



HORIZON Touchscreen display Integration Manual

English

Deutsch

Nederlands

Français

Español

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PRODUCT SPECIFICATIONS

1. PRODUCT SPECIFICATION

PRODUCT SPECIFICATIONS	
Screen Size	92"
Panel Technology	IPS
Display Resolution	5120 x 2160
Brightness	450 cd/m2
Contrast	5000:1
Response Time	6.5ms
Frame Rate	60Hz
Viewing Angle	178°
Display Colors	1.07G
Backlight Type	Direct LED
Service Life	50.000Hrs
Orientation	Landscape
Haze Level	25%
Durability	16/7
Operating System	Android 13
Internal Memory (RAM)	8GB
Internal Storage (ROM)	64GB
Input Connectors	USB-C x2, USB-A 2.0 x1, USB 3.0x6, Ethernet x2, HDMI x4, RS-232
Output Connectors	HDMI 2.0 4K@60Hz
OPS Slot	YES
Wi-Fi Module	Optional (Included)
Audio Power Output	3 x 20W
VESA 100x100	YES
Power Supply	AC 100-240V 50/60Hz
Operation Temperature	0 – 40°C
Operation Humidity	35 – 85% RH (No Cond.)
VESA Standard	800 x 600 M8
KEA Number	7-807000-92

SERIAL COMMUNICATIONS

2. SERIAL COMMUNICATIONS

The display uses a simple text-based control protocol to take requests from control devices and to provide responses to such devices. This section describes how to send control messages over a serial link between the display and an automation/control system or a PC running a terminal emulation program such as Windows® HyperTerminal or Tera Term.

2.1 RS-232 CONNECTION AND PORT CONFIGURATION

Connect your control system or PC to the RS-232 input of the display.

Configure the RS-232 controller or PC serial port as follows:

- Baud rate: 9600
- 8bit
- non parity
- 1 stop bit

2.2 RS-232 INTERFACE

Command Format

byte1 byte2 byte3 byte4 byte5 byte6 byte7 byte8 byte9

Command Description:

- Byte 1: Used as the start of a command is always seen as 3A
- Byte 2 & Byte 3: Always seen as 30 31, indicating the display's ID by default set to 1.
- Byte 4: Indicated the command type, 53 being a SET command and 47 being a GET command.
- Byte 5: Indicates the configuration subject such as 30 being power, 31 being treble and 38 being volume.
- Byte 6, Byte 7, Byte 8: Data information of the command, ex: 30 30 30 = 0, 30 31 32 = 12, 31 30 30 = 100.
- Byte 9: Used as the end of a command is always seen as 0D

2.3 LAN CONNECTION AND PORT

Connect your control system or PC to the local network.

To connect or send a command to your device use the following structure: "Device IP": "Port 4664"

