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Chandler Remote OSD Protocol Description

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**PrismaMEDIA-ECO, PrismaCompact-Media,
PrismaMINI-H, PrismaMINI-HDMI-DP,
PrismaECO-eDP, PrismaECO-IV, ArtistaMedia-III**

Version 1.5

15.03.2019

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1 Revision History

Date	Rev.No.	Description	Page
22.05.2017	1.0	Initial version	All
12.06.2017	1.1	Power Save Mode added PCB Revision added BOM Revision added Product Number added Serial Number added	9
13.06.2017	1.2	Document renamed to Prisma Chandler-ROSD	All
07.03.2018	1.3	Document renamed to Chandler-ROSD Added ArtistaMedia-III Last page updated	All All 24
15.10.2018	1.4	Corrected Checksum in Chapter 4.3 Update Logo	6 All
15.03.2019	1.5	Updated Document Corrected Value (Hex) Meanings for the Connection Check	All 9

2 Introduction

This guide explains how to read and adjust the OSD settings of PrismaMEDIA-Eco, PrismaCompact-Media, PrismaMINI-H, PrismaMINI-HDMI-DP, PrismaECO-eDP and PrismaECO-IV boards from your PC over the serial port.

3 Minimum requirements

One of these Controller boards with a firmware Remote OSD capability and the serial interface IF-370 (ZU-02-370) with cable (KA-30-101) are needed.

- PrismaECO-eDP
- PrismaMINI-H
- PrismaECO-IV
- PrismaMINI-HDMI-DP
- PrismaCompact-Media
- PrismaMEDIA-ECO
- ArtistaMedia-III

4 How to Communicate with a Prisma board

4.1 Serial port configuration

The serial port RS-232 configuration that has to be used for communicating with Prisma board is given in Table 1 below.

Table 1:

Property	Value
DTR Enable	False
EOF Enable	True
Handshaking	No handshaking
Input Buffer Size	8
Input Length	8
Input Mode	Binary
Null Discard	False
Output Buffer Size	8
Receive Threshold	0
RTS Enable	False
Settings	115200 Baud, n, 8, 1
Send Threshold	0

4.2 Request and response structure

To read and adjust the OSD menu controls, and to execute the OSD menu functions, requests can be sent to the Prisma board from the COM port of the PC. Please refer to Table 5 for time delays before reading response packets in adjustment functions. For reading, this delay is by default 200ms. Also, there is a default delay of 100 ms before sending a second request. Some Remote OSD commands do not have an adjust option. See Table 5 for details.

Remote OSD requests and responses are always 8-byte long. See Table 2 and Table 3 for the packet structures.

Remote OSD packets have two bytes for inputs and outputs of the functions. The two bytes are considered as a whole - as a signed integer. The sign bit is the most significant bit of the most significant byte (5th byte). These bytes are not controlled in read requests. In adjust requests; the firmware might not set the sent value if it is not available. Then the firmware sends the current value of the function.

Table 2: Request Packet

Byte Order	Name	Explanation
1	Length	The length of the whole packet (Always 8)
2	Remote OSD Selection	Always 0x34(Hex), only for Table 6 0x35(Hex)
3	Remote OSD Function ID	ID of the adjuster function or information function. See Table 5.
4	Remote OSD Sub-function ID	See Section 4.4.
5	Remote OSD Function Input Parameter Most Significant Byte	Used if the requested Remote OSD function requires input. The most significant bit here is used as the sign bit.
6	Remote OSD Function Input Parameter Least Significant Byte	Used if the requested Remote OSD function requires input.
7	Remote OSD File Operation Byte	See Section 4.7
8	Checksum	See Section 4.3 for the calculation

Table 3: Response Packet

Byte Order	Name	Explanation
1	Length	The length of the whole packet (Always 8)
2	Remote OSD Selection	Always 0x34(Hex), only for Table 6 0x35(Hex)
3	Remote OSD Function ID	ID of the adjuster function or information function. See Table 5.
4	Remote OSD Sub-function ID + Status Info	See Section 4.4.
5	Remote OSD Function Output Parameter Most Significant Byte	The most significant bit here is used as the sign bit.
6	Remote OSD Function Output Parameter Least Significant Byte	-
7	Remote OSD File Operation Byte	See Section 4.7
8	Checksum	See Section 4.3 for the calculation

4.3 Calculating the Checksum

The calculation of checksum is as follows: Add the previous (first 7) bytes of the request, take the least significant 8 bits of this result, and find the 2's complement of this result. The checksum in the response that is received is calculated in the same way. See the example below:

Suppose that the first 7 bytes to be sent are

0x08, 0x34, 0x00, 0x00, 0x00, 0x01, 0xFF

By adding them you would obtain

0x08 + 0x34 + 0x00 + 0x00 + 0x00 + 0x01 + 0xFF = 0x13C

It exceeds 8 bits, so take the least significant 8 bits, as 0x3B and find the 2's complement:

Checksum = 0x100 – 0x3C = 0xC4

When the checksum is added as the 8th byte, you would get a sequence like the following one (The output of the function is not stable, the following is just an example):

0x08, 0x34, 0x00, 0x00, 0x00, 0x01, 0xFF, 0xC4

To check if the checksum is correct, all of the bytes are added together. If the least significant byte of the result is zero, then the checksum is correct.

0x08+ 0x34 + 0x00 + 0x00 + 0x00 + 0x01 + 0xFF + 0xC4 = 0x200

This means that the checksum of the received sequence is correct.

4.4 Remote OSD Sub-Function IDs

Sub-function ID structure is as in Table 4. In "Control Function" this byte is used, but the format changes. This special command will be explained in Section 4.8.1.12.

Table 4:

Bit #	Name of Flag	0	1
0 (Least significant)	-	-	-
1	Read/Adjust	Read value of the selected control	Adjust value of the selected control
2	Min	-	Get minimum value of the control
3	Max	-	Get maximum value of the control
4	Disable[1]	Selected control is enabled	Selected control is disabled
5	Input Change[1]	No input change	Detected input change
6	-	-	-
7	-	-	-

[1] These bits are available only in the Remote OSD response packet.

