User Guide

RPS and Video Controller RS232

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Manual Part Number: 020-1332-00I

Contents

RS232 Communication

RS232 control is not necessary for operation, but is a convenient way to control the Planar Remote Power Supply and Planar Video Controller from a control system at a distance. Plus, you can send inquiries to the system 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. See the sections "Sending Serial Commands via USB" on page 37 and "Sending Serial Commands Via TCP or UDP" on page 46 for details on those physical connections.

Applicable Models

This RS-232 user manual applies to all Planar RPS and Video Controller models. RS232 user manuals for other products can be found at www.planar.com/support/.
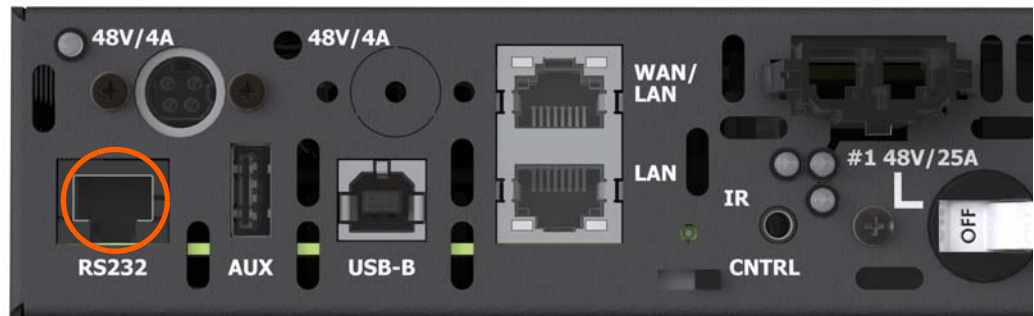
RS232 Setup

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.
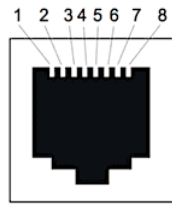
Remote Power Supply Models

Video Controller Models

RJ45 and DB9 Standard RS232 Pinout

Pin RJ45 Jack	Signal	Description
6	Rx	Receive
3	Tx	Transmit
4, 5	GND	Ground
1, 2, 7, 8		No Connect

Pin DB9	Signal	Description
2	Rx	Receive
3	Tx	Transmit
5	GND	Ground
1, 4, 6, 7, 8, 9		No Connect
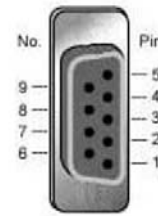
RS232 Protocol

Command Structure

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

- OPCODE is the command code (e.g. "IR.CODE"). 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. "(STATIC)"]. 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 9). 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 9).
    - '#' reads the setting value in numeric form (see "Examples" on page 9).
    - '+' 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.
    - TIMEOUT indicates that a command was not received by a host piece of equipment. This may be due to disconnected equipment or a poor communication path.
    - [No operator] denotes an action. In this case, there's no operator and no operand.

- OPERAND indicates the data to be sent or the return 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 9).
  - 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 9).
  - 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. "SYSTEM.STATE", "system.state" and "System.StaTe" are all the same). Responses will always be in capital letters.
- Excessive white space is allowed (e.g. "AUTO.ON=0", "AUTO.ON = 0" and "AUTO.ON   =   0" are all the same).
- Modifiers and operands can be separated by commas, spaces or both (e.g. "PANEL.ACTIVE=0 0 1280 720", "PANEL.ACTIVE=0,0,1280,720" and "PANEL.ACTIVE=0, 0, 1280, 720" 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). Not all commands shown are available.

Command	Response	Notes
ipv4.address(static)="10.15.0.220" [CR]	IPV4.ADDRESS(STATIC):"10.15.0.220" [CR]	Example command with a string operator
reset[CR]	RESET@ACK [CR]	Example action command (no operator or operand)
reset[CR]	RESET^NAK [CR]	Example action command that cannot be processed at this time
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)

RS232 Codes

Notes:

- The examples are written with the command first and the *response in italics*. Example:
  - Command: IPV4.ADDRESS(STATIC)=192.168.0.12
  - Response: *IPV4.ADDRESS(STATIC):192.168.0.12*
- 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 IPV4.ADDRESS command is STATIC, so the following two commands are identical:
  - IPV4.ADDRESS(STATIC)=192.168.0.12
  - IPV4.ADDRESS=192.168.0.12
- '!' 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.

Advanced

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
ALERT.CHECK	Check Alert Status	2326	!			ALERT.CHECK ALERT.CHECK@ACK	Clears existing alerts and evaluates the system for alerts that are may be active. Resends alerts based on the alert settings report via check boxes.	No	6.0	Yes	No
ALERT.CLEAR	Clear Alerts	2323	!	0=ALL 1=WEB 2=EMAIL 3=SNMP		ALERT.CLEAR(WEB) ALERT.CLEAR(WEB):@ACK ALERT.CLEAR ALERT.CLEAR:@ACK	Clears alerts for the specified UI. If no modifier is provided, all alerts are cleared.	Yes	5.1	Yes	Yes
DEVICE.REBOOT	Unit Connected Reboot	2405	!	Blank VC# PS# PSW#		DEVICE.REBOOT(PS2) DEVICE.REBOOT(PS2)@ACK	Reboots the specified device. No modifier reboots all LAN connected components. For all device reboot, see SYSTEM.REBOOT.	Yes	2.1 10.0[1]	Yes	No

HELP	Help	2300	=?	0 = FIRST
				2147483647 = NEXT
					String	HELP=OSD.STATUS
						HELP:"OSD.STATUS\
						   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\
							Displays information for each command.
							
							To get a list of all commands, first enter the following command: HELP(FIRST)?
							
							Then enter the following command continuously until it returns NAK: HELP(NEXT)?
								Yes	1.x	Yes	Yes

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby

KEY	Remote Key Codes	1200	=?		0=UP
					1=DOWN
					2=MENU
					9=EXIT
					12=LEFT
					13=ENTER
					14=PREV
					15=RIGHT
					17=KEY.1
					18=KEY.2
					19=KEY.3
					20=KEY.4
					21=KEY.5
					22=KEY.6
					23=KEY.7
					24=KEY.8
					25=KEY.9
					32=KEY.0
					257=STDBY.ENTER
					258=STDBY.EXIT
					260=TOP
					261=PRESETS
					262=PRESET1
					263=PRESET2
					264=PRESET3
					265=PRESET4
					280=WALL
					281=COLOR
					282=MISC
					283=ARROW.LEFT
					284=ARROW.RIGHT
					285=STAR.STAR
						KEY=262
						KEY:262
						KEY=STAR.STAR
						KEY:STAR.STAR
							Refer to OSM section for key definitions:
							UP=ARROW UP
							DOWN=ARROW DOWN
							MENU=MENU TOGGLE
							EXIT=EXIT MENU LEVEL
							LEFT=ARROW LEFT
							ENTER=SELECT
							PREV=PREVIOUS MENU
							RIGHT=ARROW RIGHT
							KEY.1=NUMBER 1
							KEY.2=NUMBER 2
							KEY.3=NUMBER 3
							KEY.4=NUMBER 4
							KEY.5=NUMBER 5
							KEY.6=NUMBER 6
							KEY.7=NUMBER 7
							KEY.8=NUMBER 8
							KEY.9=NUMBER 9
							KEY.0=NUMBER 0
							STDBY.ENTER=SYSTEM OFF
							STDBY.EXIT=SYSTEM ON
							TOP=TOP MENU HIGHLIGHT
							PRESETS=OPEN PRESET MENU
							PRESET1=SWITCH TO PRESET 1
							PRESET2=SWITCH TO PRESET 2
							PRESET3=SWITCH TO PRESET 3
							PRESET4=SWITCH TO PRESET 4
							WALL=OPEN BIG PICTURE MENU
							COLOR=OPEN COLOR BALANCE MENU
							MISC=OPEN BRIGHTNESS MENU
							ARROW.LEFT=CYCLE PANEL # LEFT IN COLOR BALANCE
							ARROW.RIGHT=CYCLE PANEL # RIGHT IN COLOR BALANCE
							STAR.STAR=SELECT ALL PANELS IN COLOR BALANCE
								No	2.0	Yes	Yes

LOCAL.DIMMING	Enable Local Dimming	1415	=?+-		0=OFF 1=ON	LOCAL.DIMMING? LOCAL.DIMMING:OFF	Toggles between local dimming on or off. Only effective on LCD panels which support capability.	No	2.0 6.0[1]	Yes	Yes
LOOP.ROUTE	Loop Signal Output	112	=?	VC#	1=IN1 2=IN2 3=IN3 4=IN4 5=DP	LOOP.ROUTE(VC2)=IN3 LOOP.ROUTE(VC2):IN3	Gets / sets the input that will be routed to the loop out on the specified video controller.	No	4.0	Yes	No

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
LOOP.ROUTE.AUTO	Auto Loop Routing	113	=?	VC#	0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE	LOOP.ROUTE.AUTO(VC2)? LOOP.ROUTE.AUTO(VC2):TRUE	Gets / sets the loop out on the specified video controller will be overridden by zone setup signal requests.	No	4.0	No	No
MASTER.SWITCH	Master Component Activation	1913	=?+-	VC# PS#	0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE	MASTER.SWITCH(VC1)=1 MASTER.SWITCH:TRUE	Gets / sets the specified equipment to be the master component. Only one component in an interconnected system must be set to master or conflicts will occur. This overrides the physical switch on the RPS	Yes	2.0 5.1[1]	Yes	Yes
MESSAGE.CLEAR	System Messages	2325	!			MESSAGE.CLEAR MESSAGE.CLEAR:@ACK	Clears any system messages from the log	Yes	5.1	Yes	Yes
PANEL.ACTIVE.AUTO	Automatic Panel Active Area	1521	=?		0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE	PANEL.ACTIVE.AUTO? PANEL.ACTIVE.AUTO:YES	When enabled panel active rects are computed automatically. Disable to use PANEL.ACTIVE to override automatic active area.	No	3.0	No	No
PANEL.POWER	Panel On/Off	1538	=?	PN# ALL	0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE	PANEL.POWER(PN2)? PANEL.POWER(PN2):0	Gets / sets the specified luminating devices to on or off	No	7.0 9.0[1]	Yes	No
PANEL.SYNC.ENABLE	Panel Sync Enabled	1520	=?		0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE	PANEL.SYNC.ENABLE? PANEL.SYNC.ENABLE:YES	Gets / sets the scan line inversion for even row displays (LCD only).	No	2.1	No	No
RESET.PANEL	Panel Reset	1523	!	0=ALL 1-999		RESET.PANEL(3) RESET.PANEL(3):@ACK	Resets connected display equipment to factory state.	No	3.0	Yes	No
VC.AUTO.ENABLE.ADDRESS	Auto Enable VC		=?		0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE	VC.AUTO.ENABLE.ADDRESS=0 VC.AUTO.ENABLE.ADDRESS:OFF	Gets / sets the auto enabling of VC addressing to on or off.	No	8.0	Yes	Yes

[1] Updated

Basic Control

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
BACKLIGHT. INTENSITY	Brightness Intensity	1400	=?+-		0-100	BACKLIGHT.INTENSITY? BACKLIGHT.INTENSITY:80	Gets / sets the intensity of the display.	No	2.0	No	No
POWER. COMMAND	External Device Power	2702	=	PSW# or PSW,ALL PSW,GROUP PSW,NAME PS#	0=DISABLE=OFF=NO= FALSE 1=ENABLE=ON=YES= TRUE 2=CYCLE	POWER.COMMAND(PSW3)=OFF POWER.COMMAND(PSW3):"OFF" POWER.COMMAND(PSW,NAME)=CYCLE "LEFT COLUMN" 5 POWER.COMMAND(PSW,NAME): "CYCLE" "LEFT COLUMN" "5"	Sets the main power output of the specified device. Second modifier may be used to change bulk states of devices by predefined tags. Operand CYCLE may be followed by an integer that denotes a delay time in seconds for the specified device to change from the opposite power state back to its current power state. If no number is entered, 10 seconds is used. CYCLE does not apply to modifier PS#. Power supplies set to off toggle the AC input to the RPSM.	Yes	8.0 10.0[1]	Yes	No
QCONFIG	Big Picture Configure	505	=?		VC#.IN#	QCONFIG=VC2.IN3 QCONFIG:VC2.IN3	Gets / sets Big Picture of wall to specified sources.	No	2.0	No	No
SYSTEM.POWER	System Power	1408	=?+-		0=DISABLE=OFF=NO= FALSE 1=ENABLE=ON=YES= TRUE	SYSTEM.POWER=ON SYSTEM.POWER:ON	Toggles system power between on and off.	No	1.x	Yes	Yes
SYSTEM.REBOOT	System Reboot	2402	!			SYSTEM.REBOOT SYSTEM.REBOOT:@ACK	Reboots the system and all system powered connected components.	No	2.0	Yes	Yes

