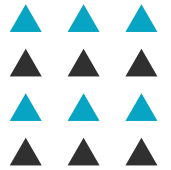


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GUSTAV-I3

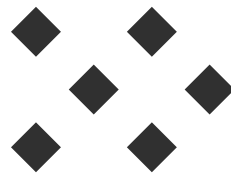
ALL IN ONE EDGE SOLUTION
DOCUMENT VERSION 1.0.2



ABOUT GUSTAV-I3

SUPPORTS NVIDIA JETSON ORIN NX 8 & 16 GB, XAVIER NX 8 & 16 GB

The GUSTAV-I3 hardware series represents a comprehensive line of edge computers, strategically positioned in the market as an all-inclusive solution. This document is made for NVIDIA JETSON Orin NX and Nano series.



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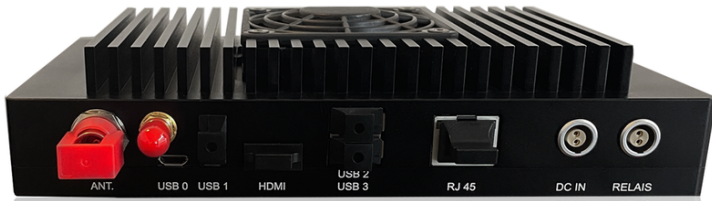
PRODUCTS OVERVIEW

SUPPORTS ORIN NX ORIN NANO

SUPPORTS XAVIER NX

GUSTAV-I3 ORIN NX 16 GB

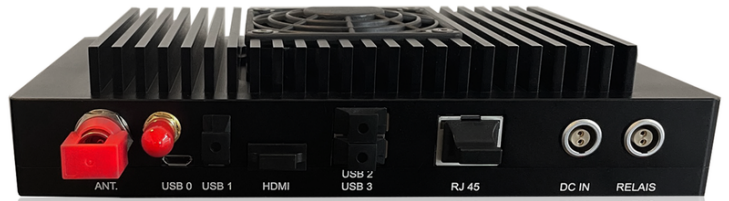
BASED ON NVIDIA JETSON ORIN NX 16 GB



SKU-PART.NO: RBC_GI3USBNX016

GUSTAV-I3 ORIN NX 8 GB

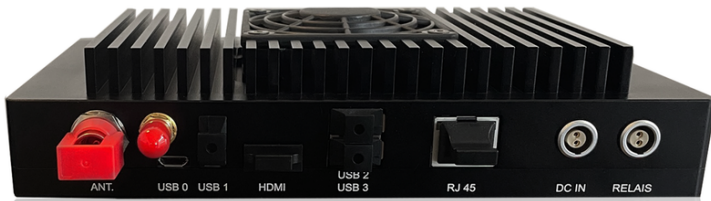
BASED ON NVIDIA JETSON ORIN NX 8 GB



SKU-PART.NO: RBC_GI3USBNX08

GUSTAV-I3 ORIN NANO 8 GB

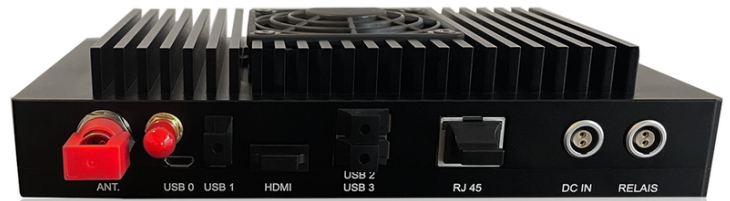
BASED ON NVIDIA JETSON ORIN NANO 8 GB



SKU-PART.NO: RBC_GI3USBNANO8

GUSTAV-I3 ORIN NANO 4 GB

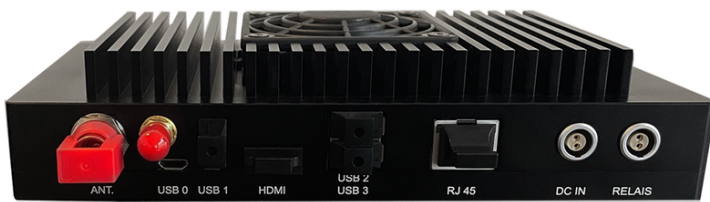
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SKU-PART.NO: RBC_GI3USBNANO4

