PRO DSX API

Revision: 1.2

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Before continuing. You must know the IP address configuration of your PRO DSX System

Please refer to the Appendix at end of document.
Or if you have questions, please contact us.

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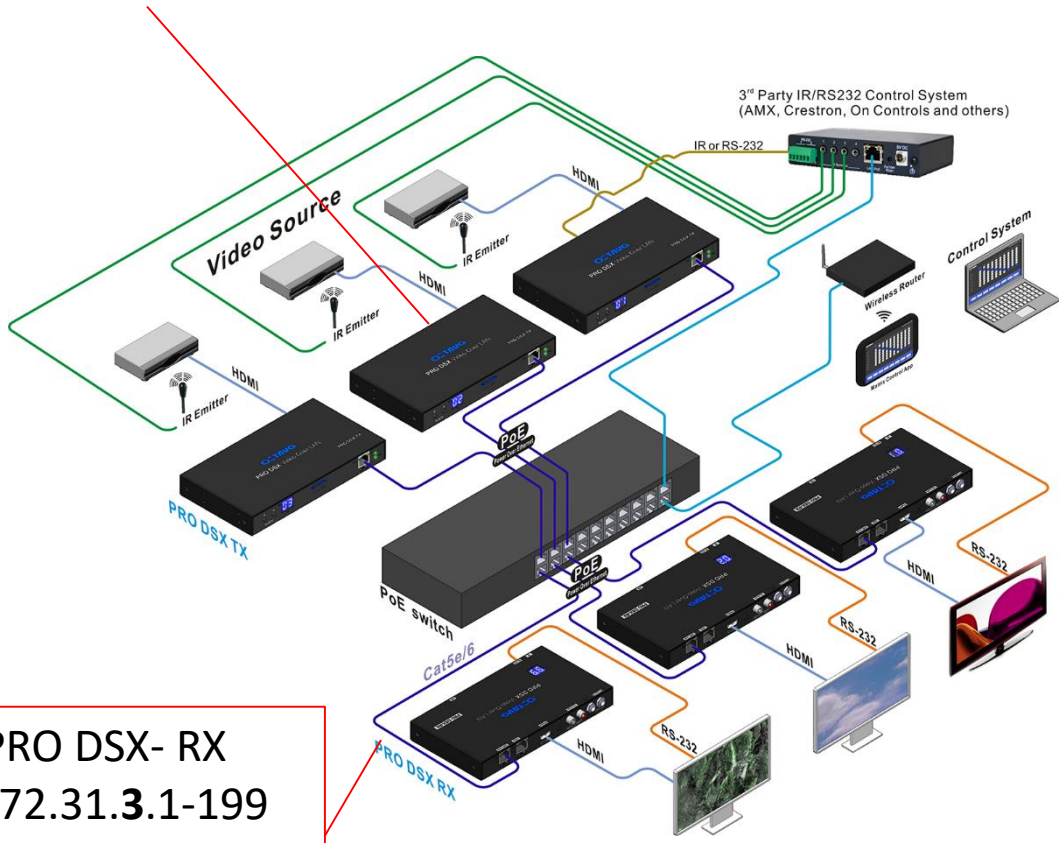
Example 172.31 Subnet Network Setup

The Static IP Addresses range of the PRO DSX system is in the 172.31 subnet depending on preference.