SERIAL COMMUNICATIONS

Direct SET Commands		
Command	Code	Description
N/A	34 30 31 2B 0D	SET Command successful
N/A	34 30 31 2D 0D	SET Command fail
Power OFF	3A 30 31 53 30 30 30 32 0d	Turn the display OFF
Power ON	3A 30 31 53 30 30 30 33 0d	Turn the display ON
Treble	3A 30 31 53 31 2D 30 33 0d	Set the low end of treble using -xx: -5~0
	3A 30 31 53 31 2B 30 33 0d	Set the high end of treble using +xx: 0~5
Bass	3A 30 31 53 32 2D 30 35 0d	Set the low end of bass using -xx: -5~0
	3A 30 31 53 32 2B 30 35 0d	Set high end of bass using +xx: 0~5
Balance	3A 30 31 53 33 2D 35 30 0d	Set Right balance -xx: -50~0
	3A 30 31 53 33 2B 32 30 0d	Set Left balance +xx: 0~50
Contrast	3A 30 31 53 34 30 35 30 0d	Set Contrast using the 000 ~ 100 range
Brightness	3A 30 31 53 35 30 35 30 0d	Set Contrast using the 000 ~ 100 range
Sharpness	3A 30 31 53 36 30 31 30 0d	Set Contrast using the 000 ~ 100 range
Sound Mode	3A 30 31 53 37 30 30 30 0d	Set the sound mode to Movie using 000
	3A 30 31 53 37 30 30 31 0d	Set the sound mode to Standard using 001
	3A 30 31 53 37 30 30 33 0d	Set the sound mode to Classroom using 003
	3A 30 31 53 37 30 30 34 0d	Set the sound mode to Meeting using 004
Volume	3A 30 31 53 38 30 35 30 0d	Set volume level using the 000 ~ 100 range
Mute OFF	3A 30 31 53 39 30 30 30 0d	Mute Audio
Mute ON	3A 30 31 53 39 30 30 31 0d	Un-Mute Audio
Picture Mode	3A 30 31 53 3D 30 30 30 0d	Set Picture Mode to standard using 000
	3A 30 31 53 3D 30 30 31 0d	Set Picture Mode to bright using 001
	3A 30 31 53 3D 30 30 32 0d	Set Picture Mode to soft using 002
Color Temperature	3A 30 31 53 40 30 30 30 0d	Set Color Temperature to cool using 000
	3A 30 31 53 40 30 30 31 0d	Set Color Temperature to standard using 001
	3A 30 31 53 40 30 30 32 0d	Set Color Temperature to warm using 002
IR Enable	3A 30 31 53 42 30 30 30 0d	Enable IR detection (Remote Control)
IR Disable	3A 30 31 53 42 30 30 31 0d	Disable IR detection (Remote Control)
Speakers OFF	3A 30 31 53 43 30 30 30 0d	Turn Speakers OFF
Speakers ON	3A 30 31 53 43 30 30 31 0d	Turn Speakers ON
HDMI OUT Disabled	3A 30 31 53 48 30 30 30 0d	Disable the HDMI OUTPUT
HDMI OUT Enabled	3A 30 31 53 48 30 30 31 0d	Enable the HDMI OUTPUT

SERIAL COMMUNICATIONS

Direct Input SET Commands		
Command	Code	Description
Android	3A 30 31 53 3A 31 30 31 0D	Input Switch to Android Command
PC/OPS	3A 30 31 53 3A 31 30 33 0D	Input Switch to OPS Command
HDMI1	3A 30 31 53 3A 30 30 31 0D	Input Switch to HDMI 1 Command
HDMI2	3A 30 31 53 3A 30 30 32 0D	Input Switch to HDMI 2 Command
HDMI3	3A 30 31 53 3A 30 32 31 0D	Input Switch to HDMI 3 Command
USBC	3A 30 31 53 3A 31 30 34 0D	Input Switch to USB C Side Command

