTC+10:00) Canberra, Melbourne, Sydney |
| 92 | UTCP1000.GUAM.PORT.MORESBY | (UTC+10:00) Guam, Port Moresby |
| 93 | UTCP1000.HOBART | (UTC+10:00) Hobart |
| 94 | UTCP1000.MAGADAN | (UTC+10:00) Magadan |

| Value | Name | Description |
|-------|---|---|
| 95 | UTCP1000.VLADIVOSTOK.MAGADAN.RTZ.9 | (UTC+11:00) Vladivostok (RTZ 9) |
| 96 | UTCP1100.CHOKURDAKH.RTZ.10 | (UTC+11:00) Chokurdakh (RTZ 10) |
| 97 | UTCP1100.SOLOMON.IS.NEW.CALEDONIA | (UTC+11:00) Solomon Is., New Caledonia |
| 98 | UTCP1200.ANADYR.PETROPAVLOVSK.KAMCHATSKY.RTZ.11 | (UTC+12:00) Anadyr, Petropavlovsk-Kamchatsky (RTZ 11) |
| 99 | UTCP1200.AUCKLAND.WELLINGTON | (UTC+12:00) Auckland, Wellington |
| 100 | UTCP1200.COORDINATED.UNIVERSAL.TIMEP12 | (UTC+12:00) Coordinated Universal Time +12 |
| 101 | UTCP1200.FIJI | (UTC+12:00) Fiji |
| 102 | UTCP1300.NUKU.ALOFA | (UTC+13:00) Nuku'alofa |
| 103 | UTCP1300.SAMOA | (UTC+13:00) Samoa |
| 104 | UTCP1400.KIRITIMATI.ISLAND | (UTC+14:00) Kiritimati Island |

Discontinued

Sending Serial Commands via USB

The USB-B connector accepts the same serial command set as RS232. As most PCs no longer have RS232 connections, using the USB-B connector becomes a convenient method for performing serial communication with the display.

Installing the QE Series USB drivers

Before using USB for serial communication, the USB drivers must be installed. This section describes the steps necessary to install the USB drivers. You can skip this section if you have already installed the USB drivers on your computer.

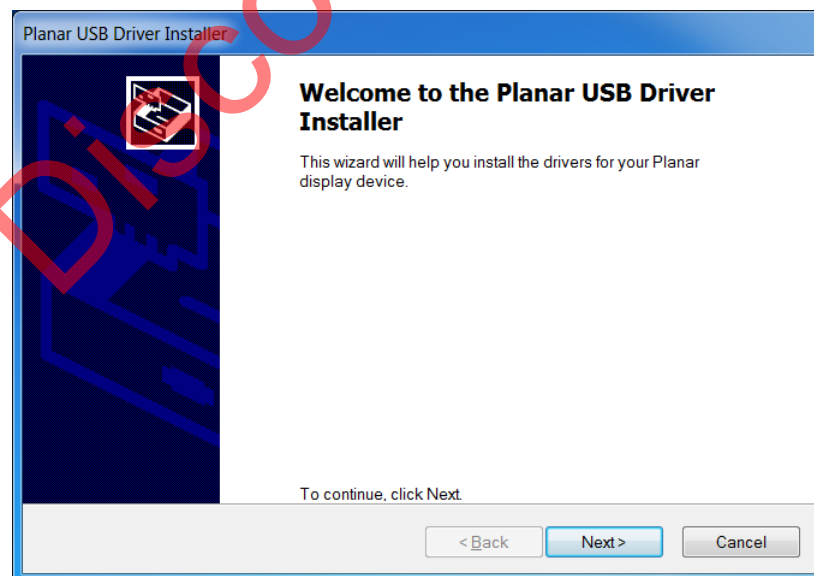
Automatically installing the USB drivers

In most cases, the USB driver installation can be performed using the automated driver installation program included on the USB flash drive in your accessory kit.