PRO DSX- TX
IP : 172.31.**2**.1-199

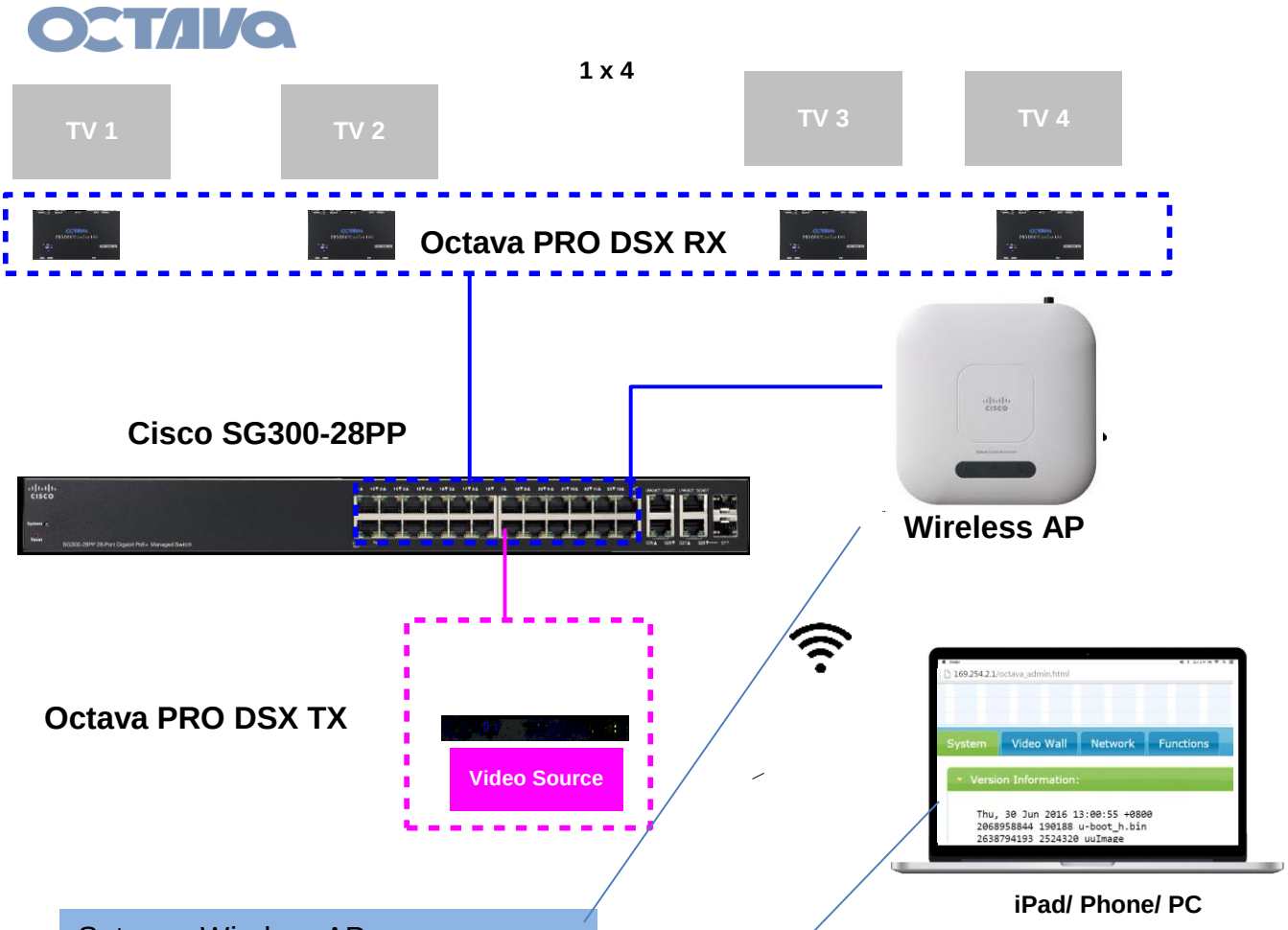
- Other static IP address can be set by WEB Interface
- Contact us for info.



PRO DSX- RX
IP : 172.31.**3**.1-199

Example of 172.31 subnet system

The PRO DSX- TX and RX has various features that can be enabled and modified by directing accessing the TX or RX web interface by entering the TX or RX IP address in a browser.