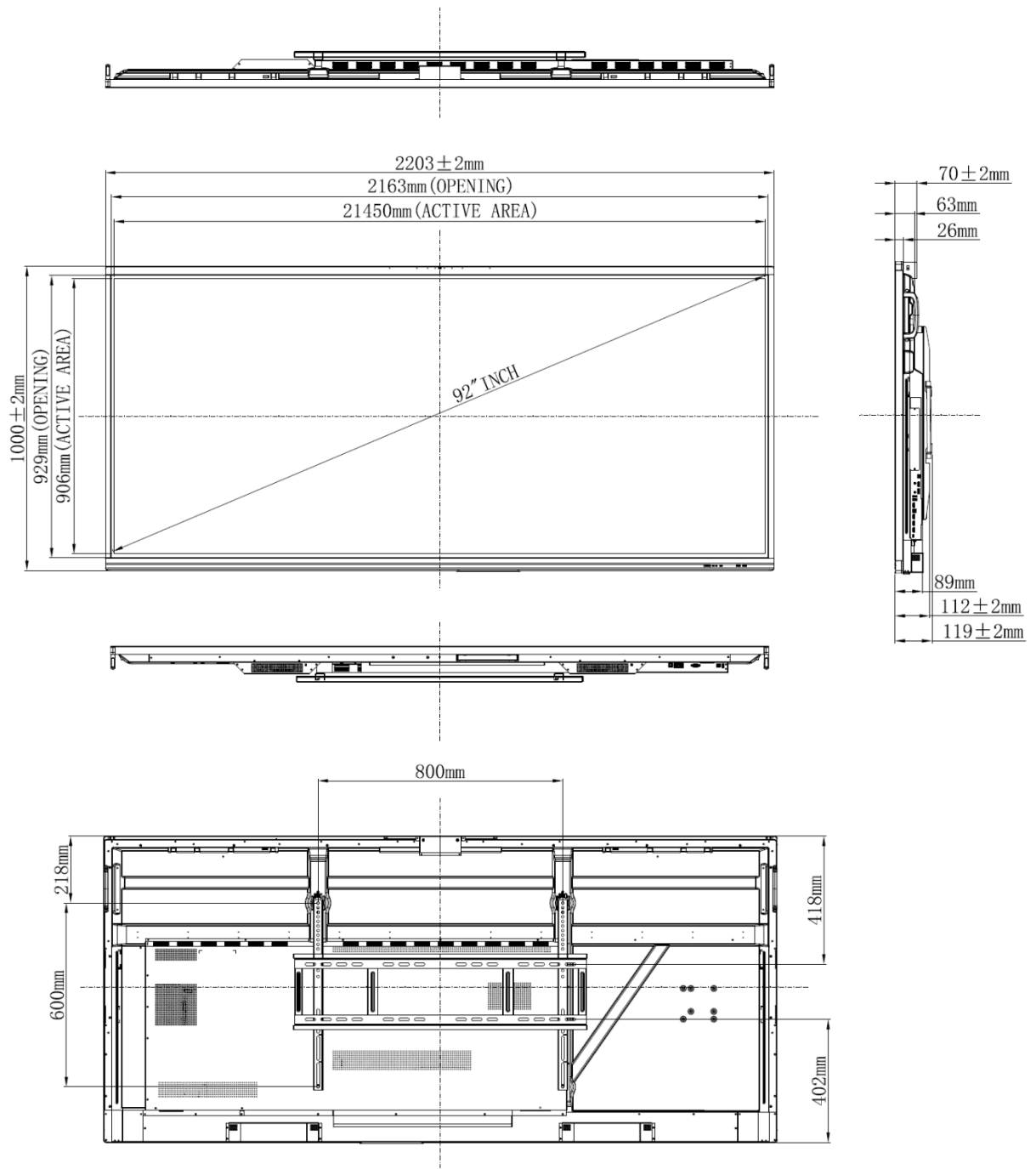
Remote Control Commands		
Mode	Code	Description
Volume +	3A 30 31 53 41 30 30 30 0d	Will rise the screen's volume
Volume -	3A 30 31 53 41 30 30 31 0d	Will lower the screen's volume
Up Key	3A 30 31 53 41 30 31 30 0d	Simulates the Up Key on your remote
Down Key	3A 30 31 53 41 30 31 31 0d	Simulates the Down Key on your remote
Left Key	3A 30 31 53 41 30 31 32 0d	Simulates the Left Key on your remote
Right Key	3A 30 31 53 41 30 31 33 0d	Simulates the Right Key on your remote
Enter/OK	3A 30 31 53 41 30 31 34 0d	Confirms the current option selection
Menu Key	3A 30 31 53 41 30 32 30 0d	Displays the screen's menu
Input Key	3A 30 31 53 41 30 32 31 0d	Opens the input selection menu
Back/Exit Key	3A 30 31 53 41 30 32 32 0d	goes back on step on your settings selection
Freeze Key	3A 30 31 53 41 30 33 32 0d	Freezes the current picture frame
Mute Key	3A 30 31 53 41 30 33 33 0d	Mutes the screen's sound
Home Key	3A 30 31 53 41 30 33 34 0d	Opens the Home menu