[1] Updated

Color Balance

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
BACKLIGHT. OFFSET	LCD Backlight Offset	1424	=?+-	PN# 0=ALL	-100..100	BACKLIGHT.OFFSET(3)=10 BACKLIGHT.OFFSET(3):10	Gets / sets panel backlight offset values for brightness matching of LCDs.	No	4.0	Yes	No
COLOR.TEMP	Color Temperature	1510	=?	PN# or integer NONE is all	0=3200K 1=5500K 2=6500K 3=8500K 4=9300K 5=NATIVE 6=CUSTOM	COLOR.TEMP? COLOR.TEMP=8500K	Gets / sets wall color temperature. Note: 5500K and NATIVE is for LCD product only and 9300K is for LED product only. To set a custom color temperature for LED, it must be set through the Planar Control Software interface. A @NAK return indicates all panels are not set the same.	No	4.0	Yes	No
GRAY.BALANCE. GAMMA	Color Balance - Gray	1504	=?	Panel ID ….and…. 0=RED 1=GREEN 2=BLUE 255=ALL	1.8 .. 2.6	GRAY.BALANCE.GAMMA(1 red)? GRAY.BALANCE.GAMMA(1 RED):2.200000	Gets / sets the gray balance value (gamma) for the given LCD and color channel.	No	4.0	No	No
RESET.BALANCE	Color Balance Reset	1506	!			RESET.BALANCE RESET.BALANCE:@ACK	Resets the color balance of all LCDs back to the last saved state	No	4.0	No	No
WALL.RGB.GAIN	LED RGB Gain Values	611	=?	0=RED 1=GREEN 2=BLUE 255=ALL	0.000 THRU 100.000	WALL.RGB.GAIN(RED)? WALL.RGB.GAIN(RED):100	Gets / sets the red, green and blue gain settings for the wall. This command applies to LED open pixel architectures only.	No	8.0	No	No
WHITE.BALANCE	White Balance Setting	1525	=?	Panel ID ….and…. 0=RED 1=GREEN 2=BLUE 255=ALL	0.0 - 100.0	WHITE.BALANCE(1 RED)? WHITE.BALANCE(1 RED):100.000000	Gets / sets the white balance value for the given LCD and color channel	No	4.0	No	No

Configuration

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
AUTO.LAYOUT	Auto Wall Layout	608	!	PN#		AUTO.LAYOUT AUTO.LAYOUT@ACK AUTO.LAYOUT(PN2) AUTO.LAYOUT(PN2)@ACK	For LCD products, the command uses the position sensors to auto layout the panels within a system. No modifier used for LCD products. When a modifier is used, the effect will be on LED cabinets within the range of the panel indicated by the modifier.	No	7.0	Yes	No
AUTO.ON	Auto Power On	1407	=?		0=DISABLED 1=POWER_ON 2=PREVIOUS_STATE	AUTO.ON=POWER_ON AUTO.ON:POWER_ON	Gets / sets if the system will turn on if the AC power is applied.	No	1.x 2.0[1]	Yes	Yes
BACKLIGHT.MAXIMUM	Maximum Brightness Setting	1417	=?+-		40-100	BACKLIGHT.MAXIMUM=50 BACKLIGHT.MAXIMUM:50	Gets / sets maximum wall brightness.	No	4.0	Yes	No
BACKLIGHT.MODE	Auto Brightness	1402	=?		0=AUTO 1=MANUAL (default)	BACKLIGHT.MODE=MANUAL BACKLIGHT.MODE:MANUAL	Gets / sets wall brightness adjustment mode, where AUTO enables the system to automatically change brightness based on ambient sensor value.	No	4.0	Yes	No
CABINET.INPUT	Active Cabinet Input	1534	=?	PN#	0=AUTO 1=HDMI1 2=HDMI2	CABINET.INPUT(PN2)=AUTO CABINET.INPUT(PN2):AUTO	Gets / sets the active input setting on the first cabinet of the specified panel.	Yes	5.1	Yes	No
CUSTOM.COLOR	Custom Color Display	1314	=?	PN# 0=ALL (default)	0-1023	CUSTOM.COLOR(PN4)=100 255 10 CUSTOM.COLOR(PN4):100 255 10	Gets / sets in order: Red, Green, Blue color value. When set for a panel, also enables PATTERN(panel)=CUSTOM. When set for ALL, this command ONLY sets the custom color value and does not activate any PATTERN. PATTERN command equal to NONE required to remove.	No	4.0	No	No
DEVICE.DELETE	Delete External Device	2700	!	PSW#		DEVICE.DELETE(PSW1) DEVICE.DELETE(PSW1)@ACK	Deletes the specified device from system.	No	8.0	Yes	Yes
DEVICE.GROUP	External Device Group	2704	=?	PSW#	String	DEVICE.GROUP(PSW2)="LEFT WALL" DEVICE.GROUP(PSW2):"LEFT WALL"	Gets / sets for specified device the group affiliation associated. Quotes must be used to set any group names that have spaces.	No	8.0	Yes	Yes
DEVICE.NAME	External Device Name	2703	=?	PSW#	String	DEVICE.NAME(PSW4)="LEFT COLUMN" DEVICE.NAME(PSW4):"LEFT COLUMN"	Gets / sets for specified device the unique name associated. Quotes must be used to set any names that have spaces.	No	8.0	Yes	Yes

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
FIRMWARE. UPDATE	Update Firmware	2200	=?!		String	FIRMWARE.UPDATE="usb:firmware.pkg" FIRMWARE.UPDATE:"ackknowledged" FIRMWARE.UPDATE? FIRMWARE.UPDATE:"USB.FIRMWARE. PKG" 0 1 "success" 1	No operator checks the attached USB drive for latest default filename structure firmware .pkg file in numeric order and updates to latest. = operator is used to assign specific file name for update ? Operator will return status of update. Data only valid before device reboot. Only applies to the attached equipment.	Yes	1.x 2.1[1] 7.0[1]	Yes	No
FIRMWARE. VERSION	Get unit FW version	2320	?	PS# VC# PN# PSW#	String	FIRMWARE.VERSION? FIRMWARE.VERSION:4.0.569	Gets current firmware version of the specified device. No modifier returns system master firmware version.	Yes	4.0 10.0[1]	Yes	No
GENLOCK.AUTO	Auto Genlock	1518	=?		0=DISABLE=OFF=NO= FALSE 1=ENABLE=ON=YES= TRUE	GENLOCK.AUTO? GENLOCK.AUTO:ON	Gets / sets whether the equipment is set up to automatically genlock to a source.	No	2.1	Yes	No
GENLOCK. DISABLE	Disable Genlock	1519	=?		0=DISABLE=OFF=NO= FALSE 1=ENABLE=ON=YES= TRUE	GENLOCK.DISABLE=0 GENLOCK.DISABLE:FALSE	Gets / sets whether the genlock feature is disabled.	No	2.1	Yes	No
GENLOCK. REFERENCE	Genlock Reference Source	1516	=?	VC#	0=SYNC_IN 1=IN1 2=IN2 3=IN3 4=IN4 5=DP 6=INTERNAL	GENLOCK.REFERENCE=0 GENLOCK.REFERENCE:SYNC_IN	Gets / sets the sync reference source to be used with the connected equipment. Note: DP not an option for High Speed Link VCs..	No	2.1 10.0[1]	Yes	No
HDR.ENABLE	Enable HDR	610	=?+-		0=DISABLE=OFF=FALSE =AUTO 1=ENABLE=YES=TRUE= HDR10	HDR.ENABLE? HDR.ENABLE:ENABLE	Gets / sets the system capability to process HDR source signals to the display.	No	8.0 9.0[1]	Yes	Yes
ID	Component ID	1911	=?	VC# PS# PN# PSW#	String	ID(VC3)=4 ID(VC3):4	Gets / sets the ID of the component specified.	No	1.x 2.0[1] 6.0[1] 10.0[1]	Yes	No
IDENTIFY	Identify Power Supply ID	1910	!	String	String	IDENTIFY(PS2) IDENTIFY(PS2):@ACK	Sends command to system for the system master control LED on the specified remote power supply to blink 3 times rapidly and cycle this behavior several times.	No	2.0	Yes	No
INPUT. BRIGHTNESS	Input Brightness	200	=?	VC#.IN#	0-100	INPUT.BRIGHTNESS(VC1.IN4)=56 INPUT.BRIGHTNESS(VC1.IN4):56	Gets / sets the input brightness value for the specified input.	No	6.0	Yes	No

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
INPUT.COLOR SPACE	Input Colorspace	207	=?	VC#.IN#	0=REC601 1=REC709 2=RGB 3=RGB VIDEO 4=AUTO 5=UNKNOWN	INPUT.COLORSPACE(VC1.IN1)? INPUT.COLORSPACE(VC1.IN1):REC709	Gets / sets the input colorspace for the specified input.	No	6.0 7.0[1]	Yes	No
INPUT.CONTRAST	Input Contrast	201	=?	VC#.IN#	0-100	INPUT.CONTRAST(VC5.IN3)? INPUT.CONTRAST(VC5.IN3):22	Gets / sets the input contrast value for the specified input.	No	6.0	Yes	No
INPUT.GAIN	Input RGB Gain	209	=?	VC#.IN# ….and…. 0=RED 1=GREEN 2=BLUE 255=ALL	0-200	INPUT.GAIN(VC2.IN3 0)? INPUT.GAIN(VC2.IN3 RED):85 INPUT.GAIN(VC3.IN1 ALL)=128 INPUT.GAIN(VC3.IN1 ALL)=128 128 128	Gets / sets the input gains for red, green and/or blue. Multiple data returned is red, green, blue.	No	6.0 7.0[1]	Yes	No
INPUT.OFFSET	Input RGB Offset	210	=?	VC#.IN# ….and…. 0=RED 1=GREEN 2=BLUE 255=ALL	0-100	INPUT.OFFSET(VC2.IN3 0)? INPUT.OFFSET(VC2.IN3 RED):85 INPUT.OFFSET(VC3.IN1 ALL)=128 INPUT.OFFSET(VC3.IN1 ALL)=128 128 128	Gets / sets the input offsets for red, green and/or blue. Multiple data returned is red, green, blue.	No	6.0	Yes	No
INPUT.RESET	Reset Input Values	217	!	VC#.IN#		INPUT.RESET=VC2.IN2 INPUT.RESET:VC2.IN2	Sets all input parameter values back to factory default for specified input.	No	6.0	Yes	No
IPV4.ADDRESS	IP Address	1204	=?	ACTIVE STATIC MASTER DHCP VC# PSW# [None = ACTIVE (for reads only)] [None = STATIC (for writes only)]	String	IPV4.ADDRESS(DHCP)? IPV4.ADDRESS:"10.15.0.60" IPV4.ADDRESS(MASTER)=192.168.0.15 IPV4.ADDRESS(MASTER)="192.168.0.15" IPV4.ADDRESS(VC2, STATIC)? IPV4.ADDRESS(VC2 STATIC):192.168.0.113 IPV4.ADDRESS(PSW3)=192.168.0.223 IPV4.ADDRESS(PSW3):192.168.0.223	Gets the master equipment specified IP Address. Sets the master static IP Address. Modifiers MASTER and STATIC are equivalent. Use of modifier PSW# only changes the system master expected equipment IP address, not IP address of equipment.	No	2.0 8.0[1] 10.0[1]	Yes	Yes
IPV4.ENABLE	Configuration	1230	=?	MASTER STATIC	0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE	IPV4.ENABLE=1 IPV4.ENABLE:1	Toggles the equipment to use dynamic host configuration protocol. Modifier MASTER and STATIC are equivalent. For DHCP, see NETWORK.DHCP.	No	8.0	Yes	Yes

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
IPV4.GATEWAY	Default Gateway	1206	=?	ACTIVE STATIC MASTER DHCP [None = ACTIVE (for reads only)] [None = STATIC (for writes only)]	String	IPV4.GATEWAY(DHCP)? IPV4.GATEWAY(DHCP):"10.15.0.1" IPV4.GATEWAY(1)=192.168.0.1 IPV4.GATEWAY(1):"192.168.0.1"	Gets the master equipment specified network gateway. Sets the master static network gateway. Modifiers MASTER and STATIC are equivalent.	No	2.0 8.0[1]	Yes	Yes
IPV4.NETMASK	Subnet Mask	1205	=?	ACTIVE STATIC MASTER DHCP [None = ACTIVE (for reads only)] [None = STATIC (for writes only)]	String	IPV4.NETMASK(2)? IPV4.NETMASK(0):"255.255.254.0" IPV4.NETMASK(STATIC)=255.255.255. 254 IPV4.NETMASK(STATIC):"255.255.255. 254"	Gets the master equipment specified subnet. Sets the master static subnet. Modifiers MASTER and STATIC are equivalent.	No	2.0 8.0[1]	Yes	Yes
IR.CODE	Remote Code	1210	=?+-		0-65535	IR.CODE=12345 IR.CODE:12345	Gets / sets remote code to work with different remotes.	No	1.x	Yes	Yes
IR.LOCK	Remote Lock	1202	=?+-		0=DISABLE=OFF=NO= FALSE 1=ENABLE=ON=YES= TRUE	IR.LOCK=ENABLE IR.LOCK:ENABLE	Toggles the equipment from responding to commands sent by a remote.	No	1.x	Yes	Yes
KEY.LOCK	Front Keypad Lock	1201	=?+-		0=DISABLE=OFF=NO= FALSE 1=ENABLE=ON=YES= TRUE	KEY.LOCK=DISABLE KEY.LOCK:DISABLE	Toggles the equipment from responding to commands from the keypad.	No	2.0	Yes	No
MATRIX.LAYOUT. COLUMNS	Matrix Array Columns	600	?		Integer	MATRIX.LAYOUT.COLUMNS? MATRIX.LAYOUT.COLUMNS:6	Returns the number of columns in the configured wall.	No	4.0	Yes	Yes
MATRIX.LAYOUT. PANEL	Array Panel ID	602	?	Column# and Row#	Integer	MATRIX.LAYOUT.PANEL(1 3)? MATRIX.LAYOUT.PANEL(1 3):7	Returns the panel ID number for the specified column/row coordinate in a configured wall.	No	4.0	Yes	Yes
MATRIX.LAYOUT. ROWS	Matrix Array Rows	601	?		Integer	MATRIX.LAYOUT.ROWS? MATRIX.LAYOUT.ROWS:4	Returns the number of rows in the configured wall.	No	4.0	Yes	Yes
MENU.PANEL	OSD Panel Display	1311	=?		Integer	MENU.PANEL? MENU.PANEL:4	Gets / sets the panel ID on which the main OSD is displayed.	No	2.0	No	No
MODEL.NAME	Component Model	2306	?	PS# VC# PN# PSW#	String	MODEL.NAME? MODEL.NAME:"RPS220-3" MODEL.NAME(PN3)? MODEL.NAME(PN3):"MX55U"	Returns the directly connected equipment model name without modifier. Returns the specified equipment's model name with modifier.	Yes	1.x 4.0[1] 10.0[1]	Yes	No