GUSTAV-I3 XAVIER NX 8 GB

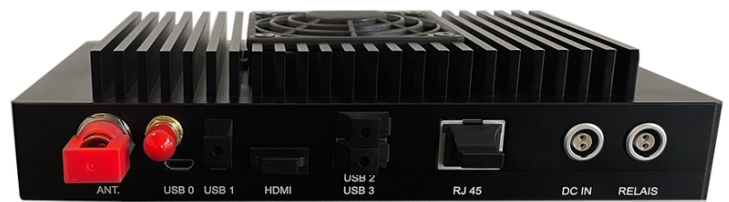
BASED ON NVIDIA JETSON XAVIER 8 GB



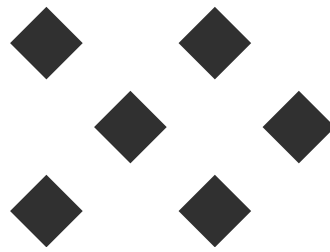
SKU-PART.NO: RBC_GI3USBNXX8

GUSTAV-I3 XAVIER NX 16 GB

BASED ON NVIDIA JETSON XAVIER 16 GB



SKU-PART.NO: RBC_GI3USBNXX16



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READY TO GO SOLUTION

GUSTAVi contains all optimized frameworks, including the REBONTIX CUSTOM SDK Manager with device hardware drivers.

The software is also optimized by us and supplied pre-installed:

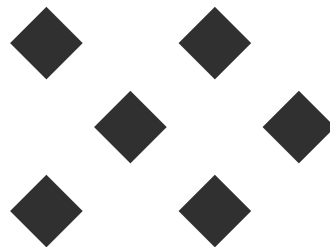
- Latest Jetpack version support > 4.6 - 5.1.2 or higher
- OpenCV optimized and compiled with CUDA acceleration
- Pytorch optimized version
- One click refresh images with all hardware drivers, not need for flashing services or complex patching

LIFECYCLE TO JANUARY 2030

In today's world, availability is one of the most important components of the supply chain. We are announcing the availability of GUSTAVi NX ORIN until January 30, 2030.

During the product lifecycle, there may be changes to hardware components that may be accompanied by corresponding software changes (e.g. memory component updates). REBONTIX reserves the right to make changes to availability at any time based on the supply chains of suppliers from the chip industry, e.g. NVIDIA Corp.

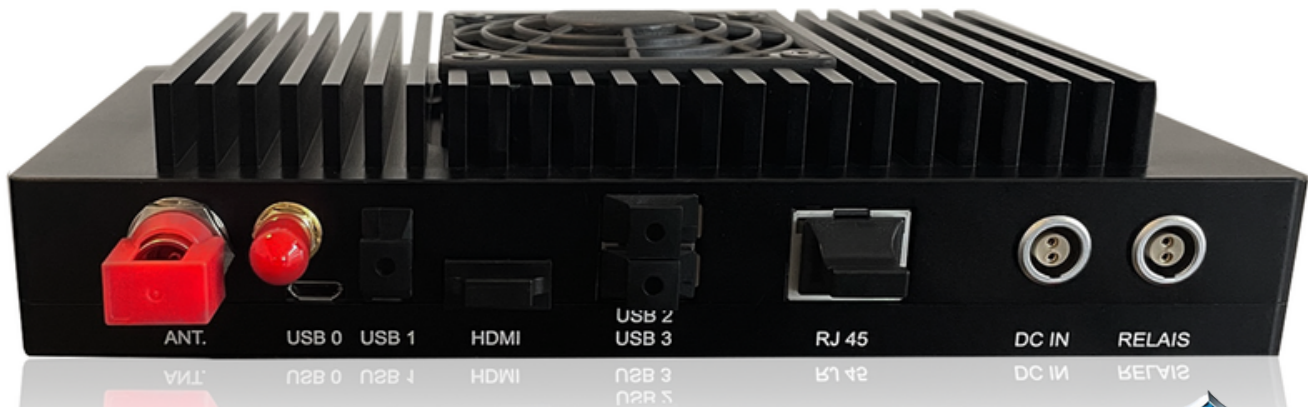




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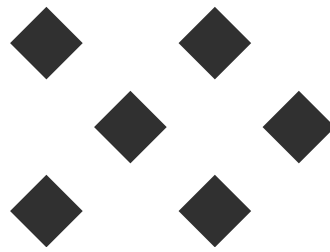


SECURE HARDWARE AUTHENTICATION



FEATURES

- Crypto Element with Protected Hardware-based Key Storage.
- Secure Symmetric Authentication Device Host and Client Operations.
- Superior SHA-256 Hash Algorithm with Message Authentication Code (MAC) and Hash-Based Message Authentication Code (HMAC) Options.
- Best-in-class, 256-bit Key Length; Storage for Up to 16 Keys.
- Guaranteed Unique 72-bit Serial Number.
- Easy to use REBOTNIX free crypto programmer test and run application (works only with hardware). Python, C++, JS bindings.



