INDUSTRY IS CALLING | WE DELIVER
GUSTAV FPD-LINK & RB CAMERA

REBOTNIX
CREATOR OF INTELLGENT MASCHINE

RB - CAM

REBOTNIX

RB - CAM

ANT.   USB 0 USB 1   HDMI   USB 2 / USB 3   RJ 45   DC IN   RELAIS

NVIDIA   PREFERRED PARTNER

VERSION 1.0.9

# GUSTAV | READY TO GO VISUAL COMPUTING

FPD-LINK CAMERAS

The GUSTAV computer by REBOTNIX now supports robust raw camera signal processing up to 15 meters cable length. The system consists of one or more of REBOTNIX FPD-Link III cameras in different sensor classes. Until now, cable lengths were sensitive when it came to raw signal transmission.

Standard USB3 connections are susceptible to interference when operating in rough environments. The complete system is delivered as a package with camera, cable and latest driver software.

All cameras works a standard V4L2 camera in the operating system. The driver is supplied free of charge and is included with the system.

The GUSTAV is ready for use immediately after unpacking.
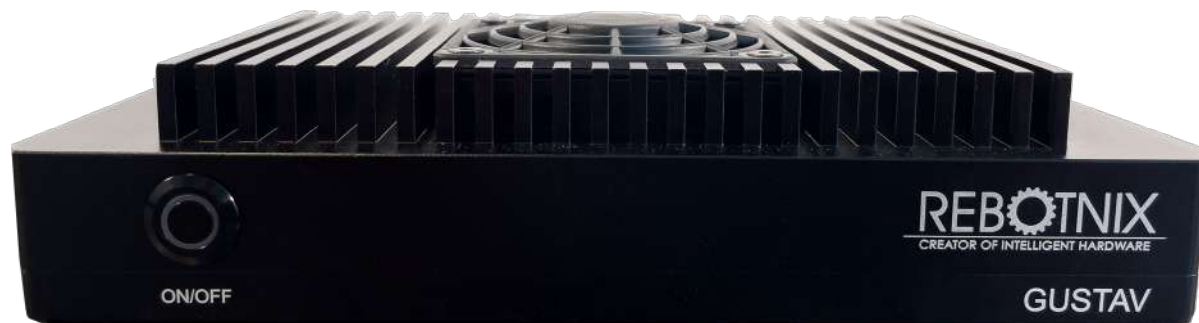
RB-CAMERA
ROBUST | **HARDY** AND RELIABLE

Based on the MIPI CSI-2 cameras, REBOTNIX now also offers a complete solution of cameras with FPD Link. With an integrated serializer chip in the GUSTAV Edge computer, the RB-CAMERAS enable long cable solutions of up to 15 metres. All camera functions can be used, so they work exactly like the V4L2 camera. The drivers are optimised for the GUSTAV Edge computer. GUSTAV currently supports the NVIDIA JETSON GPU modules.

Your benefits:
- Long cable solutions of up to 15 meters.
- All drivers are available as open source for NVIDIA Jetson on GitHub.
- Small size, light weight, low power consumption and cost efficiency.
- Low latency of the raw CSI-2 signal from camera to host
- Lean and efficient overhead
- Housing milled entirely from black aluminium for the best thermal characteristics.
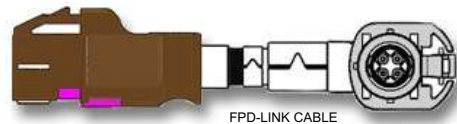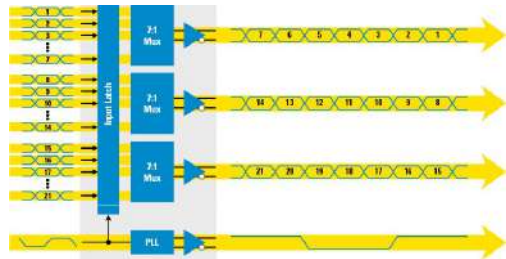
FPD-LINK CABLE

RB-FPD-LINK CAMERAS

GLOBAL SHUTTER | INTERCHANGEABLE LENSES

RB-FPD-C1
Interface: FPD-Link
Sensor: Sony IMX287
0.4 MP 728 (H) x 544 (V)
FPS: up to 302 fps
Shutter: Global Shutter
Color or Monochrom
Mount: C-Mount

RB-FPD-C2
Interface: FPD-Link
Sensor: Sony IMX273
1.6 MP 1456 (H) x 1088 (V)
FPS: up to 157 fps
Shutter: Global Shutter
Color or Monochrom
Mount: C-Mount

RB-FPD-C3
Interface: FPD-Link
Sensor: Sony IMX392
2.4 MP 1936 (H) x 1216 (V)
FPS: up to 128 fps
Shutter: Global Shutter
Color or Monochrom
Mount: C-Mount

RB-FPD-C4
Interface: FPD-Link
Sensor: Sony IMX265
3.2 MP 2064 (H) x 1544 (V)
FPS: up to 54 fps
Shutter: Global Shutter
Color or Monochrom

