

CAMERA MONITOR SYSTEMS FOR MUNICIPAL VEHICLES





DELIGHTED CUSTOMERS

OUR VALUE PROPOSITION

Dear business partner,

As an owner managed company, we value trust, fairness and cooperation in our working environment. We are committed to making certain that you are delighted with our products and services.

As a partner to our customers, we are constantly developing the best solution for the respective application area and, if required, manufacture customer-specific solutions in Germany – also in small series. We offer professional consultations focused on delivering solutions – the fundament for a productive cooperation. To ensure the consistently high quality of our products, we conduct extensive tests both prior to initial launch and once production has started. Additionally, we affirm our quality commitment with a 48 months warranty.

As a dynamic company with a streamlined organisation structure, we always aim to offer the best cost-benefit ratio. We look forward to collaborating with you to find solutions for your specific requirements.

Sincerely

Dr. Matthias Feistel

Martin Groschke



A NETWORK OF PROFESSIONALS

AUTHORISED DISTRIBUTORS

LUIS Technology GmbH Head Office

Hammer Deich 70
20537 Hamburg
T + 49. 40. 897 27 84-0
service@luis.de

LUIS Technology GmbH Sales Office

Marktplatz 12
91472 Ipsheim
service@luis.de

Aspöck France S.A.S., France
T + 33. 437. 5508 65
office@aspoeck.fr

Aspöck Ibérica, S.A., España
T + 34. 93. 759 80 39
aspock@aspock.com

Aspöck Systems Polska Sp. z o.o., Polska
T + 48. 34. 3430 600
office.poland@aspoeck.com

Aspöck UK Ltd., United Kingdom
T + 44. 1279. 655 220
sales@aspoeck.co.uk

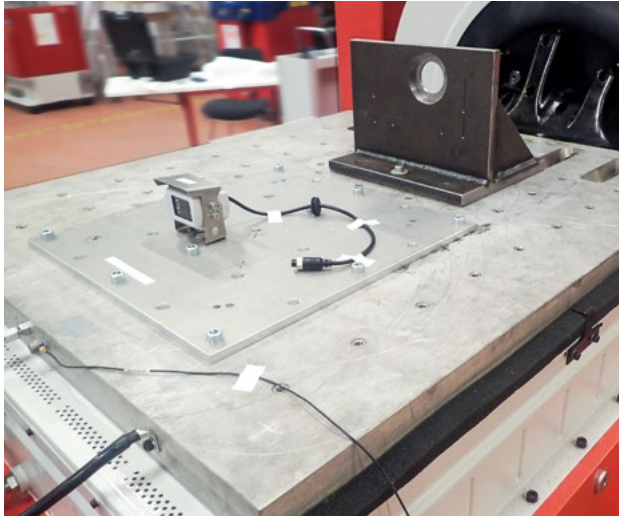
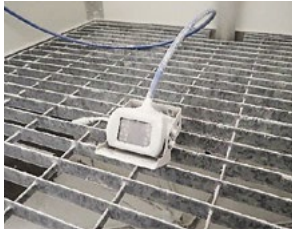
Ing. A. F. Baeder GmbH, Österreich
T + 43. 1. 865 16 40
sales@baeder-automotive.com

COSMIC s.r.l., Italia
T + 39. 080. 424 07 93
info@cosmicrli.com

Duchemin AGT, Belgium
T + 32. 71. 89 43 23
info@ducheminagt.be

Electro Maintenance S.A., France
T + 33. 4. 90 94 14 09
adv@electromaintenance.fr

Frits Dijk International BV, Nederland
T + 31. 40. 283 1815
info@fritsdijk.nl



RUGGED EMBEDDED VISION & AI SYSTEMS

FOR USE ON HEAVY DUTY MOBILE MACHINES

At our head office in Hamburg, we develop digital camera systems and embedded systems for demanding applications in municipal vehicles and mobile machines.

With the development of robust AI embedded systems, we enable embedded machine vision and AI applications in real time. With our hardware, multiple high-resolution camera feeds can be assessed with low latency and sophisticated robotics and automation applications on commercial vehicles and mobile machines can be performed. The fanless and maintenance-free AI edge systems from LUIS meet the high protection classes IP67/69k and meet high requirements for shock, temperature and vibration.

If required, we also develop and manufacture customer-specific solutions - also in small series. As an owner-managed company a trusting and cooperative partnership is very important to us.



PERFORMANCE ARTIFICIAL INTELLIGENCE (AI)

AI MACHINE VISION IN REAL TIME

With our subsidiary LUVIS AI GmbH, we are pursuing the goal of developing machine vision, classic image processing and artificial intelligence applications for the market with mobile machines and meeting the high requirements of the sectors of construction, agriculture, waste disposal or logistics.

