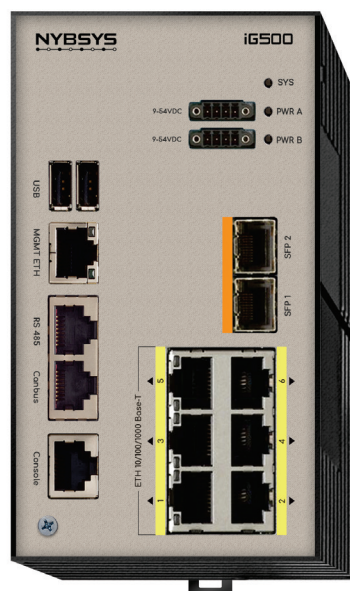


iG500

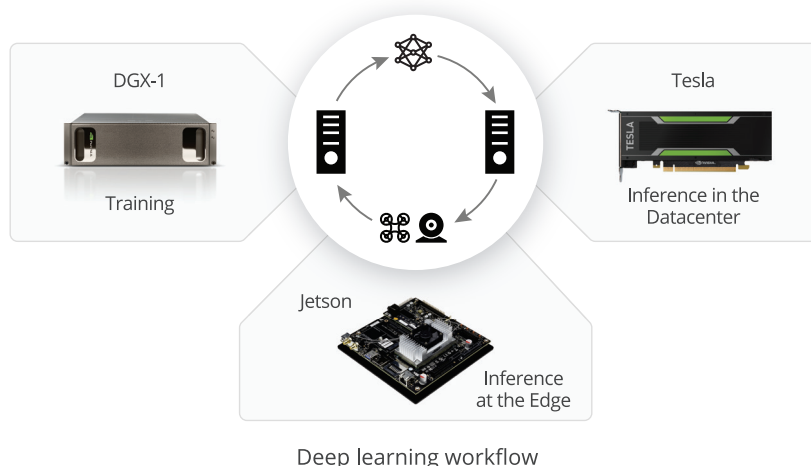
The Intelligent IoT Gateway

OVERVIEW

The iG500 is our high computing intelligent Gateway with builtin Machine Learning. The iG500 offers machine learning at the edge. The system has been designed based on NVidia TX2 SoM (Supercomputer on Module). Jetson TX2 is the fastest, most power-efficient embedded AI computing device. This 7.5-watt supercomputer on a module brings true AI computing at the edge. It's built around an NVIDIA Pascal™-family GPU and loaded with 8 GB of memory and 59.7 GB/s of memory bandwidth.



iG500 offers unique opportunity to apply already trained models at the edge to perform inference at the edge. It can be used for Image recognition and classification, objection and localization, segmentation and free space visualization, complex event processing. We designed the iG500 with industrial standard DIN rail enclosure with 6 Port ether switch for connecting sensors and cameras and 2 SFP module for uplinks. Failover DC power supply units are provided for high availability.

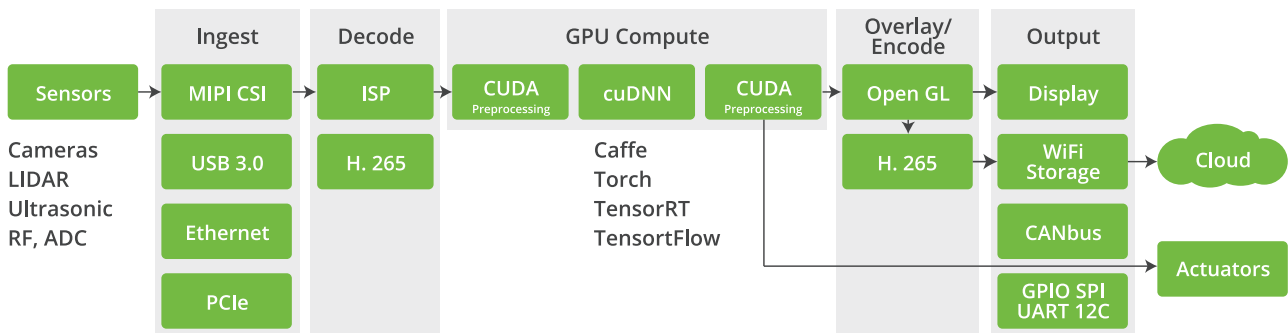


SPECIFICATIONS

Item	Description
CPU	ARM Cortex-A57 (quad-core) @ 2GHz + NVIDIA Denver2 (dual-core) @ 2GHz
GPU	256-core Pascal @ 1300MHz
Memory	8GB 128-bit LPDDR4 @ 1866Mhz 59.7 GB/s
Storage	32GB eMMC 5.1
Encoder	4Kp60, (3x) 4Kp30, (8x) 1080p30
Decoder	(2x) 4Kp60
Display	2x HDMI 2.0 / DP 1.2 / eDP 1.2 2x MIPI DSI
Wireless	802.11a/b/g/n/ac 2x2 867Mbps Bluetooth 4.1
Ethernet	6 port 10/100/1000 BASE-T Ethernet and 2 Fiber optic option
USB	USB 3.0 + USB 2.0
CAN	Dual CAN bus controller
RS 485	High speed serial port for connecting RS 485 compliant sensors
Thermals	-25°C to 80°C
Power	10.5W

USE CASES

iG500 is a general purpose deep learning machine at the edge which has complete machine learning pipeline for mission critical IoT setup.



iG500 ingest signals from cameras, LIDARs, ultrasonic, RF or analog to digital converters and decode them and apply any machine learning / deep learning algorithm such as Caffe, Torch, TensorRT or TensorFlow. After computing machine learning algorithm it can show the display of the image processing or provide signal to an actuators or connect to other systems in the NybSys IoT product portfolio.

Typical use case of this system is in mass public transit system, farming and agriculture system, smart city and traffic control system, industrial automation, manufacturing flow control system, retail theft detection system, object classification and movement detection system for warehouse etc. There are five key benefits of this system are:

LATENCY



BANDWIDTH



PRIVACY



AVAILABILITY



Latency issues for industrial automation can be reduced by applying iG500 at the edge. Our trained models for security camera can monitor and track all traffic at the security camera pole. DICOM image processing and computer vision on medical images can provide extra layer of privacy.

ORDERING INFORMATION

Item	Description
iG500-GW-A1	Internet of Things (IoT) Gateway, iG500 Express Model

FOR MORE INFORMATION

For more information about iG500 products, please contact us at sales@nybsys.com