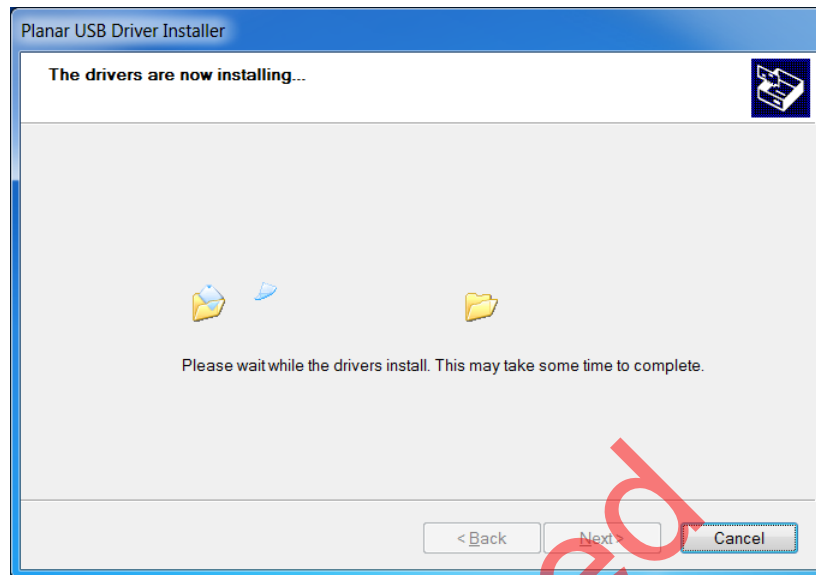
- If using a 64-bit version of Windows, use the CP210xVCPInstaller_x64.exe installation program.
- If using a 32-bit version of Windows, use the CP210xVCPInstaller_x86.exe installation program.

If you're unsure whether your machine is 32-bit or 64-bit, try both installation programs. If the selected program is for a different architecture, the installer will inform you to use the other installation program.

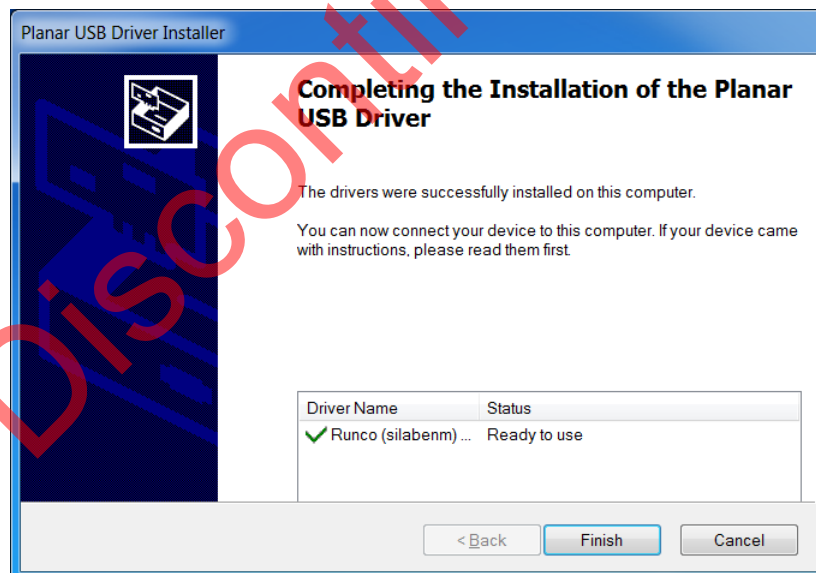
- 1 When the Planar USB Driver Installer page opens, click "Next".



- The USB drivers will be automatically installed.