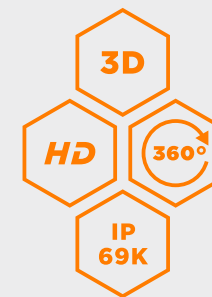
The use cases are diverse and in addition to driver assistance systems, increasingly involve (partially) automated work processes. All applications run embedded, i.e. on the device and do not require a server in the background. A broad toolchain of software, simulation algorithms and in some cases, pre-trained neural networks is available for the respective use case.

For the training of large data sets a powerful training pipeline on GPU servers is used, which employs modern methods to minimize the training effort.



LUIS 3D HD 360° SURROUND VIEW PROFESSIONAL

HIGH-PERFORMANCE 360° SYSTEM



QUALITY FEATURES

- › High resolution
- › 3D representation of the vehicle for better orientation
- › Multiple view modes depending on driving mode
- › Simple and fast auto calibration on the system
- › Camera with IP69k protection class (according to ISO 60529:2014)
- › Temperature resistant -40 to +85 °C (according to ISO 16750-3:2012)
- › Operating voltage 9 to 32 V
- › Variant with person detection (AI-based) 360° all around the vehicle in real time



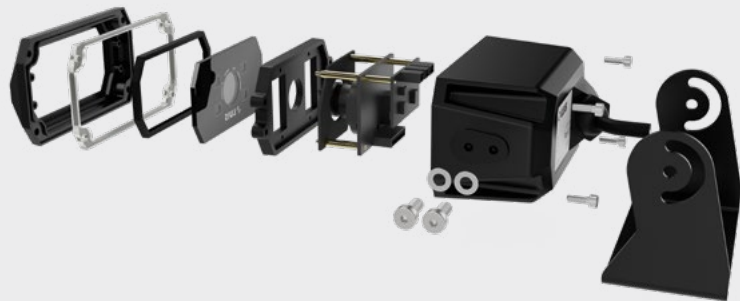


LUIS DIGITAL CAMERAS

FOR USE IN CHALLENGING ENVIRONMENTS

At our head office in Hamburg, we develop digital camera systems for demanding applications on commercial vehicles and mobile machines.

Our digital camera portfolio includes a wide range of different camera types. Our LVDS cameras transmit the raw data at a speed of up to several gigabits per second, allowing the uncompressed image to be processed without loss. Our Ethernet cameras are available as Fast Ethernet (100BASE-TX) and BroadR-Reach (100BASE-T1) versions. The image is low latency (<100 milliseconds), compressed (H264/ MJPEG) and processed (e.g. with white balance, gamma or color correction). All cameras are manufactured according to the automotive requirements with regard to temperature resistance, dust and waterproofness, vibration as well as vibration and shock according to corresponding ISO standards.



LUIS ETHERNET CAMERA TX

POWERFUL FAST ETHERNET CAMERA

- › Sensor 1/3" CMOS
- › Resolution 2 MP (1080P)
- › Viewing angle 110° horizontal (others on request)
- › Fast Ethernet 100BASE-TX
- › 100 Mb/s
- › Latency < 200 ms
- › Video out H264 and H265
- › IEEE 802.3, IP, TCP, HTTP, RTSP
- › Night vision up to 10 m
- › Temperature -30 to +70 °C
- › Water and dust proof IP69k
- › Heater (optional)
- › Microphone (optional)
- › DC 12 V / 24 V / IEEE 802.3af POE

LUIS ETHERNET CAMERA TX ULTRA

LOW LATENCY FAST ETHERNET CAMERA

- › Sensor 1/3" CMOS
- › Resolution 1.2 MP
- › Viewing angle 90° or 130° horizontal (others on request)
- › Fast Ethernet 100BASE-TX
- › 100 Mb/s
- › Latency < 100 ms
- › Video out MJPEG, H264
- › IEEE 802.3, IP, TCP, HTTP, RTSP
- › Night vision (optional)
- › Temperature -40 to +85 °C
- › Water and dust proof IP69k
- › Shockproof up to 100 G
- › Heater (optional)
- › DC 12 V / 24 V / IEEE 802.3af POE

LUIS BROADR-REACH CAMERA ULTRA

LOW LATENCY ETHERNET T1 CAMERA

- › Sensor 1/3" CMOS
- › Resolution 1.2 MP
- › Viewing angle 90° or 130° horizontal (others on request)
- › BroadR-REACH 100BASE-T1
- › 100 Mb/s
- › Latency < 100 ms
- › Video out MJPEG, H264
- › IEEE 802.3, IP, TCP, HTTP, RTSP
- › Night vision (optional)
- › Temperature -40 to +85 °C
- › Water and dustproof IP69k
- › Shockproof up to 100 G
- › Heater (optional)
- › DC 12 V / 24 V / IEEE 802.3af POE