Read/Adjust flag is set to 0 when the sender wants to get the value of the selected function, and is set to 1 when the sender wants to set the value of the selected function. The minimum and maximum values of some functions change with respect to source type, resolution, refresh rate, etc. For these functions (see Table 5) min and max values need to be requested from the firmware. **Min** and **Max flags** cannot be "1" at the same time and can be used only in read operations. **Disable flag** is used for functions whose availability status changes (See Table 5, Always Enabled column). This flag is set to 1 in the response packet for read or adjust requests if the selected function is disabled.

Input change flag is set to 1 after a change in the source input. This flag is carried on the response packet of any read or adjust request following the change. The possible conditions which can be regarded as a change in the source input:

- Another input source has been selected using Remote OSD commands
- Another input source has been selected using "Input Select" of the on-board OSD
- Prisma board has automatically switched to another input source, because the previously selected input source is no longer providing a valid input signal
- The resolution or the refresh rate of the input signal has been changed
- The power of the Prisma board has been switched off and on.

These flags appear as set in the response packets until the sender makes a connection check request. Only, power, source input change, protocol version, firmware version, control function, panel width/height, board type and EDID write protect operations can be done without clearing these flags. For other controls, input should be stable and these flags should be cleared using connection check. If "Remote OSD Function ID" in response packet is different than request packet (if 0x00), this also means that you have to make connection check.

4.5 Remote OSD Command Table

Table 5:

Function Name (Function available on Prisma Board)	Function ID (Hex)	Read\write (r/w)	Always Enabled	Minimum Value - Maximum Value	Adjust Delay (sec)	Number of Saved Value Sets in File Operations	Value (Hex) Meanings
Connection Check ([6, 7, 8, 9, 10, 11, 12])	0x00	r	√	-	-	None	(0x01): Valid Sync (0x02): Powered Off (0x03): No Sync
Brightness ([6, 7, 8, 9, 10, 11, 12])	0x02	r/w	√	0 - 100	0,2	Multiple-Set[1]	(0x00): Min. Value (0x64): Max. Value
Contrast ([6, 7, 8, 9, 10, 11, 12])	0x03	r/w	√	0 - 100	0,2	Multiple-Set	(0x00): Min. Value (0x64): Max. Value
Saturation ([6, 7, 8, 9, 10, 11, 12])	0x04	r/w	([5])	0 - 100	0,2	Multiple-Set	(0x00): Min. Value (0x64): Max. Value
Hue ([6, 7, 8, 9, 10, 11, 12])	0x05	r/w	([5])	0 - 100	0,2	Multiple-Set	(0x00): Min. Value (0x64): Max. Value
Sharpness ([6, 7, 8, 9, 10, 11, 12])	0x06	r/w	√	0 - 8	0,2	Multiple-Set	(0x00): Min. Value 8 (0x08): Max. Value
Color Temperature ([6, 7, 8, 9, 10, 11, 12])	0x08	r/w	([5])	1 - 6	0,2	Multiple-Set	(0x01): User (0x02): 4200K (0x03): 5000K (0x04): 6500K (0x05): 7500K (0x06): 9300K
Red Gain ([6, 7, 8, 9, 10, 11, 12])	0x09	r/w	([5])	0 - 100	0,2	Multiple-Set	(0x00): Min. Value (0x64): Max. Value
Green Gain ([6, 7, 8, 9, 10, 11, 12])	0x0A	r/w	([5])	0 - 100	0,2	Multiple-Set	(0x00): Min. Value (0x64): Max. Value
Blue Gain ([6, 7, 8, 9, 10, 11, 12])	0x0B	r/w	([5])	0 - 100	0,2	Multiple-Set	(0x00): Min. Value (0x64): Max. Value
Color Option ([6, 7, 8, 9, 10, 11, 12])	0x70	r/w	([5])	0 - 2	0,2	Multiple-Set	(0x00): Full Color (0x01): SRGB (0x02): XVYCC
ADC Calibration ([8, 10])	0x51	w	([5])	0	1,5	None	(0x00): ADC Calibration
Auto Adjust ([8, 10, 11])	0x19	w	([5])	0	1,0	None	(0x00): Auto Adjust
VGA Vertical Position ([8, 10, 11])	0x1A	-	([5])	FWR ([2])	0,2	None	-
VGA Horizontal Position	0x1B	-	([5])	FWR ([2])	0,2	None	-
Phase	0x1C	-	([5])	0 - 63	0,2	None	-
Clock	0x1D	-	([5])	0 - 100	0,2	None	-
OSD Horizontal Start ([6, 8, 10, 11, 12])	0x31	r/w	√	0 - 100	0,2	1-Set	(0x00): Min. Value (0x64): Max. Value
OSD Vertical Start ([6, 8, 10, 11, 12])	0x32	r/w	√	0 - 100	0,2	1-Set	(0x00): Min. Value (0x64): Max. Value