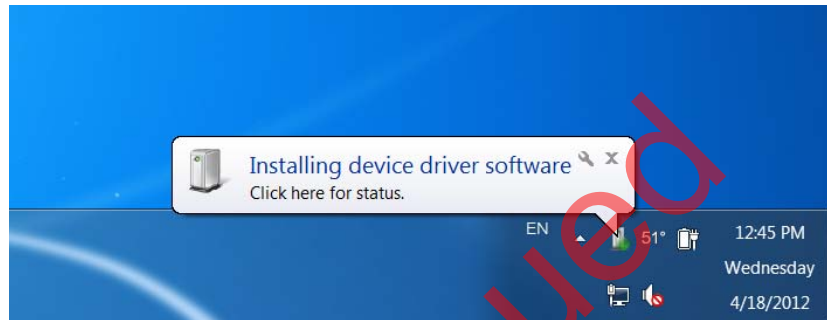
- When the installation completes, click "Finish". The USB driver installation process is now complete.



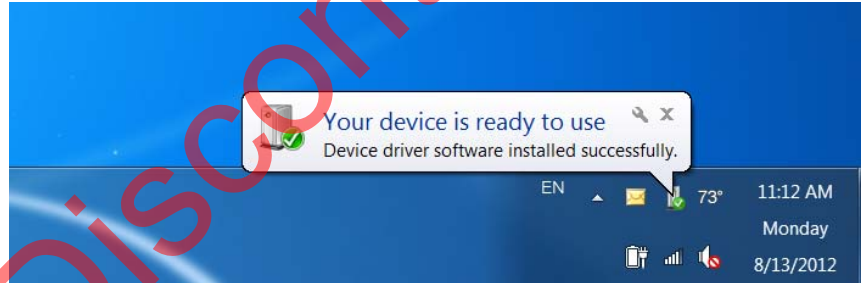
Manually installing the USB drivers

If the automatic USB driver installation doesn't succeed, you can follow the steps below to manually install the USB drivers. The USB flash drive in your accessory kit contains the USB drivers for manual installation.

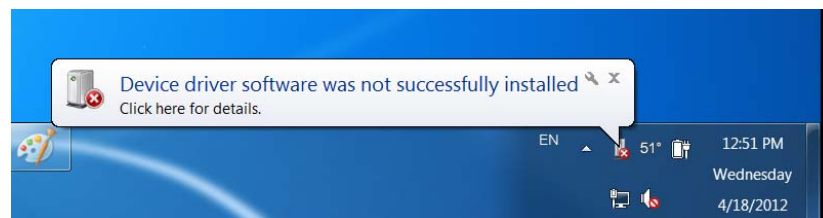
- 1 Plug in the USB cable to your computer and to the QE Series panel.
- 2 Windows will detect the new hardware and attempt to install the drivers on its own. If you do not see the "Installing device driver software" message, then the driver installation previously failed. Skip to step 5.



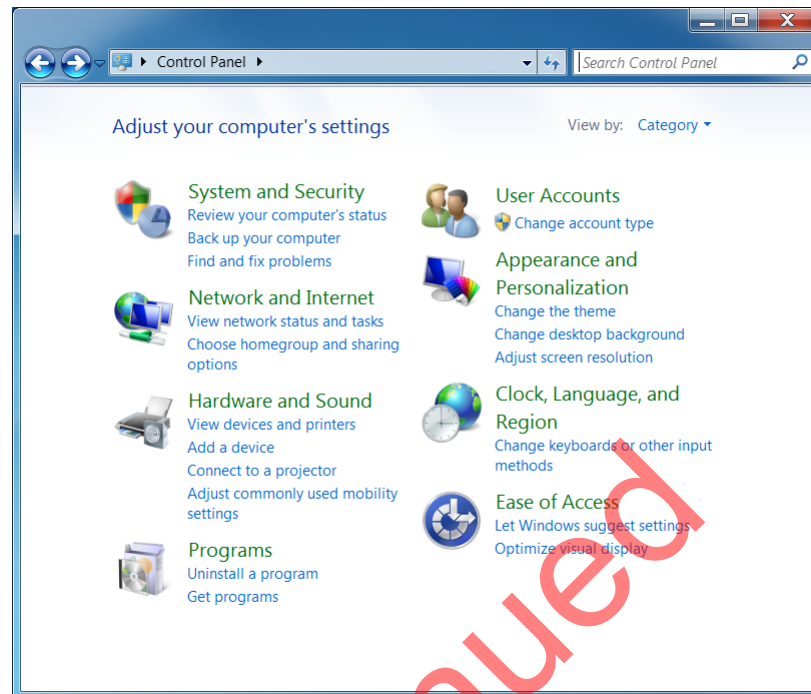
- 3 If driver installation succeeds, you will see a message like the one shown below. If so, driver installation is complete.



