

# Application Programming Interface

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| Product Model | SW-120-TX3-Ux | SW-120-TX3 | RX3-100 |
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[Overview **3**](#_bookmark0)

[Wiring and Communication Configuration **3**](#_bookmark1)

[Command Overview **4**](#_bookmark2)

[Switching Inputs **5**](#_bookmark3)

[Controlling Display Power via CEC **6**](#_bookmark4)

[Troubleshooting **8**](#_bookmark5)

[Contacting Technical Support **9**](#_bookmark6)

[Document Revision History **9**](#_bookmark7)

[Publication Disclaimer **10**](#_bookmark8)

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 functionally to ensure that the connect connections can be made. Note: See DIP Switch Control settings for models SW-120-TX3 and RX3-100





RS-232 Port Settings

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

## 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:

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| --- | --- | --- | --- | --- |
| **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.

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| **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 typc out** |
| Example Response:  **SW typec out** |

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| **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**

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| **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** |

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| **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** |

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

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| **Set CEC Auto Trigger** | |
| Command structure:  **SET AUTOCEC\_FN <OUTPUT> <PRM>** | **<PRM>** = on | off  **<OUTPUT>** = out  **Note:** Not valid for RX3-100 |
| Response Syntax:  **AUTOCEC\_FN <OUTPUT> <PRM>** |
| Example Command:  **SET AUTOCEC\_FN out on** |
| 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. | |

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

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| **Set CEC Auto Power Off Delay** | |
| Command structure:  **SET AUTOCEC\_D <OUTPUT> <PRM>** | **<OUTPUT>** = out  **<PRM>** = 1~30  **Note:** Not valid for RX3-100 |
| Response Syntax:  **AUTOCEC\_D <OUTPUT> <PRM>** |
| Example Command:  **SET AUTOCEC\_D out 5** |
| Example Response:  **AUTOCEC\_D out 5** |
| Note: <PRM> is in minutes. A value of 5 is equal to a 5-minute delay. | |

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| **Query CEC Auto Power Off Delay** | |
| Command structure:  **GET AUTOCEC\_D <OUTPUT>** | **<OUTPUT>** = out  **<PRM>** = 1~30  **Note:** Not valid for RX3-100 |
| Response Syntax:  **AUTOCEC\_D <OUTPUT> <PRM>** |
| Example Command:  **GET AUTOCEC\_D out** |
| Example Response:  **AUTOCEC\_D out 5** |
| Note: <PRM> is in minutes. A value of 5 is equal to a 5-minute delay. | |

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| **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** |

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| **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>** |

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| **Reboot Switcher** | |
| Command:  **REBOOT** | **No Parameters** |
| Response:  **REBOOT** |

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| **Restore Factory Defaults** | |
| Command:  **RESET** | **No Parameters** |
| Response:  **RESET** |

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

# Document Revision History

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| --- | --- |
| V1.0 – November 2023 | |
| All | Initial release of document |

## Publication Disclaimer

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