LUIS ETHERNET CAMERA 180°

LOW LATENCY FAST ETHERNET CAMERA 180°

- › Sensor 1/3" CMOS
- › Resolution 1.2 MP
- › Viewing angle 180° horizontal
- › Fast Ethernet 100BASE-TX
- › 100 Mb/s
- › Latency < 100 ms
- › Video out MJPEG, H264
- › IEEE 802.3, IP, TCP, HTTP, RTSP
- › Night vision (optional)
- › Temperature -40 to +85 °C
- › Water and dustproof IP69k
- › Shockproof up to 100 G
- › Heater (optional)
- › DC 12 V / 24 V / IEEE 802.3af POE





LUIS PROFESSIONAL HD CAMERA

ROBUST, HIGH-RESOLUTION CAMERA

- › 1/3" CMOS sensor with 600 TV lines (CVBS) resp. 1920 x 1080 pixels (AHD)
- › Viewing angle 105° horizontal
- › Automatic backlight compensation
- › Robust casing made from die cast aluminium with sun blind and camera base made from stainless steel
- › Protection Rating IP69k
- › Shock resistant up to 100G
- › Vibration resistant up to 10G
- › Night vision range up to 15m
- › Operating temperature range -40 to +85°C
- › Integrated heating
- › Operating voltage 9 to 32V



LUIS R7-S COMPACT STAINLESS STEEL CAMERA

SHUTTER COVER TO PROTECT THE LENS

- › 1/3" CMOS sensor with full HD (1080p) or optionally 600 TV lines (PAL, NTSC)
- › Viewing angle 120° horizontal (optionally also 70° or 130°)
- › Electronic shutter cover protects the lens against staining
- › Robust casing made from die cast aluminium with sun blind, shutter and camera base made from stainless steel
- › Camera features include mirror mode
- › Protection Rating IP69k
- › Shock resistant up to 100G
- › Vibration resistant up to 10G
- › Night vision range up to 15m
- › Integrated heating
- › Operating voltage 10 to 32V



LUIS WIDE ANGLE CAMERA 170° FULL HD

OFFERING AN EXCEPTIONALLY WIDE FIELD OF VISION

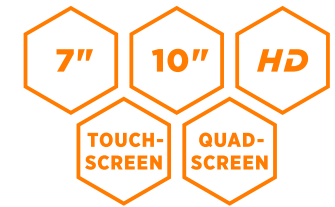
- › 1/3" CMOS sensor with full HD (1080p)
- › Viewing angle 170° horizontal
- › Fisheye correction
- › Robust casing made from die cast aluminium with powder coating
- › Night vision range up to 15m
- › Protection Rating IP69k
- › Shock resistant up to 100G
- › Vibration resistant up to 6G
- › Operating voltage 12V



LUIS BALL AND SIDE VIEW CAMERA

SUITABLE FOR USE AS A LATERAL OR REAR CAMERA

- › 1/3" CMOS sensor with full HD (1080p) or optionally 600 TV lines (PAL)
- › Viewing angle 120° horizontal
- › Automatic backlight compensation
- › Robust casing made from die cast aluminium
- › Protection Rating IP69k
- › Night vision range up to 15m
- › Operating temperature range -30 to +70°C
- › Integrated heating
- › Operating voltage 12V (optionally 24V)
- › Freely adjustable angle
- › Also available as NTSC and front-facing version



LUIS TOUCH MONITORS

HIGH FUNCTIONALITY AND BEST PICTURE

The new LUIS 7" and 10" touch monitors combine maximum functionality with a slim and robust design. The development is based on the knowledge and experience of the last 20 years with the claim to develop the leading monitor on the market.

Particularly noteworthy are the very high resolution and the brightness. In addition, the monitor recognizes independently which camera signal is connected and enables the simultaneous display of AHD and CVBS/NTSC/PAL. In the menu a variety of (split) views as well as triggering can be individually set and stored in specific driver profiles. Through the implementation of four freely programmable buttons and four I/O outputs, additional functionalities can be integrated into the monitor.

QUALITY FEATURES

- › LUIS 7- or 10-inch with touch screen
- › **Optional: split function**
- › Resolution 1,280 x 768 pixels (7-inch) and 1,280 x 720 pixels (10-inch)
- › Brightness 500 cd/m2
- › Operating voltage 9 to 32 V
- › Controllable LED warning stripes
- › Automatic switching PAL/NTSC and AHD/CVBS
- › 4 video inputs with audio function
- › Built-in loudspeaker
- › 4 freely programmable keys
- › 5 I/O inputs and 4 I/O outputs freely customizable