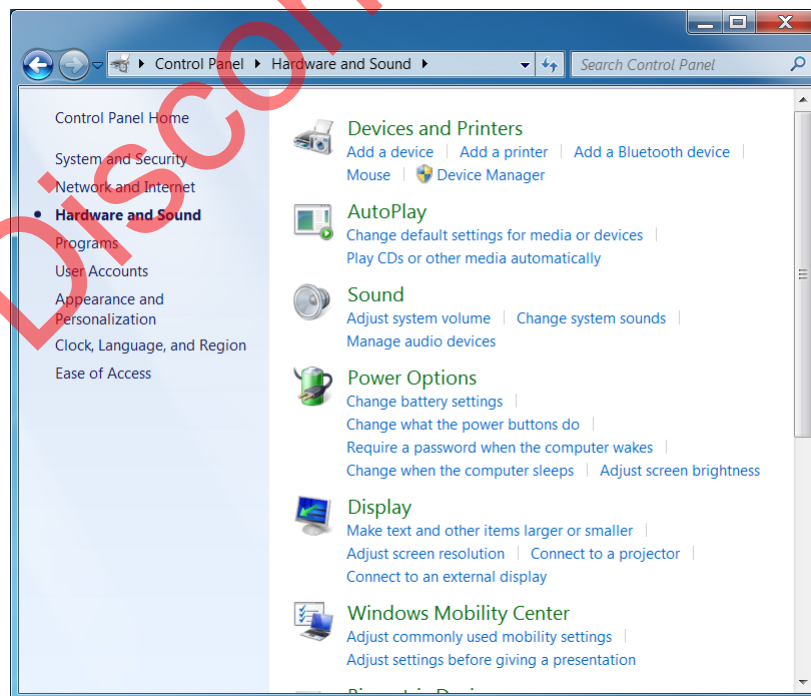
- 4 If Windows' attempt at installing the drivers fails, you will need to manually install the drivers using the steps below.



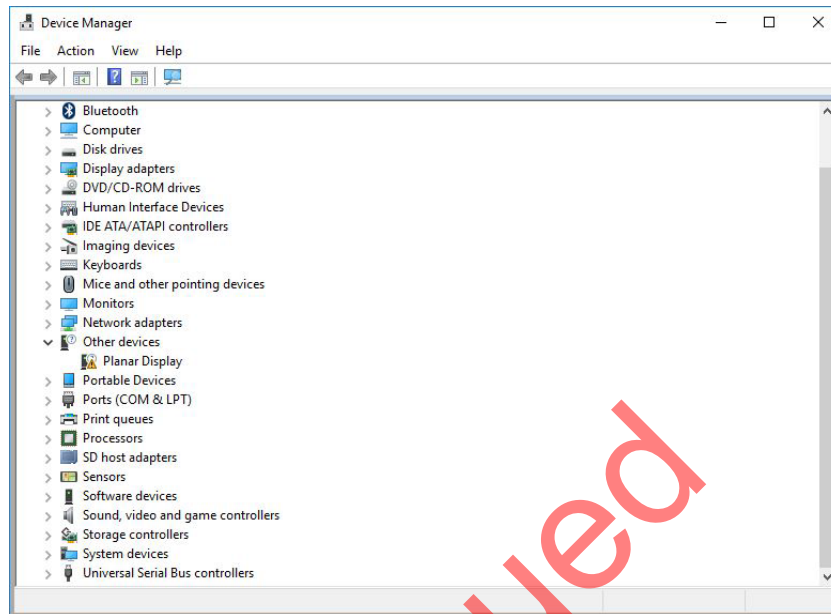
5 Open the Start menu and select "Control Panel".