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
NETWORK.CONFIG.MODIFIED	Network Change	1216	?		0=DISABLE=OFF=NO=| FALSE 1=ENABLE=ON=YES= TRUE	NETWORK.CONFIG.MODIFIED? NETWORK.CONFIG.MODIFIED: TRUE	Returns whether the system network configuration has changed. If yes, a reboot is required.	No	2.0	Yes	Yes
NETWORK.DHCP	DHCP	1207	=?+-		0=DISABLE=OFF=NO= FALSE 1=ENABLE=ON=YES= TRUE	NETWORK.DHCP? NETWORK.DHCP:ON	Toggles the equipment to use dynamic host configuration protocol. For static IP enabling, see IPV4.ENABLE.	No	1.x	Yes	Yes
NETWORK.DNS1	DNS Server 1	1212	=?	0=ACTIVE 1=STATIC [None = ACTIVE (for reads only)] [None = STATIC (for writes only)]	String	NETWORK.DNS1(0)? NETWORK.DNS1(0):"192.168.1.10"	Gets / sets the domain name server of the equipment.	No	1.x	Yes	Yes
NETWORK.DNS2	DNS Server 2	1213	=?	0=ACTIVE 1=STATIC [None = ACTIVE (for reads only)] [None = STATIC (for writes only)]	String	NETWORK.DNS2(0)? NETWORK.DNS2(0):"192.168.1.20"	Gets / sets the backup domain name server of the equipment.	No	1.x	Yes	Yes
NETWORK.MAC	Component MAC Address	1203	?	PS# VC# PSW#	String	NETWORK.MAC? NETWORK.MAC:"12:34:56:AB:CD:EF" NETWORK.MAC(VC2)? NETWORK.MAC(VC2):C4:F3:12:73:77:04	Returns the master component MAC address. No modifier returns the master component MAC address.	No	1.x 10.0[1]	Yes	Yes
NETWORK.PING	Network Ping	1211	=		String	NETWORK.PING=10.15.0.60 NETWORK.PING:"0"	Pings other network IP addresses. "0" = Time out (10 seconds) "1" = Success	No	1.x	Yes	Yes
NTP.ENABLE	Network Time Protocol Enable	1209	=?		0=OFF 1=ON	NTP.ENABLE=ON NTP.ENABLE:ON	Enables or disables NTP.	Yes	5.1	Yes	Yes
NTP.SERVER	Network Time Protocol Server	1214	=?		See Table: Time Zone Setting-Operands	NTP.SERVER="0.pool.us.ntp.org" NTP.SERVER:"0.pool.us.ntp.org"	Gets / sets the NTP server used by the NTP client.	Yes	5.1	Yes	Yes
OSD.ALLOW.POPUP	OSD Popup	1300	=?+-		0=DISABLE=OFF=NO= FALSE 1=ENABLE=ON=YES= TRUE	OSD.ALLOW.POPUP? OSD.ALLOW.POPUP:ON	Gets / sets the whether popup messages will be displayed on the panels.	No	3.0	No	No
OSD.MARGIN	OSD Offset	1313	=?+-		0-400	OSD.MARGIN=10 OSD.MARGIN:10	Gets / sets the OSD position in pixels away from edges set by OSD.POSITION. No effect on OSD.POSITION=CENTER.	No	3.0	No	No

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
OSD.POSITION	OSD Position	1301	=?+-		0=CENTER 1=UPPER.LEFT 2=UPPER.RIGHT 3=BOTTOM.LEFT 4=BOTTOM.RIGHT	OSD.POSITION=2 OSD.POSITION:UPPER.RIGHT	Positions the OSD on each panel to the indicated position on the panel.	No	3.0	No	No
OSD.TIMEOUT	OSD Timeout	1304	=?+-		0=OFF 30=30.SECONDS 60=60.SECONDS 120=120.SECONDS 240=240.SECONDS	OSD.TIMEOUT? OSD.TIMEOUT:60	Gets/ sets the output resolution to automatically (default) detect the connected panel resolution or provide a method to manually set the mode to be 1920x1080 or 3840x2160 resolution. Modifier is only used to query an individual VC's mode.	No	3.0	No	No
OUTPUT.COLOR.DEPTH	Bit Depth	603	=?		8, 10, 12	OUTPUT.COLOR.DEPTH? OUTPUT.COLOR.DEPTH:10	Gets / sets the color bit depth processed by the system.	No	9.0	Yes	No
OUTPUT.MODE	VC Output Resolution	604	=?	VC#	0=AUTO 1=1080p 2=4K	OUTPUT.MODE=4k OUTPUT.MODE:4K OUTPUT.MODE(VC2)? OUTPUT.MODE(VC2):4K	Gets / sets the output resolution to automatically (default) detect the connected panel resolution or provide a method to manually set the mode to be 1920x1080 or 3840x2160 resolution.	Yes	7.0	Yes	No
OUTPUT.VREFRESH	Panel Refresh Rate	605	=?		50 60	OUTPUT.VREFRESH=50 OUTPUT.VREFRESH:50	Gets / sets the system panel refresh rate. Reboot required after setting.	No	7.0	Yes	No
PANEL.ACTIVE	Panel Active Area	1522	=?	Integer	0-65535	PANEL.ACTIVE(1)? PANEL.ACTIVE(1):0 0 1280 720	Gets / sets the active area x, y, width, and height in panel pixel coordinates	No	3.0	No	No
PANEL.BRIGHTNESS.OFFSET	Panel Brightness Offset	1437	=?+-	PN#	-100 to 100	PANEL.BRIGHTNESS.OFFSET(PN1)=5 PANEL.BRIGHTNESS.OFFSET(PN1):5.000000	Gets / sets the panel's offset brightness for use with color balancing	No	7.0	Yes	No
PANEL.COUNT	Number of Panels	1527	?		Integer	PANEL.COUNT? PANEL.COUNT:12	Returns the number of panels configured in the system.	No	4.0	Yes	No
PANEL.HEIGHT	Panel Height in Pixels	1544	?	PN#	Integer	PANEL.HEIGHT(10)? PANEL.HEIGHT(10):720	Gets the pixel height of the specified panel.	No	8.0 10.0[1]	Yes	Yes
PANEL.ID	Set Panel ID	1524	=	1-65535	1-65535	PANEL.ID(5)=3 PANEL.ID(5):3	Sets an existing panel ID to a new panel ID. If there are duplicate IDs, the first found will be changed.	No	3.0	No	No

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
PANEL.LIST	Panel ID List	1526	?	Integer 1-PANEL.COUNT …..and/or…. Integer 1-PANEL.COUNT	String	PANEL.LIST? PANEL.LIST:1 2 3 5 6 7 8 9 10 PANEL.LIST(3)? PANEL.LIST:3 PANEL.LIST(4 8)? PANEL.LIST:4 5 6 7 8	Returns a list of up to 64 panel IDs that are currently recognized by the system. The optional modifiers enable listing when there are more than 64 panels. The first modifier gives the 1-based index into the list for the first returned value. If the second modifier is omitted, only one value is returned. When given, the second value specifies the end index of the returned values.	No	4.0	Yes	No
PANEL.POSITION	Panel Array Position	1528	?	PN#	String	PANEL.POSITION(PN2)? PANEL.POSITION(PN2):3 2	Returns the column/row postion in an array of the specified panel.	No	4.0	Yes	No
PANEL.RECT	Panel Display Area	1529	?	Integer	Integer	PANEL.RECT(5)? PANEL.RECT(5):1920 1080 1920 1080	For specified panel in configured wall, returns in order: x offset dimension from zero x position in wall, y offset dimension from zero y position in wall, x display pixels, y display pixels.	No	4.0	Yes	No
PANEL.WIDTH	Panel Width in Pixels	1543	?	PN#	Integer	PANEL.WIDTH(10)? PANEL.WIDTH(10):1080	Gets the pixel width of the specified panel.	No	8.0 10.0[1]	Yes	Yes
PANEL.XY	Cabinet Origin	1537	?	Integer		PANEL.XY(3)? PANEL.XY(3):0 2160	Returns the pixel position of the 0,0 coordinate of the specified panel in X and Y dimensions.	No	6.0	Yes	No
PATTERN	Test Pattern	1307	=?		0=NONE 1=BLACK 2=WHITE 3=RED 4=GREEN 5=BLUE 6=CYAN 7=MAGENTA 8=YELLOW 9=GRAY 10=CUSTOM_COLOR 11=RED_SCALE 12=GREEN_SCALE 13=BLUE_SCALE 14=GRAY_SCALE 15=LOGO 16=GRID 18=CONTRAST 20=COLOR_BARS	PATTERN? PATTERN:GREEN	Gets / sets the test pattern displayed for all displays connected to the system.	No	2.0	No	No

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
POWER.SAVING. DELAY	No Source Power Mode Time	1439	=?		0=CUSTOM 60=1.MINUTE 300=5.MINUTES 900=15.MINUTES 1800=30.MINUTES 3600=60.MINUTES	POWER.SAVING.DELAY=900 POWER.SAVING.DELAY:900 POWER.SAVING.DELAY? POWER.SAVING.DELAY:15.MINUTES	Gets / sets the time the system will wait before activating the POWER.SAVE.MODE. See POWER.SAVING.DELAY.MINUTES for custom times.	No	8.0	Yes	Yes
POWER.SAVING. DELAY.MINUTES	No Source Power Mode Custom Time	1440	=?		1.000000 thru 120.000000	POWER.SAVING.DELAY.MINUTES=100 POWER.SAVING.DELAY.MINUTES:100.00 0000	Gets / sets the custom time for POWER.SAVING.DELAY.	No	8.0	Yes	Yes
POWER.SAVING. MODE	No Source Power Mode	1440	=?		0=DISABLED 1=FAST.START 2=LOW.POWER	POWER.SAVING.MODE? POWER.SAVING.MODE:DISABLED	Gets / sets the system power mode for when a source displayed on the video wall is absent.	No	8.0	Yes	Yes
PS.COUNT	Number of Power Supplies	1428	?		Integer	PS.COUNT? PS.COUNT:4	Returns the number of power supplies configured in the system.	No	4.0	Yes	No
PS.LIST	Power Supply ID List	1427	?	Integer 1-PS.COUNT …..and/or…. Integer 1-PS.COUNT	String	PS.LIST? PS.LIST:1 2 3 4 PS.LIST(3)? PS.LIST:3 PS.LIST(1 3)? PS.LIST:1 2 3	Returns a list of up to 64 power supply IDs that are currently recognized by the system. The optional modifiers enable listing when there are more than 64 power supplies. The first modifier gives the 1-based index into the list for the first returned value. If the second modifier is omitted, only one value is returned. When given, the second value specifies the end index of the returned values.	No	4.0	Yes	No
PS.VERSION	Power supply module software version	2318	?	1-4	String	PS.VERSION(2)? PS.VERSION(2):"1.0.600"	Returns the firmware version of the indicated power supply module within the directly connected power supply.	Yes	1.x	Yes	No
RESET	Factory Reset	2400	!			RESET RESET:@ACK	Resets the system to factory defaults. Full AC power cycle may be required or system reboot.	No	1.x	Yes	No
RESET.CANCEL	Cancel Factory Reset	2406	!			RESET.CANCEL RESET.CANCEL:@ACK	Cancels pending factory reset prior to reboot or AC cycle.	No	2.0	Yes	Yes
RESET.LAYOUT	Reset Wall Layout	609	!			RESET.LAYOUT RESET.LAYOUT@ACK	Resets wall layout back to default.	No	7.0	Yes	No
SERIAL.DEVICE	Serial Baud Rate	1220	=?		9600 19200 38400 57600 115200	SERIAL.DEVICE? SERIAL.DEVICE:19200	Gets / sets the baud rate for the connected component. Default is 19200. Note: Data bits, parity and stop bits are always 8, N, 1.	Yes	2.0	Yes	Yes