OSD Blend ([6, 8, 10, 11, 12])	0x33	r/w	√	1 - 12	0,2	1-Set	Min. 8% (0x01) Max. 100% (0x0C) 0% cannot be set
OSD Timeout ([6, 8, 10, 11, 12])	0x34	r/w	√	0 - 2	0,2	1-Set	(0x00): 3s (0x01): 6s (0x02): 12s
OSD Rotation ([6, 8, 10, 11, 12])	0x37	r/w	√	0 - 3	0,2	1-Set	(0x00): 0° (0x01): 90° (0x02): 180° (0x03): 270°
Factory Reset ([6, 7, 8, 9, 10, 11, 12])	0x39	w	√	0	1,0	None	(0x00): Factory Reset
Input Search ([6, 7, 8, 9, 10, 11, 12])	0x50	r/w	√	0 - 1	0,2	1-Set	(0x00): Off (0x01): On
Power Save Mode (reserved)	0x52	r/w	√	0 - 1	0,2	1-Set	(0x00): Off (0x01): On
PCB Revision (reserved)	0x53	r/w	√	0 – 255 0 - 255	0,2	1-Set	(0x00): Min. Value (0xFF): Max. Value MSB = PCB major revision LSB = PCB minor revision
BOM Revision (reserved)	0x54	r/w	√	0 - 255	0,2	1-Set	(0x00): Min. Value (0xFF): Max. Value
Product Number (reserved)	0x55	r/w	√	0 – 255 0 - 255	0,2	1-Set	(0x00): Min. Value (0xFF): Max. Value MSB = PN MSB LSB = PN LSB
Serial Number (reserved)	0x56	r/w	√	0 – 255 0 - 255	0,2	1-Set	(0x00): Min. Value (0xFF): Max. Value MSB = SN MSB LSB = SN LSB
Main Video Source ([6, 7, 8, 9, 10, 11, 12])	0x3D	r/w	√	0 - 2	0,2	1-Set	(0x00): Display Port (0x01): HDMI (0x02): VGA
EDID Write Protect ([6, 10, 11, 12])	0x74	r/w	√	0 - 1	0,2	1-Set	(0x00): Off (0x01): On
Power ([6, 7, 8, 9, 10, 11, 12])	0x3F	r/w	√	0 - 1	0,2	1-Set	(0x00): Off (0x01): On
Control Function ([6, 7, 8, 9, 10, 11, 12])	0x40	r	√	0 - 1	0,2	None	Sub-Function IDs: (0x00):Supported Inputs by firmware (0x01): Hardware PCB revision
Horizontal Resolution ([6, 7, 8, 9, 10, 11, 12])	0x41	r	√	0	0,2	None	-
Vertical Resolution ([6, 7, 8, 9, 10, 11, 12])	0x42	r	√	0	0,2	None	-
Refresh Rate ([6, 7, 9, 10, 11, 12])	0x43	r	√	0	0,2	None	-
Remote OSD Protocol-Version ([6, 7, 8, 9, 10, 11, 12])	0x44	r	√	0	0,2	None	ROSD Version response bit (14:10).bit (9:5). bit (4:0)
Firmware Version ([6, 7, 8, 9, 10, 11, 12])	0x71	r	√	0	0,2	None	Firmware Version response bit (14:10).bit (9:5). bit (4:0)
Panel Width ([6, 7, 8, 9, 10, 11, 12])	0x72	r	√	0	0,2	None	-

Panel Height ([6, 7, 8, 9, 10, 11, 12])	0x73	r	√	0	0,2	None	-
Board Type ([6, 7, 8, 9, 10, 11, 12])	0x4E	r	√	0	0,2	None	Chandler Boards response: (0x03): PrismaMEDIA-Eco (0x06): PrismaCOMPACT Media (0x07): PrismaMINI-HDMI (0x0A): PrismaECO-eDP (0x0B): PrismaECO-IV (0x0C): PrismaMINI-HDMI-DP (0x0D): ArtistaMedia-III
Volume ([5])	0x80	r/w	([5])	0 - 100	0,2	1-Set	(0x00): Min. Value (0x64): Max. Value
Mute(Speakers) ([10, 12])	0x85	r/w	([5])	0 - 1	0,2	1-Set	(0x00): Off (0x01): On
Audio Output Port ([10])	0x90	r/w	([5])	0 – 1 ([2])	0,2	1-Set	(0x00): Speakers (0x01): Headphone (0x02)::Auto (Only PCB1.2)
Remote Control – IR ([10])	0x75	r/w	√	0 - 1	0,2	1-Set	(0x00): Off (0x01): On
Scan Direction ([11])	0x76	r/w	-	FWR ([2])	0,2	1-Set	(0x00): Normal (0x01): Reverse
Left Key ([11])	0x77	r/w	√	0 - 2	0,2	1-Set	(0x00): Not Used (0x01): Brightness Decrement (0x02): Brightness Menu
Right Key ([11])	0x78	r/w	√	0 - 2	0,2	1-Set	(0x00): Not Used (0x01): Brightness Increment (0x02): Contrast Menu
Enter Key ([11])	0x79	r/w	√	0 - 2	0,2	1-Set	(0x00): Not Used (0x01): Source Menu (0x02): Source - Auto Color

[1] See Section 4.7 for detailed explanation

[2] FWR: Make a firmware request to get this function

[3] See Section 4.8.1.1 for detailed explanation

[4] See Section 4.8.1.12 for detailed explanation

[5] See Section 4.6 for detailed explanation

[6] Function available on the PrismaECO-eDP

[7] Function available on the PrismaMINI-H

[8] Function available on the PrismaECO-IV

[9] Function available on the PrismaMINI-HDMI-DP

[10] Function available on the PrismaMEDIA-ECO

[11] Function available on the PrismaCompact-Media

[12] Function available on the ArtistaMedia-III

Table 6:

Function Name (Function available on Prisma Board)	Function ID (Hex)	Readwrite (r/w)	Always Enabled	Minimum Value - Maximum Value	Adjust Delay (sec)	Number of Saved Value Sets in File Operations	Value (Hex) Meanings
Port Prioritization ([4, 12])	0x05	r/w	([12])	-	0,2	None	(0x00): Off (0x01): HDMI1 (ext) (0x02): HDMi2 (int)

[1] See Section 4.6 for detailed explanation

[2] FWR: Make a firmware request to get this function

[3] See Section 4.7 for detailed explanation

[4] See Section 4.8.4 detailed explanation

[12] Function available on the ArtistaMedia-III

4.6 Availability of Controls

Table 7:

Function Name	Function ID (Hex)	Disabled according to another setting	Disabled according to changed input and resolution	Disabled according to used firmware	Description
Saturation	0x04		√		Available if color space of input is not RGB.
Hue	0x05		√		
Color Temperature	0x08		√		Available if color space of input is RGB.
Color Option	0x70		√		SRGB and XVYCC options are not available according to input and color space.
Red Gain	0x09	√	√		Available if "Color Temperature" setting is "User" and color space of input is RGB.
Green Gain	0x0A	√	√		
Blue Gain	0x0B	√	√		
ADC Calibration	0x51		√		Available if input type is VGA.
Auto Adjust	0x19		√		
VGA Vertical Position	0x1A		√		
VGA Horizontal Position	0x1B		√		
Phase	0x1C		√		
Clock	0x1D		√		
Volume	0x80		√		Available if input type is not VGA.
Mute (Speakers)	0x85		√		
Audio Output Port	0x90		√		
Remote Control-IR	0x75		√		Available if PCB revision is 1.2

4.7 File Operations

All settings are saved in the NVRAM of the Prisma firmware. Some of these functions have a different variable for each input type (multiple set). See Table 5, Column "Number of Saved Value Sets in File Operations".
If saving type is input dependent, there are 3-sets of variables (Display Port, HDMI, and VGA).