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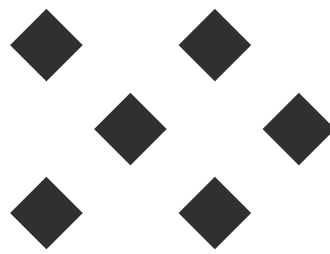
SECURE HARDWARE AUTHENTICATION



For the verifiability of AI applications as well as the European cybersecurity law and the upcoming AI ACT, proof of generated AI data of the liability issue is mandatory.

REBOTNIX edge systems include a hardware 256 bit based cryptochip on the mainboard. In combination with NVIDIA JETSON GPU and GUSTAVi as host, we can now create more secure AI applications and protect custom generated models.

The Microchip's is a full turnkey security device. It includes a 4.5Kb EEPROM divided into 16 slots. This array can be used for storage of keys, miscellaneous read/write, read-only, password or secret data, and consumption tracking. Access to the various sections of memory can be restricted in a variety of ways and then the configuration locked to prevent changes.



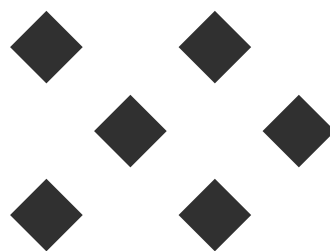
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INDUSTRIAL A.I. SOLUTIONS

GUSTAV-I3

ALL IN ONE EDGE SOLUTION

NVIDIA JETSON ORIN NX 8 GB & 16 GB

PROPERTY	INFO	INFO
GPU	ORIN NX 8GB / 16GB	8GB (70 TOPS) / 16GB (100 TOPS)
USB3.x PORTS	3	1 x NATIVE USB 2 x SHARED USB
USB2.x PORTS	1	1 x USB 2.0 PORT
NETWORK	1 x 100 MBIT / 1000 MBIT	RJ-45
COOLING	INVISIBLE ACTIVE FAN	CONTROLABLE PWM FAN WITH SOFTWARE
CASE	FULL ALUMINIUM BLOCK	180x42x99mm (1000g incl. POWER SUPPLY UNIT)
DISPLAY	1 x HDMI 2.x	-
POWERING	1 x 12-48 VOLTS INPUT	LEMO CONNECTOR
ANTENNAS	1 x WIFI	FME/M CONNECTOR
DIGITAL IO	1 x RELAIS	LEMO CONNECTOR (POWER ON / OFF)
SERVICE PORT	IX CONNECTOR	FOR FLASHING & DEBUGGING



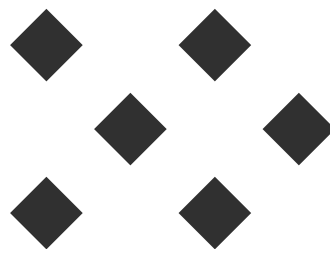
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INDUSTRIAL A.I. SOLUTIONS

GUSTAV-I3

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NVIDIA JETSON ORIN NANO 4 GB & 8 GB

PROPERTY	INFO	INFO
GPU	ORIN NANO 4GB / 8GB	4GB (20 TOPS) 8GB (40 TOPS)
USB3.x PORTS	3	1 x NATIVE USB 2 x SHARED USB
USB2.x PORTS	1	1 x USB 2.0 PORT
NETWORK	1 x 100 MBIT / 1000 MBIT	RJ-45
COOLING	INVISIBLE ACTIVE FAN	CONTROLABLE PWM FAN WITH SOFTWARE
CASE	FULL ALUMINIUM BLOCK	180x42x99mm (570g)
DISPLAY	1 x HDMI 2.x	-
POWERING	1 x 12-48 VOLTS INPUT	LEMO CONNECTOR
ANTENNAS	1 x WIFI	FME/M CONNECTOR
DIGITAL IO	1 x RELAIS	LEMO CONNECTOR (POWER ON / OFF)
SERVICE PORT	IX CONNECTOR	FOR FLASHING & DEBUGGING



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GUSTAV-I3

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SUPPORTS | NVIDIA JETSON XAVIER 8 GB & 16 GB