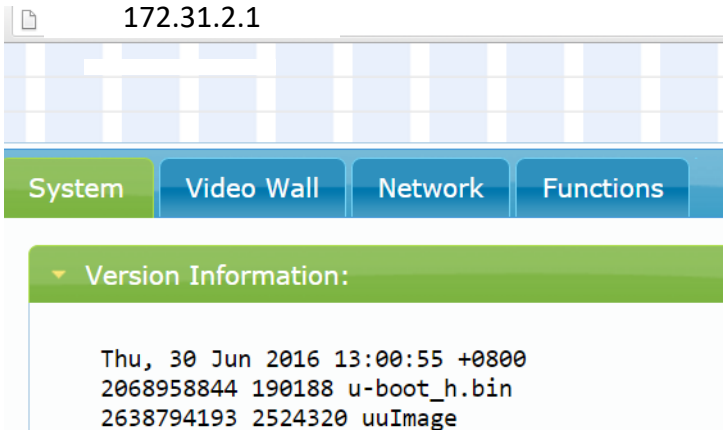
Set your Wireless AP
IP : 172.31.1.245 or
Subnet Mask: 255.255.0.0
Gateway/Router: 172.31.1.1

Set your network to
IP : 172.31.1.xx
Subnet Mask: 255.255.0.0
Gateway/Router: 172.31.1.245

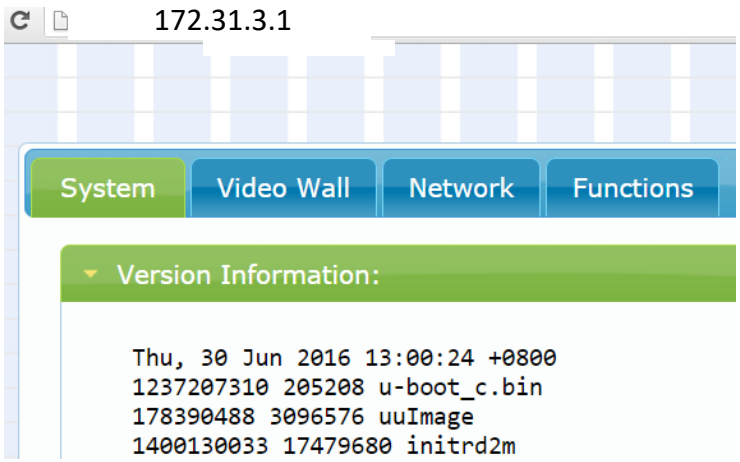
Example172.31 WEB Interface Access

The PRO DSX- TX and RX has various features that can be enabled and modified by directing accessing the TX or RX web interface by entering the TX or RX IP address in a browser.

Access PRO DSX-TX by entering:
172.31.2.xx (where xx is the last octet of the ip)