The Remote OSD functions to get and set these value-sets are intended for saving firmware settings to a file or loading the settings from a saved file. For example with file operations you can get the contrast value of HDMI input when there is VGA input at the display. If the request is not a file operation, the File Operation byte (7th byte) must be 0xFF. If it is a file operation for a multi-set control, the selected input's value must be sent; while if it is a file operation for a 1-set control, 0x80 must be sent (See Table 8).

Table 8:

File Operation Type		File Operation Byte
Not File Operation		0xFF
1-Set		0x80
Multi Set	Display Port	0x00
	HDMI	0x01
	VGA	0x02

In file operations, only the Read/Adjust flag is important for the sender. There is no min or max defined for file operations. In responses, input change flag have to be checked.

Loading from a previously saved file means to adjust the variables using "file operation adjust". The adjustment operation is executed if the sent value is within the defined range of the function. Otherwise the adjustment is not executed and the current values remain. All the adjustments are done after sending the "Source Input" file adjust command (so, this command should be at the end of file operations). After this, connection check has to be done to clear input change flags.

4.8 Sample Request and Response Packets with Explanations

This section includes examples referring to both regular commands and commands with special conditions and behaviour. The commands not included here follow the default rules and tables.

4.8.1 Read and Adjust Examples

4.8.1.1 Set Power Off/ On

This call is used to switch Chandler to Power OFF Mode (0) or to Operating Mode (1).

Request				
Name	**Length**	**Value**		**Comment**
Length	1	0x08		
Function Set	1	0x34		Std. ROSD
Function	1	0x3F		Power
Subfunction	1	0x02		Main Adjust
Parameter High	1	0x00		Not used, set to 0
Parameter Low	1	0x00	0x01	Switch scaler to 0 = Power OFF 1 = Operating Mode
File-OP	1	0xFF		Not file operation
Checksum	1	0x84	0x83	
RESPONSE				
Response is similar to request				
VALID				
ROSD, all versions				

Example Request:

08 34 3F 02 00 00 FF 84   (Switch scaler to Power OFF Mode)
08 34 3F 02 00 01 FF 83   (Switch scaler to Operating Mode)

4.8.1.2 Get Power State

This call is used to check if Chandler is in Power OFF Mode or not.

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x34	Std. ROSD
Function	1	0x3F	Power
Subfunction	1	0x00	Main Read
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0x00	Not used, set to 0
File-OP	1	0xFF	Not file operation
Checksum	1	0x86	
RESPONSE			

x08 x34 x3F x00 x00 xNN xFF x[]
 xNN = 0: Power Off Mode
       1: Operating Mode or Sleep Mode
  x[] = Checksum			

VALID			
ROSD, all versions			

Example Request:

08 34 3F 00 00 00 FF 86

Example Response:

08 34 3F 00 00 01 FF 85   (Scaler is in Operating Mode or Sleep Mode)
08 34 3F 00 00 00 FF 86   (Scaler is in Power Off Mode)

4.8.1.3 Connection Check

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x34	Std. ROSD
Function	1	0x00	Connection Check
Subfunction	1	0x00	Main Read
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0x00	Not used, set to 0
File-OP	1	0xFF	Not file operation
Checksum	1	0xC5	
RESPONSE			

x08 x34 x00 x00 x00 xNN xFF x[]
 xNN = 01: Valid Sync
        02: Powered Off
        03: No Sync
 x[] = Checksum			

VALID			
ROSD, all versions			

Example Request:

08 34 00 00 00 00 FF C5

Example Response:

08 34 00 00 00 01 FF C4   (Connection Check successful)

In this example, there is a "Connection Check" request to check Prisma board's status.

Response is "Valid Sync "(0x0001), means "board is powered on and signal is stable". All controls can be used after getting this answer till there is input/resolution change or power status change.

If response is "Powered Off"(0x0002) means board is powered off. Only limited controls available in this state ("Connection Check", "Power", "Control Function", "Protocol Version", "Firmware Version", "Panel Width", "Panel Height", "Board Type" and "EDID Write Protect").

If response is "No Sync"(0x0003), this means board is powered on but, input is not stable. Only limited controls available in this state("Source Input", "Connection Check", "Power", "Control Function", "Protocol Version", "Firmware Version", "Panel Width", "Panel Height", "Board Type" and "EDID Write Protect").

"Connection Check" is also used to clear "Input change flag". See Section 4.4.

4.8.1.4 Set Brightness

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x34	Std. ROSD
Function	1	0x02	Brightness
Subfunction	1	0x02	Main Adjust
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0xNN	Brightness value Range: Min. Value 0% (0x00) Max. Value 100% (0x64)
File-OP	1	0xFF	Not file operation
Checksum	1	0x[]	
RESPONSE			
If Auto Brightness is off: Response is similar to request If Auto Brightness is on: x08 x34 x02 x12 x00 xNN xFF [] xNN = current brightness value x[] = Checksum			
VALID			
ROSD, all versions			

Example Request:

08 34 02 02 00 64 FF 5D   (set brightness to 0x64 = 100%)

Example Response if Auto Brightness is off:

08 34 02 02 00 64 FF 5D

Example Response if Auto Brightness is on:

08 34 02 12 00 2A FF 87   (Note that the current brightness value is returned instead of 0x64)

4.8.1.5 Get Brightness

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x34	Std. ROSD
Function	1	0x02	Brightness
Subfunction	1	0x00	Main Read
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0x00	Not used, set to 0
File-OP	1	0xFF	Not file operation
Checksum	1	0xC3	
RESPONSE			
x08 x34 x02 xTT xMM xNN xFF x[] xTT= 0x00 Normal 0x02 Connection check is missing or Input changed xMM = 0xFF ,if brightness value is negative, else 0x00 xNN = brightness value (Range: Min. Value 0% (0x00), Max. Value 100% (0x64)) x[] = Checksum			
VALID			
ROSD, all versions			

Example Request:

08 34 02 00 00 00 FF C3

Example Response if Auto Brightness is OFF:

08 34 02 00 00 64 FF 5F   (Brightness is 0x64 = 100% (Dec))
08 34 02 00 00 17 FF AC   (Brightness is 0x17 = 23% (Dec))

Example Response if Auto Brightness is ON:

08 34 02 10 00 17 FF 9F   (Brightness is 0x17 = 23% (Dec))

In the example above, there is a read request for the current input's brightness value. The response gives the information that the current brightness value of the input is 0x0017 (Hex) (0x0017=23% (Dec)).

