



EMEREC DEVS

Driver's Enhanced Vision System

Reliable technology for emergency crews.

 **rosenbauer**

EMEREC DEVS – Driver's enhanced

■ Navigation

Highly precise navigation for a safety-critical environment.

■ Locating

Real time positions of operational and advance vehicles on the map.

■ Sight improvement

Visual support in difficult visual conditions.



vision system

■ Data center

Networked operations: information – communication – coordination – documentation.

■ Position data

Overview of the current traffic situation in real time.



EMEREC DEVS

Driver's Enhanced Vision System

Navigation and operations support under severe conditions

EMEREC DEVS was specially developed for time- and safety-critical requirements in the airport environment. DEVS unites a highly precise navigation solution with infrared visibility support and a mobile operational information system. The system concept is also used in closed operational areas such as industrial plants and mining regions.

As an integrated solution in Rosenbauer airport and industrial fire fighting vehicles, EMEREC DEVS delivers the full package. The system is also compatible with other vehicle and manufacturer concepts as a stand-alone and retrofit solution. This enables uncomplicated equipping and integration of an entire fleet.



Highest safety standards - tailored to individual needs and customer wishes.

EMEREC DEVS fulfills all standards specified by norm NFPA 414/2012 and FAA guideline 150/5210-19A and, thus, offers maximum safety in operational situations. DEVS supports the driver during emergency journeys with three components:

- Highly precise navigation and position information
- Visibility improvement through the use of FLIR – infrared technology
- Information relevant to the operation is always accessible

DEVS standard applications can be expanded with optional modules and functions:

- EMEREC DEVS data center – central information and communication hub between tower, command center, staff room, and emergency vehicles
- Alarm call and disposition application / computer aided dispatch (CAD)
- Video integration – interface to local video system and video transmission of the infrared camera to the tower or the command center
- Individual map data – addition of integrated vector and satellite maps
- Messaging – message exchange between terminals
- HAZMAT and air crash charts database
- Document management
- Module checklist

In addition, Rosenbauer offers planning and realization of individual needs for a specific system for the respective range of requirements, if needed. Special applications, functions, interfaces, or connections can be developed and implemented by Rosenbauer's own in-house development team.

Operating concept

EMEREC DEVS is a powerful system that is characterized by high precision and user-friendliness. The system may be realized in a "one- or two-man operating concept." In the case of the "one-man concept," all relevant information will be displayed on the driver display. Through user guidance adjusted to the respective situation, system interaction is reduced to only the interaction necessary in the situation. The "two-man operating concept" enables the representation of content relevant to an operation in separate, individual forms via two displays – one in the vehicle and one in the command center. This system configuration also allows for the two surfaces to interact.

Hardware and technical components

The EMEREC DEVS hardware is installed in the driver's cab and can be implemented in two different designs

- Mobile Tablet Computer
- Fixed installed touchscreen monitor in combination with an in-car PC

A thermal imaging camera is used for visual support. (Optional: video transmission to the command center or tower). The integrated GPS-GLONASS combination receiver is used for a highly accurate resolution of the GPS position. In combination with service4fire.com, the fluid levels of water, foam and fuel can additionally be visualized in real time on the situation map.



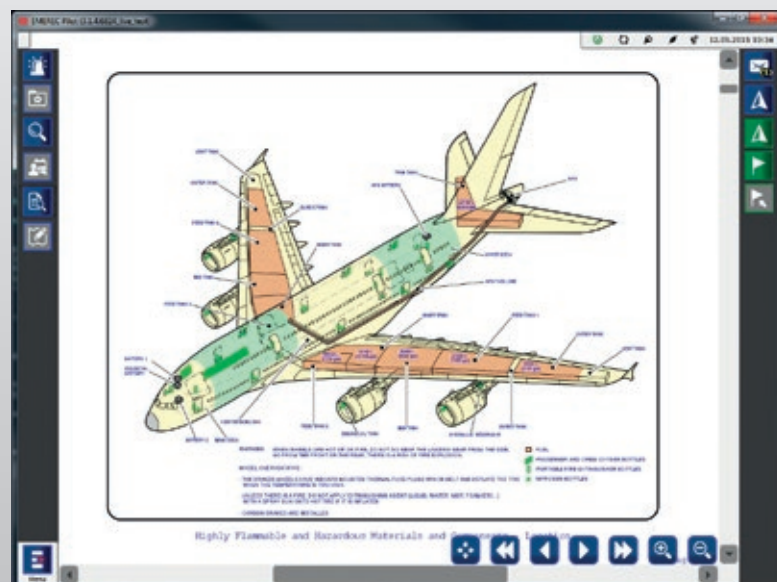
Navigation

EMEREC DEVS allows for extremely precise navigation of vehicles in regions where conventional navigation systems fail, for example, at airports, in industrial plants, or on military and mining facilities. The result of new technological developments, the system achieves GPS accuracy required by NFPA/FAA standards and guidelines. DEVS Navigation supports it with:

- Orthographic/satellite photos as base maps for the navigation function
- Map direction - north/"moving map"/in direction of travel
- Visual navigation guidance and text/speech directions
- Automatic route calculation and manual route entry
- Pre-defined "Smart routes" and meeting points
- Alarm if entering restricted zones
- GRID map function

EMEREC DEVS Data Center

The EMEREC DEVS data center enables communications support as well as the exchange of information between all involved operational units and central command. Additional information such as hydrants, object information, data sheets, and even aircraft air crash cards can be updated and automatically provisioned via central data management. The data center also allows interfaces for integrating additional informational content from the external environment systems.