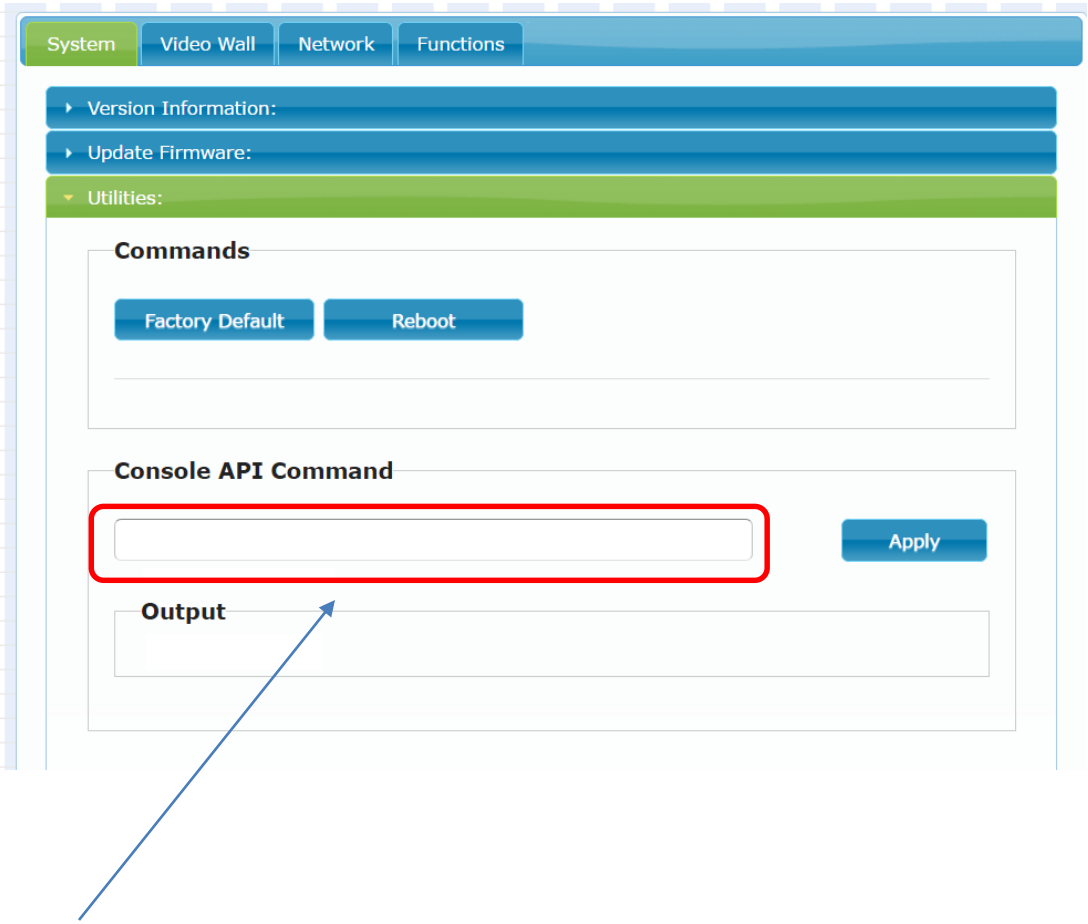


Access PRO DSX-RX by entering:
172.31.3.xx



Console API Commands

Access the Console API Command under Select Systems / Utilities



Commands will be entered here
Note 1. You must press Apply
Note 2. Some commands will require rebooting the unit.

Control Commands Using Telnet

The PRO DSX- TX and RX has various features that can be enabled and modified by directing accessing the TX or RX using TELNET.

Telnet commands can sent to the desired device using port 24.

Example:

telnet 172.31.x.xxx 24
Login: octava

Example 1:
Accessing PRO DSX –RX unit 01 (ip address = 172.31.3.1)

telnet 172.31.3.1 24
Login: octava

Example 2:
Accessing PRO DSX –RX unit 02 (ip address = 172.31.3.2)

telnet 172.31.3.2 24
Login: octava

Control Commands Using HTTP

The PRO DSX- TX and RX has various features that can be enabled and modified by directing accessing the TX or RX using HTTP request.

http://[device ip]/cgi-bin/query.cgi?cmd=[command]

Example:

Example 1:
Switching PRO DSX –RX unit 01 (ip = 172.31.3.1) to
PRO DSX-TX unit 01 (ip = 172.31.3.2.1) unit 1

http://**172.31.3.1**/cgi-bin/query.cgi?cmd=rxswitch:001

Example 2:
Switching PRO DSX –RX unit 01 (ip = 172.31.3.1) to
PRO DSX-TX unit 03 (ip = 172.31.3.2.1) unit 1

http://**172.31.3.1**/cgi-bin/query.cgi?cmd=rxswitch:003

The above http request examples can also use AJAX and XMLHttpRequest to implement. AJAX allows web pages to be updated asynchronously without requiring a page refresh.

Console API Commands

Command	Description	Feedback
reset:default	set back to factory default mode	
reboot	reboot	
get:fw_version	read back firmware version	
get:rs232	read rs-232 is on or off	RS-232 Over IP enable RS-232 Over IP disable
get:ir	read ir is on or off	USB Over IP enable USB Over IP disable
get :usb	read usb is on or off	USB Over IP enable USB Over IP disable
get :i2s	read i2s is on or off	Audio Over IP enable Audio Over IP disable
get:video	read if video is on or off	Video Over IP enable Video Over IP disable
astparam g ch_select	read what TX CH PRO DSX RX is connected to.	0001 for TX CH 01 00199 for TX CH 199