LUIS TRAILER CABLE SET

TRAILER CONNECTION

- › ABS socket and spiral cable set for connection of a rear view camera (also shutter cameras)
- › 7-pin connectors
- › Non-interchangeable due to special coding
- › Very stable spiral cable with ABS connectors, IP69K, ADR tested
- › Trailer detection for switching to the rear camera (optional)



LUIS DIGITAL TRANSMITTER SET

HIGH RELIABILITY AND LOW LATENCY

- › Wireless connection of camera and monitor
- › Stable and low-interference digital radio
- › End-to-end encrypted
- › Simple pairing
- › Waterproof housing (IP65)
- › I/O for drive mode-dependent control
- › Low latency (< 200 ms)
- › Operating voltage 9 to 32 V

LUIS WIFI TRANSMITTER PROFESSIONAL

VIDEO TRANSMISSION TO ANDROID AND IOS DEVICES

- › Transfer of the camera image to smartphone, tablet or navigation device with WiFi function (Android and iOS)
- › End-to-end encrypted
- › Rugged, waterproof and dustproof case (IP69k)
- › I/O for automatic activation of the app (Android only)
- › Low transmission latency (< 200 ms)
- › Operating voltage 9 to 32 V

LUIS AVAS & REVERSE WARNING DEVICES

AUDIBLE WARNING DEVICES

Specially designed for electric vehicles, the LUIS AVAS meets the requirements set forth from the EU. The AVAS module receives its control data directly from the CAN bus of the vehicle. The specification of the sound can be designed with you. Furthermore, the sound module is self-adjusting and adapts to the ambient volume.



MOBILE DATA RECORDING

DATA PRIVACY COMPLIANT AND COST-EFFICIENT

For mobile data recording, LUIS offers everything from hardware to the appropriate software, mounting, data management and cloud services. LUIS offers the right solution for each individual case. Data protection compliance can be met, thanks to the option of face pixelation, password management and event-related recording.

ADVANTAGES

- › Preservation of evidence in the event of damage
- › Proof of services rendered services provided
- › Averting fraudulent claims for damages
- › Promotion of careful driving
- › Deterrence of theft
- › Locating and live-connecting to the vehicle from headquarters
- › Effective management of the vehicle fleet

SPECIFICATION

- › Recording of up to 8 cameras and vehicle data simultaneously
- › 4G module for real-time recording, live transmission and remote maintenance
- › Integrated modules: GPS, WiFi, G-Sensor and Motion Detection.
- › Hard disk storage with parallel recording on SD card as backup copy
- › Data cannot be tampered with for reliable evidence

LUIS CLOUD PLATFORM

- › LUIS offers its own cloud platform solution.
- › No investment in server hardware
- › Fast and flexible integration of fleets
- › Worldwide access to your data
- › Remote maintenance without vehicle downtime
- › Low IT administration effort
- › Concentration on core business





LUIS SMART TRACK

GPS TRACKING SOLUTIONS

The LUIS SMART-TRACK system enables tracking and viewing of vehicle data remotely. In addition to a simple and cost-effective solution for the localization of vehicles and other »assets« such as construction equipment and machinery (»LUIS SMART TRACK BASIC«), we also offer a powerful solution that can process a wide range of sensor data, is IoT-capable and also offers a digital tachograph (»LUIS SMART TRACK PRO«). Inputs/outputs offer versatile -use scenarios for vehicle fleets of all types.

LUIS FLEET PORTAL

Central portal for controlling and monitoring of your vehicle fleet

» TRACKING

With the real-time view of your vehicle locations and vehicle data you can view the status of your fleet at any fleet at any time

» MAP VIEW

Find your vehicle fleet quickly and easily on the map view and plan further orders in the plan other jobs in the vicinity nearby.

» GEOFENCING

Customizable points of interest allow you to stay informed whenever a vehicle enters or leaves a specific location.

» REPORTING

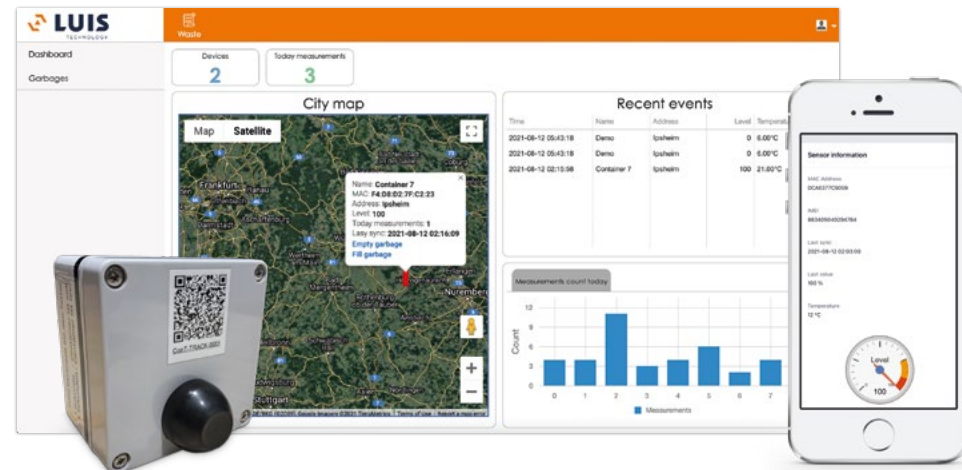
From a simple daily report, to a logbook, to the reporting of freely definable exception messages, you can carry out and export various reportings.