4.8.1.6 Get VGA min.\max. Horizontal Position

In this example, there is a read request for the maximum value of the VGA horizontal position. The response gives the information that the maximum or minimal value of the VGA horizontal position.

Request				
Name	**Length**	**Value**		**Comment**
Length	1	0x08		
Function Set	1	0x34		Std. ROSD
Function	1	0x1B		VGA Horizontal Position
Subfunction	1	0x04	0x08	Read Horizontal Position 0x04 = min Horizontal Position 0x08 = max Horizontal Position
Parameter High	1	0x00		Not used, set to 0
Parameter Low	1	0x00		Not used, set to 0
File-OP	1	0xFF		Not file operation
Checksum	1	0xA6	0xA2	
RESPONSE				
x08 x34 x1B xMM x00 xNN xFF x[] xMM = min. Horizontal Position (0x04) or max. Horizontal Position (0x08) xNN = min. \max. Horizontal Position value x[] = Checksum				
VALID				
ROSD, all versions				

Example Request (min. Horizontal Position):

08 34 1B 04 00 00 FF A6

Example Response (min. Horizontal Position):

08 34 1B 04 00 08 FF 9E

Example Request (max. Horizontal Position):

08 34 1B 08 00 00 FF A2

Example Response (max. Horizontal Position):

08 34 1B 08 00 A5 FF FD

4.8.1.7 Set VGA Horizontal Position

Please make a "Get VGA min. \ max. Horizontal Position" request to get the maximum and minimum Horizontal Position value.

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x34	Std. ROSD
Function	1	0x1B	VGA Horizontal Position
Subfunction	1	0x02	Main Adjust
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0xNN	Horizontal Position value
File-OP	1	0xFF	Not file operation
Checksum	1	0x[]	
RESPONSE			
Response is similar to request			
VALID			
ROSD, all versions			

Example Request:

08 34 1B 02 00 32 FF 76

4.8.1.8 Get VGA Horizontal Position

<table>
<tr><td colspan="4" align="center">Request</td></tr>
<tr><td align="center">Name</td><td align="center">Length</td><td align="center">Value</td><td align="center">Comment</td></tr>
<tr><td>Length</td><td align="center">1</td><td align="center">0x08</td><td></td></tr>
<tr><td>Function Set</td><td align="center">1</td><td align="center">0x34</td><td>Std. ROSD</td></tr>
<tr><td>Function</td><td align="center">1</td><td align="center">0x1B</td><td>VGA Horizontal Position</td></tr>
<tr><td>Subfunction</td><td align="center">1</td><td align="center">0x00</td><td>Main Read</td></tr>
<tr><td>Parameter High</td><td align="center">1</td><td align="center">0x00</td><td>Not used, set to 0</td></tr>
<tr><td>Parameter Low</td><td align="center">1</td><td align="center">0x00</td><td>Not used, set to 0</td></tr>
<tr><td>File-OP</td><td align="center">1</td><td align="center">0xFF</td><td>Not file operation</td></tr>
<tr><td>Checksum</td><td align="center">1</td><td align="center">0xAA</td><td></td></tr>
<tr><td colspan="4" align="center">RESPONSE</td></tr>
<tr><td colspan="4">x08 x34 x1B x00 x00 xNN xFF x[]
xNN = VGA Horizontal Position value
 x[] = Checksum</td></tr>
<tr><td colspan="4" align="center">VALID</td></tr>
<tr><td colspan="4">ROSD, all versions</td></tr>
</table>

Example Request:

08 34 1B 00 00 00 FF AA

Example Response:

08 34 1B 00 00 32 FF 78

Chandler-ROSD

4.8.1.9 Set Color Option

Normally this control is always enabled. But, SRGB and XVYCC options are not available according to input and color space. If you choose one of these options and this option is not available, no adjustment is done; the current value is returned.

<table>
<tr><th colspan="7">Request</th></tr>
<tr><th>Name</th><th>Length</th><th colspan="3">Value</th><th colspan="2">Comment</th></tr>
<tr><td>Length</td><td>1</td><td colspan="3">0x08</td><td colspan="2"></td></tr>
<tr><td>Function Set</td><td>1</td><td colspan="3">0x34</td><td colspan="2">Std. ROSD</td></tr>
<tr><td>Function</td><td>1</td><td colspan="3">0x70</td><td colspan="2">Color Option</td></tr>
<tr><td>Subfunction</td><td>1</td><td colspan="3">0x02</td><td colspan="2">Main Adjust</td></tr>
<tr><td>Parameter High</td><td>1</td><td colspan="3">0x00</td><td colspan="2">Not used, set to 0</td></tr>
<tr><td>Parameter Low</td><td>1</td><td>0x00</td><td>0x01</td><td>0x02</td><td colspan="2">Color space
0x00 = Full Color
0x01 = SRGB
0x02 = XVYCC</td></tr>
<tr><td>File-OP</td><td>1</td><td colspan="3">0xFF</td><td colspan="2">Not file operation</td></tr>
<tr><td>Checksum</td><td>1</td><td>53</td><td>52</td><td>51</td><td colspan="2"></td></tr>
<tr><th colspan="7">RESPONSE</th></tr>
<tr><td colspan="7">Response is similar to request, if the color space is supported by the source signal.</td></tr>
<tr><th colspan="7">VALID</th></tr>
<tr><td colspan="7">ROSD, all versions</td></tr>
</table>

Example Request (Color space is supported):

08 34 70 02 00 00 FF 53

Example Response (Color space is supported):

08 34 70 02 00 00 FF 53

Example Request (Color space is not available):

08 34 70 02 00 02 FF 51

Example Response (Color space is not available):

08 34 70 02 00 00 FF 53

In the example above, the sender wants to set the color option to "XVYCC", but no adjustment is done because "XVYCC" is not available.

