

XHD-3903/X85/X75 Serial Control

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<u>INTRODUCTION</u>	4
<u>HARDWARE REQUIREMENT</u>	5
<u>XHD3903</u>	5
<u>X85/X75</u>	5
<u>SERIAL PORT SET-UP</u>	6
<u>XHD-3903</u>	6
<u>X85/X75</u>	6
<u>FIRMWARE REQUIREMENT</u>	6
<u>COMMANDS</u>	7
<u>INIT</u>	7
<u>RELEASE</u>	7
<u>SETAFDMODE</u>	7
<u>GETAFDMODE</u>	7
<u>BOARDSTATUS</u>	7
<u>HELP</u>	7
<u>ENUMSET [CCS PARAM – ID],[ENUM INDEX]</u>	7
<u>INTSET [CCS PARAM – ID],[INTEGER VALUE]</u>	8
<u>STRSET [CCS PARAM – ID],[STRING VALUE]</u>	9

Introduction

Serial Control is a function implemented on XHD3903 / X85/X75 to control the insertion of AFD code into downstream video or to set integer/enumeration/string parameter value through serial port.

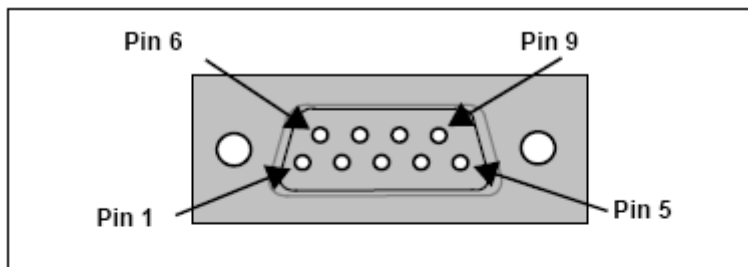
Hardware requirement

XHD3903

XHD3903 breakout cable: Non-AES or balanced/unbalanced AES cable

Connection cable: A straight through cable to connect the breakout cable RS232/RS422 port and RS422 port on the customer side. The connection of this cable depends on the RS422 pinouts on the customer side, so this cable is not available from Harris. Refer to the following information to make this cable.

DB-9 Pinouts and Pin numbering of the breakout cable RS232/RS422 port is illustrated as below:



DB-9 Connector	Pin Number	Function
RS-232/RS-422	2	Tx - (Tx)
	3	Rx + (Rx)
	7	Tx +
	8	Rx -
	Metal body	Ground

X85/X75

You need the same straight through cable as described above for the XHD-3903. You can then connect this cable to the rear of the X85/X75 unit at the DB-9 connector labeled “RS-232/422”.

Serial Port Set-up

XHD-3903

RS232
Baudrate: 115200
Data bits: 8
Parity: none
Stop bits: 1
Flow control: None

X85/X75

RS232
Baudrate: 38400
Data bits: 8
Parity: none
Stop bits: 1
Flow control: None

Firmware requirement

XHD-3903: Version 1.14 firmware is required for this function

X85/X75 : Ver 3.3

Commands

init

The first command need to be executed before any other control command can be used. Upon successful execution, xhd3903 sends out “*Connection established*”.

release

Command to release the connection established by “*init*” command, Upon successful execution, xhd3903 sends out “*Connection closed*” .

setafdmode

Command to control the output AFD code. This command should be called as “*setafdmode bbbb*”, where ‘*b*’ is either ‘0’ or ‘1’, and “*bbbb*” in combination should represent a valid AFD code. Note this control result will be reflected on two CCS control parameters “*AFD Control*” and “*AFD Select*”, “*AFD Control*” is set to “*Insert Custom*”, and “*AFD Select*” is set to the code of “*bbbb*”. ‘*z*’ indicates which output is selected for the insertion. This command is not supported on the X85.

getafdmode

Command to get the current output AFD code. . This command should be called as “*setafdmode*”. The card will return current AFD code in “*bbbb*” format if it is inserting some AFD code, while it will reply “Not inserting AFD code” if it’s not inserting any code. This command is not supported on the X85.

boardstatus

Depending on the card status, the card will reply with one of the following texts:
 Major and Minor alarm on
 Major alarm on
 Minor alarm on
 Good

This command is not supported on the X85.

help

The command will print out all the supported commands through this port.

enumset [CCS Param – ID],[Enum Index]

Command to set an enumeration parameter on the XHD-3903 or X85/X75.