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
SERIAL.NUMBER	Component Serial number	2303	?	PS# VC# PN#	String	SERIAL.NUMBER(PN1)? SERIAL.NUMBER(PN1):"ABCD1234"	No modifier returns the directly attached component serial number. Using a modifier returns the serial number of the specified equipment.	Yes	1.x 4.0[1]	Yes	No
SOURCE.ABSENT.COLOR	No Source Display Color	606	=?		0=BLACK 1=GRAY 2=RED 3=GREEN 4=BLUE 5=CYAN 6=YELLOW 7=MAGENTA 8=CUSTOM	SOURCE.ABSENT.COLOR=2 SOURCE.ABSENT.COLOR:2	Gets / sets the configured color for a zone when an expected source is absent.	No	7.0	Yes	No
SOURCE.ABSENT.RGB	Custom No Source Display Color	607	=?		0 to 1023	SOURCE.ABSENT.RGB=1000 1000 1000 SOURCE.ABSENT.RGB:1000 1000 1000	Gets / sets the custom color option in SOURCE.ABSENT.COLOR. Three values entered in order are Red, Green, Blue. Setting automatically sets SOURCE.ABSENT.COLOR to CUSTOM.	No	7.0	Yes	No
STANDBY.MODE	Power Standby Mode	1425	=?		0=FAST.START 1=LOW.POWER	STANDBY.MODE? STANDBY.MODE:FAST.START	Gets / sets the power standby mode of the system.	No	4.0	Yes	Yes
SYSTEM.PANEL.VERSION	Panel Firmware Version	2322	?		String	SYSTEM.PANEL.VERSION? SYSTEM.PANEL.VERSION:"1.5.267"	Returns the panel firmware version.	No	5.1	Yes	No
SYSTEM.POWER.TIE	External Device Power Behavior	2705	=?	PSW# ALL	0=NO 1=FAST.START 2=LOW.POWER 3=CUSTOM	SYSTEM.POWER.TIE(PSW5)? SYSTEM.POWER.TIE(PSW5):FAST.START SYSTEM.POWER.TIE(ALL)=2 SYSTEM.POWER.TIE(ALL):2	Gets / sets the specified external power device behavior based on the system power mode.	No	8.0	Yes	Yes
TIMEZONE	Time Zone Setting	1208	=?+-		See "Time Zone Setting–Operands" on page 26.	TIMEZONE=5 TIMEZONE:5 TIMEZONE=UTCM0800.PACIFIC.TIME.US.CANADA TIMEZONE:UTCM0800.PACIFIC.TIME.US.CANADA	Gets / sets the timezone for the system.	Yes	5.1	Yes	Yes
TIMEZONE.STRING	Time Zone Status	1221	?		String	TIMEZONE.STRING? TIMEZONE.STRING:"(UTC-08:00) Pacific Time (US & Canada)"	Returns the timezone string for the system.	Yes	5.1	Yes	Yes
VC.AUTO.ADDRESS.ENABLE	Automatic VC IP Address	2328	=?		0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE	VC.AUTO.ADDRESS.ENABLE? VC.AUTO.ADDRESS.ENABLE:TRUE	Gets / sets the system auto setting of individual IP addresses on the static network.	No	8.0	Yes	Yes
VC.COUNT	Number of Video Controllers	1604	?		Integer	VC.COUNT? VC.COUNT:4	Returns the number of video controllers configured in the system.	No	4.0	Yes	No

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
VC.LIST	Video Controller ID List	1603	?	Integer 1-VC.COUNT …..and/or…. Integer 1-VC.COUNT	String	VC.LIST? VC.LIST:1 2 3 4 VC.LIST(3)? VC.LIST:3 VC.LIST(2 4) VC.LIST:2 3 4	Returns a list of up to 64 video controller IDs that are currently recognized by the system. The optional modifiers enable listing when there are more than 64 video controllers. The first modifier gives the 1-based index into the list for the first returned value. If the second modifier is omitted, only one value is returned. When given, the second value specifies the end index of the returned values.	No	4.0	Yes	No
VC.START. ADDRESS	VC Starting IP Address	2327	=?		XXX.XXX.XXX.XXX/XX	VC.START.ADDRESS=192.168.0.120/24 VC.START.ADDRESS:"192.168.0.120/24"	Gets / sets the first VC's xxxx IP address and subnet. All additional VCs will be assigned an IP address in numeric order from this assigned address.	No	8.0	Yes	Yes
WALL. BRIGHTNESS	Wall Brightness Setting	1436	=?+-		0-100	WALL.BRIGHTNESS? WALL.BRIGHTNESS:80.000000	Gets / sets the global wall brightness.	No	7.0	Yes	No
WALL.HEIGHT	Wall Pixel Height	613	=?		Integer	WALL.HEIGHT=3840 WALL.HEIGHT:3840	Gets / sets the wall height pixels.	No	8.0	Yes	Yes
WALL.WIDTH	Wall Pixel Width	612	=?		Integer	WALL.WIDTH=2160 WALL.WIDTH:2160	Gets / sets the wall width pixels.	No	8.0	Yes	Yes

[1] Updated

Time Zone Setting–Operands

0=UTCM1200.INTERNATIONAL.DATE.LINE.WEST
1=UTCM1100.COORDINATED.UNIVERSAL.TIMEM11
2=UTCM1000.HAWAII
3=UTCM0900.ALASKA
4=UTCM0800.BAJA.CALIFORNIA
5=UTCM0800.PACIFIC.TIME.US.CANADA
6=UTCM0700.ARIZONA
7=UTCM0700.CHIHUAHUA.LA.PAZ.MAZATLAN
8=UTCM0700.MOUNTAIN.TIME.US.CANADA
9=UTCM0600.CENTRAL.AMERICA
10=UTCM0600.CENTRAL.TIME.US.CANADA
11=UTCM0600.GUADALAJARA.MEXICO.CITY.MONTERREY
12=UTCM0600.SASKATCHEWAN
13=UTCM0500.BOGOTA.LIMA.QUITO.RIO.BRANCO
14=UTCM0500.CHETUMAL
15=UTCM0500.EASTERN.TIME.US.CANADA
16=UTCM0500.INDIANA.EAST
17=UTCM0430.CARACAS
18=UTCM0400.ASUNCION
19=UTCM0400.ATLANTIC.TIME.CANADA
20=UTCM0400.CUIABA
21=UTCM0400.GEORGETOWN.LA.PAZ.MANAUS.SAN.JUAN
22=UTCM0330.NEWFOUNDLAND
23=UTCM0300.BRASILIA
24=UTCM0300.CAYENNE.FORTALEZA
25=UTCM0300.CITY.OF.BUENOS.AIRES
26=UTCM0300.GREENLAND
27=UTCM0300.MONTEVIDEO
28=UTCM0300.SALVADOR
29=UTCM0300.SANTIAGO
30=UTCM0200.COORDINATED.UNIVERSAL.TIMEM02
31=UTCM0100.AZORES
32=UTCM0100.CABO.VERDE.IS
33=UTC.CASABLANCA
34=UTC.COORDINATED.UNIVERSAL.TIME
35=UTC.DUBLIN.EDINBURGH.LISBON.LONDON
36=UTC.MONROVIA.REYKJAVIK
37=UTCP0100.AMSTERDAM.BERLIN.BERN.ROME.STOCKHOLM.VIENNA
38=UTCP0100.BELGRADE.BRATISLAVA.BUDAPEST.LJUBLJANA.PRAGUE
39=UTCP0100.BRUSSELS.COPENHAGEN.MADRID.PARIS
40=UTCP0100.SARAJEVO.SKOPJE.WARSAW.ZAGREB
41=UTCP0100.WEST.CENTRAL.AFRICA
42=UTCP0100.WINDHOEK
43=UTCP0200.AMMAN
44=UTCP0200.ATHENS.BUCHAREST
45=UTCP0200.BEIRUT
46=UTCP0200.CAIRO
47=UTCP0200.DAMASCUS
48=UTCP0200.HARARE.PRETORIA
49=UTCP0200.HELSINKI.KYIV.RIGA.SOFIA.TALLINN.VILNIUS
50=UTCP0200.ISTANBUL
51=UTCP0200.JERUSALEM
52=UTCP0200.KALININGRAD.RTZ.1

53=UTCP0200.TRIPOLI
54=UTCP0300.BAGHDAD
55=UTCP0300.KUWAIT.RIYADH
56=UTCP0300.MINSK
57=UTCP0300.MOSCOW.ST.PETERSBURG.VOLGOGRAD.RTZ.2
58=UTCP0300.NAIROBI
59=UTCP0330.TEHRAN
60=UTCP0400.ABU.DHABI.MUSCAT
61=UTCP0400.BAKU
62=UTCP0400.IZHEVSK.SAMARA.RTZ.3
63=UTCP0400.PORT.LOUIS
64=UTCP0400.TBILISI
65=UTCP0400.YEREVAN
66=UTCP0430.KABUL
67=UTCP0500.ASHGABAT.TASHKENT
68=UTCP0500.EKATERINBURG.RTZ.4
69=UTCP0500.ISLAMABAD.KARACHI
70=UTCP0530.CHENNAI.KOLKATA.MUMBAI.NEW.DELHI
71=UTCP0530.SRI.JAYAWARDENEPURA
72=UTCP0545.KATHMANDU
73=UTCP0600.ASTANA
74=UTCP0600.DHAKA
75=UTCP0600.NOVOSIBIRSK.RTZ.5
76=UTCP0630.YANGON.RANGOON
77=UTCP0700.BANGKOK.HANOI.JAKARTA
78=UTCP0700.KRASNOYARSK.RTZ.6
79=UTCP0800.BEIJING.CHONGQING.HONG.KONG.URUMQI
80=UTCP0800.IRKUTSK.RTZ.7
81=UTCP0800.KUALA.LUMPUR.SINGAPORE
82=UTCP0800.PERTH
83=UTCP0800.TAIPEI
84=UTCP0800.ULAANBAATAR
85=UTCP0900.OSAKA.SAPPORO.TOKYO
86=UTCP0900.SEOUL
87=UTCP0900.YAKUTSK.RTZ.8
88=UTCP0930.ADELAIDE
89=UTCP0930.DARWIN
90=UTCP1000.BRISBANE
91=UTCP1000.CANBERRA.MELBOURNE.SYDNEY
92=UTCP1000.GUAM.PORT.MORESBY
93=UTCP1000.HOBART
94=UTCP1000.MAGADAN
95=UTCP1000.VLADIVOSTOK.MAGADAN.RTZ.9
96=UTCP1100.CHOKURDAKH.RTZ.10
97=UTCP1100.SOLOMON.IS.NEW.CALEDONIA
98=UTCP1200.ANADYR.PETROPAVLOVSK.KAMCHATSKY.RTZ.11
99=UTCP1200.AUCKLAND.WELLINGTON
100=UTCP1200.COORDINATED.UNIVERSAL.TIMEP12
101=UTCP1200.FIJI
102=UTCP1300.NUKU.ALOFA
103=UTCP1300.SAMOA
104=UTCP1400.KIRITIMATI.ISLAND

Monitoring Setup

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
CABINET. POLLING.ENABLE	LED Cabinet Monitoring Enable	1532	=?		0=DISABLE=OFF=NO= FALSE 1=ENABLE=ON=YES= TRUE	CABINET.POLLING.ENABLE=YES CABINET.POLLING.ENABLE:@ACK	Gets / sets LED cabinet monitoring enabling.	Yes	5.1 7.0[1]	Yes	Yes
CABINET. POLLING. INTERVAL	LED Cabinet Polling Interval	1533	=?		1000 .. 10000	CABINET.POLLING.INTERVAL=2000 CABINET.POLLING.INTERVAL:2000	Gets / sets the cabinet polling interval. Valid values are between 1000 and 10000. Longer time intervals reduce chance of false error reporting.	Yes	5.1	Yes	Yes
RESET.ALERTS	Alert Reset	2409	!	0=ALL 1=WEB 2=EMAIL 3=SNMP		RESET.ALERTS(WEB) RESET.ALERTS(WEB):@ACK	Resets alert settings to the factory default for the specified UI. If no modifier is provided, it is treated as all.	No	5.1	Yes	Yes

Presets

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
PRESET.ACTIVE	Active Preset	2010	?		Integer	PRESET.ACTIVE? PRESET.ACTIVE:2	Returns the active displayed preset slot number. 0 (zero) indicates the current zone layout has been modified since the last preset was recalled, or that no preset has ever been recalled.	No	4.0	Yes	No
PRESET.COUNT	Saved Presets	2006	?		Integer	PRESET.COUNT? PRESET.COUNT:8	Returns the number of configured presets in the system.	No	2.0	Yes	Yes
PRESET.DELETE	Delete Preset	2000	!	Integer 1-999		PRESET.DELETE(3) PRESET.DELETE(3):@ACK	Deletes specified preset from the specified preset slot.	No	2.0	Yes	Yes
PRESET.LIST	Preset List	2008	?	Integer 1-PRESET.COUNT …..and/or…. Integer 1-PRESET.COUNT	String	PRESET.LIST? PRESET.LIST:1 2 3 4 PRESET.LIST(3)? PRESET.LIST:3 PRESET.LIST(2 3)? PRESET.LIST:2 3	Returns a list of up to 64 preset slot numbers that are currently utilized (has a preset saved with that slot number). The optional modifiers enable listing when there are more than 64 saved presets. The first modifier gives the 1-based index into the list for the first returned value. If the second modifier is omitted, only one value is returned. When given, the second value specifies the end index of the returned values.	No	4.0	Yes	No
PRESET.NAME	Name Preset	2003	=?	Integer 1-999	String	PRESET.NAME(2)? PRESET.NAME(2):"4K Video" PRESET.NAME(2)=All 4K Sources PRESET.NAME(2):"All 4K Sources"	Gets / sets the user assigned name of the specified preset slot number.	No	2.0	Yes	Yes
PRESET.RECALL	Load Preset	2001	!	Integer 1-999		PRESET.RECALL(4) PRESET.RECALL(4):@ACK	Assigns the specified preset slot as the active zone layout for the system.	No	2.0	No	No
PRESET.SAVE	Save Preset	2002	!	Integer 1-999		PRESET.SAVE(8) PRESET.SAVE(8):@ACK	Saves the specified preset slot number with the active zone layout. Overwrites any existing saved preset with specified slot number, or makes a new preset with specified slot number if needed.	No	2.0	No	No
PRESET.SLOT	Preset Memory Slot	2011	=?	Integer 1-999	Integer 1-999	PRESET.SLOT(2)=1 PRESET.SLOT(2):1	Sets the memory slot location of a specified valid preset. Returns if a preset slot value is in use. See PRESET.STATUS AND PRESET.LIST.	No	4.0	Yes	No
PRESET.STATUS	Preset Status	2009	?	Integer 1-999	0=EMPTY 1=FULL	PRESET.STATUS(1)? PRESET.STATUS(1):FULL	Returns whether a specified preset slot currently has information stored.	No	2.0 4.0[1]	Yes	Yes

[1] Updated

Security

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
COMMAND. ENABLE	Enable TCP/UDP	2411	=?	0=NETWORK	0=DISABLE=OFF=NO= FALSE 1=ENABLE=ON=YES= TRUE	COMMAND.ENABLE(NETWORK)? COMMAND.ENABLE(NETWORK):TRUE	Gets / sets port 57 on the TCP/UDP port to enabled or disabled.	No	7.0	Yes	Yes
PASSWORD.SET	Set User Password	2410	=	String	String	PASSWORD.SET=123 PASSWORD.SET="123"	Sets the password for the 'admin' account in the WallDirector software. Command many not be set via port 57 service.	Yes	7.0	Yes	Yes