» INTEGRATION OF OTHER HARDWARE POSSIBLE

In addition to LUIS GPS trackers, the LUIS Fleet Portal already supports an extensive list of other hardware products such as temperature sensors, beacons and many more.

» OPEN INTERFACES

The connection of existing applications is supported by open interfaces or APIs.



LUIS CONT-TRACK

SMART CONTAINER MONITORING

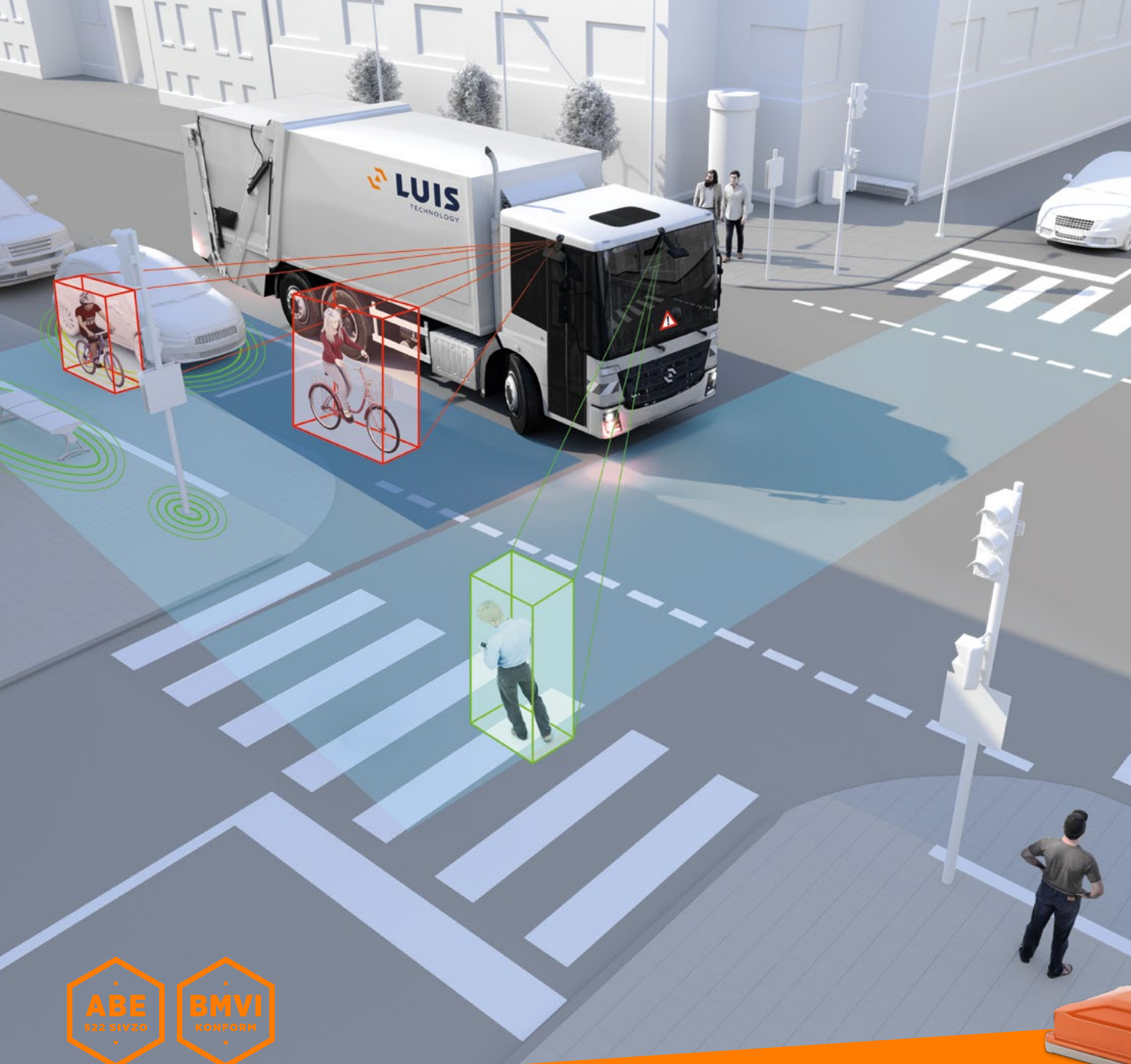
The LUIS Cont-TRACK is a fully autonomous wireless sensor, which enables easy asset management such as containers. Due to the GPS-location, it is possible to track where the asset is located. Via a web application the current location and filling status of the container can be tracked at any time.