RB-FPD-C5
Interface: FPD-Link
Sensor: Sony IMX264
5.1 MP 2464 (H) x 2056 (V)
FPS: up to 34 fps
Shutter: Global Shutter
Color or Monochrom

RB-FPD-C6
Interface: FPD-Link
Sensor: Sony IMX487
8.1 MP 2828 (H) x 2848 (V)
FPS: up to 58 fps
Shutter: Global Shutter
Color
Mount: C-Mount

RB-FPD-LINK
ADDONS

RB-FPD-AM1
Mounting Plate for RB-CAMERA

RB-FPD-AFC1
FPD-Flex Cable 1 to 15 Meters
2.8mm diameter
Fakra connector
Flexible

RB-FPD-PIPC1
IP67 protected case

GUSTAV EDGE COMPUTING
FPD-LINK SINGLE

BACK VIEW SINGLE PORT

RB-GUSTAV-FPDS

Features

- NVIDIA® Jetson NX or ORIN
- All Jetpacks > 4.6.2
- 8 OR 16 GB / Gigabytes of RAM
- 3 x USB 3.x connectors
- 1 x FPD Link (Single Mode)
- 4 x FPD Link (Quadro Mode)
- 1 x 12-24 Volts input with Lemo Connector
- 1 x HDMI 2.x Output
- 1 x RJ-45 Ethernet (both gigabit)
- 128 – 2.000 GB SSD (M2)
- Active cooling
- Quickflash for all NVIDIA Jetpack SDK
- W: 42mm H:43.5mm D:220mm
- **Optional**

  Internal GPS | GSM MODEM | WIFI

  REBOTNIX SDK´S

GUSTAV EDGE COMPUTING
FPD-LINK QUADRO

FPD-CAM1
FPD-CAM2
FPD-CAM3
FPD-CAM4

REBOTNIX
CREATOR OF INTELLIGENT HARDWARE

ON/OFF

GUSTAV

RB-GUSTAV-FPDQ

Features

- NVIDIA® Jetson NX or ORIN

- All Jetpacks > 4.6.2

- 8 OR 16 GB / Gigabytes of RAM

- 3 x USB 3.x connectors

- 1 x FPD Link (Single Mode)

- 4 x FPD Link (Quadro Mode)

- 1 x 12-24 Volts input with Lemo Connector

- 1 x HDMI 2.x Output

- 1 x RJ-45 Ethernet (both gigabit)

- 128 – 2.000 GB SSD (M2)

- Active cooling

- Quickflash for all NVIDIA Jetpack SDK

- W: 42mm H:43.5mm D:220mm

- **Optional**

  Internal GPS | GSM MODEM | WIFI

  REBOTNIX SDK´S

GUSTAV EDGE COMPUTING
INDUSTRIES

Agriculture and Food

Intelligent **Smart** City
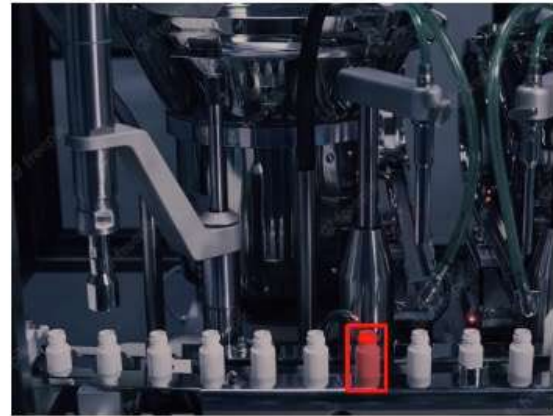
Energy Solutions

Manufacturing

Automotive

Biotech and Pharmaceutical

WE TARE CARE OF DEVELOPERS

ALL FRAMEWORKS

We at REBOTNIX know how complex software development can be. Especially in the connection of neural networks, standards to the frameworks like Pytorch, Tensorflow, Yolo, OpenCV must be guaranteed.

The seamless integration of these frameworks is guaranteed by our driver architecture.

Each camera is recognized in the standard device tree and can be directly addressed as a CSI camera. Alternatively via the Video for linux standard (V4L2).

We support the following frameworks, out of the box.

FLEXIBLE CABLES

We supplies different FPD-LINK cable lengths between 1 and 15 meters.

10 cm CSI cable

REBOTNIX
15 meter flexible cable

CSI vs. FPD Link

In order for cameras to transmit their signals with high bandwidth, they need a direct connection to a carrier board. This is usually done via a CSI cable. The picture on the left shows the differences in cable lengths.

These CSI cables are short, just a few centimeters long. The processing of our FPD Link III on the camera and the edge device signal is stable and directly in the memory of the GPU.

The single-end system mode is composed by a coaxial cable, on which 12V power can be transmitted. The maximum signal transmission speed is up to 4G bps.

This mode integrates video data, control signal and power on a very long cable which reduces cable cost significantly and is meanly used on on-board cameras.

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