Status

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
ALERT.COUNT	System Alert Count	2319	?		Integer	ALERT.COUNT? ALERT.COUNT:21	Returns the number of configurable system alerts.	No	2.0 5.1[1]	Yes	Yes
BREAKER.OPEN	Tripped Breaker Monitor	1435	?	PS#		BREAKER.OPEN(PS1)? BREAKER.OPEN:NO NO	Returns if the breaker position is ON(NO) or OFF(YES) in sequence from 1 to number of outputs on the model RPS.	No	5.1	Yes	No
CABINET.INPUT.STATUS	Cabinet Input Status	1535	?	Panel ID ….and…. Cabinet X position ….and…. Cabinet Y position	0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE …and… 0=NONE 1=HDMI1 2=HDMI2 …and… 0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE …and… 0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE	CABINET.INPUT.STATUS(pn2 1 2)? CABINET.INPUT.STATUS(PN2 1 2): YES HDMI1 YES NO	Returns the following about a cabinet: Connected (YES/NO), Active Input (HDMI1, HDMI2), HDMI1 present (YES/NO), HDMI2 present (YES/NO).	No	5.1 7.0[1]	Yes	No
CONNECTION	Panel Connection	1542	?	PN# …or… VC#.OUT#	VC#.OUT# …or… PN#.IN#	CONNECTION(PN2)? CONNECTION(PN2):VC3.OUT6 CONNECTION(PN3)? CONNECTION(PN3):VC2.OUT1 VC2.OUT2 CONNECTION(VC2.OUT1)? CONNECTION(VC2.OUT1):PN3.IN1	Gets the output(s) of the VC that a panel is connected to or the input of a panel that a VC output is connected to. For 4k panels, the first value returned is the primary (IN1) and the second value is the secondary (IN2) connection.	No	6.0 7.0[1]	Yes	No
CONNECTED	Device Connected	1426	?	PS# VC# PN# PSW#	0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE	CONNECTED(VC3)? CONNECTED(VC3):NO	Gets connected status of the indicated device. With no modifier, gets connected status of the directly connected device.	Yes	4.0 7.0[1] 10.0[1]	Yes	No
FAN.STATUS	VC Fan Status	1433	?	VC#	0=OK 1=FAULT	FAN.STATUS(VC1)? FAN.STATUS:OK	Returns the specified VC fan status.	Yes	5.1	Yes	No
FUSE.OPEN	Auxiliary RPS Fuse Status	1434	?	PS#	0=NO 1=YES	FUSE.OPEN(PS1)? FUSE.OPEN:YES YES	Returns the fuse status for each fuse on the specified device.	Yes	5.1	Yes	No

| Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
GENLOCK.LOCKED	Genlock Status	1517	?	VC# or ALL	0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE	GENLOCK.LOCKED(VC1)? GENLOCK.LOCKED(VC1):YES	Returns whether the equipment is locked to a sync source.	No	2.1	Yes	No
INFOFRAME	HDR Data Header	305	?	VC#.IN# VC#.OUT#	Hex String	INFOFRAME(VC1.IN2)? INFOFRAME(VC1.IN2):"87011A0D0200488A08393421AA9B9619FC08133D4240E80332000000000000"	Gets the HDR meta data for the specified input or output of systems with HDR enabled.	No	8.0	Yes	No
INPUT.INFO	Get Input Information	300	?	VC#.IN# ….and optional…. 0=BRIEF (DEFAULT) 1=ALL	String	INPUT.INFO(VC1.IN4)? INPUT.INFO(VC1.IN4):TRUE 1440 900 P 59.89 INPUT.INFO(VC1.IN4 BRIEF)? INPUT.INFO(VC1.IN4 BRIEF):TRUE 1440 900 P 59.89 INPUT.INFO(VC1.IN4 ALL)? INPUT.INFO(VC1.IN4 ALL):TRUE 1440 900 P 59.89 RGB 444 24 1904 934 55.934 106.499 SDR	Returns in order: input present, width, height, P (progressive) / I (interlaced), vertical refresh, colorspace, subsampling, bits per pixel, H total, V total, H freq (kHz), pixel clock (MHz), Dynamic Range.	Yes	4.0	Yes	No
INPUT.INFO	Get Input Information	300	?	VC#.IN# ….and optional…. 0=BRIEF (DEFAULT) 1=ALL	String	INPUT.INFO(VC1.IN4)? INPUT.INFO(VC1.IN4):TRUE 1440 900 P 59.89 INPUT.INFO(VC1.IN4 BRIEF)? INPUT.INFO(VC1.IN4 BRIEF):TRUE 1440 900 P 59.89 INPUT.INFO(VC1.IN4 ALL)? INPUT.INFO(VC1.IN4 ALL):TRUE 1440 900 P 59.89 RGB 444 24 1904 934 55.934 106.499	Returns in order: input present, width, height, P (progressive)/ I (interlaced), vertical refresh, colorspace, subsampling, bits per pixel, H total, V total, H freq (kHz), pixel clock (MHz).	Yes	4.0	Yes	No
INPUT.PRESENT	Source Connected	302	?	VC#.IN#	0=FALSE 1=TRUE	INPUT.PRESENT(VC3.IN4)? INPUT.PRESENT(VC3.IN4):FALSE	Returns if a source is active on the specified input.	Yes	4.0	Yes	No
MESSAGE.COUNT	System Message Count	2324	?		Integer	MESSAGE.COUNT? MESSAGE.COUNT:10	Returns a count of the current system messages.	Yes	5.1	Yes	Yes
PANEL.POWER	Panel On/Off	1538	=?	PN#	0=DISABLE=OFF=NO=FALSE 1=ENABLE=ON=YES=TRUE	PANEL.POWER? PANEL.POWER:0	Gets / sets the backlight to on or off of the selected display	No	7.0	Yes	No
PANEL.RX.LENGTH	Data Cable Length	1541	?	PN#	String	PANEL.RX.LENGTH(PN3)? PANEL.RX.LENGTH(PN3):"<20m"	Returns an estimate of the CAT cable from the VC to the specified panel.	No	6.0	Yes	No
PANEL.SIGNAL.QUALITY	Output Cable Signal Quality	1536	?	PN#	String	PANEL.SIGNAL.QUALITY(PN2)? PANEL.SIGNAL.QUALITY(PN2):"-22dB, -22dB, -23dB, -22dB"	Returns panel signal quality as a string.	No	5.1	No	No

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
PANEL.VOLTAGE	Panel Voltage	1514	?	1-4294967295	String	PANEL.VOLTAGE(8)? PANEL.VOLTAGE(8):48.12	Returns the input voltage of a panel.	No	5.1	Yes	Yes
POWER.STATUS	External Device Power Status	2701	?	PS# PSW#	0=OFF 1=ON	POWER.STATUS(PSW2)? POWER.STATUS(PSW2):"OFF"	Gets the specified device power state.	Yes	8.0 10.0[1]	Yes	No
PS.PRESENT	Power Module Present	1422	?	1-4	0=NOT_PRESENT 1=PRESENT 2=INVALID	PS.PRESENT(2)? PS.PRESENT(2):PRESENT	Returns if a power supply module is detected within the power supply.	Yes	1.x	Yes	No
PS.STATUS	Power Module Status	1423	?	1-4	String	PS.STATUS(3)? PS.STATUS(3):0x284A	This command is used for critical health status of the RPSM; further diagnosis of an issue may need to be completed at the factory. Output will be in a hexadecimal format. Converting to binary and noting the position starting at the right (0 position) and noting the position of the non-zero character(s) up to the last (15) will indicate which faults were seen. Note: For the example shown, 284A, the hex value coverts to 0010 1000 0100 1010. This indicates that 1, 3, 6, 11, and 13 were noted as fault conditions. 0 = Unspecified fault 1 = Communication Memory Fault 2 = Module temperature may have exceeded the maximum 3 = VAC is below minimum 4 = IDC is above maximum 5 = VDC is above maximum 6 = Module DC is off 7 = Module is performing previously requested actions 8 = Unspecified fault 9 = Unspecified fault 10 = Fan failure 11 = Power status 12 = Unspecified Fault 13 = VAC fault warning 14 = IDC fault or warning 15 = VDC fault or warning 0xFFFFFFFF = Module not present, invalid or off	Yes	1.x	Yes	No

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
RUNTIME	Device Total On Time	1429	?	VC# PS# PN#	String	RUNTIME(PS1)? RUNTIME(PS1):"1562:24"	Returns the total time on for the specified device in the format "HOURS:MINUTES". If no device is specified runtime is returned for the master component.	Yes	5.1	Yes	No
SYSTEM.STATE	System State	2310	?		0=STANDBY 1=POWERING.ON 2=ON 3=POWERING.DOWN 4=BACKLIGHT.OFF 5=FAULT	SYSTEM.STATE? SYSTEM.STATE:STANDBY	Indicates the current state of the system. -STANDBY: The system is in its lowest power mode. Not all function are available -POWERING.ON: The system is transitioning from the STANDBY state to the ON state -ON: The system is on with the displays on -POWERING.DOWN: The system is transitioning from the ON state to the STANDBY state -BACKLIGHT.OFF: The system is on and the displays are off -FAULT: A system failure has occurred	No	1.x	Yes	Yes
SYSTEM.VERSION	Firmware Version	2302	?		String	SYSTEM.VERSION? SYSTEM.VERSION:"4.0.567"	Returns the software version of the system based on the master component.	Yes	1.x 4.0[1]	Yes	Yes
TEMPERATURE	Device Temperature	1431	?	PN# VC# PS#	Float	TEMPERATURE(VC1)? TEMPERATURE(VC1):30.438000	Returns the temperature of the specified device. If no modifier is provided, returns the temp of the master component.	Yes	5.1	Yes	No
UPTIME	Device On Time	1430	?	PS# VC#	String	UPTIME(VC1)? UPTIME="4:16"	Returns the total time on since last reboot of the specified device in "HOURS:MINUTES". If no modifier is provided, returns the uptime of the master component.	No	5.1 7.0[1]	Yes	No
VOLTAGE	Input AC Voltage	1432	?	PS#.MODULE# PN#	Float	VOLTAGE(PS1.MODULE1)? VOLTAGE(PS1.MODULE1):118.203354	Returns the voltage for the specified power supply module.	Yes	5.1 6.0[1]	Yes	No
TIME.STRING	System Time	1103	?		String	TIME.STRING? TIME.STRING:"2018-12-14 22:59:30"	Returns system current date and time in a standard format.	No	5.1	Yes	No

[1] Updated

Zone Setup and Control

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
ZONE.ADD	Add Zone	2605	=	Integer	Integer	ZONE.ADD(5)=0 0 1920 1080 ZONE.ADD(5):	Adds a zone number specified at in order: x pixel dimension from zero x position of wall, y pixel dimension from zero y position of wall, x pixel width, y pixel height. Only applicable to the active display/preset.	No	4.0	Yes	No
ZONE.ASPECT	Zone Aspect Ratio	2610	=?	Integer	0=FILL 1=CROP 2=16X9 3=4X3 4=NATIVE 5=AUTO	ZONE.ASPECT(5)? ZONE.ASPECT(5):16X9	Gets / sets the how to scale/zoom of source that does not fit the aspect ratio of a specified zone. Only applicable to the active display/preset.	No	4.0	Yes	No
ZONE.BACK	Send Zone to Back	2613	=?		Integer	ZONE.BACK? ZONE.BACK:3	Gets / sets the zone at bottom of the zone overlapping display area for the active display.	No	4.0	Yes	No
ZONE.CAPTURE.PERCENT	Zone Capture in %	2612	=?	Integer	0.00 - 100.00	ZONE.CAPTURE.PERCENT(5)=25 25 75 75 ZONE.CAPTURE.PERCENT(5):25 25 75 75	Gets / sets for specified source in zone in order: x offset percentage from zero x position in zone, y offset percentage from zero y position in zone, source x percent capture area, source y percent capture area. Numbers are based on percentage of overall source dimensions. Only applicable to the active display/preset.	No	4.0	Yes	No
ZONE.CAPTURE.PIXEL	Zone Capture in Pixels	2618	=?	Integer	Integer	ZONE.CAPTURE.PIXEL(5)=480 270 1440 810 ZONE.CAPTURE.PIXEL(5):480 270 1440 810	Gets / sets for specified source in zone in order: x offset pixel from zero x position in zone, y offset pixel from zero y position in zone, source x pixel capture area, source y pixel capture area. Numbers are based on overall source pixels. Only applicable to the active display/preset.	No	4.0	Yes	No
ZONE.COUNT	Number of Zones	2609	?		Integer	ZONE.COUNT? ZONE.COUNT:8	Returns the number of zones configured in the active display.	No	4.0	Yes	No
ZONE.DELETE	Delete Zone	2600	!	Integer		ZONE.DELETE(2) ZONE.DELETE(2)@ACK	Deletes specified zone from active display.	No	4.0	Yes	No
ZONE.DUPLICATE	Duplicate Zone	2619	=	#	Integer	ZONE.DUPLICATE(4)=8 ZONE.DUPLICATE(4):8 ZONE.DUPLICATE(7)=0 ZONE.DUPLICATE(7):8	Creates duplicate zone with ID of operand based on the zone ID in the modifier. Operand of zero will create zone with the next numerically unassigned zone ID.	No	9.0	Yes	Yes