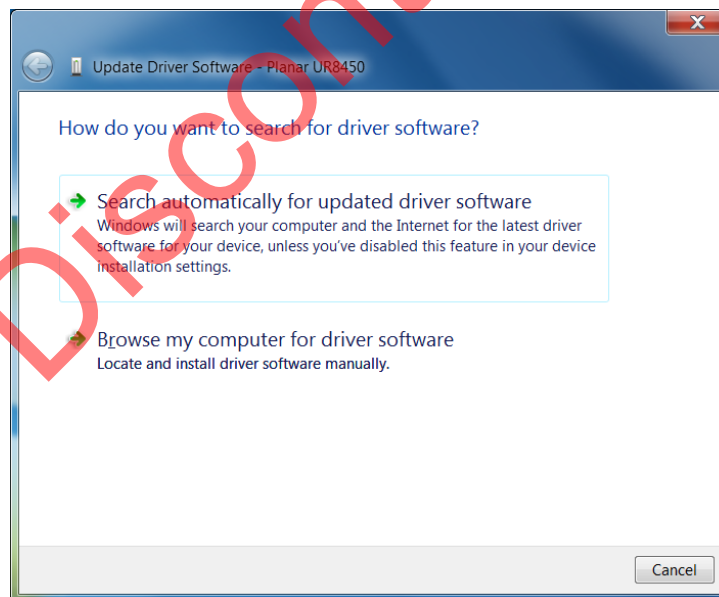
6 Select Hardware and Sound. In the following menu, under Devices and Printers, select "Device Manager".



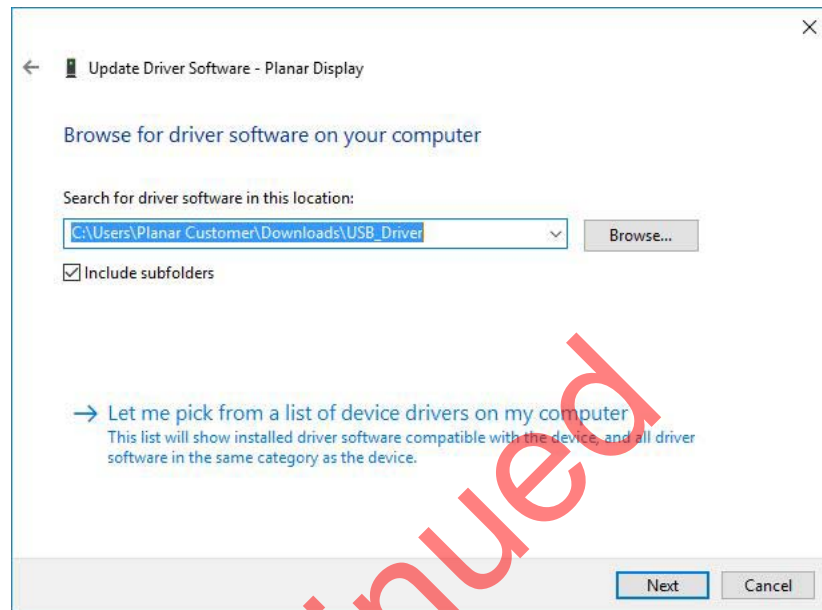
- 7 In the Device Manager, there will be a "Planar Display" item in the "Other Devices" section. Right-click on Planar Display and select "Update Driver Software".



