



Application Programming Interface

Product Model	SW-I20-TX3-Ux SW-I20-TX3 RX3-I00
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Contents

Overview	3
Wiring and Communication Configuration.....	3
Command Overview.....	4
Switching Inputs.....	5
Controlling Display Power via CEC.....	6
Troubleshooting.....	8
Contacting Technical Support.....	9
Document Revision History.....	9
Publication Disclaimer.....	10

Overview

The following contains the connection info and commands to control the SW-120-TX3-Ux, SW-120-TX3 and RX3-100. By following the content contained in this document the switcher can be controlled and configured via a 3rd party RS-232 control system.

Before You Begin

Verify that the following items are on hand and that all documentation is reviewed before continuing:

- Connected and operational SW-120-TX3-Ux, SW-120-TX3 or RX3-100.....
- Control System and Control System Documentation.....
- PC or Mac for Configuring Product.....

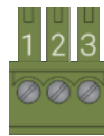
Wiring and Communication Configuration

WyreStorm recommends that all wiring for the installation is run and terminated prior to making connections to the switcher. Before running or terminating the wires, read through this section in its entirety to ensure proper operation and to avoid damaging equipment.

RS-232 Connection

The following wiring diagram shows the pinout for the WyreStorm device. While not shown, connect the TX (transmit) to RX (receive) pins at the control system or PC side of the cable. Most control systems and computers are configured for Digital Terminal Equipment (DTE) where pin 2 is RX and pin 3 is TX. This can vary from device to device, refer to the documentation for the connected device for pin functionality to ensure that the connect connections can be made. **Note: See DIP Switch Control settings for models SW-120-TX3 and RX3-100**

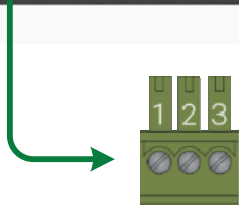
SW-120-TX3-Ux



WyreStorm Connector		3rd Party Device
Pin 1	TX (Transmit)	---> To ---> RX (Receive)
Pin 2	RX (Receive)	---> To ---> TX (Transmit)
Pin 3	G (Ground)	---> To ---> G (Ground)

Overview

SW-120-TX3



WyreStorm Connector		3rd Party Device
Pin 1 TX (Transmit)	--> To -->	RX (Receive)
Pin 2 RX (Receive)	--> To -->	TX (Transmit)
Pin 3 G (Ground)	--> To -->	G (Ground)

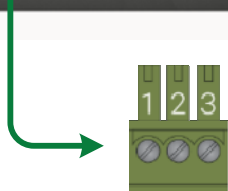
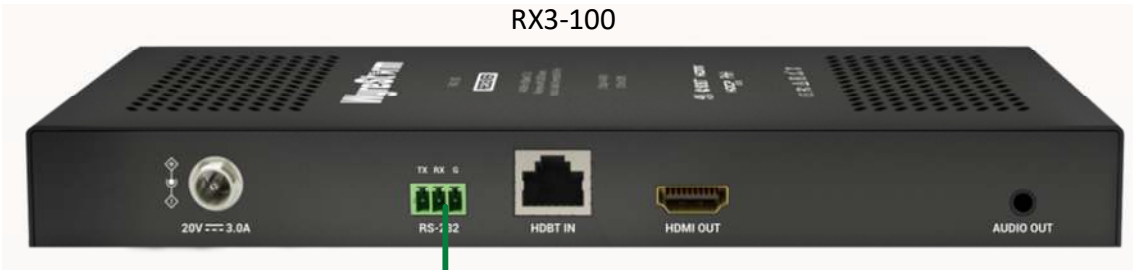
DIP Switch Control SW-120-TX3 and RX3-100 Only

The four-pin DIP switch can be used to adjust RS-232 function.



Pin 2 is set to the 'Up' position, RS-232 Control mode. RS-232 port is used to control the receiver and remote transmitter. In this mode, users can upgrade the receivers MCU firmware.

RX3-100



WyreStorm Connector		3rd Party Device
Pin 1 TX (Transmit)	--> To -->	RX (Receive)
Pin 2 RX (Receive)	--> To -->	TX (Transmit)
Pin 3 G (Ground)	--> To -->	G (Ground)

RS-232 Port Settings

Baud rate:	115200 bps
Data Bits:	8bits
Parity:	None
Stop Bits:	1bit
Flow Control:	None

Command Overview

Command Delimiter for Sent Commands

When sending commands using the RS-232 API channel, all command lines sent from the 3rd-party controller to the switcher should end with a specific character. This signifies when the command is processed by the switcher. This is usually specified in 3rd-party control software as the “command delimiter,” “stop character,” or “line terminator.”