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
ZONE.EXPECTED. SOURCE.HEIGHT	Zone Source Height	2617	=?	Integer	Integer	ZONE.EXPECTED.SOURCE. HEIGHT(3)? ZONE.EXPECTED.SOURCE. HEIGHT(3):2160	Gets / sets the input resolution height of the zone source. Only applicable to the active display/preset.	No	4.0	Yes	No
ZONE.EXPECTED. SOURCE.WIDTH	Zone Source Width	2616	=?	Integer	Integer	ZONE.EXPECTED.SOURCE. WIDTH(3)? ZONE.EXPECTED.SOURCE. WIDTH(3):3840	Gets / sets the input resolution width of the zone source. Only applicable to the active display/preset.	No	4.0	Yes	No
ZONE.FRONT	Send Zone to Front	2614	=?		Integer	ZONE.FRONT=2 ZONE.FRONT:2	Gets / sets the zone at the top of the zone overlapping display area for the active display.	No	4.0	Yes	No
ZONE.ID	Set Zone ID	2601	=	1-65535	1-65535	ZONE.ID(5)=3 ZONE.ID(5):3	Sets an existing zone ID to a new zone ID. If there are duplicate IDs, the first found will be changed. Only applicable to the active display/preset.	No	4.0	Yes	No
ZONE.INPUT	Assign Input to Zone	2602	=?	Integer	VC#.IN#	ZONE.INPUT(5)=VC2.IN3 ZONE.INPUT(5):VC2.IN3	Gets / sets the source input for a specified zone. Only applicable to the active display/preset.	No	4.0	Yes	No
ZONE.JUSTIFY	Justify Zone	2611	=?	1-65535	0=CENTER 1=LEFT 2=RIGHT 3=TOP 4=BOTTOM 5=TOP.LEFT 6=TOP.RIGHT 7=BOTTOM.LEFT 8=BOTTOM.RIGHT	ZONE.JUSTIFY(3)? ZONE.JUSTIFY:TOP.LEFT	Gets / sets the reference edge(s) of a zone source. Only applicable to the active display/preset.	No	4.0	Yes	No
ZONE.LIST	Zone ID List	2603	?	Integer 1-ZONE.COUNT …..and/or…. Integer 1-ZONE.COUNT	String	ZONE.LIST? ZONE.LIST:1 2 3 5 6 7 8 9 10 ZONE.LIST(3)? ZONE.LIST:3 ZONE.LIST(4 8)? ZONE.LIST:4 5 6 7 8	Returns a list of zone IDs associated with the active display. The optional modifiers enable listing when there are more than 64 zones. The first modifier gives the 1-based index into the list for the first returned value. If the second modifier is omitted, only one value is returned. When given, the second value specifies the end index of the returned values.	No	4.0	Yes	No
ZONE.MAXIMIZE	Maximize Zone	2604	!	Integer		ZONE.MAXIMIZE(3) ZONE.MAXIMIZE:@ACK	Sets a zone to display an image over the entire active area controlled by the system. Only applicable to the active display/preset.	No	4.0	Yes	No

Command	Description	Numeric Command Code	Operators	Modifiers	Operands	Example	Notes	Standalone Component Command	Firmware Version Active	Functional in Fast Start Standby	Functional in Low Power Standby
ZONE.ORDER	Zone Stack Order	2615	=?	Integer	String	ZONE.ORDER(5)? ZONE.ORDER(5):-4	Gets / sets the order position of the specified zone in the zone stack. Smaller numbers are toward the back. Only applicable to the active display/preset.	No	4.0	Yes	No
ZONE.RECT	Zone Display Area	2606	=?	Integer	String	ZONE.RECT(5)? ZONE.RECT(5):1920 1080 1920 1080	Gets / sets for specified zone in configured wall in order: x offset pixel from zero x position in wall, y offset pixel from zero y position in wall, zone x area pixel size, zone y area pixel size. Only applicable to the active display/preset.	No	4.0	Yes	No
ZONE.RESTORE	Restore Zone	2607	!	Integer		ZONE.RESTORE(5) ZONE.RESTORE(5):@ACK	Undo of the last zone modification performed on the specified zone. Zone specified must have had the last action performed. Only applicable to the active display/preset.	No	4.0	Yes	No
ZONE.SOURCE	Zone Input	2608	=?	Integer	String	ZONE.SOURCE(1)? ZONE.SOURCE(1):"HDMI VC2.IN2"	Gets / sets the input routed to a zone. Only applicable to the active display/preset.	No	4.0	Yes	No

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.
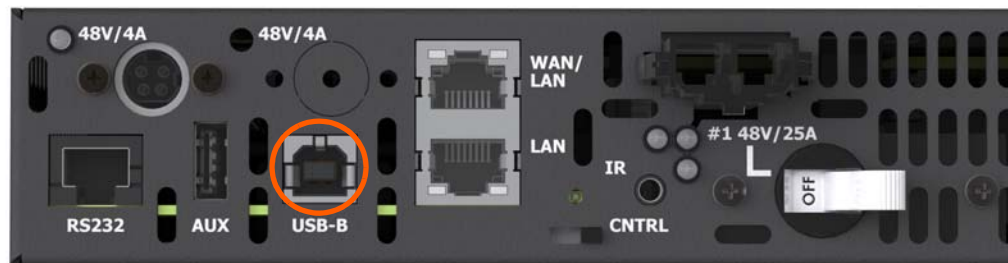
Remote Power Supply Models

Video Controller Models

Installing the 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. USB drivers may be obtained from the Planar Partner Portal website at https://partners.planar.com/

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".

2 The USB drivers will be automatically installed.
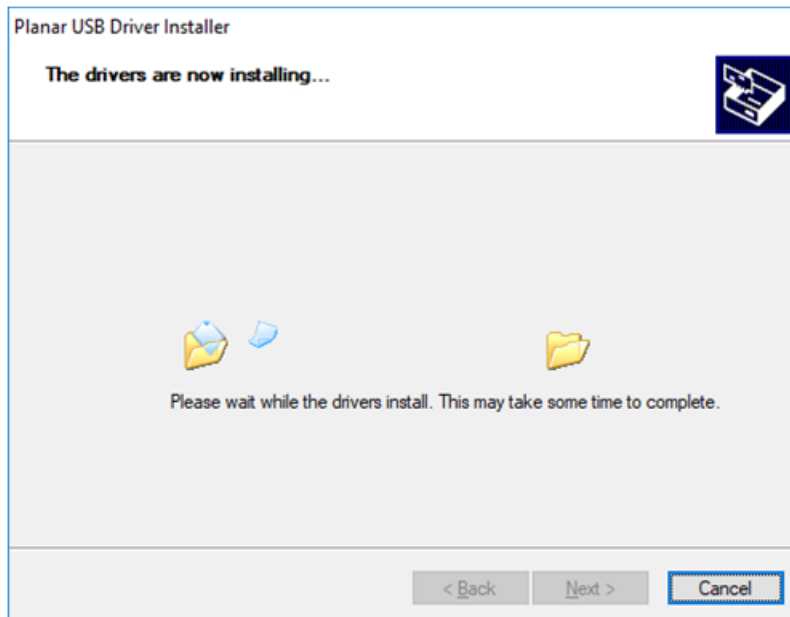
3 When the installation completes, click "Finish". The USB driver installation process is now complete.
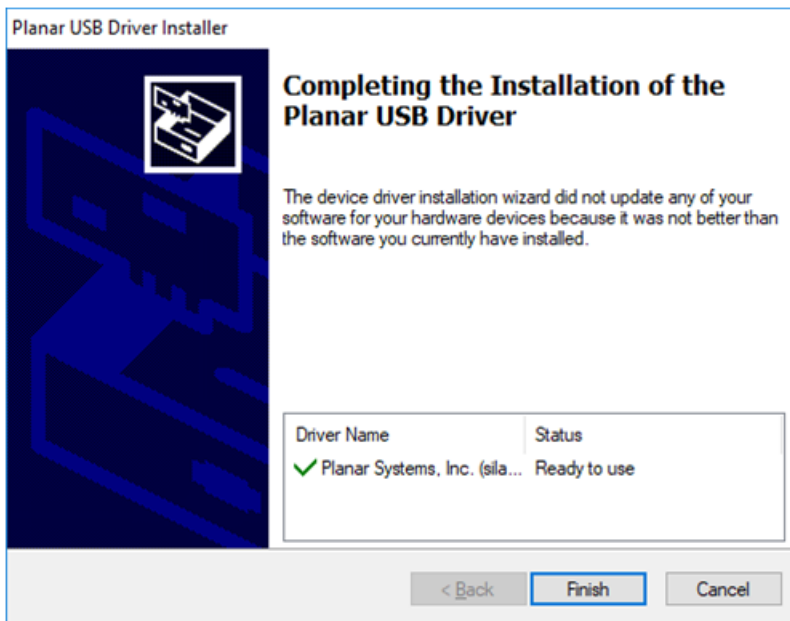
Manually installing the USB drivers

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 desired component.

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.
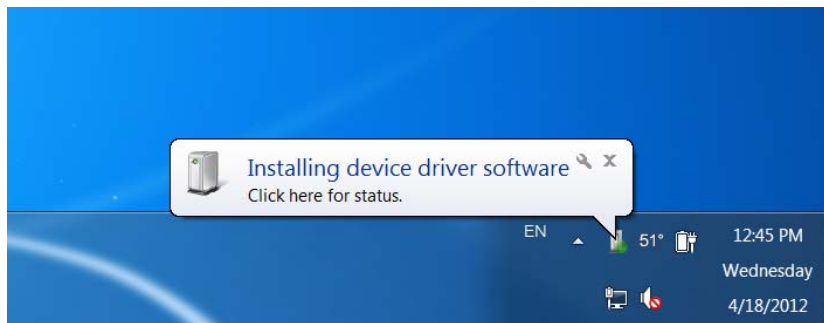
3   If driver installation succeeds, you will see a message like the one shown below. If so, driver installation is complete.
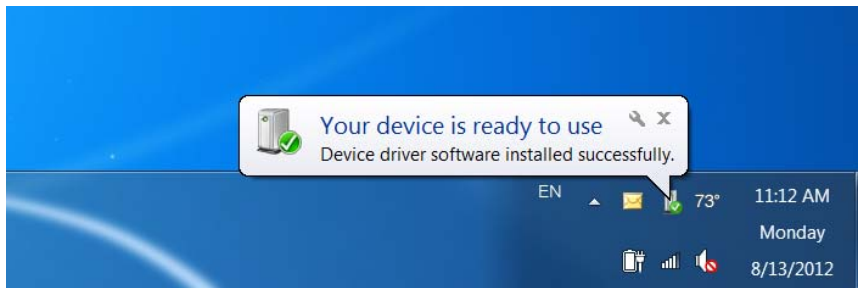
4   If Windows' attempt at installing the drivers fails, you will need to manually install the drivers using the steps below.
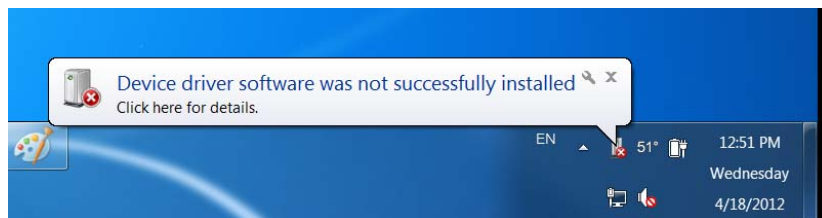
5   Open the Start menu and select "Control Panel".
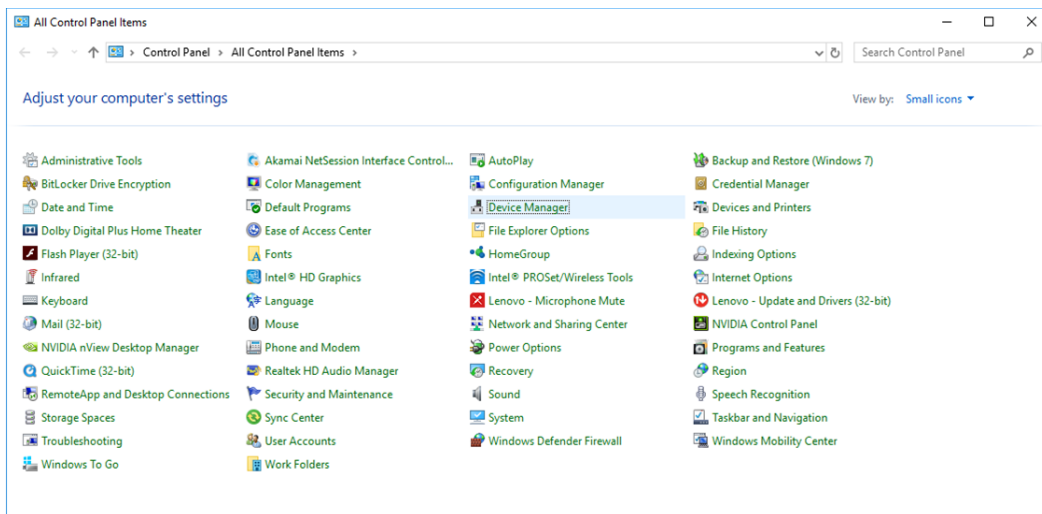
6   Select "Device Manager".