RX Console API Commands

RX Video Switching, Scaling, Rotate Commands		
Command		Description
rxswitch:nnn		Connect/switch PRO DSX to TX CH nnn
Examples shown below:		
rxswitch:001		Connect/switch PRO DSX to TX CH 01
rxswitch:010		Connect/switch PRO DSX to TX CH 10
rxswitch:199		Connect/switch PRO DSX to TX CH 199
scale_rx:passthru		Scale RX Video Output: pass thru
scale_rx:1080@50		Scale RX Video Output=:1080P@50Hz
scale_rx:1080@60		Scale RX Video Output: 1080P@60Hz
scale_rx:1080@30		Scale RX for 1080P@30Hz
scale_rx:1080@25		Scale RX for 1080P@25Hz
scale_rx:3840@30		Scale RX Video Output: 3840x2160@30Hz
scale_rx:3840@25		Scale RX Video Output: 3840x2160@25Hz
scale_rx:720@60		Scale RX Video Output: 1280x720@60Hz
rotate:0		rotate_0 degrees
rotate:90		rotate_90 degrees
rotate:180		rotate_180 degrees
rotate:270		rotate_270 degrees
rotate:0		rotate_0 degrees
video:on	turn on video	
video:off	turn off video	video Over IP disable
get:video	read if video is on or off	video Over IP enable

IR , RS-232, I2S Commands

Command	Description
rs232:on	Enable RS-232
rs232 :off	Disable RS-232
kvm:on	turn on KVM
kvm:off	turn off KVM
get:kvm	read if KVM is on or off
usb:on	turn on usb
usb:off	turn off usb
ir:on	turn on ir
ir:off	turn off ir
i2s:on	turn on I2S
i2s:off	turn off I2S
get:i2s	read if i2s is on or off
a_io_select: auto	auto select audio input source
a_io_select: hdmi	select hdmi as audio input source
a_io_select: analog	select analog as audio input source

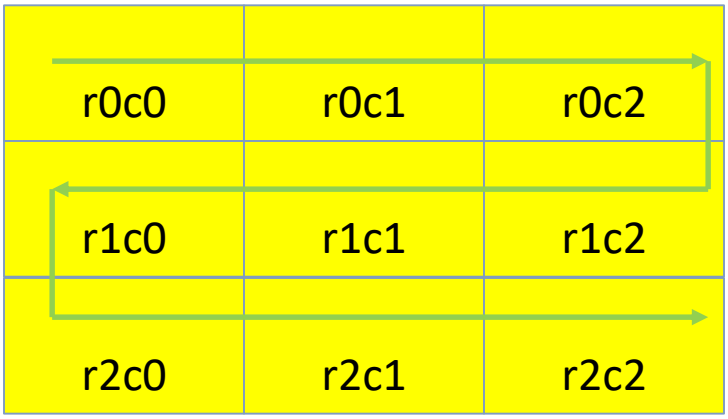
Console API Commands

Customize Web User Interface. **The following commands determine what features will be displayed in the WEB UI.**		
Command		
astparam s web_ui_cfg e;astparam save;reboot		e:Essential
astparam s web_ui_cfg en;astparam save;reboot		e:Essential n:Network
astparam s web_ui_cfg envw;astparam save;reboot		e:Essential n:etwork v:Video Wall
astparam s web_ui_cfg envws;astparam save;reboot		e:Essential n:etwork v:Video Wall s:serial over ip
astparam s web_ui_cfg envwsa;astparam save;reboot		e:Essential n:etwork v:Video Wall s:serial over ip a:audio (i2s)
astparam s web_ui_cfg envwsau;astparam save;reboot		e:Essential n:etwork v:Video Wall s:serial over ip a:audio (i2s) u: USB
astparam s web_ui_cfg envwsaur;astparam save;reboot		e:Essential n:etwork v:Video Wall s:serial over ip a:audio (i2s) u: USB r: IR

RX Console API Commands

Snap Shot of Video at the TX or RX.		
Command		
capture:on	Get a snapshot of the current video image being displayed at the TX or RX in the form of BITMAP (.bmp) file.	The snap shot BITMAP File (.bmp) is saved to : ***RX IP Address /images/capture.bmp*** ***TX IP Address /images/capture.bmp***

Video Wall Commands – 3x3



r = row, c = column

To render a 3x3 Video Wall. Send the 3x3commands to each corresponding RX in the sequence desired.

