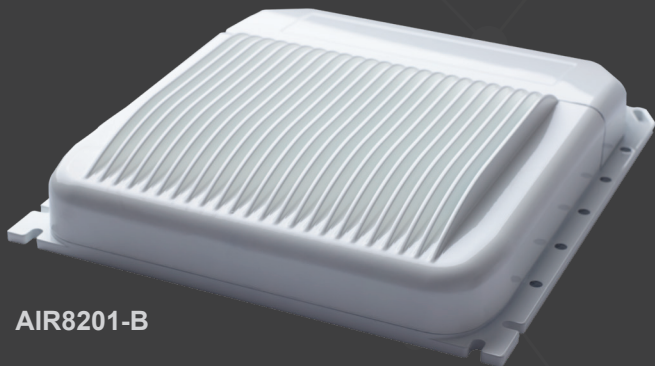




### AIR-T Edge Series Product Line



AIR8201-B

#### Applications

Pre-trained  
AI Cores

User Developed  
Applications

AI  
Frameworks

DSP  
Frameworks

AIR-T Hardware Abstraction

AIR-T Hardware

#### Overview

Deepwave's AIR-T is the first software defined radio with embedded high performance computing. It contains three unique digital processors for any application:

- FPGA for strict real-time operations
- GPU for highly parallelized processing
- CPU for control, I/O, and software applications

The AIR-T allows users to easily incorporate artificial intelligence into their radio frequency and wireless technologies.

This versatile system can function as a highly parallel SDR, data recorder, or inference engine for deep learning algorithms. The embedded GPU allows for SDR applications to process bandwidths greater than 200 MHz in real-time.

#### Software Support



CUDA

GPU  
Acceleration

HPC with CUDA  
toolkit using  
C/C++ or Python  
interfaces



GNU Radio  
THE FREE & OPEN SOFTWARE RADIO ECOSYSTEM

Signal  
Processing

Support for  
industry leading  
SDR development  
environment



TensorFlow

Deep  
Learning

Train and deploy  
AI systems using  
standard  
frameworks

#### Operating System

AirStack  
(Derived from Ubuntu)



#### Mechanical

- Size - 12.2 x 11.0 x 2.4 inches
- IP56 Rating (pending)

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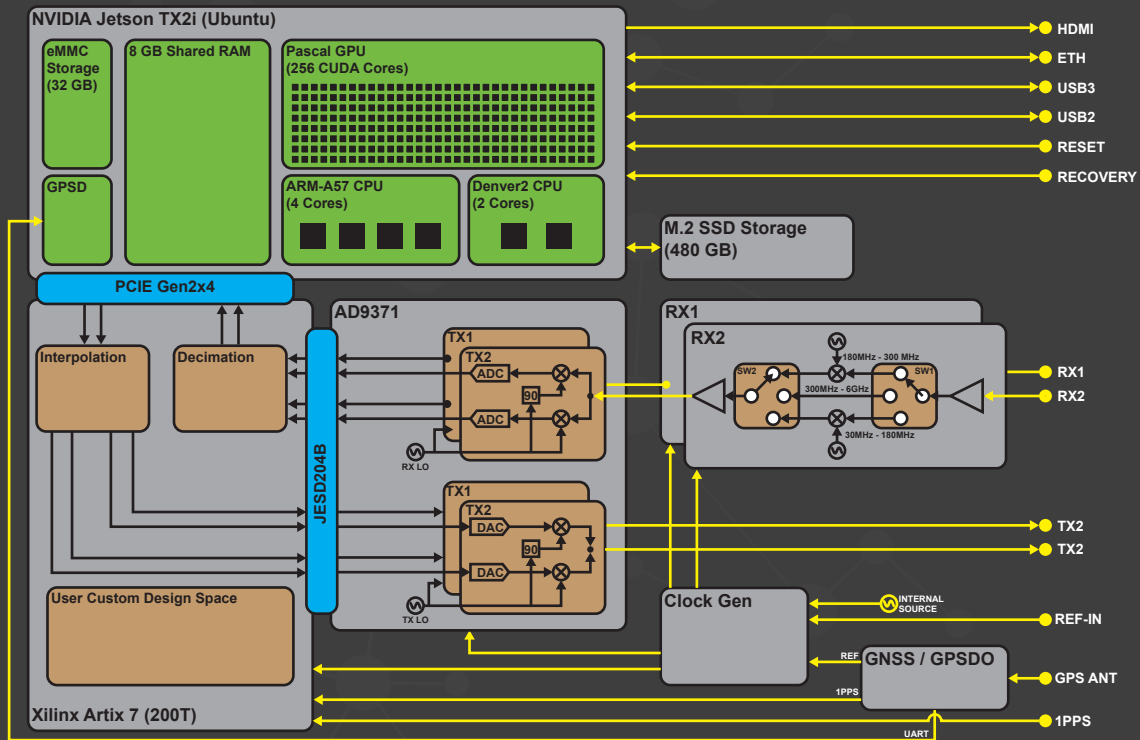
1429 Walnut St, Suite 1000, Philadelphia, PA 19102

www.deepwavedigital.com salesteam@deepwavedigital.com





### AIR-T Edge Series Product Line



### Key Specifications

- **Dual Channel MIMO Transceiver**
  - Receiver (2 channels):
    - 100 MHz bandwidth
    - 30 MHz to 6 GHz
    - 52 dB Gain (2.2 dB noise figure)
  - Transmitter (2 channels)
    - 100 MHz bandwidth Tx (per channel)
    - 300 MHz to 6 GHz
    - +6 dBm Max Output Power
- **Environmental:**
  - Temperature: -40C to +85C
- **GPSDO:**
  - 40 ns Timing Accuracy (to UTC)
  - 8 anti-jam countermeasures against CW
  - GPS, GLONASS, Galileo, QZSS, SBAS
- **Digital Signal / Deep Learning Processors**
  - NVIDIA Jetson TX2i
    - ARM Cortex-A57 CPU (4 core)
    - NVIDIA Denver2 CPU (2 core)
    - NVIDIA Pascal GPU (256 core)
    - 8 GB of memory
  - Xilinx Artix 7 200T FPGA
- **Data Recording / Storage:**
  - 512 GB Flash Storage
- **Connectivity**
  - GPS Sync via 1 PPS and 10 MHz
  - USB 3.0, USB 2.0/3.0
  - 1 Gbps Ethernet
- **Power Consumption:**
  - 25 Watts Max (14 Watts Typical)

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