4.8.1.10 Get Color Option

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x34	Std. ROSD
Function	1	0x70	Color Option
Subfunction	1	0x00	Main Read
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0x00	Not used, set to 0
File-OP	1	0xFF	Not file operation
Checksum	1	0x55	
RESPONSE			

x08 x34 x70 x00 x00 xNN xFF x[]
 xNN = 0x00 Full Color
  0x01 SRGB
  0x02 XVYCC
  x[] = Checksum			

VALID			
ROSD, all versions			

Example Request:

08 34 70 00 00 00 FF 55

Example Response:

08 34 70 00 00 01 FF 54

4.8.1.11   Set Hue

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x34	Std. ROSD
Function	1	0x05	Hue
Subfunction	1	0x02	Main Adjust
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0xNN	Hue value range: Min. Value 0% (0x00) Max. Value 100% (0x64)
File-OP	1	0xFF	Not file operation
Checksum	1	0x[]	
RESPONSE			
Response is similar to request			
VALID			
ROSD, all versions			

Example Request:

08 34 05 02 00 64 FF 5A

4.8.1.12 Get Hue

<table>
<tr><td colspan="4" align="center">Request</td></tr>
<tr><td align="center">Name</td><td align="center">Length</td><td align="center">Value</td><td align="center">Comment</td></tr>
<tr><td>Length</td><td align="center">1</td><td align="center">0x08</td><td></td></tr>
<tr><td>Function Set</td><td align="center">1</td><td align="center">0x34</td><td>Std. ROSD</td></tr>
<tr><td>Function</td><td align="center">1</td><td align="center">0x05</td><td>Hue</td></tr>
<tr><td>Subfunction</td><td align="center">1</td><td align="center">0x00</td><td>Main Read</td></tr>
<tr><td>Parameter High</td><td align="center">1</td><td align="center">0x00</td><td>Not used, set to 0</td></tr>
<tr><td>Parameter Low</td><td align="center">1</td><td align="center">0x00</td><td>Not used, set to 0</td></tr>
<tr><td>File-OP</td><td align="center">1</td><td align="center">0xFF</td><td>Not file operation</td></tr>
<tr><td>Checksum</td><td align="center">1</td><td align="center">0xC0</td><td></td></tr>
<tr><td colspan="4" align="center">RESPONSE</td></tr>
<tr><td colspan="4">x08 x34 x05 x00 x00 xNN xFF x[]
xNN = Hue value (Range: Min. Value 0% (0x00), Max. Value 100% (0x64))
  x[] = Checksum</td></tr>
<tr><td colspan="4" align="center">VALID</td></tr>
<tr><td colspan="4">ROSD, all versions</td></tr>
</table>

Example Request

08 34 05 00 00 00 FF C0

Example Response

08 34 05 00 00 32 FF 8E   (Hue is 0x32 = 50% (Dec))

Example Request (Color space is not RGB):

08 34 05 00 00 00 FF C0

Example Response (Color space is not RGB):

08 34 05 10 00 32 FF 7E

In this example above, there is a read request for the current input's hue value. Disabled flag is set in the Response message, if the color space is not RGB.

4.8.1.13 Set Color Temperature

In this example, there is an adjust request for "Color Temperature". Please refer to the "Set RGB Color Temperature" request in the section below if you select the User Color (0x01) option.

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x34	Std. ROSD
Function	1	0x08	Color Temperature
Subfunction	1	0x02	Main Adjust
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0xNN	Color Temperature settings: (0x01) =User Color (0x02) = 4200K (0x03) = 5000K (0x04) = 6500K (0x05) = 7000K (0x06) = 9300K
File-OP	1	0xFF	Not file operation
Checksum	1	0x[]	(0xBA) = User Color (0xB9) = 4200K (0xB8) = 5000K (0xB7) = 6500K (0xB6) = 7000K (0xB5) = 9300K
RESPONSE			
Response is similar to request			
VALID			
ROSD, all versions			

Example Request (9300K):

08 34 08 02 00 06 FF B5

4.8.1.14 Get Color Temperature

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x34	Std. ROSD
Function	1	0x08	Color Temperature
Subfunction	1	0x00	Main Read
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0x00	Not used, set to 0
File-OP	1	0xFF	Not file operation
Checksum	1	0xBD	
RESPONSE			

x08 x34 x08 x00 x00 xNN xFF x[]
xNN = (0x01) = User Color
      (0x02) = 4200K
      (0x03) = 5000K
      (0x04) = 6500K
      (0x05) = 7000K
      (0x06) = 9300K
 x[] = Checksum			

VALID			
ROSD, all versions			

Example Request

08 34 08 00 00 00 FF C0

Example Response (5000K)

08 34 08 00 00 03 FF BA

4.8.1.15 Set RGB Color Temperature

In this example, there is an adjust request for "RGB Color Temperature". The RGB Color Temperature setting works only if you previously selected the User Color (0x01) option (please refer the Chapter "Set Color Temperature").

Request				
Name	**Length**	**Value**		**Comment**
Length	1	0x08		
Function Set	1	0x34		Std. ROSD
Function	1	0x09　0x0A	0x0B	Red, Green or Blue Gain
Subfunction	1	0x02		Main Adjust
Parameter High	1	0x00		Not used, set to 0
Parameter Low	1	0xNN		Gain value: Min. Value 0% (0x00) Max. Value 100% (0x64)
File-OP	1	0xFF		Not file operation
Checksum	1	0x[]		
RESPONSE				
Response is similar to request if the "User Color (0x01)" option previously selected (Please refer the Chapter "Set Color Temperature").				
VALID				
ROSD, all versions				

Example Request (Red Gain, 25%)

08 34 09 02 00 19 FF A1

4.8.1.16 Get RGB Color Temperature

Request				
Name	**Length**	**Value**		**Comment**
Length	1	0x08		
Function Set	1	0x34		Std. ROSD
Function	1	0x09	0x0A	0x0B	Red, Green or Blue Gain
Subfunction	1	0x00		Main Read
Parameter High	1	0x00		Not used, set to 0
Parameter Low	1	0x00		Not used, set to 0
File-OP	1	0xFF		Not file operation
Checksum	1	BC	BB	BA	
RESPONSE				

x08 x34 xMM xPP x00 xNN xFF x[]
 	
xMM = 0x09 Red Gain
     0x0A Green Gain
     0x0B Blue Gain
 	
xPP = 0x00 (User Color was selected)
     0x10 (User Color was not selected (Please refer chapter "Setting the color
       temperature").
xNN = Gain Value
x[] = Checksum				

VALID				
ROSD, all versions				

Example Request (Red Gain)

08 34 09 00 00 00 FF BC

Example Response (Red Gain, 50%)

08 34 09 00 00 32 FF 8A

4.8.1.17 Set Main Video Source

In this example, there is an adjust request to set the source input to DP. Response sent before adjustment for this command. You should send a connection check request in order to understand if the firmware is ready to communicate and make new adjustments, and also to prevent receiving the input change flag.