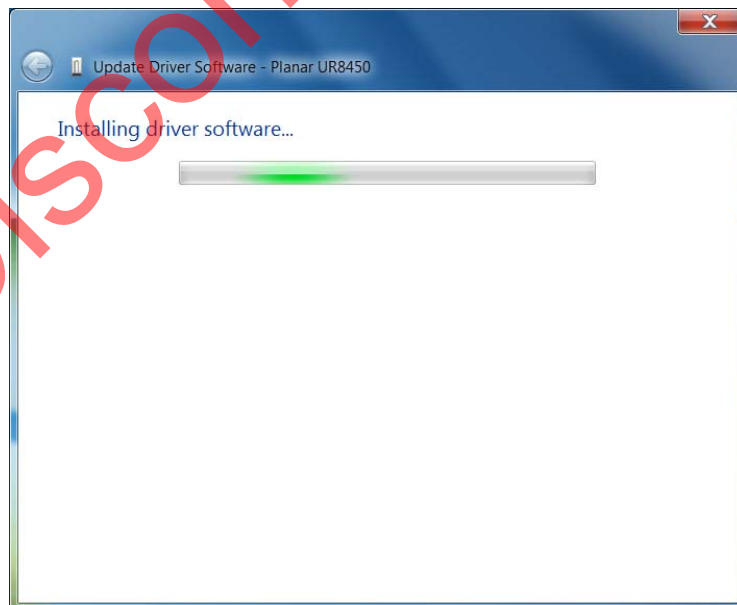
- 8 Follow the steps defined in the Update Driver Software wizard as follows.
 - a On the initial screen, select "Browse my computer for driver software".



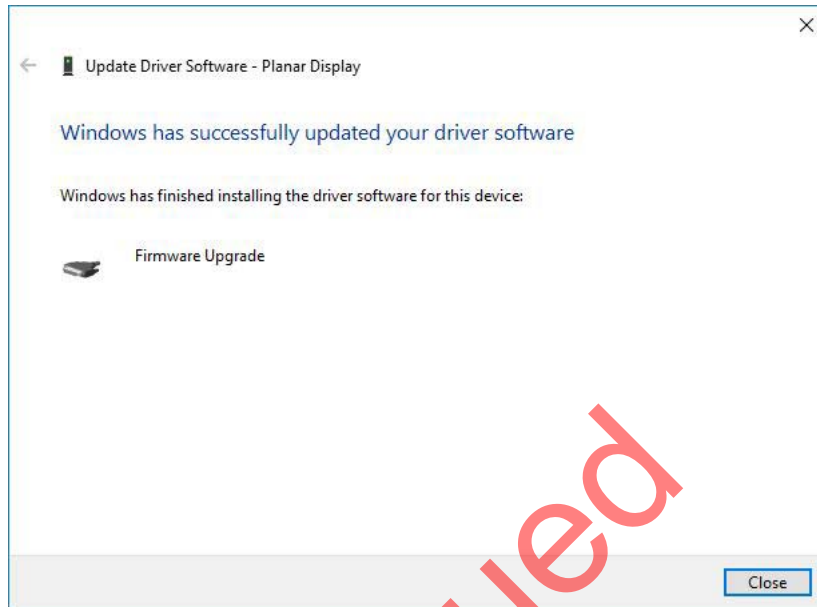
- b** Make sure the “Include subfolders” checkbox is checked. The USB drivers are included on the USB flash drive in the accessory kit; they can also be obtained from <http://www.planar.com/support>. Use the “Browse” button to locate the directory where the USB drivers are located. Click “Next”.



- c** The Update Driver Software wizard will search the directory for the proper USB drivers and install them.



- d When the installation completes, click “Close”. The USB driver installation process is now complete.



Using the QE Series USB Connection

Once the USB drivers are installed, the PC will recognize the USB-B connection as a regular serial port. The USB-B connection will appear in the COM port list of each serial terminal program. Any terminal program such as Tera Term can be used to test the connection.