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".
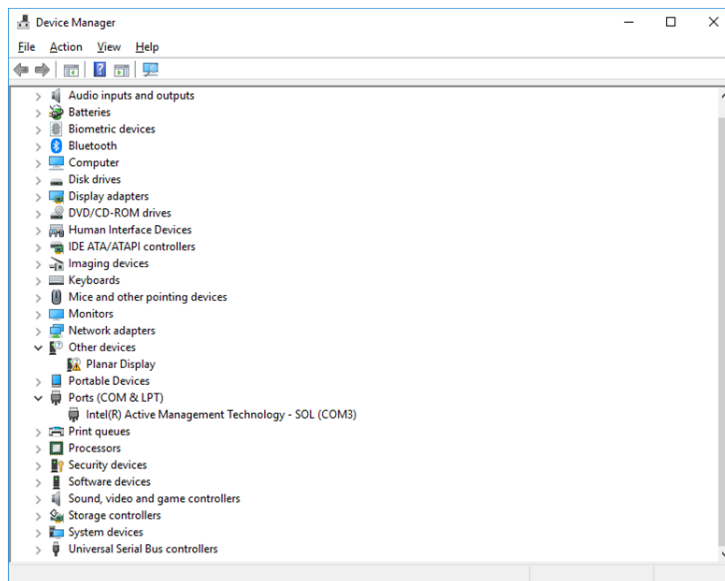
8   Follow the steps defined in the Update Driver Software wizard as follows.

   a   On the initial screen, select "Browse my computer for driver software".
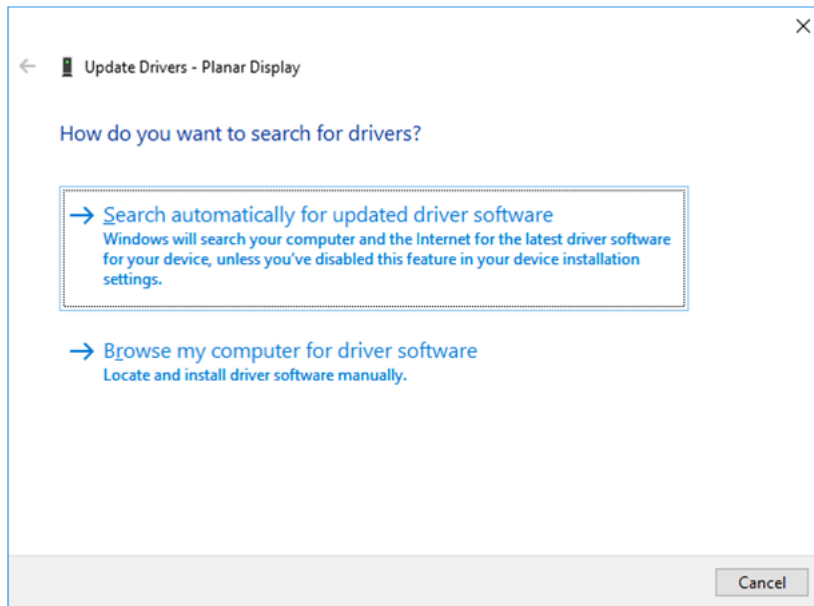
   b   Make sure the "Include subfolders" checkbox is checked. The USB drivers are included on the USB flash drive in the accessory kit; they can also be obtained from http://www.planar.com/support. Use the "Browse" button to locate the directory where the USB drivers are located. Click "Next".
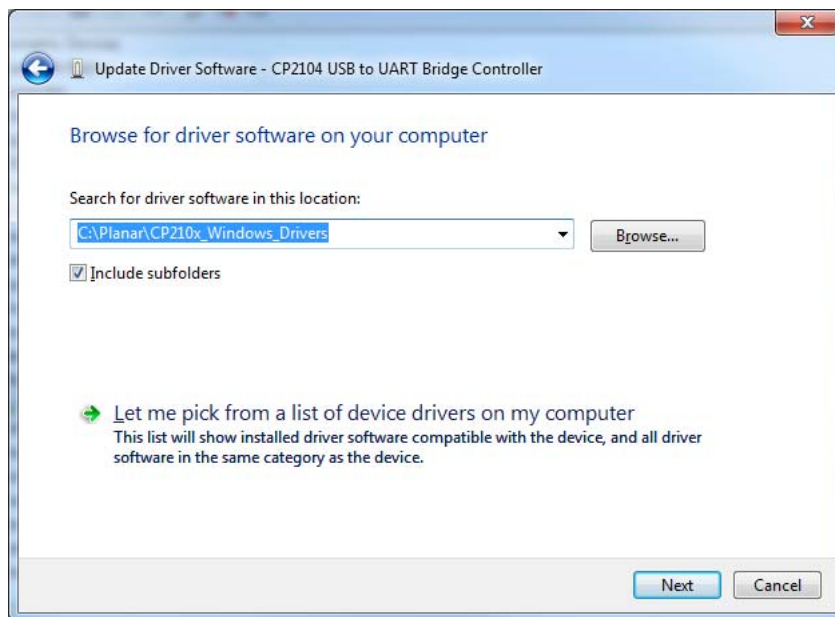
c When the installation completes, click "Close". The USB driver installation process is now complete.
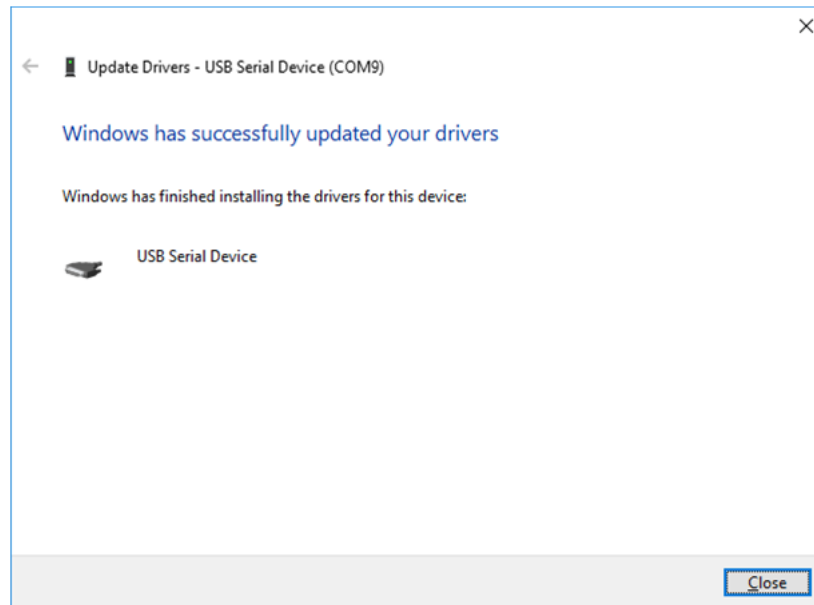
Note: Beginning with the release of Windows 10 v.1607, all drivers must be digitally signed by the Windows Hardware Developer Center Dashboard (WHDCD) portal. Planar is currently in process of having this driver signed by the WHDCD. If there are issues stating that no compatible driver is found when trying to recognize the device, a manual installation will be required. Follow these steps to enable the installation of the driver:

1 Click the **Start Menu** and select **Settings**.

2 Click **Update and Security**.

3 Click **Recovery**.

4 Click **Restart Now** under **Advanced Setup**.

5 Click **Troubleshoot**.

6 Click **Advanced Options**.

7 Click **Startup Settings**.

8 Click **Restart**.

9 When the Startup Settings screen appears, press either 7 or F7 to disable driver signature enforcement.

Once the computer reboots, it will be able to load unsigned drivers through the WHDCD until the next reboot of the PC.

Using the RPS 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.
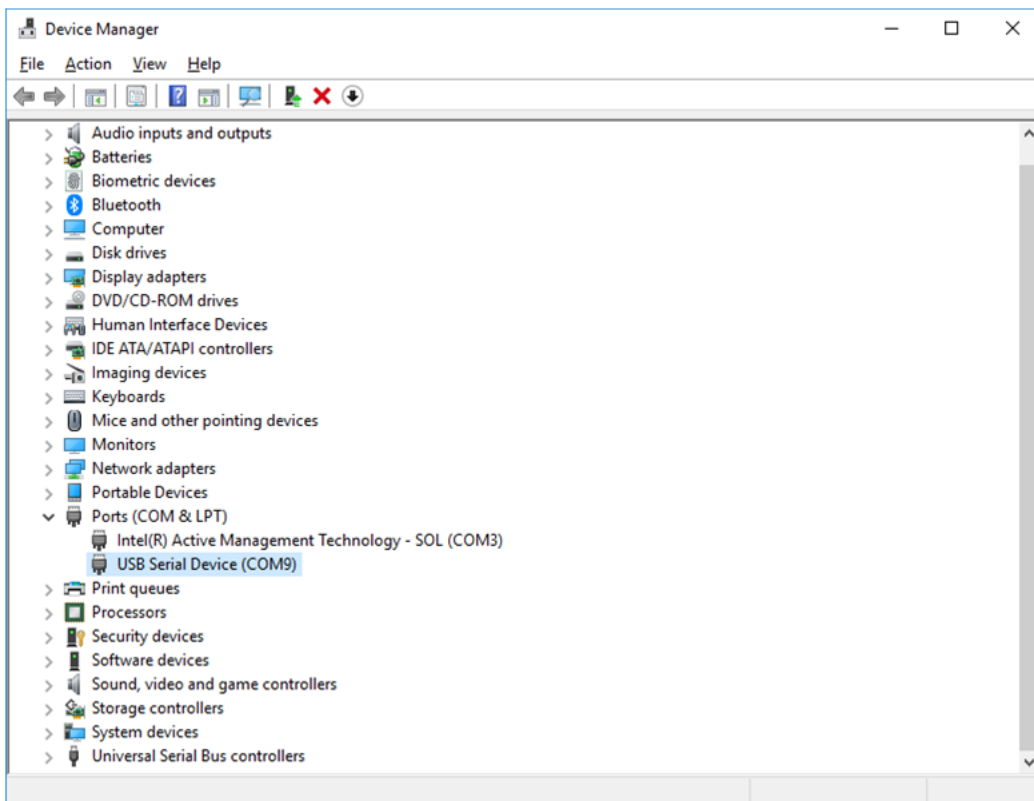
The baud rate on the serial connection is set by default to 19200 on the hardware, so it may be necessary to update the baud rate in the software. From the Device Manager, right-click and select Properties.
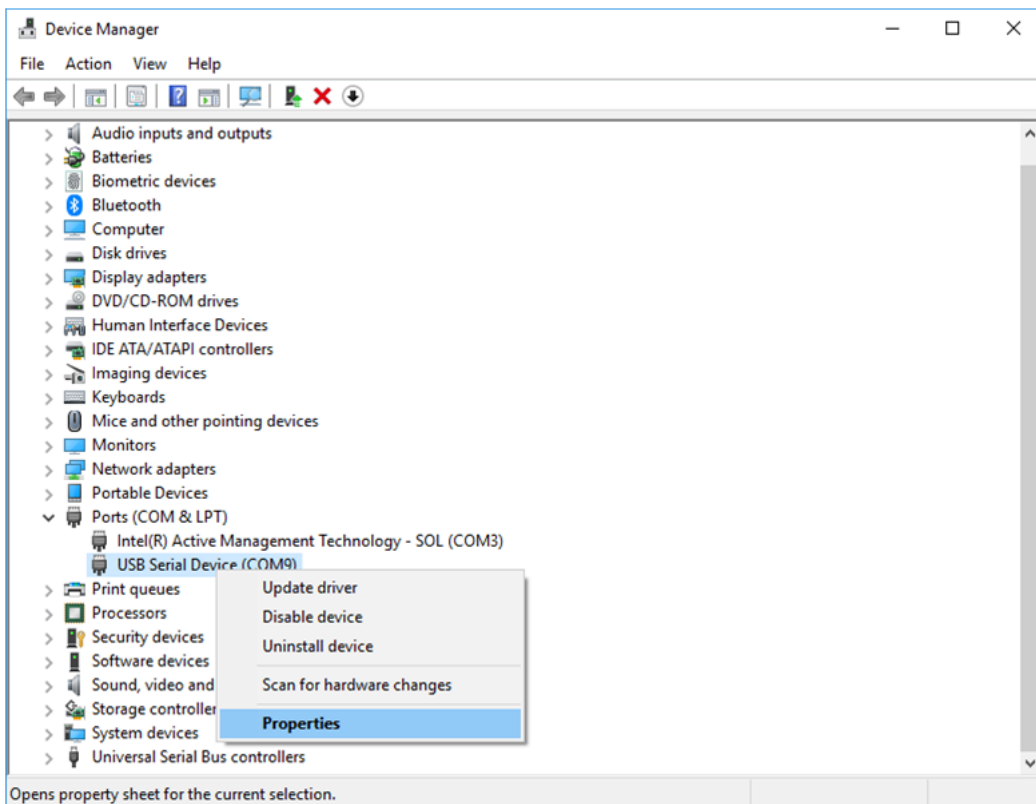
Select the Port Settings tab from the window that opened and from the pull down menu under Bits per second select 19200.
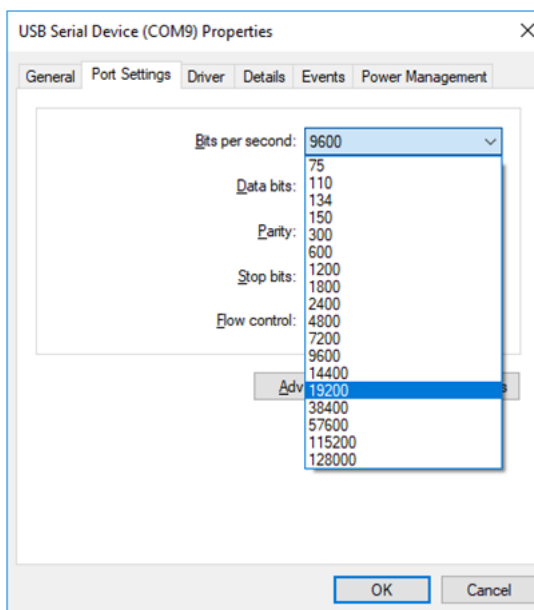
Click OK and exit out of the Device Manager.