To turn off the video wall. Send the vw:off mode to each corresponding RX in the sequence desired.

Note the RX ID need to correspond to the Row and Column number of the Video Wall diagram above.

Video Wall Commands – 3x3

To turn off the video wall. Send the vw:off mode to each corresponding RX in the sequence desired.

Description	Suggested Commands	Note
Turn Off Video Wall	vw:off	Send command to the specific screens desired

Video Wall Commands – 3x3

To render a 3x3 Video Wall. Send the 3x3_rncn:on commands to each corresponding RX in the sequence desired.

Description	Suggested Commands	Note
3x3_r0c0:on	e e_vw_pos_layout_2_2	Declare Video Wall as 3x3
	e e_vw_enable_2_2_0_0	Enable Screen at Row 0 Column 0
	e e_vw_moninfo_200_200_100_100	
	e e_vw_stretch_type_2	Type_2 = fitin mode, Type_1=stretch mode
	e e_vw_refresh_pos_idx_0_0	Refresh Screen at Row 0 Column 0
3x3_r0c1:on	e e_vw_pos_layout_2_2	
	e e_vw_enable_2_2_0_1	
	e e_vw_moninfo_200_200_100_100	
	e e_vw_stretch_type_2	
	e e_vw_refresh_pos_idx_0_1	
3x3_r0c2:on	e e_vw_pos_layout_2_2	
	e e_vw_enable_2_2_0_2	
	e e_vw_moninfo_200_200_100_100	
	e e_vw_stretch_type_2	
	e e_vw_refresh_pos_idx_0_2	

Video Wall Commands – 3x3

r = row, c = column

To render a 2x2 Video Wall. Send the 2x2_rncn:on commands to each corresponding RX in the sequence desired.

To turn off the video wall. Send the vw:off mode to each corresponding RX in the sequence desired.

Note the RX ID need to correspond to the Row and Column number of the Video Wall diagram above.

Video Wall Commands – 2x2

To turn off the video wall. Send the vw:off mode to each corresponding RX in the sequence desired.

Description	Suggested Commands	Note
Turn Off Video Wall	vw:off	Send command to the specific screens desired

Video Wall Commands – 2x2

To render a 3x3 Video Wall. Send the 2x2 commands to each corresponding RX in the sequence desired.

Description	Suggested Commands	Note
2x2_r0c0:on	e e_vw_pos_layout_1_1	Declare Video Wall as 2x2
	e e_vw_enable_2_2_0_0	Enable Screen at Row 0 Column 0
	e e_vw_moninfo_200_200_100_100	
	e e_vw_stretch_type_2	Type_2 = fitin mode, Type_1=stretch mode
	e e_vw_refresh_pos_idx_0_0	Refresh Screen at Row 0 Column 0
2x2_r0c1:on	e e_vw_pos_layout_1_1	
	e e_vw_enable_2_2_0_1	
	e e_vw_moninfo_200_200_100_100	
	e e_vw_stretch_type_2	
	e e_vw_refresh_pos_idx_0_1	
2x2_r1c0:on	e e_vw_pos_layout_1_1	
	e e_vw_enable_2_2_1_0	
	e e_vw_moninfo_200_200_100_100	
	e e_vw_stretch_type_2	
	e e_vw_refresh_pos_idx_1_0	
2x2_r1c1:on	e e_vw_pos_layout_1_1	
	e e_vw_enable_2_2_1_1	
	e e_vw_moninfo_200_200_100_100	
	e e_vw_stretch_type_2	
	e e_vw_refresh_pos_idx_1_1	

ID and IP Setup :

Each PRO DSX – TX and RX unit need to be set to a unique ID and IP address. For ease of installation, the ID and IP address can be set using the front panel push buttons.

