

AP-001 Specifications

Feature	Note
CPU/Chipset	Intel® Atom™ x5-Z8350 Processor (2M Cache, up to 1.92 GHz)
GPU	Graphics Intel® HD Graphics Integrated GPU
Memory 4GB DDR3L-1600	2GB DDR3L-1600
Display	HDMIx1
On Board Flash Storage	16GB eMMC supplied on board
On Board Flash Expansion	1x MicroSD card socket for user supplied card up to 256GB
Hardwired Ethernet	Realtek RTL8111G-CG (10/100/1Gb/s)
Primary Audio	Via HDMI Audio Out
Optional Secondary Audio Co Processor	USB to Audio XUF208-128-TQ64 Mfg by XMOS*
Optional Amplifier	TAS5717PHP (TI) 5Wx2 (12V required)*
USB Interfaces	1x USB3.0 Type A connector at board edge
	1x USB2.0 for Webcam or other use 5 pin JST
	1x USB2.0 to Optional Audio Solution
	1x USB2.0 for WIFI
	1x USB2.0 for Bluetooth
	1 x USB to SD Card
SD Card Controller IC	Genesys GL835
Robotics / Motion / NAV / VIB Sensor	BNO055 I2C 9-axis Absolute Orientation Sensor *
WIFI/BT Wi-Fi IC	MediaTek RT5572 2.5/5GHz/2x2 MMC connectors +
Bluetooth IC	CSR CSR8510
Power / GPIO / Fast Serial	Via 26 pin main board connector
Main USB I/O 1x USB 3.0	Type A at board edge
2 x HSUART TTL (TX/RX)	In 26 pin connector to Enchillada up to 3,686,400 bps ##
1 x HSUART TTL (TX/RX/CTS/RTS) to BT	Used internally on control PCB
1 x TTL UART for debug connector	Can be jumpered to CH340 on Enchillada for USB debug ** ##
2 x GPIO	Labeled Volume CTRL in Robotics Example ##
6 x GPIO in 26 PIN Connector	Unused user defined ##
1 x GPIO for Wi-Fi power reset	Default mapping for internal use
1 x GPIO for Bluetooth power reset	Default mapping for internal use
1 x GPIO for Webcam power reset	Default mapping for internal use
1 x GPIO for HSIC power reset	Default mapping for internal use
1 x GPIO for USB3.0 power reset	Default mapping for internal use
1 x GPIO for SD Card power reset	Default mapping for internal use
1 x Ethernet RJ45	Filtered RJ-45
1 x Reset button	Tactile at edge of board
1 x HDMI	Full size HDMI connector
1 x Micro SD connector	Standard micro-SD socket
2 x 2 pin Speaker connector	JST 2mm
2x 10 pin MIC connector	JST 2mm
1 x 3 pin Volume Control Connector	JST 2mm
1 x 3 pin debug connector	JST 2mm
1 x 5 pin WEBCAM connector	JST 2mm usable for other USB 2.0 devices
1 x [2x13] 26 Pin power/GPIO/Serial IO	2 row 13x2 26 pin , .100 standard header
1 x [1x2] pin header RTC Battery	JST 2mm, keyed, mating connector supplied w/ battery pigtail #
1 x [2x10] Programming header	2mm JTAG / programming header for XMOS, CPU, etc
3 x WIFI/BT Antenna ipex head	MMC / IPX +
Clock	CMOS w/SRAM, CR2032 #
Operating Humidity	10%~80%RH, non-condensing
Form Factor	130mmx100mmx20mm (50mm incl. heatsink)
Power	5V ~3-4A in from 26pin connector +
OS Supported	Linux (UBUNTU 14-17+) or ROS or Win 10

Notes:

* = hardware included, drivers under development

** = requires optional Enchillada breakout, see schematic

+ = customer provided hardware (PS, Antenna) required

= CR2032 battery provided with pigtail

= signal brought out to screw terminals on Enchillada