Sending Serial Commands Via TCP or UDP

The TCP and UDP port 57 accepts serial commands the same as the above methods. 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; however, any Telnet program will work. Ensure the port is active through WallDirector Security Settings prior to attempting to use port 57.
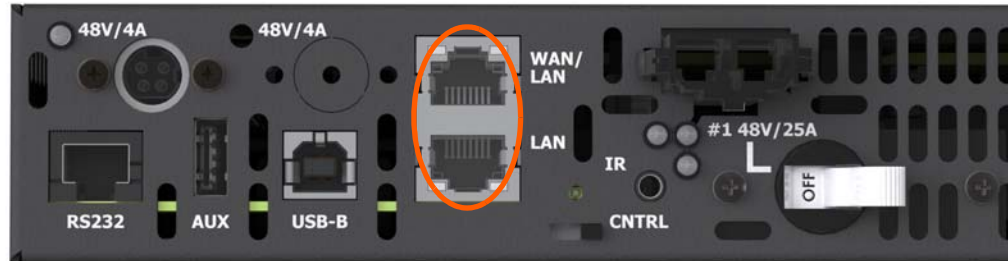
Remote Power Supply Models

Video Controller Models

Note: Windows 10 has a command line based telnet capability that is not installed by default. To install, follow the instructions below:

1   Open **Control Panel**.
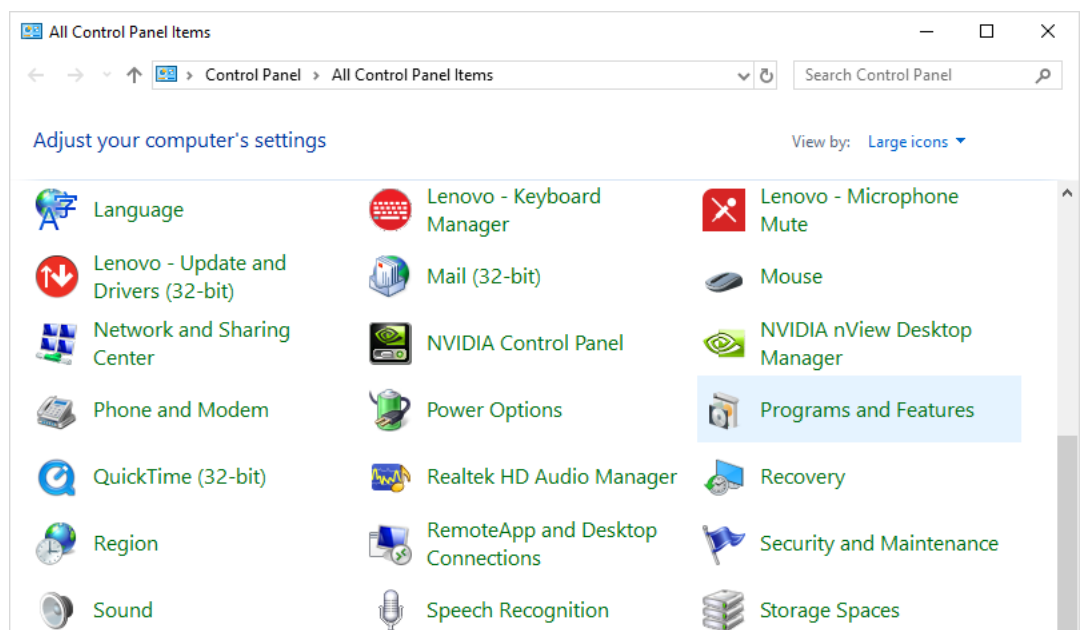
2 Open **Programs and Features**.
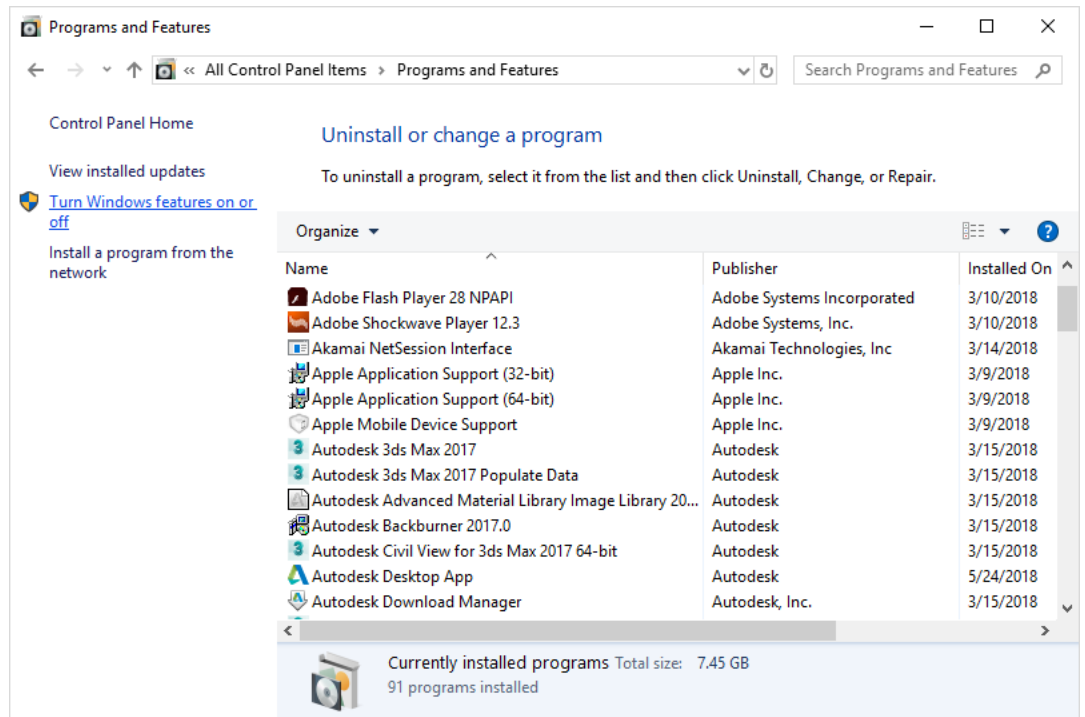
3 Select the **Turn Windows features on or off** option.

4 Select the **Telnet Client** check box.
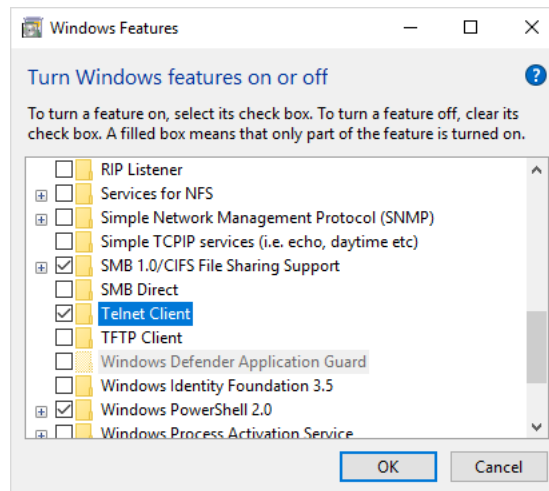
5 Click **OK**. A box will appear that says "Windows feature" and "Searching for required files." When complete, the Telnet client should be installed.
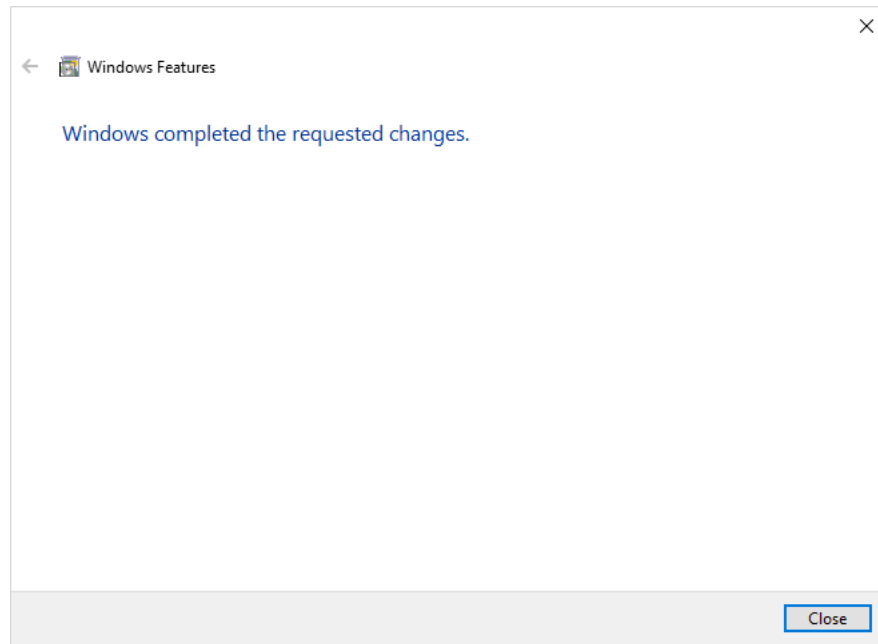
6. Open the program by searching from the **Start** menu.
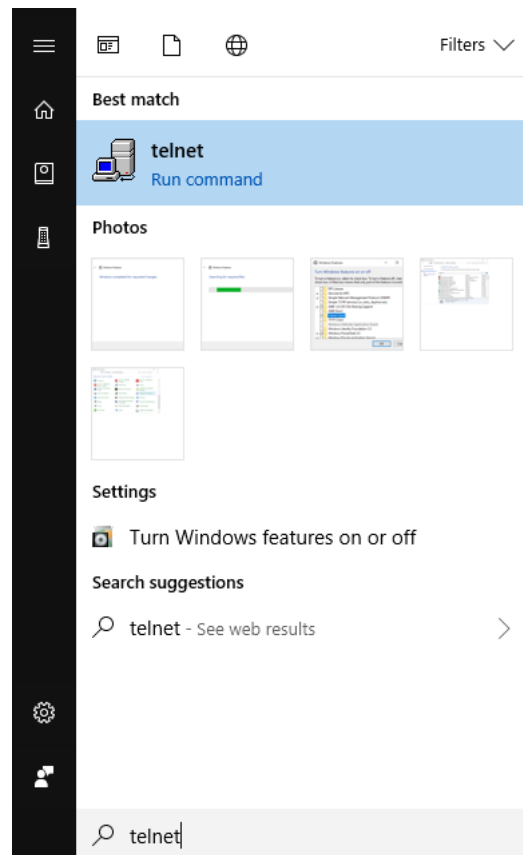
Notice the following in the TCP example below using Tera Term:

- The default IP address is 192.168.0.12; however, if connected to a WAN, the IP address assigned by the network can be used.
- Port 57 is selected
- Service is set to "Other" to indicate that TCP is being used without Telnet or SSH
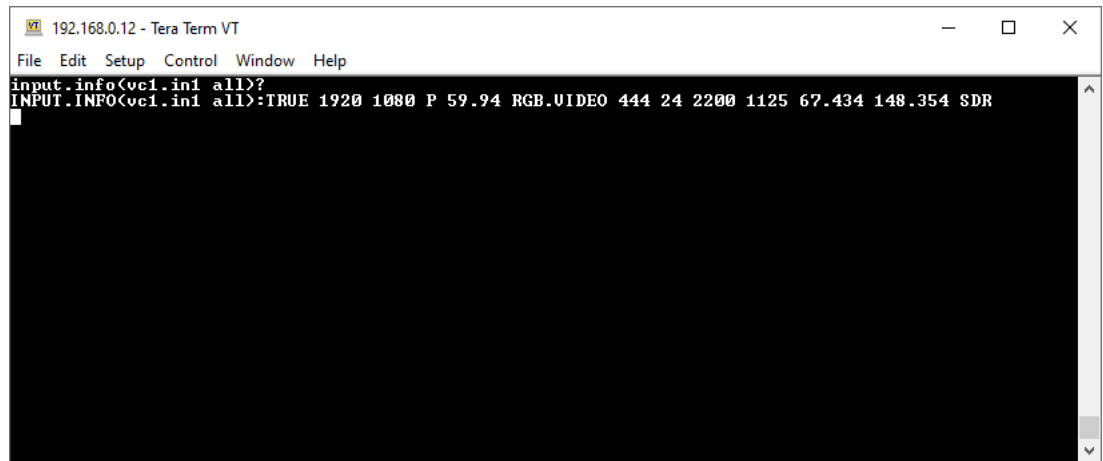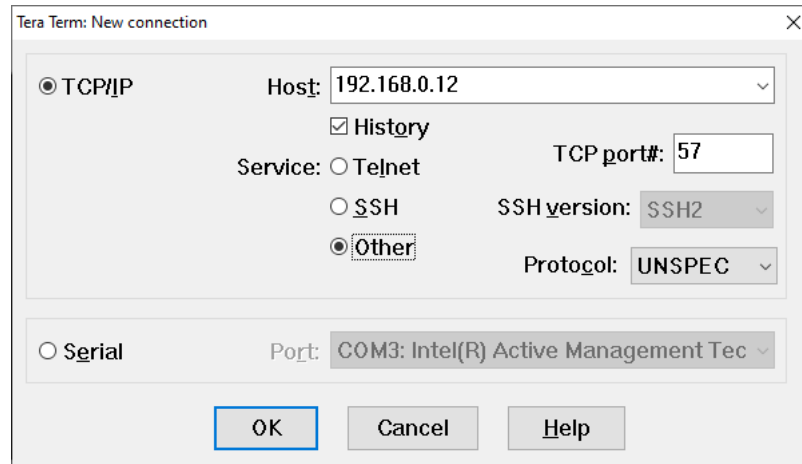
Notice the following in the UDP example below using Hercules:

- The default IP address is 192.168.0.12; however, if connected to a WAN, the IP address assigned by the network can be used.
- Port 57 is selected
- "69 6e 70 75 74 2e 69 6e 66 6f 28 76 63 31 2e 69 6e 31 20 61 6c 6c 29 3f 0d 0a" in the Send box is hex for "input.info(vc1.in1 all)?"

Note: Most UDP terminal programs won't automatically send the [CR] at the end of the command, so the hex command (0d 0a) is used to do this manually.

Index