Arguments:

“CCS Param – ID” is the parameter ID specified in the “CCS Parameter interface document” which can be obtain in the product documentation or via the Harris Primer website.

“Enum Index” is the enumeration index value for the parameter specified in the “CCS Parameter interface document”.

Return Value:

“ok” – Parameter set command successfully send.

“error” – Parameter set command failed to send.

Example:

Here is a sample parameter definition in the CCS Parameter Interface Document for the XHD3903:

ARC Preset DOWN [CCS-P Parameter ID = 357]

Description: Selects a preset ARC configuration.

Navigation
Path: /Video/Processing/ARC

Type: enumeration

Access: read/write

Default: 0

Enum Values: 0="Anamorphic" ,1="4:3 Pillar Box" ,2="14:9 Pillar Box" ,3="16:9 Cut" ,4="4:3->21:9 Ltr" ,5="16:9 Letter Box" ,6="14:9 Letter Box" ,7="4:3 Cut" ,8="16:9->21:9 Ltr" ,9="PixelTrue" ,10="Preset 1" ,11="Preset 2" ,12="Preset 3" ,13="Preset 4" ,14="Preset 5" ,15="Preset 6" ,16="Preset 7" ,17="Preset 8" ,18="Preset 9" ,19="Preset 10" ,20="AFD" ,21="AFD - ALTR" ,22="VI" ,23="VI - ALTR" ,24="WSS" ,25="WSS - ALTR" ,26="Custom"

To set the above parameter to “Anamorphic” using the “enumset” serial command the following command can be issued:

enumset 357,0

A return value of “ok” is then returned upon the successful execution of the above command.

intset [CCS Param – ID],[Integer value]

Command to set an integer parameter on the XHD-3903 or X85/X75.

Arguments:

“CCS Param – ID” is the parameter ID specified in the “CCS Parameter interface document” which can be obtain in the product documentation or via the Harris Primer website.

“Integer value” is the integer value of the parameter with-in the range specified in the “CCS Parameter interface document’s Valid Range” and does not take precision into account. This number value can be preceded by a ‘-’ to indicate a negative number.

Return Value:

“ok” – Parameter set command successfully send.
“error” – Parameter set command failed to send.

Example:

Here is a sample parameter definition in the CCS Parameter Interface Document for the XHD3903:

Horz. Offset [CCS-P Parameter ID = 274]

Description: Sets the ARC horizontal offset.

Navigation Path: /Video/Processing/ARC

Type: integer

Access: read/write

Valid Range: -800 to 800 with units of "%" and precision of 1 decimal places

Default: 0

To set the above parameter to -25.5% using the “intset” serial command the following command can be issued:

intset 274,-255

A return value of “ok” is then returned upon the successful execution of the above command.

strset [CCS Param – ID],[String value]

Command to set a string parameter on the XHD-3903 or X85/X75.

Arguments:

“CCS Param – ID” is the parameter ID specified in the “CCS Parameter interface document” which can be obtain in the product documentation or via the Harris Primer website.

“String value” is an ASCII character string value of the parameter. The character string must be preceded and terminated by a “” character. “String value” can not exceed 64 characters.

Return Value:

“ok” – Parameter set command successfully send.

“error” – Parameter set command failed to send.

Example:

Here is a sample parameter definition in the CCS Parameter Interface Document for the XHD3903:

File Path Select [CCS-P Parameter ID = 440]

Description: Selects the logo image to load.

Navigation Path: /Video/Processing/Logo

Type: string

Access: read/write

Default:

To set the above parameter to “logo1.mg2” using the “strset” serial command the following command can be issued:

```
strset 440,"logo1.mg2"
```

A return value of “ok” is then returned upon the successful execution of the above command.