BeagleY®-AI: Data Sheet

Suitable for Numerous Industrial Applications

BeagleY®-AI users get started quickly and ramp AI performance to full throttle in applications such as:

- Robotics
- Factory and Building Automation
- Test & Measurement
- Medical
- Human-Machine Interfaces (HMIs)
- Intelligent Vision
    - Image Classification
    - Object Detection
    - Semantic Segmentation

Full-featured Single Board Computer for Today's Embedded AI Workloads

- Texas Instruments AM67A Arm-based vision processor
    - Quad-core 64-bit Arm®Cortex®-A53 CPU subsystem at 1.4GHz
    - Dual general-purpose C7x DSP with Matrix Multiply Accelerator (MMA) capable of 4 TOPs
    - Arm Cortex-R5 subsystem for low-latency I/O and control
    - GPU, video and vision accelerators, and other specialized processing capability
- Memory
    - 4GB LPDDR4
    - microSD card socket
    - Board identifier EEPROM
- Networking
    - BeagleBoard.org BM3301 module
        - [WiFi 6](#) (IEEE802.11ax)
        - Bluetooth® 5.4 with Bluetooth Low-Energy (BLE)
    - Gigabit Ethernet with power-over-Ethernet (PoE+) support via add-on
- 3 Simultaneous Displays
    - microHDMI
    - OLDI (LVDS) with touchscreen support
    - MIPI-DSI with touchscreen support (muxed with MIPI-CSI)
- Other I/O
    - PCI-Express® Gen3 x 1 interface (requires external adapter)
    - 4x USB3 (5Gbps) type-A host ports
    - 1x USB2 (480Mbps) type-C device port and power input
    - 40-pin expansion header
    - Fan power and control connector
- Debug
    - 3-pin JST-SH console UART
    - 10-pin TAG-CONNECT JTAG header