BeagleBone AI PRELIMINARY spec sheet

Open hardware development board geared for machine learning and rapid prototyping

- Processor: Texas Instruments AM5729
  - Dual 1.5GHz ARM® Cortex®-A15 with out-of-order speculative issue 3-way superscalar execution pipeline for the fastest execution of existing 32-bit code
  - 2 C66x Floating-Point VLIW DSP supported by OpenCL
  - 4 Embedded Vision Engines (EVEs) supported by TIDL machine learning library
  - 2x Dual-Core Programmable Real-Time Unit (PRU) subsystems (4 PRUs total) for ultra low-latency control and software generated peripherals
  - 2x Dual ARM® Cortex®-M4 co-processors for real-time control
  - IVA-HD subsystem with support for 4K @ 15fps H.264 encode/decode and other codecs @ 1080p60
  - Vivante® GC320 2D graphics accelerator
  - Dual-Core PowerVR® SGX544™ 3D   GPU
  - ... and much more
- BeagleBone Black header and mechanical compatibility
  - 16-bit LCD interfaces
  - Touchscreen/ADC controller (1.8V/3.3V)
  - 4+ UARTs
  - 2 I2C ports
  - 2 SPI ports
  - lots of PRU I/O pins
  - ... and much more
- Memory
  - 1GB RAM
  - 16GB on-board eMMC flash
- Connectivity
  - USB Type-C connector for power and SuperSpeed dual-role controller
  - Gigabit Ethernet
  - 802.11ac 2.4/5GHz WiFi