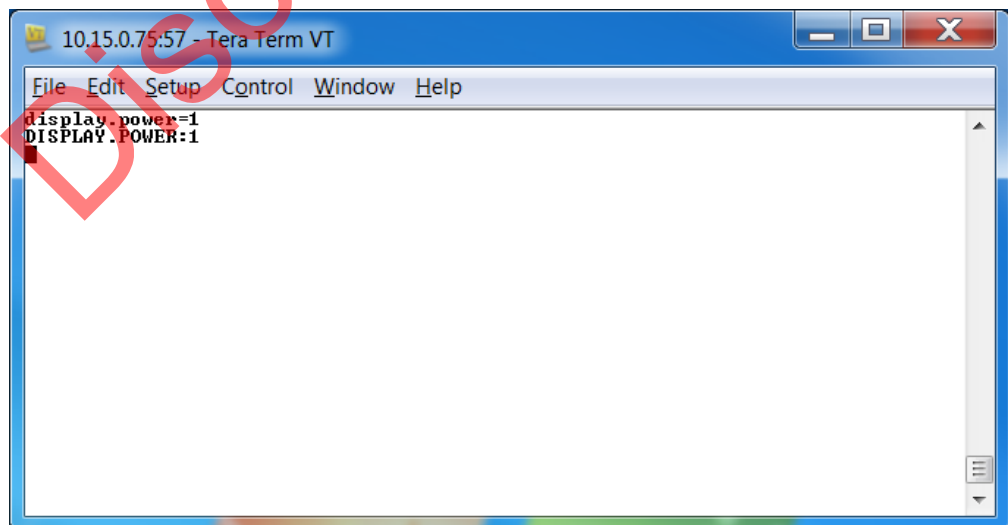
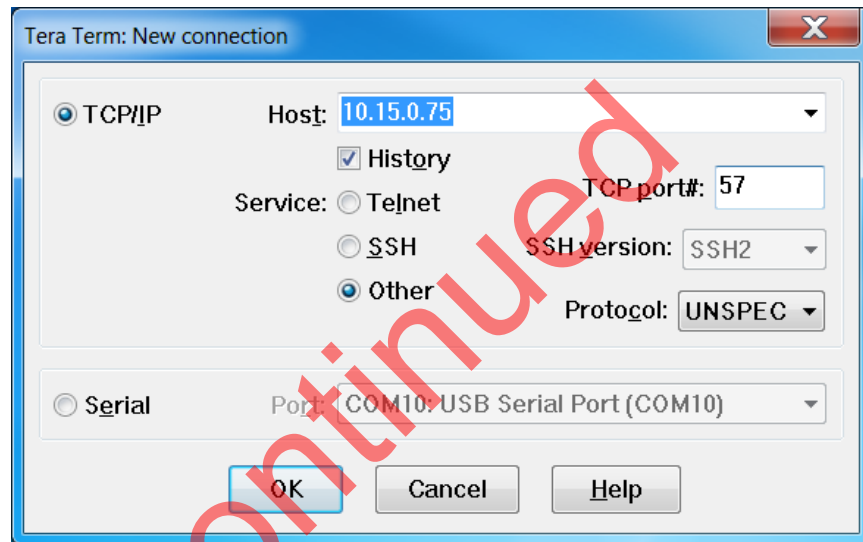
Discontinued

Sending RS232 Commands Via TCP or UDP

TCP and UDP port 57 accept the same serial command set as RS232. It is convenient for IP control applications and can be tested with a TCP terminal program such as Tera Term or a UDP terminal program such as Hercules.

Notice the following in the TCP example below using Tera Term:

- The IP address is 10.15.0.75
- Port 57 is selected
- Service is set to "Other" to indicate that TCP is being used without Telnet or SSH



Notice the following in the UDP example below using Hercules:

- The IP address is 10.15.0.67
- Port 57 is selected
- "444953504C41592E504F5745523D310D" in the Send box is hex for "DISPLAY.POWER=1"

Note: Most UDP terminal programs won't automatically send the [CR] at the end of the command, so the hex command is used to do this manually.

