DIAMOND SYSTEMS JETBOX-FLOYD

COMPLETE NVIDIA JETSON NANO / NX SYSTEM

Key Features

- Complete system with Jetson Nano or NX module and Linux OS installed
- 1 or 2 gigabit Ethernet ports
- Optional PoE+ support (with external power source)
- 2 HDMI 2.0a/b ports
- 1 USB 3.0 port with type A connector
- 2 USB 2.0 ports with type A connector; 1 port can serve as OTG
- 8 GPIO with 3.3V logic levels
- 2 serial ports with RS-232/422/485 (depending on model)
- 3 dual/quad lane MIPI/CSI camera ports
- 1 CAN port (NX module only)
- 1 Mini PCIe socket with PCIe and USB support

- 1 M.2 2280 PCIe x1 or x4 NVME socket
- Input voltage 7-28VDC; 12VDC universal AC adapter included
- Operating temperature -25 to +80C
- Dimensions: 175mm W x 91mm D x 53mm H / 6.9"W x 3.6"D x 2.1"H

Introduction

JETBOX-FLOYD is a compact Nvidia Jetson AI computing platform ready to deploy. It includes the Jetson Nano or NX module installed on our FLOYD carrier board with a Linux OS installed and preconfigured to support all the I/O on Floyd.

The system is available in multiple standard configurations to meet a range of customer needs. The 01 full-feature models feature dual Ethernet ports with PoE support using an external power injector, two multi-protocol serial ports, dual HDMI displays, and a PCIe / USB mini card socket. The 02 low-cost models have fewer baseline I/O features but offer a faster-performance

PCIe x4 NVME M.2 socket. Both models will support one channel of CAN 2.0B with the Xavier NX module installed.

Jetbox-Floyd features multiple expansion sockets for additional I/O and storage capacity to meet a wide range of application needs. Dual SMA antenna cutouts support the installation of wi-fi and cellular modem modules for network connectivity. The enclosure is DIN rail mountable or can be used in a "tabletop" scenario.

The system is compatible with both 12V and 24V DC power supplies. A 12VDC universal AC adapter is included with the system.

Product Configurations

Jetbox-Floyd is available in four standard baseline configurations of Jetson module and baseboard features:

Feature	JB-FLOYD-NAO-01	JB-FLOYD-NAO-02	JB-FLOYD-XNX-01
Jetson module	Nano	Nano	Xavier NX
Gigabit Ethernet	2	1	2
PoE	Both ports	No	Both ports
HDMI	2	1	2
Camera CSI 4-lane	3	3	3
USB 3.0	1	1	1
USB 2.0	2	2	2
M.2 2280 socket	PCIe x1	PCIe x4	PCIe x1
Minicard socket	Full size PCIe + USB	No	Full size PCIe + USB
SD card	Yes	Yes	Yes
GPIO 3.3V	8	8	8
Serial	2x RS-232/422/485	1x RS-232 1x RS-232/485	2x RS-232/422/485

CAN 2.0	No	No	1

FLOYD Block Diagram

FLOYD I/O Expansion

Jetbox-Floyd includes several options for I/o and memory expansion:

- The M.2 2280 socket may be used for additional flash storage using Diamond's flash disks up to 2TB in capacity, or for I/O modules in M.2 2280 format. On 01 models the socket has a PCIe x1 interface, while on 02 models the interface is PCIe x4.
- The PCIe MiniCard socket accepts any full-size PCIe- or USB-based MiniCard. Check to be sure that drivers compatible with Nvidia Linux are available.
- A micro-SD card socket is also available for adding flash storage.

Note that all Jetson modules include built-in flash memory. Check the Jetson datasheets for specifics. This built-in flash contains Diamond's customized Linux based on Nvidia Jetpack for the installed Jetson module.

FLOYD Customization

Jetbox-Floyd can be customized to fit your application needs. Typical customizations include:

- Change of case size/shape to accommodate additional I/O or electronics
- Installation of flash memory or mini-card I/O modules
- Branding with your colour and logo
- Change in I/O connector assortment based on your I/O needs
- Conformal coating of internal electronics
- Customization of the Linux OS or loading of your custom software

Please contact sales for further information.

General

Electrical	Input voltage: 12-24V DC
Mechanical	175mm W x 91mm D x 53mm H
Software	N/A
Temperature	Temperature range (operation): -25 to +80C Temperature range (storage): TBA
Warranty	2 Years
RoHS	Compliant

Ordering Details

System	**JB-FLOYD-NAO-01** Jetbox-Floyd complete Nano system based on Floyd BB01 full-feature carrier board; includes module, OS, and enclosure **JB-FLOYD-NAO-02** Jetbox-Floyd complete Nano system based on Floyd BB02 low-cost carrier board; includes module, OS, and enclosure **JB-FLOYD-XNX-01** Jetbox-Floyd complete NX system based on Floyd BB01 full-feature carrier board; includes module, OS, and enclosure **JB-FLOYD-XNX-02** Jetbox-Floyd complete NX system based on Floyd BB02 low-cost carrier board; includes module, OS, and enclosure
Accessories	N/A