Request					
Name	**Length**	**Value**			**Comment**
Length	1	0x08			
Function Set	1	0x34			Std. ROSD
Function	1	0x3D			Main Video Source
Subfunction	1	0x02			Main Adjust
Parameter High	1	0x00			Not used, set to 0
Parameter Low	1	0x00	0x01	0x02	Please refer to the table 9 below to change the video source.
File-OP	1	0xFF			Not file operation
Checksum	1	0x86	0x85	0x84	
RESPONSE					
Response is similar to request					
VALID					
ROSD, all versions					

Example Request (DP)

08 34 3D 02 00 00 FF 86

Table 9:

	Parameter Low		
Product Name	**0x00**	**0x01**	**0x02**
PrismaMEDIA-Eco	DP	HDMI	VGA
PrismaCOMPACT-Media	DP	HDMI	VGA
PrismaMINI	-	HDMI	-
PrismaECO-eDP	DP	HDMI	-
PrismaECO-IV	-	DVI	VGA
PrismaMINI-HDMI-DP	DP	HDMI	-
ArtistaMedia-III	-	HDMI1 (ext)	HDMI 2 (int)

4.8.1.18 Get Main Video Source

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x34	Std. ROSD
Function	1	0x3D	Main Video Source
Subfunction	1	0x00	Main Read
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0x00	Not used, set to 0
File-OP	1	0xFF	Not file operation
Checksum	1	0x88	
RESPONSE			
x08 x34 x3D x00 x00 xNN xFF x[] xNN = Please see Table 9 above for the explanation. x[] = Checksum			
VALID			
ROSD, all versions			

Example Request

08 34 3D 00 00 00 FF 88

Example Response (HDMI)

08 34 3D 00 00 01 FF 87

4.8.1.19　　　Get ROSD Protocol Version

<table>
<tr><th colspan="4">Request</th></tr>
<tr><th>Name</th><th>Length</th><th>Value</th><th>Comment</th></tr>
<tr><td>Length</td><td>1</td><td>0x08</td><td></td></tr>
<tr><td>Function Set</td><td>1</td><td>0x34</td><td>Std. ROSD</td></tr>
<tr><td>Function</td><td>1</td><td>0x44</td><td>ROSD Protocol Version</td></tr>
<tr><td>Subfunction</td><td>1</td><td>0x00</td><td>Main Read</td></tr>
<tr><td>Parameter High</td><td>1</td><td>0x00</td><td>Not used, set to 0</td></tr>
<tr><td>Parameter Low</td><td>1</td><td>0x00</td><td>Not used, set to 0</td></tr>
<tr><td>File-OP</td><td>1</td><td>0xFF</td><td>Not file operation</td></tr>
<tr><td>Checksum</td><td>1</td><td>0x81</td><td></td></tr>
<tr><th colspan="4">RESPONSE</th></tr>
<tr><td colspan="4">

x08 x34 x44 x00 xMM xNN xFF x[]

xMMNN = High Byte, Low Byte

       Bit (14:10) | Bit (9:5) | Bit (4:0) -> least significant digit
Protocol Version   X   .   X   .   X

x[] = Checksum
</td></tr>
<tr><th colspan="4">VALID</th></tr>
<tr><td colspan="4">ROSD, all versions</td></tr>
</table>

Example Request

08 34 44 00 00 00 FF 81

Example Response

08 34 44 00 04 31 FF 4C

                                     Bit (14:10) | Bit (9:5) | Bit (4:0)
0431 (Hex) = 0000 0100 0011 0001 (Bin) =　　00001　|　00001　|　10001 =　1.1.17

This example shows a protocol version request. This is a read only Remote OSD function. Certain bits in the response show certain segments of the version info. The least significant five bits (4:0) show the least significant digit, the next five bits (9:5) show the middle digit and the next five bits (14:10) show the most significant digit.

4.8.1.20 Get Horizontal Resolution, Vertical Resolution or Refresh Rate

Request					
Name	**Length**	**Value**			**Comment**
Length	1	0x08			
Function Set	1	0x34			Std. ROSD
Function	1	0x41	0x42	0x43	Horizontal Resolution, Vertical Resolution, Refresh Rate
Subfunction	1	0x00			Main Read
Parameter High	1	0x00			Not used, set to 0
Parameter Low	1	0x00			Not used, set to 0
File-OP	1	0xFF			Not file operation
Checksum	1	0x84	0x83	0x82	
RESPONSE					

x08 x34 xTT x00 xMM xNN xFF x[]
 	
  xTT = 0x41 Horizontal Resolution
       0x42 Vertical Resolution
       0x43 Refresh Rate
 xMMNN (Hex)= MMNN (DEC)
 	
x[] = Checksum					

VALID					
ROSD, all versions					

Example Request (Horizontal Resolution)

08 34 41 00 00 00 FF 84

Example Response

08 34 41 00 05 00 FF 7F

In this example above, there is a read request for the input's horizontal resolution value. The response gives the Resolution value (0x0500 (Hex) = 1280(Dec)). Resolution and refresh rate functions are read only.

In refresh rate function, the response sent is rounded value of the real value. For example if the refresh rate is 60.1 Hz, the firmware sends 60(Dec) in the response packet.

