Atomic board connector functional information.

CN18 - 26 pin connector on bottom of board. Has power inputs and some GPIO and high speed serial ports.
See schematic page 39 and AtomicPi GPIO documentation.
3.3 volt logic levels, don't apply 5 volt levels.

CN2 - uSD card connector. From an USB to SD card chip. Runs through the on board USB hub chip.
Schematic page 15.

CN12 - HDMI output connector. Direct to Atom.

CN1 - Battery input, above the reset switch. CR2032 battery with cable supplied with unit.

ANT3 - Bluetooth antenna connector. Uses a U.FL or I-PEX type connector.

CN9 - Volume control input connector (GPIO's). 3 pins. Schematic page 33.
Can be used as general GPIO pins, see the GPIO documentation for more info. 3.3 volt logic levels, don't apply 5 volts levels.

CN10 - Debug serial port. 3 pins. 3.3 volt levels, don't apply RS-232 or 5 volt levels.
Schematic page 33.

ANT2 - WiFi antenna connector. RF0 port. Schematic page 25.
Uses an U.FL or I-PEX type connector, should be a dual band (2.4 GHz / 5GHz) antenna.

ANT1 - WiFi antenna connector. RF1 port. Schematic page 25.
Uses an U.FL or I-PEX type connector, should be a dual band (2.4 GHz / 5GHz) antenna.

CN15 - 20 pin 2mm header, XMOS JTAG programming header. Schematic page 31.
This can connect to an XMOS xTAG3 programming adapter with a 0.1" 20 pin to 2mm 20 pin cable. Wires are crossed, that is 2mm pin 1 goes to 0.1" pin2 and the 2mm pin 2 goes to the 0.1" pin1, etc for the other pins.
Note: this is only needed if custom XMOS audio processing code is to be developed.
3.3 volt levels.

SPR1 - Right channel speaker connector. 2 pins. Schematic page 32.
Output from the on board class D amplifier. Do not ground either side.

SPL1 - Left channel speaker connector. 2 pins. Schematic page 32.
Output from the on board class D amplifier. Do not ground either side.

CN14 - 10 pins, Digital microphone 3 & 4 inputs. Schematic page 31.
Contains two stereo I2S audio input channels. 3.3 volt levels.
There are an 3.072 MHz bitclock and 48 KHz left/right clock on this, along with a data input.

CN13 - 10 pins, Digital microphone 1 & 2 inputs. Schematic page 31.
Contains two stereo I2S audio input channels. 3.3 volt levels.
There are an 3.072 MHz bitclock and 48 KHz left/right clock on this, along with a data input.

CN11 - RJ45 GB Ethernet. 10/100/1000 Not on schematic.

CN8 - USB 3.0 connector. Schematic page 27 (connector) and 28 (controller chip).

CN16 - USB 2.0 (marked WEBCAM). Schematic page 33. Can be used as a general purpose
USB 2.0 port. Will work with an external USB hub also to get more ports.

CN5 - 12 pin 50 mil spacing header. Unknown function but probably used to program the 8 pin
FLASH chip next to it. This is the board's AMI BIOS. Not on the schematic.

CN3 - A 2 pin header that's not stuffed, marked POWER. Schematic page 17.

CN17 - A 4 pin connector that's not stuffed, marked FAN. FET switches for it are also not stuffed.
Schematic page 33.