

Model HX-200 AirSelectTM Sensor Hub Plus

Sensor Hub with Extended Features

Connects GX and PX AirSelect Sensors to host devices, enables special behaviors, and provides extended connectivity.

Applications include:

- Connect gesture and proximity sensors to BrightSign® players, mapping sensor inputs to GPIO (with special configuration).
- Serves as RS-232 or RS-485 serial gateway to other Ascentic products (e.g., AS8-IP to a standard BrightSign via HX-200 RS-485 Bus).
- Host the *Ethernet Daughter Card* (EDC) to provide a network interface and logging to system (e.g., use EDC to log RS-485 traffic, which is provided to CMS).
- Any combination of the above.



Inputs and Outputs

- Standard Inputs: microSD card, 4x DIP switches
- Standard In/Out:
 - 1x RS-232 port (RJ45) with Null-Straight switch
 - 2x RS-485 bus ports (RJ45)
 - 8x host ports (RJ9)
 - 8x sensor ports (RJ9)
- Optional In/Out: Ethernet port (with IP daughter card, RJ45)
- Indicators:
 - 1x green power indicator
 - 1x yellow status indicator

Power Input Specification

- Power Entry Port: 2x barrel jack connectors (5.5 x 2.1mm, bussed, center positive)
- Voltage: 12VDC
- No-Load Current: HX-200 = 5mA, HX-200-IP = 65mA
- Maximum Load Current: HX-200 = 750mA, HX-200-IP = 835mA
- Maximum Current Output: RS-485 Bus: 1.25 A @ 12.0V DC

Mechanical Details

- Case Type: Ascentic universal case, molded ABS
- Case Dimensions (in, WxLxH): 7.5 x 4.1 x 1.5, (mm, WxLxH): 190 x 104 x 38
- Mounting Locations: molded flanges
- CAD Drawing: available on request

RS-485 Communication

- Protocol: 57600 Baud, 8-N-1
- Commands: AAC Proprietary

RS-232 Communication

- Default Device ID = 16
- Default Protocol: 115200 Baud, 8-N-1
- All commands must end with a carriage return
- Modem Configuration: Null - Straight (select via switch)
Pinout: (RJ45)
 - Pin 1 = ground
 - Pin 2 = ground
 - Pin 3 = TX (straight) or RX (null)
 - Pin 4 = not connected
 - Pin 5 = not connected
 - Pin 6 = RX (straight) or TX (null)
 - Pin 7 = ground
 - Pin 8 = ground

RS-232 Commands

Name	Type	Function	Command Format	Response Format
SENSOR COVER	EVENT	Sent when a sensor is COVERED on a device		(DEV=%;SNS=#;COVER)
SENSOR UNCOVER	EVENT	Sent when a sensor is UNCOVERED on a device		(DEV=%;SNS=#;UNCOVER)
GESTURE UP	EVENT	Sent when an UP Gesture is performed on a sensor on a device		(DEV=%;SNS=#;UP)
GESTURE DOWN	EVENT	Sent when an DOWN Gesture is performed on a sensor on a device		(DEV=%;SNS=#;DOWN)
GESTURE LEFT	EVENT	Sent when an LEFT Gesture is performed on a sensor on a device		(DEV=%;SNS=#;LEFT)
GESTURE RIGHT	EVENT	Sent when an RIGHT Gesture is performed on a sensor on a device		(DEV=%;SNS=#;RIGHT)
DEVICE ID	SET	Sets the DEVICE ID for a device	[DEV=%;DEV=\$]	
DEVICE ID	QUERY	Queries the DEVICE ID for a device	[DEV=%;DEV?]	(DEV=%;DEV=%)
REBOOT	SET	Reboots a device	[DEV=%;REBOOT]	
BAUD RATE	SET	Sets the BAUD RATE of a PORT on a device	[DEV=%;PORT=#;BAUD=\$]	
SERIAL NUMBER	QUERY	Query the serial number of a device	[DEV=%;CFG;SERNUM?]	(DEV=%;CFG;SERNUM=\$)
RESET DEFAULTS	SET	Resets the Device to the FW Version Defaults & Reboot	[DEV=%;RESET;DEFAULT]	
UP COUNT	QUERY	Query how many times the device has been powered on	[DEV=%;UP;COUNT?]	(DEV=%;UP;COUNT=\$)
UP TIME	QUERY	Query how long in seconds the device has been powered on	[DEV=%;UP;TIME?]	(DEV=%;UP;TIME=\$)

KEY: % = Device ID (HX-200 Default 16, Valid Range 1-255)
 # = Position (HX-200 Valid Range 1-8)
 \$ = Command Specific Argument (see Function description)

Quick Start

1. Connect up to 8 of any combination of GX or PX to the grey RJ9 ports labeled "Sensors".
2. Connect the RS-232 Port to your PC via RJ45 to USB RS-232 Cable
 - USB A: AAC PNo 801-402
 - USB C: AAC PNo 806-731
3. Open a serial terminal - 115200 8-N-1
4. Toggle Null/Straight switch if needed to correct signal polarity
5. Interact with the connected AirSelect products, serial messages should appear in the terminal.



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Audio Authority Corporation
2048 Mercer Road, Lexington, KY 40511-1071 USA
Phone: 859-233-4599 • Fax: 859-233-4510
Customer Toll-Free USA & Canada: 800-322-8346
audioauthority.com • sales@audioauthority.com