## WHB-N211-IB Artificial Intelligence



Embedded System with NVIDIA® Jetson ${ }^{\text {TM }}$ TX2

Introduction
WB-N211-B bare board is an industrial grade design and focus on highspeeding GPU calculation. Consider customers diversity apply, WB-N211$B$ not only have h/w crypto authentication feature to support software $\mathrm{S} / \mathrm{l}$ add-on own valuable application to meet *GDPR certification, but also include an expansion slot to allow customer creating own daughter board to extend new features easily and quickly.
*GDPR- General Data Protection Regulation

## Features

- Industrial grade design
- Expansion slot, easy to extend new features
- 3.5 mm line-out jack x 1 and MIC jack x 1
- Crypto Authentication


## Specification

| System |  |
| :---: | :---: |
| Module | nVidia Tegra X2 module |
| CPU | HMP Dual Denver 2/2 MB L2 +, Quad ARM® A57/2 MB L2 |
| GPU | NVIDIA Pascal ${ }^{\text {TM }} 256$ CUDA core GPU |
| DRAM | On Board 8GB LPDDR4 |
| BSP Storage | On-Board 32GB eMMC (eMMC5.1) for BSP |
| I/O |  |
| Network (LAN) | 1x Gigabit Ethernet (10/100/1000), RJ45 w/ LED |
| Display | 1x HDMI (Type A) |
| Audio | $1 \times 3.5 \mathrm{~mm}$ phone jack for line-out |
|  | $1 \times 3.5 \mathrm{~mm}$ phone jack for MIC line in, audio plug detect |
| OTG | 1x Micro USB |
| USB | 2 C USB 3.0 type-A (compatible to USB2.0) |
| WiFi/BT | $802.11 \mathrm{a} / \mathrm{b} / \mathrm{g} / \mathrm{n} / \mathrm{ac}+\mathrm{BT} 4.0$ (Option) |
| Storage |  |
| Micro SD | 1x Micro SD card slot for SDXC SD Card |
| SATA | 1x SATA support 3Gbps |
| Button |  |
| Power | 1x Power button + power PIN-OUT |
| Reset | 1x Reset button + reset PIN-OUT |
| Recovery | 1x Recovery button + recovery PIN-OUT |
| PIN OUT |  |
| Power on | On board dip switch for system turn on by button or automatic |
| Expansion | $1 \times 120$ in connector (primarily for camera module design) |
|  | $1 \times 100$ pin connector |
| PCle 2.0 ( $5.0 \mathrm{GT} / \mathrm{s}$ ) | 1 x lane *2 (reserved on 100pin expansion connector) |
| MIPI CSI 2.0 | Total 12 lanes, could be configured as $2 \times$ lanes * 6 or |
| (2.5Gbps per lane) | 4 x lanes *3 (reserved on 120pin expansion connector) |
| mPCle | Primarily for WWAN module (w/ USB2.0/USIM card interface) |
| OS Support |  |
| OS Support | Linux 4.4.38 / ubuntu 16.04 |
| Power Consumption |  |
| Input Voltage | DC12V +/-10\% |
| Consumption | 42 watt (max.) w/o daughter boards |
| Dimension |  |
| Dimension | $120 \mathrm{~mm} \times 146 \mathrm{~mm}$ |

## WB-N211 \& Analog/HDMI IN Daughter Board View



## WB-N211 Integrate Analog/HDMI IN Daughter Board



Ordering Information

| Part Number | Description |
| :--- | :--- |
| BWBN211TX2 | WB-N211-B + nVidia TX2 module (8GB, 256 CUDA) |
| BWBN211TX2W | WB-N211-B/W (with WiFi/BT antenna) + nVidia TX2 module (8GB, 256 CUDA) |
| MWBN211THERFAN | Thermal sink with fan |
| AWBN202ADP12 | Adapter (FSP060-DHAN3) w/o power cord |
| SWBN211TVI | Analog Daughter board (4x TVI IN + 1x HDMI IN) <br> include : WB-N211-B/W + nVidia TX2 module + thermal sink with fan + adapter <br> w/o power cord + BNC Daughter board + Acrylate housing |