SERIAL COMMUNICATIONS

Direct GET Commands			
Command	Code	Answer	Value
Backlight Off	3A 30 31 47 30 30 30 0D	3A 30 31 72 30 30 30 0D	000 : backlight off
Backlight On		3A 30 31 72 30 30 30 31 0D	001 : backlight on
Power OFF		3A 30 31 72 30 30 30 32 0D	002 : power off
Treble	3A 30 31 47 31 30 30 0D	3A 30 31 72 31 2B 30 35 0D	-05 ~ +05
Bass	3A 30 31 47 32 30 30 0D	3A 30 31 72 32 2D 30 35 0D	-05 ~ +05
Balance	3A 30 31 47 33 30 30 0D	3A 30 31 72 33 2B 35 30 0D	-50 ~ +50
Contrast	3A 30 31 47 34 30 30 0D	3A 30 31 72 34 30 35 30 0D	000~100
Brightness	3A 30 31 47 35 30 30 0D	3A 30 31 72 35 30 35 30 0D	000~100
Sharpness	3A 30 31 47 36 30 30 0D	3A 30 31 72 36 30 31 30 0D	000~100
Sound Mode	3A 30 31 47 37 30 30 0D	3A 30 31 72 37 30 30 0D	000 : Movie
		3A 30 31 72 37 30 30 31 0D	001 : Standard
		3A 30 31 72 37 30 30 33 0D	003 : Classroom
		3A 30 31 72 37 30 30 34 0D	004 : Meeting
Volume	3A 30 31 47 38 30 30 0D	3A 30 31 72 38 30 35 30 0D	000~100
Mute	3A 30 31 47 39 30 30 0D	3A 30 31 72 39 30 30 0D	000: Off
		3A 30 31 72 39 30 30 31 0D	001: On
Picture Mode	3A 30 31 47 3D 30 30 0D	3A 30 31 72 3D 30 30 0D	000 : standard
		3A 30 31 72 3D 30 30 31 0D	001 : bright
		3A 30 31 72 3D 30 30 32 0D	002 : soft
Color Temperature	3A 30 31 47 40 30 30 0D	3A 30 31 72 40 30 30 0D	000 : Cool
		3A 30 31 72 40 30 30 31 0D	001 : Standard
		3A 30 31 72 40 30 30 32 0D	002 : Warm
Remote Control	3A 30 31 47 42 30 30 0D	3A 30 31 72 42 30 30 0D	000: Enable
		3A 30 31 72 42 30 30 31 0D	001: Disable
Speakers	3A 30 31 47 43 30 30 0D	3A 30 31 72 43 30 30 0D	000 : off
		3A 30 31 72 43 30 30 31 0D	001 : on
HDMI OUT	3A 30 31 47 48 30 30 0D	3A 30 31 72 48 30 30 0D	000 : off
		3A 30 31 72 48 30 30 31 0D	001 : on
Video Source	3A 30 31 47 3A 30 30 0D	3A 30 31 72 3A 30 30 31 0D	001 : HDMI1
		3A 30 31 72 3A 30 30 32 0D	002: HDMI2
		3A 30 31 72 3A 30 32 31 0D	021 : HDMI3
		3A 30 31 72 3A 31 30 31 0D	101 : Android
		3A 30 31 72 3A 31 30 33 0D	103 : Slot in PC
		3A 30 31 72 3A 31 30 34 0D	104 : Type C1

TECHNICAL DRAWINGS

3.1 HRZ-9200



TECHNICAL DRAWINGS

3.2 PACKING

HRZ-9200	
Product Dimentions	2203 × 1000 × 89 (mm)
Packing Dimentions	2360 × 1140 × 225 (mm)
Net Weight	67.60 kg
Gross Weight	88.50 kg