Subnet 172.31 indicator

+100 Indicator

RX ID indicator

RX ID Set Buttons

Subnet 172.31 indicator

+100 Indicator

TX CH ID Set Buttons

TX CH ID indicator

A table showing the LED Indicators will help clarify

NOTE: The factory default RX ID isset to “199” . Resetting device to factory default will also initialize the RX ID to “199”

RX ID LED Indicator 172.31.x.x subnet

Each RX includes a LED ID indicator to easily identify the RX.
The RX ID represents RX ID and the last octet of the RX IP address.
PRO DSX_RX will have ID in the range : 01-199
PRO DSX_RX will have IP address in the range : 172.31.3.xxx.

RX LED Indicators indicating device has been set to 172.31.x.x subnet is below

RX ID	RX ID LED	RX IP Address
RX001		172.31.3.1
RX002		172.31.3.2
RX099		172.31.3.99
RX100		172.31.3.100
RX101		172.31.3.101
RX199		172.31.3.199

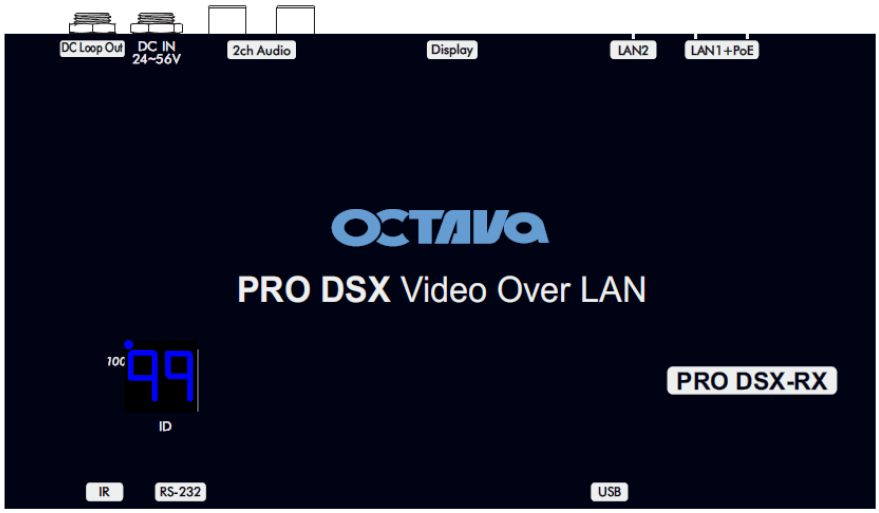
TX ID LED Indicator 172.31.x.x subnet

Each TX includes a LED ID indicator to easily identify the TX.
The TX ID represents the CH ID and last octet of the TX IP address.

PRO DSX-TX will have **IP address in the range : 172.31.2.xxx.**

TX CH ID	TX CH ID LED	TX IP Address
TX CH 01		172.31.2.1
TX CH 02		172.31.2.2
TX CH 99		172.31.2.99
TX CH 100		172.31.2.100
TX CH 101		172.31.2.101
TX CH 199		172.31.2.199

ID and IP Setup : RX ID and IP

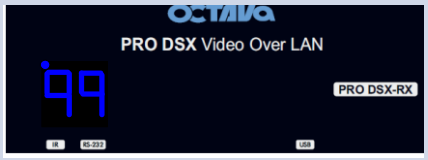
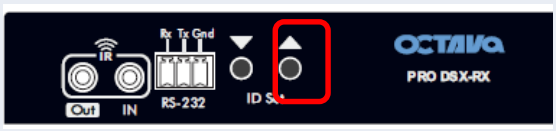
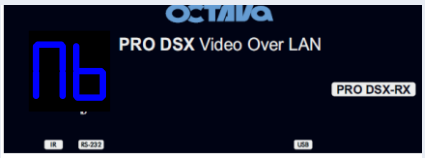
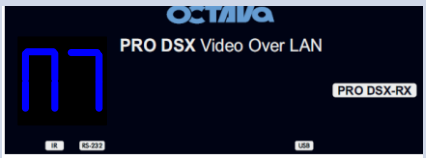
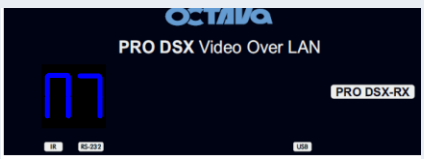