ADVANTAGES

- » Simple standalone device with GPS localization
- » Daily GPS localization
- » Temperature monitoring
- » Integrated button for reporting the container status (full/empty)
- » Planning and management of UVV inspection with reminder function by mail
- » Connection to your ERP system possible

QUALITY FEATURES

- » Wireless communication via the NB mobile network
- » Integrated 4FF nano SIM card
- » Built-in Li-SOCI2 battery
- » Battery life 5-8 years
- » Operating temperature -20 °C to +75 °C
- » Storage temperature -40 °C to +85 °C
- » Rugged housing with protection class IP65



LUIS TURN DETECT®

TURN ASSISTANT

BENEFITS

- › Clear identification of static objects to minimize the number of false alarms
- › Clear identification of cyclists even if concealed behind other objects such as parking cars
- › Also suitable for transporter vans and when coupling/decoupling trailers
- › Full functionality even in the dark
- › Swift installation
- › Vehicle type approval has been obtained; the system is eligible for grants
- › Optional extension with a front camera to identify crossing pedestrians and help prevent accidents

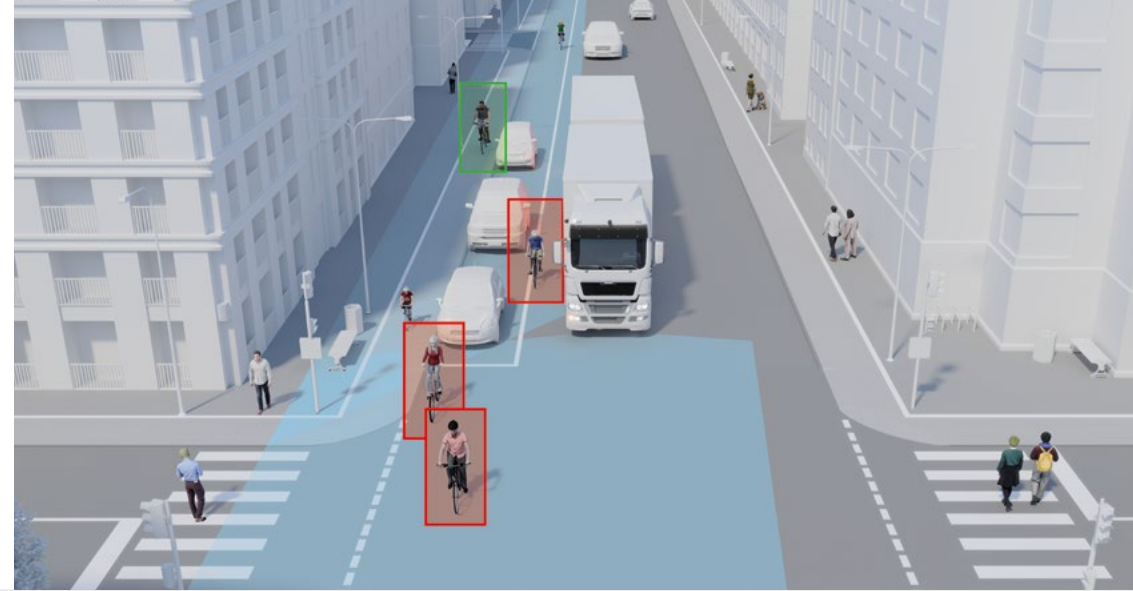
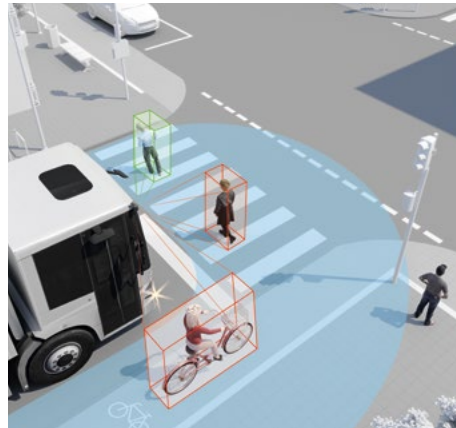
FUNCTIONALITY

- › Camera- and software-based turn assistant
- › Wide angle camera captures a wide viewing angle to the side and rear of the vehicle
- › Algorithm-based image analysis in real time
- › Activated based on speed, use of direction indicators or turning angle of the steering wheel (optionally)
- › Further I/O trigger outputs, e.g. for activation of side marker lights