4.8.1.21 Get Board Type

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x34	Std. ROSD
Function	1	0x4E	Board Type
Subfunction	1	0x00	Main Read
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0x00	Not used, set to 0
File-OP	1	0xFF	Not file operation
Checksum	1	0x77	
RESPONSE			
x08 x34 x4E x00 x00 xNN xFF x[] xNN = 0x03: PrismaMEDIA-Eco 　　　0x06: PrismaCOMPACT Media 　　　0x07: PrismaMINI-HDMI 　　　0x0A: PrismaECO-eDP 　　　0x0B: PrismaECO-IV 　　　0x0C: PrismaMINI-HDMI-DP 　　　0x0D: ArtistaMedia-III x[] = Checksum			
VALID			
ROSD, all versions			

Example Request

08 34 4E 00 00 00 FF 77

Example Response (PrismaMEDIA-Eco)

08 34 4E 00 00 03 FF 74

In this example, there is a read request for the "Board Type". "Board Type" is PrismaMEDIA-Eco. This control can be used to be sure about the connected board.

4.8.1.22 Get Supported Inputs or Hardware PCB revision (Control Function)

Control function is for making checks that are related to more than one item of the OSD or making checks related with firmware's available functions and properties. Unlike the other commands, control functions use the sub-function byte for the control's type. Table 8 shows the sub-function IDs and the responses for the control functions.

Request				
Name	**Length**	**Value**		**Comment**
Length	1	0x08		
Function Set	1	0x34		Std. ROSD
Function	1	0x40		Board Type
Subfunction	1	0x00	0x01	Supported Inputs by firmware, Hardware PCB revision
Parameter High	1	0x00		Not used, set to 0
Parameter Low	1	0x00		Not used, set to 0
File-OP	1	0xFF		Not file operation
Checksum	1	0x85	0x84	
RESPONSE				

x08 x34 x40 xMM x00 xNN xFF x[]
 	
xMM = 0x00 (Supported Inputs by firmware)
xNN = BIT0: Display Port
      BIT1: HDMI
      BIT2: VGA
 	
xMM = 0x01 (Hardware PCB revision)
xNN = 0x00: PCB 1.1 or lower
     0x01: PCB 1.2 or higher
x[] = Checksum				

VALID				
ROSD, all versions				

Example Request (Supported Inputs by firmware)

08 34 40 00 00 00 FF 85

Example Response (PrismaMEDIA-Eco, all inputs available)

08 34 40 00 00 07 FF 7E

In the example above, the firmware-supported inputs are checked. All the inputs are available.

- Standard firmwares supports all inputs, customer specific firmware can support limited inputs.

4.8.2 File Operation Examples

4.8.2.1 Get Contrast

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x34	Std. ROSD
Function	1	0x03	Contrast control
Subfunction	1	0x00	Main Read
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0x00	Not used, set to 0
File-OP	1	0x00	File Op. for "Display Port"
Checksum	1	0xC1	
RESPONSE			
x08 x34 x03 x00 x00 xNN x00 x[] xNN = Contrast value x[] = Checksum			
VALID			
ROSD, all versions			

Example Request

08 34 03 00 00 00 00 C1

Example Response (Contrast: 0x4B = 75%)

08 34 03 00 00 4B 00 76

In the above example, saved (in NVRAM) "Contrast" value for the "Display Port" input is requested. See Section 4.7 for detailed information.

4.8.2.2 Set Volume

<table>
<tr><th colspan="4">Request</th></tr>
<tr><th>Name</th><th>Length</th><th>Value</th><th>Comment</th></tr>
<tr><td>Length</td><td>1</td><td>0x08</td><td></td></tr>
<tr><td>Function Set</td><td>1</td><td>0x34</td><td>Std. ROSD</td></tr>
<tr><td>Function</td><td>1</td><td>0x80</td><td>Volume</td></tr>
<tr><td>Subfunction</td><td>1</td><td>0x02</td><td>Main Adjust</td></tr>
<tr><td>Parameter High</td><td>1</td><td>0x00</td><td>Not used, set to 0</td></tr>
<tr><td>Parameter Low</td><td>1</td><td>0x32</td><td>Adjust to 0x32: 50%</td></tr>
<tr><td>File-OP</td><td>1</td><td>0x80</td><td>File Op. for 1-Set value</td></tr>
<tr><td>Checksum</td><td>1</td><td>0x90</td><td></td></tr>
<tr><th colspan="4">RESPONSE</th></tr>
<tr><td colspan="4">Response is similar to request</td></tr>
<tr><th colspan="4">VALID</th></tr>
<tr><td colspan="4">ROSD, all versions</td></tr>
</table>

In this example, "Volume" adjust is requested. This is a one-set function. Setting will be active after "Source Input" file adjust command is executed. See Section 4.7.

4.8.3 Read and Adjust Examples for OSD Selection 0x35(Hex)

4.8.3.1 Set Port Prioritization to ArtistaMEDIA-II/-III

Request					
Name	**Length**	**Value**			**Comment**
Length	1	0x08			
Function Set	1	0x35			ArtistaMEDIA-II/-III
Function	1	0x05			Port Prioritization
Subfunction	1	0x02			Main Adjust
Parameter High	1	0x00			Not used, set to 0
Parameter Low	1	0x00	0x11	0x12	Set Port Prioritization to 0x00 = OFF 0x11 = HDMI1 (ext) 0x12 = HDMI2 (int)
File-OP	1	0xFF			Not file operation
Checksum	1	0xBD	0xAC	0xAB	
RESPONSE					
Response is similar to request					
VALID					
ROSD version 2.2.1 and later					

4.8.3.2 Get Port Prioritization from ArtistaMEDIA-II/-III

Request			
Name	**Length**	**Value**	**Comment**
Length	1	0x08	
Function Set	1	0x35	ArtistaMEDIA-II/-III
Function	1	0x05	Port Prioritization
Subfunction	1	0x00	Main Read
Parameter High	1	0x00	Not used, set to 0
Parameter Low	1	0x00	Not used, set to 0
File-OP	1	0xFF	Not file operation
Checksum	1	0xBF	
RESPONSE			

x08 x35 x05 x00 x00 xNN xFF x[]
xNN = 0x00: Port Prioritization is OFF
     0x11: Port HDMI1 (ext) is prioritized
     0x12: Port HDMI2 (int) is prioritized
x[] = Checksum			

VALID			
ROSD version 2.2.1 and later			

Example Request

08 35 05 00 00 00 FF BF

Example Response (HDMI1 (ext))

08 35 05 00 00 11 FF AE

4.9 Problems in Communication

If you cannot communicate with Prisma board the possible reasons are:
- The cables are not connected properly.
- Firmware does not support Remote OSD protocol.

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