NOTE: The factory default is RX ID = 199 and IP = 169.254.3.199
Resetting the RX will reset RX ID = 199 and IP = 169.254.3.199

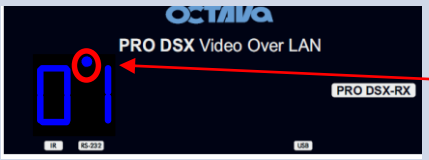
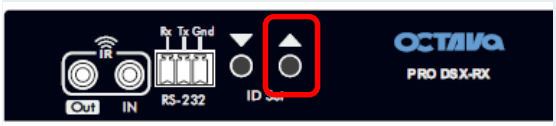
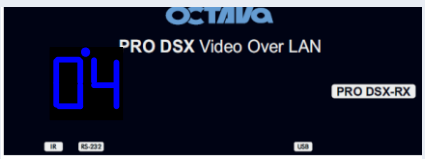
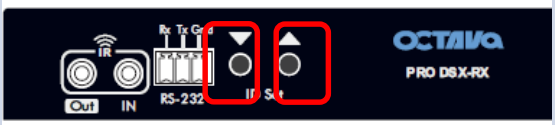
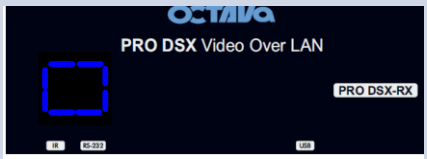
ID and IP Setup : RX ID and IP

The PRO DSX-RX ID can be manually setup per procedure shown below

Example 2: Setting PRO DSX –RX to **ID = 4 and IP = 172.231.3.4**

1	Connect PRO DSX –RX and verify it is powered up. 
2	PRESS HOLD the △ button for ~ 5 seconds until the LED display indicates “N6”   .
3	Press ▽ to change to N7 (172.31.3.xx subnet mode)  
4	PRESS HOLD ▽ + △ button for ~ 5 seconds until LED blinks “N7”. 

ID and IP Setup : RX ID and IP

5	Release the ▽ △ button. LED will blink 01  Note the 172 subnet LED indicator is ON
6	Press △ button to increment from 01 to the desired RX ID.  
7	PRESS HOLD both the ▽ + △ button for ~ 5 seconds until LED blinks. Release the buttons and LED will “cycle”  
8	RX will reboot and indicate the RX ID when complete  Note the 172 subnet LED indicator is ON
9	The above example has programmed the RX to **RX ID = 4 and IP = 172.31.3.4**

ID and IP Setup : TX ID and IP

NOTE: The factory default is TX CH ID = 199 and IP = 169.254.2.199
Resetting the TX will reset TX CH ID = 199 and IP = 169.254.2.199

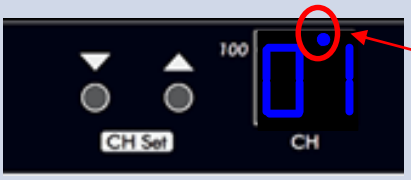
ID and IP Setup : TX ID and IP SETUP

The PRO DSX-TX CH can be manually setup per procedure shown below

Example 4: Setting PRO DSX –TX to **ID = 05 and IP = 172.31.2.5**

1	Connect PRO DSX –TX and verify it is powered up 
2	PRESS HOLD the △ button for ~ 5 seconds until the LED display indicates “N6” (172.31.2.x subnet mode). 
3	Press ▽ to change to N7 (172.31.2.xx subnet mode) 
4	PRESS HOLD ▽ + △ button for ~ 5 seconds until LED blinks “N7”. 

ID and IP Setup : TX ID and IP SETUP

5	Release the ▽ △ button. LED will blink   Note the 172 subnet LED indicator is ON
6	Press △ button to increment from 01 to the desired TX CH ID. 
7	PRESS HOLD both the ▽ + △ button for ~ 5 seconds until LED blinks. Release the buttons and LED will “cycle” 
8	TX will reboot and indicate the TX CH ID when complete  Note the 172 subnet LED indicator is ON
9	The above example has programmed the TX to **TX CH ID = 05 and IP = 172.31.2.5**