AVAILABLE OPTIONS AND ACCESSORIES

- › A choice of 7, 8 or 10 inch monitor
- › Steering angle sensor
- › Mounting bracket for camera
- › Optional extension with a rear view camera
- › Display of lateral camera image when reversing
- › LED warning light (in the planning stage)
- › Optional extension with a front camera to monitor front field of vision VI
- › Optionally available for vehicles with right-side steering (detection to the vehicle's left)





LUIS TURN DETECT® DUO AND 270°

EXTENSION OF THE TURN ASSIST WITH A MOVING-OFF ASSIST

The LUIS TURN DETECT® can be extended by a FRONT DETECT to prevent accidents with persons when starting from standstill. Particularly with high vehicle cabs, a blind spot is created directly in front of the vehicle (field of vision VI), which can become a hazard when moving-off. Here, too, the driver is warned in two stages: a visual warning frame in the monitor signals persons in the hazardous area when the vehicle is stationary. When the vehicle starts, an additional acoustic warning sounds appears. LUIS offers this as an extension of its turn assist system. A second camera for the front and an ECU that evaluates both detection fields must be upgraded. This system is called LUIS TURN DETECT® DUO.

Alternatively, we are developing a LUIS TURN DETECT® 270°. In this case, only a single camera is used to actively evaluate both danger areas next to and in front of the vehicle, covering both mirror classes V and VI. The system combines turn and moving-off assist in one and also eliminates the blind spot created by the A-pillar thanks to the seamless 270° field of view. This system is currently under development and can be finalized to your specific situation on request. developed on request.

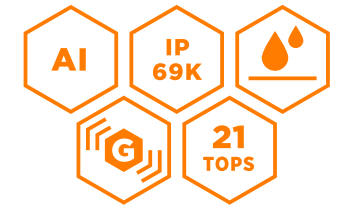
LUIS TURN DETECT® 4.0

ECE R151 BSIS AND ECE R159 MOIS

With the further development of the LUIS TURN DETECT® turn-off assistant (BSIS: Blind Spot Information System), it will also comply with UN ECE R151 requirements and can be extended to include a moving-off assistant (MOIS: Moving-Off Information System) in accordance with UN ECE R159. The LUIS TURN DETECT® 4.0 is designed for small commercial vehicles, so-called LCVs (class N1), as well as medium and heavy trucks (class N2 and N3) and for buses (class M2 and M3). It has been designed in such a modular way that it can also be fitted to special mounting positions.

The system consists of two high-resolution radar sensors that can distinguish cyclists and pedestrians from other objects up to a distance of 40 meters behind and 20 meters in front of the vehicle. As usual, the warning is two-stage: visual and audible. The LUIS TURN DETECT® 4.0 is controlled via a CAN interface or via vehicle signals (I/O) and can be updated. Optionally, a side camera and monitor with overlay of the radar signals can be added. For UN ECE R159 compliance, an additional front radar can be added.

All components meet automotive requirements for temperature, shock and vibration.



LUIS VIRTUAL MIRROR

DIGITAL MIRROR REPLACEMENT IN A NEW DIMENSION

The LUIS Virtual Mirror is a digital mirror replacement system, in which mirrors are replaced by high-resolution digital cameras and monitors. Thanks to an enlarged field of vision and the use of high sensitive sensors which provide a significantly better visibility in the dark and against the light, safety is increased compared to conventional mirrors. Thanks to the compact design and the respective positioning on the cab, damage can be reduced and aerodynamic improved.

The viewing areas are displayed in combination on just one monitor per side in the cab. The environment can thus be grasped more quickly and hazardous situations better assessed. By superimposing overlays or using a digital zoom or changing the image section depending on the maneuver, the machine can be handled more efficiently.

The virtual mirrors are available in long and short arm versions for cabs with/without overhang. We also offer individual designs and adaptation to the respective machine in small series.

The system is currently under development. Functional samples on request.

LUIS HEAVY DUTY EDGE SYSTEMS

FOR THE MOST DEMANDING APPLICATIONS

The AI System is one of the most rugged embedded systems based on Nvidia in the market. The rugged system meets the protection class IP67/69k. In addition, it is shock and vibration resistant as well as dust- and waterproof. Furthermore, the rugged system is suitable for extended temperature range of -40 to +70 degrees Celsius designed. As an AI accelerator the powerful NVIDIA Xavier NX is used.

With up to 21 TOPS of accelerated computing power multiple high-resolution camera feeds can be evaluated with low latency or implement sophisticated robotics and automation applications.

In addition to AI supersystems, we are also developing rugged, ARM-based rugged, ARM-based boards for mobile machines and demanding environments.