Accepted delimiter characters are:

Character	Shorthand	Hex Notation	Escape Notation	Decimal Notation
Line Feed	LF	0A	\n	10
Carriage Return + Line Feed	CR LF	0D 0A	\r\n	13 10

Note: Most 3rd-party control software will either append these characters automatically or an option to specify them will be present. It is important that the last delimiter character is LF and not CR.

Switching Inputs

Switching Video Inputs	
Command structure: SET SW <INPUT> <OUTPUT>	<INPUT> = hdmi typec <OUTPUT> = out Note: Not valid for RX3-100
Response Syntax: SW <INPUT>	
Example Command: SET SW typec out	
Example Response: SW typec out	

Query Active Input	
Command structure: GET MP <OUTPUT>	<INPUT> = hdmi typec <OUTPUT> = out Note: Not valid for RX3-100
Response Syntax: MP <INPUT> <OUTPUT>	
Example Command: GET MP OUT	
Example Response: MP typec out	

Auto Switch

Set Auto Switch	
Command structure: SET AUTOSW_FN <PRM>	<PRM> = on off Note: Not valid for RX3-100
Response Syntax: AUTOSW_FN <PRM>	
Example Command: SET AUTOSW_FN on	
Example Response: AUTOSW_FN on	

Query Auto Switch	
Command structure: GET AUTOSW_FN <PRM>	<PRM> = on off Note: Not valid for RX3-100
Response Syntax: AUTOSW_FN on	
Example Command: GET AUTOSW_FN on	
Example Response: AUTOSW_FN on	

Controlling Display Power via CEC

CEC Display Power	
Command structure: SET CEC_PWR <OUTPUT> <PRM>	
Response Syntax: CEC_PWR <OUTPUT> <PRM>	<PRM> = on off <OUTPUT> = out
Example Command: SET CEC_PWR out on	Note: Not valid for RX3-100
Example Response: CEC_PWR out on	

Set CEC Auto Trigger	
Command structure: SET AUTOCEC_FN <OUTPUT> <PRM>	
Response Syntax: AUTOCEC_FN <OUTPUT> <PRM>	<PRM> = on off <OUTPUT> = out
Example Command: SET AUTOCEC_FN out on	Note: Not valid for RX3-100
Example Response: AUTOCEC_FN out on	

The switcher can automatically send a CEC Power On command through its output when an input signal is detected. CEC Power Off commands can also automatically be sent after a predetermined amount of time passes and when a signal detection is lost. See “Set CEC Auto Power Off Delay” section for details.

Query CEC Auto Trigger	
Command structure: GET AUTOCEC_FN <OUTPUT>	
Response Syntax: AUTOCEC_FN <OUTPUT> <PRM>	<PRM> = on off <OUTPUT> = out
Example Command: GET AUTOCEC_FN out	Note: Not valid for RX3-100
Example Response: AUTOCEC_FN out on	

Set CEC Auto Power Off Delay

Command structure:

SET AUTOCEC_D <OUTPUT> <PRM>

Response Syntax:

AUTOCEC_D <OUTPUT> <PRM>

Example Command:

SET AUTOCEC_D out 5

<OUTPUT> = out

<PRM> = 1~30

Note: Not valid for RX3-I00

Example Response:

AUTOCEC_D out 5

Note: <PRM> is in minutes. A value of 5 is equal to a 5-minute delay.

Query CEC Auto Power Off Delay

Command structure:

GET AUTOCEC_D <OUTPUT>

Response Syntax:

AUTOCEC_D <OUTPUT> <PRM>

Example Command:

GET AUTOCEC_D out

<OUTPUT> = out

<PRM> = 1~30

Note: Not valid for RX3-I00

Example Response:

AUTOCEC_D out 5

Note: <PRM> is in minutes. A value of 5 is equal to a 5-minute delay.

Troubleshooting

Set Baud Rate	
Command structure: SET UART_B <PRM1> <PRM2>	<PRM1> = uart1 <PRM2> = 9600 1920 38400 57600 115200
Response Syntax: UART_B <PRM1> <PRM2>	
Example Command: SET UART_B uart1 9600	
Example Response: UART_B uart1 9600	

Query Firmware Version	
Command: GET VER <TARGET>	<TARGET> = all MCU MCDP5200 TPS65988 Note: MCDP520 and TPS65988 are valid for transmitter only <PRM> = current installed firmware version
Response Syntax: VER <TARGET> <PRM>	

Reboot Switcher	
Command: REBOOT	No Parameters
Response: REBOOT	

Restore Factory Defaults	
Command: RESET	No Parameters
Response: RESET	

Contacting Technical Support

Should further clarification of the content in this document or assistance on troubleshooting be required, please contact WyreStorm technical support.

Document Revision History

V1.0 – November 2023

All	Initial release of document
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Publication Disclaimer

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