PROPERTY	INFO	INFO
GPU	XAVIER NX 8 GB 16 GB	21 TOPS
USB3.x PORTS	3	1 x NATIVE USB 2 x SHARED USB
USB2.x PORTS	1	1 x USB 2.0 PORT
NETWORK	1 x 100 MBIT / 1000 MBIT	RJ-45
COOLING	INVISIBLE ACTIVE FAN	CONTROLABLE PWM FAN WITH SOFTWARE
CASE	FULL ALUMINIUM BLOCK	180x42x99mm (570g)
DISPLAY	1 x HDMI 2.x	-
POWERING	1 x 12-48 VOLTS INPUT	LEMO CONNECTOR
ANTENNAS	1 x WIFI	FME/M CONNECTOR
DIGITAL IO	1 x RELAIS	LEMO CONNECTOR (POWER ON / OFF)
SERVICE PORT	IX CONNECTOR	FOR FLASHING & DEBUGGING

OPTIONAL POE+ ADDON

SKU: RBC_GI3POEPA

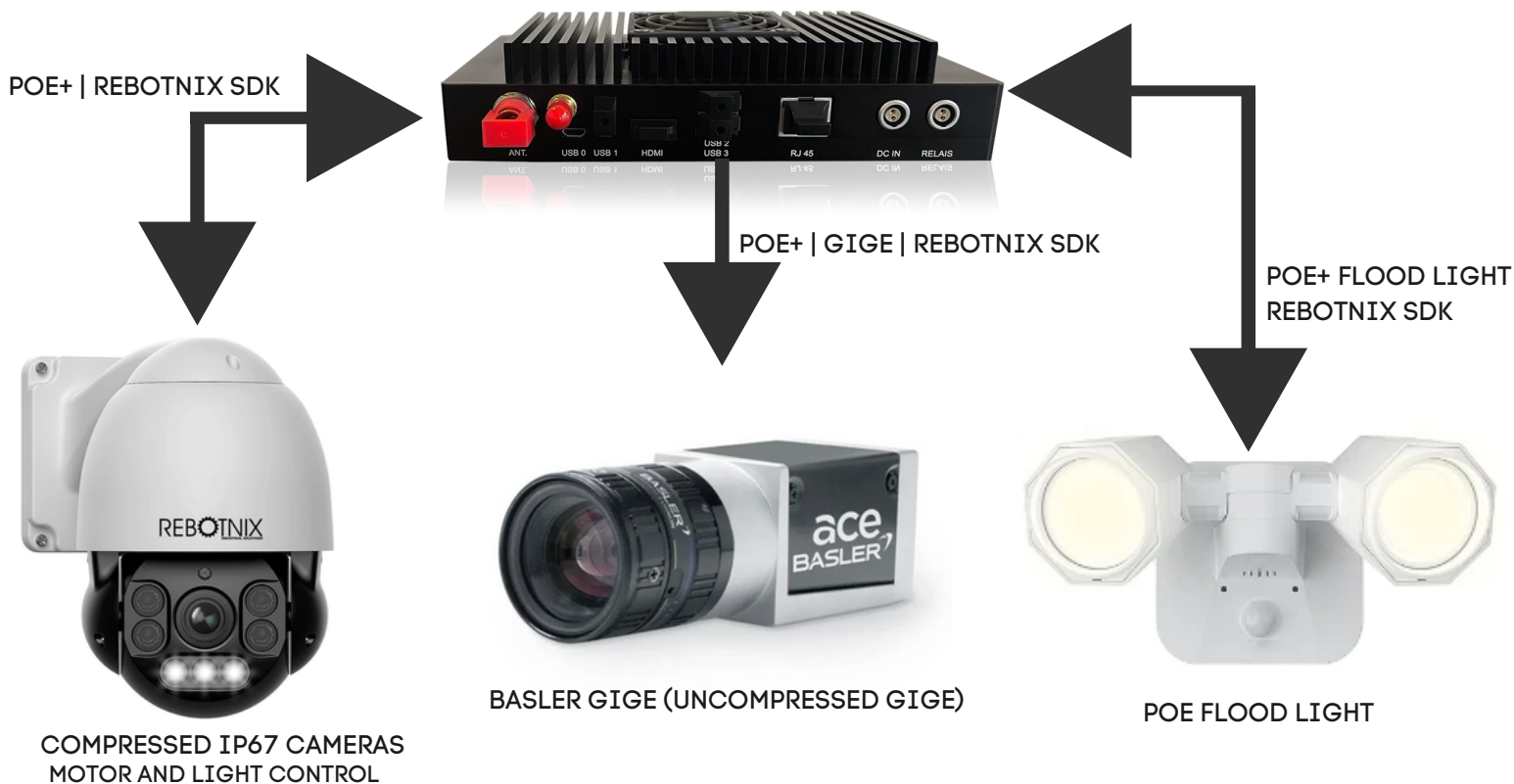


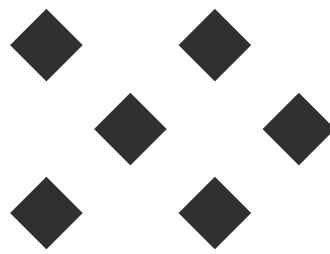
Please note that POE+ addon is only available in this GUSTAV-I3.

The POE+ (power over ethernet) add-On enables the control of devices compliant with the Power-over-Ethernet standard, such as GigE industrial cameras or surveillance cameras. Please note that the POE+ add-on is available as an accessory and is installed internally in the device. Please select the POE+ addon when placing your order.

SOME EXAMPLES OF POE+ APPLICATIONS

Please take a look at the full REBOTNIX addons catalog.





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GUSTAV-I3

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READY TO GO COMPONENTS

REBOTNIX Developer SDK (Software Development Kit) supports several third party add-ons to make working with the hardware components and machine learning easy. This SDK is bundle with the hardware. You cant use it on other hardware Jetson platforms.

RB-CAM-BASLER



This module offers the integration and support of Basler cameras, GIGe and USB3 cameras. We support a raw signal wrapper for integration into Darknet YOLO or PyTorch frameworks. No gstreamer wrapper is needed and we guarantee lowest latency under 10-20 milliseconds of delay (uncompressed).

RB-CAM-AV

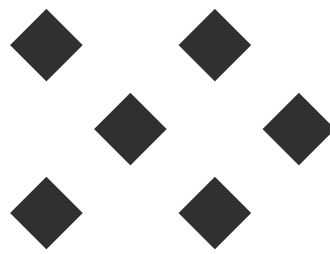


This module offers the integration of allied vision cameras, GIGe, USB3 or FDP-LINK cameras. We support raw signal wrapper for integration into darknet yolo or pytorch frameworks. No gstreamer wrapper is needed and we guarantee lowest latency under 10 milliseconds of delay.

RB-GPS