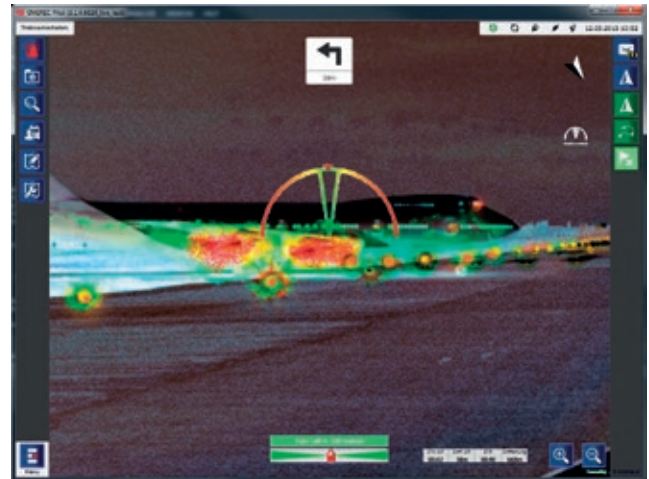
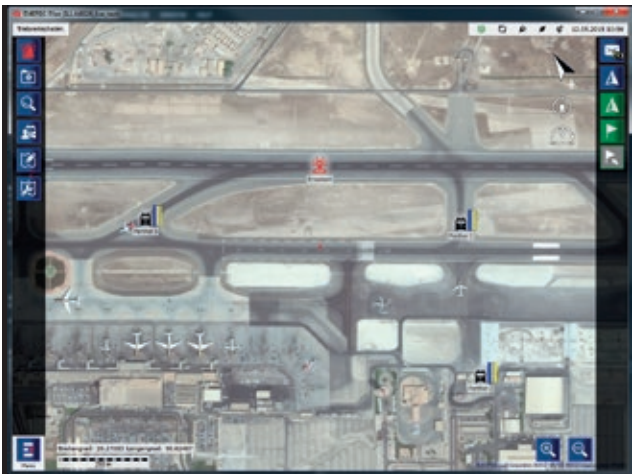


EMEREC DEVS

■ The components

Location

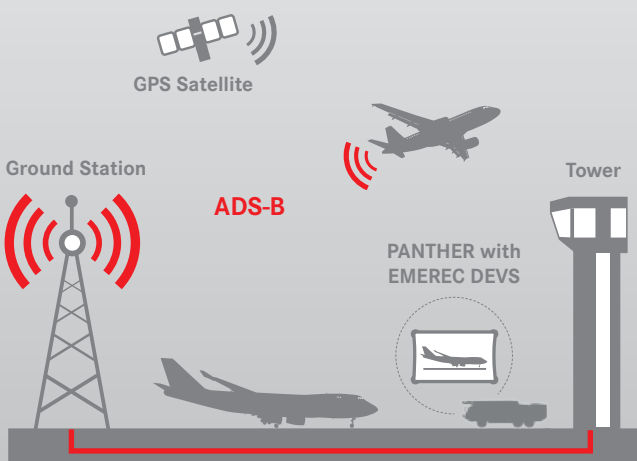
The locating system improves navigation for the driver, the tower and the operation control center. Highly precise GPS signals give the users of EMEREC DEVS an overview of real-time positions of all emergency vehicles on the map. Representation of location and tracking information of service vehicles is also possible in this way.



Visibility improvement

A FLIR (infrared) camera improves visibility in adverse conditions, such as for example, in smoke, fog, and darkness. In addition, persons located in the danger zone or in close proximity to the emergency vehicle can be identified (e.g., persons lying under a covering of foam, etc.).

Position data of airplanes in real time



The position of aircraft is not only operationally critical information to tower personnel and air traffic controllers, but also supports vehicles when approaching the operation site. ADS-B enables the provision of positional data of airplanes in the EMEREC DEVS system. It provides an overview of the current traffic situation – in the tower as well as in the emergency vehicle. With the "select by click" function, airplane positions can be automatically applied in the navigation as the operational target.

The live representation of airplane positions in EMEREC DEVS makes it possible for the crew to arrive at the operation sight safely, even in poor visibility conditions. Additional information is also provided, such as flight number, speed, flight altitude, and the planned flight path.