QUALITY FEATURES

- › 21 TOPs
- › 8GB 128-bit RAM
- › Fanless
- › 24/7 operation possible
- › Water- and dustproof according to IP67
- › Shock and vibration resistant
- › CAN interface
- › Optional LTE & WiFi extensions
- › DC 12 / 24 V

EMBEDDED AUTOMOTIVE AI PLATFORM

DEEP LEARNING SOLUTIONS THAT FIT YOUR REQUIREMENTS



RECOGNIZING OBJECTS AND PEOPLE

Classification of objects in real time, e.g. of persons. We use our high-performance networks based on many millions of annotated data.



PREDICT DIRECTION OF MOVEMENT

Predicting the movement of people and objects e.g. to predict when they will enter a predefined zone to issue warnings as early as possible or warnings to calculate the time to collision.



CALCULATE DISTANCES (2D AND 3D)

Calculation of distances between objects using the known camera position. For precise positioning, 3D data can also be assessed and the exact position of an objects can be determined.



3D OBJECT DETECTION AND POSITIONING

We use 3D ToF (Time of Flight) cameras, to detect objects and to precisely estimate the position. The positioning accuracy is so high that objects can then, for example, be gripped. Coordinates passed on to the gripping system, for example.



MARK DWELL TIME

The length of stay-algorithm marks objects, e.g. with a different color of the bounding- box as soon as they exceed a certain dwell time.



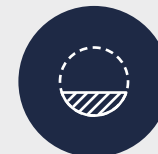
LISTENING TO ANOMALIES

The detection of anomalies is based on an acoustic basis. Via a MEMS and our acoustic AI application deviations from normal operation can be detected at an early stage and further processed.



DEFINE ZONES

Marking of objects entering a defined area (e.g. dangerous areas around a vehicle or the working area of a machine).



SEGMENT OBJECTS

Pixel-precise detection and marking of defects, irregularities and objects or measuring the fill level.



LUIS EDGE AI CAM

RUGGED CAMERA FOR THE DETECTION OF PERSONS

The LUIS EDGE AI CAM is an intelligent camera that can differentiate people from another obstacle in real time and can warn the driver in a multi-level manner in case of danger. It warns the driver only of collisions with persons or other trained object classes, without unnecessarily alerting the driver to other objects and avoid an associated loss of vigilance. In this way the LUIS EDGE AI CAM helps to effectively avoid collisions with people especially in tight driving situations.

The LUIS EDGE AI CAM has been designed to hold against harsh conditions and environmental influences. The object detection runs on the camera (»embedded«) without additional hardware and ECUs.

The detection zones and the warning mechanisms can be individually adapted to the respective vehicle and signals can be emitted to the outside.

For even more precise person recognition and localization we are further developing the LUIS EDGE AI CAM and adding a depth sensor (Sensor Fusion).





OEM CUSTOMIZATION AND ODM DEVELOPMENT

INDIVIDUAL SOLUTIONS ALSO IN SMALL SERIES

OEM CUSTOMIZATION

LUIS also offers OEM customization for specific requirements – even in small series.

ODM DEVELOPMENT

LUIS also offers customized ODM development according to your specifications. The possibilities of an ODM development range from the modification of the camera or monitor housing, software programming (e.g. for monitor, app, client software) up to the complete redesign of a camera/monitor system according to your ideas.

The ODM development is based on your specifications.

YOUR OPPORTUNITIES

- › Additional features of the camera like heating, microphone or voltage transformer
- › Alternative lens with specific aperture angle
- › Change of the image reflection (front insert) or the TV system (NTSC/PAL)
- › Modification of the connector plugs or open cable ends
- › Individual cable length
- › Customized auxiliary lines (design and vehicle-specific measurement)
- › Individual customer logo or customer-specific start screen
- › Individual housing color of the camera
- › Customized outer packaging and/ or instruction manual
- › Custom software and AI networks

INSTALLATION & SERVICE

WE INSTALL AT YOUR SITE

Systems and installations all in one hand – this is how we inspire our customers every day. Our service technicians are on the road all over Europe to carry out installations, test installations, training courses and consultations on your site. In order to respond in the best possible way to the most varied and vehicles in the best possible way, each installation is individually coordinated with you in advance. No matter whether special or refuse collection vehicles or construction machinery – we find the best possible solution. We take time for you, your ideas and your challenges. With us you speak personally with experts in the fields of commercial vehicles, hardware – especially electronics, optics and mechanics – software and artificial intelligence.

In addition, we maintain a broad service partner network. On our website you will find a competent service partner near your location.

PLEASE REFER TO

- › www.luis.de/montage/
- › www.luis.de/servicepartner/



**MOVING
SAFELY ▲**



WE ARE HAPPY TO HELP!
YOUR CONTACT

LUIS Technology GmbH

Hammer Deich 70
20537 Hamburg

T + 49. 40. 897 27 84-0
service@luis.de