This module offers the integration of UBLOX-GPS chips. We support a raw signal wrapper for integration into your own python pipelines. Besides the coordinates of latitude and longitude you also get information about speed as well as the number of available satellites and the signal quality. With a Hertz rate of up to 10 per second we guarantee lowest latency and a very precise signal.



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Components at a glance.

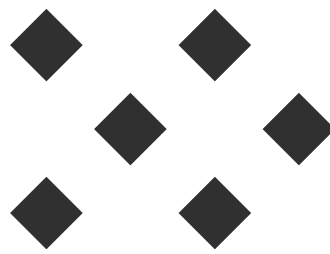
RB-IP

This module offers the integration of standard IP cameras that communicate over several protocols. With our SDK, we are able to decode H.264 or HEVC or AV1 directly into pipelines for Darknet Yolo, Pytorch or OpenCV with CUDA acceleration.

- RTSP HEVC (H.265 & H.264)
- SRT (Secure Reliable Transport)
- RTMP (ONLY H.264)
- MPEG-TS (H.264 & HEVC & AV1)
- HTTP & HTTPS
- UDP & TCP

RB-KINEMATICS-GPS

This module offers the integration of UBLOX-RTK-GPS chips. We support a raw signal wrapper for integration into your own python pipelines. Besides the coordinates of latitude and longitude you also get information about speed as well as the number of available satellites and the signal quality. With a Hertz rate of up to 20 per second we guarantee lowest latency and a very precise signal.



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The SDK components at a glance.

RB-VISIONTOOLS-INFERENCE ENGINE

This module offers the integration of real-time object-detection running on the edge, using an optimized custom trained Object Detection Model. Since it natively runs on TRT it offers a very high frames-per-second (FPS) rate. It therefore enables the user to build real-time applications. This module runs only on a NVIDIA embedded GPU.

RB-COMPRESS

This module offers the integration of an optimized image-compression into your python pipelines. It is a tool for compressing relevant image information for transferring to the smallest possible file size. By reducing the file size the user saves data volume, as well as time and cost in application hosting such as smart city applications, robotics or any other IoT without losing information. The image compression supports accelerated AVIF compression.