

Mobile solar power plant Sol

Green energy, on the field, in the
quarters and in the oil industry



Sol v1.0

- Designed for agricultural applications such as powering irrigation systems, warehouses, stables, and more.
- Built as a tractor trailer unit.
- Compatible with any vehicle capable of towing up to 6 tons.
- Approved for use on all public roads.
- Constructed on a standard two-axle tractor trailer chassis.
- Available with manual or hydraulic support systems.
- Configurable solar panel output from 5 kW to 30 kW, depending on specific energy







Why do farmers use Sol?

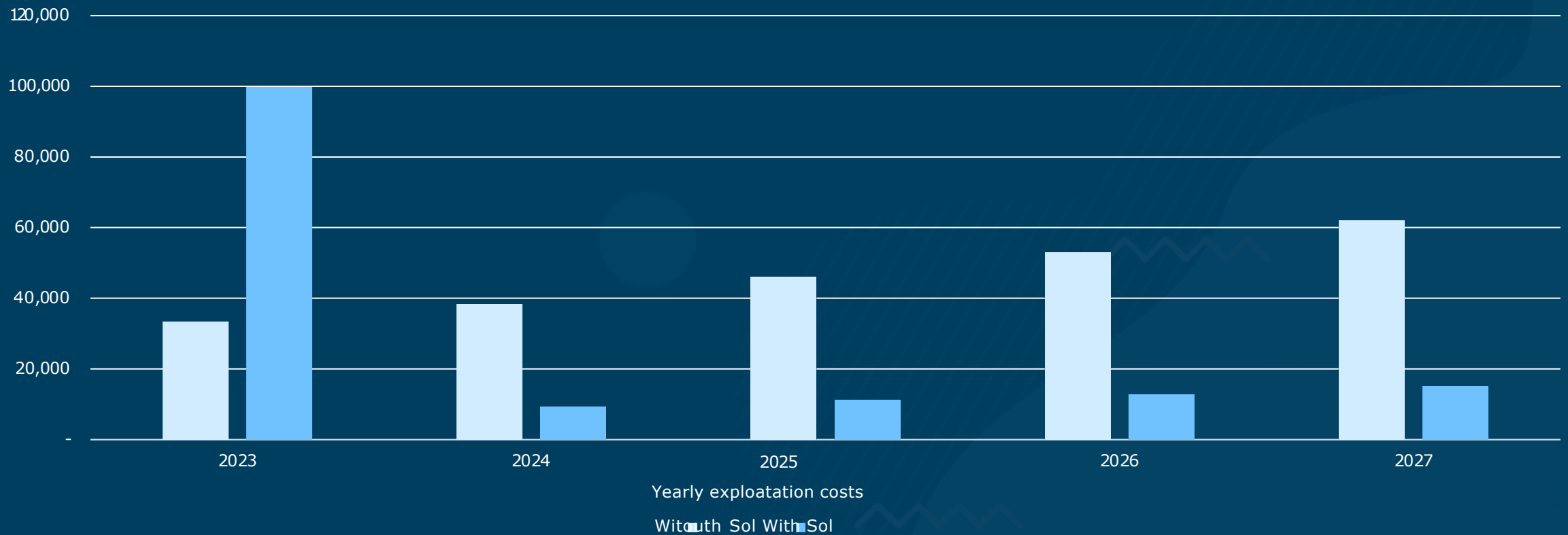
- **Key Benefits of the Mobile Solar Power Plant**
- Reduces diesel fuel costs by up to €5,000 per irrigation system per season.
- Minimizes environmental impact by replacing diesel generators.
- Lowers noise pollution, reducing sound levels by approximately 70 dB.
- Cuts carbon emissions by up to 5 tons per season.
- Decreases electricity costs of non-agricultural facilities (warehouses, stables, etc.) by up to 40%
- Potential for future revenue through participation in carbon credit markets.

Sol in the oil industry

- **Versatile Energy Solution Beyond Agriculture**
- Supplies electricity to remote facilities and oil rigs.
- Serves as a replacement for diesel generators, significantly reducing fuel costs.
- Acts as an additional power source on construction and drilling sites.
- Helps to lower overall electricity expenses in off-grid or high-consumption environments



Costs of supplying energy with diesel generators (13MW/month) in comparison of the costs of acquiring Sol (30kW) and generating electricity



Mechanics and construction

- Enhanced Design & Mobility Features.
- Improved maneuverability, especially in off-road conditions, thanks to a central axle assembly.
- Hydraulic adjustment system for side panels and platform tilting.
- Longitudinal extension of side panels for adaptable configuration.
- Component unification including axle, braking system, and lighting for simplified maintenance and improved reliability
- Energy Storage & Smart Interfaces
- Equipped with high-performance lithium-ion batteries for efficient storage of solar-generated electricity.
- Customizable battery configuration — capacity and quantity can be tailored to meet specific energy demands.
- Features a customizable charging interface for drones, surveillance robots, and other smart equipment.



- **Intelligence, Communication & Sensors**
- **Mini-PC with AI algorithm enables autonomous operation, remote diagnostics, and system control.**
- **Automatic self-protection: system retracts or secures itself in hazardous conditions (e.g. strong winds).**
- **Sun-tracking platform automatically adjusts the angle for maximum solar efficiency.**
- **Smart sensor integration for real-time data analysis, proactive notifications, and automated responses.**
- **Multi-protocol communication gateway (4G/5G, LoRaWAN) for seamless integration with remote sensors and centralized control systems.**
- **Integrated weather station continuously monitors temperature, humidity, wind speed, and direction.**
- **Video cameras and microphones provide real-time surveillance and automatic event detection.**
- **Monitoring of consumables and resources, including fuel, water, and essential operational materials.**
- **Continuous reporting on location, solar panel positioning, and battery charge levels**

Max. mass:

6000 kg

Wheelbase:

6,84m

Distance between axels:

1,2m

Dimensions (LxWxH):

12m x 2,55m x 4m

Total power:

30 kW

Number of panels:

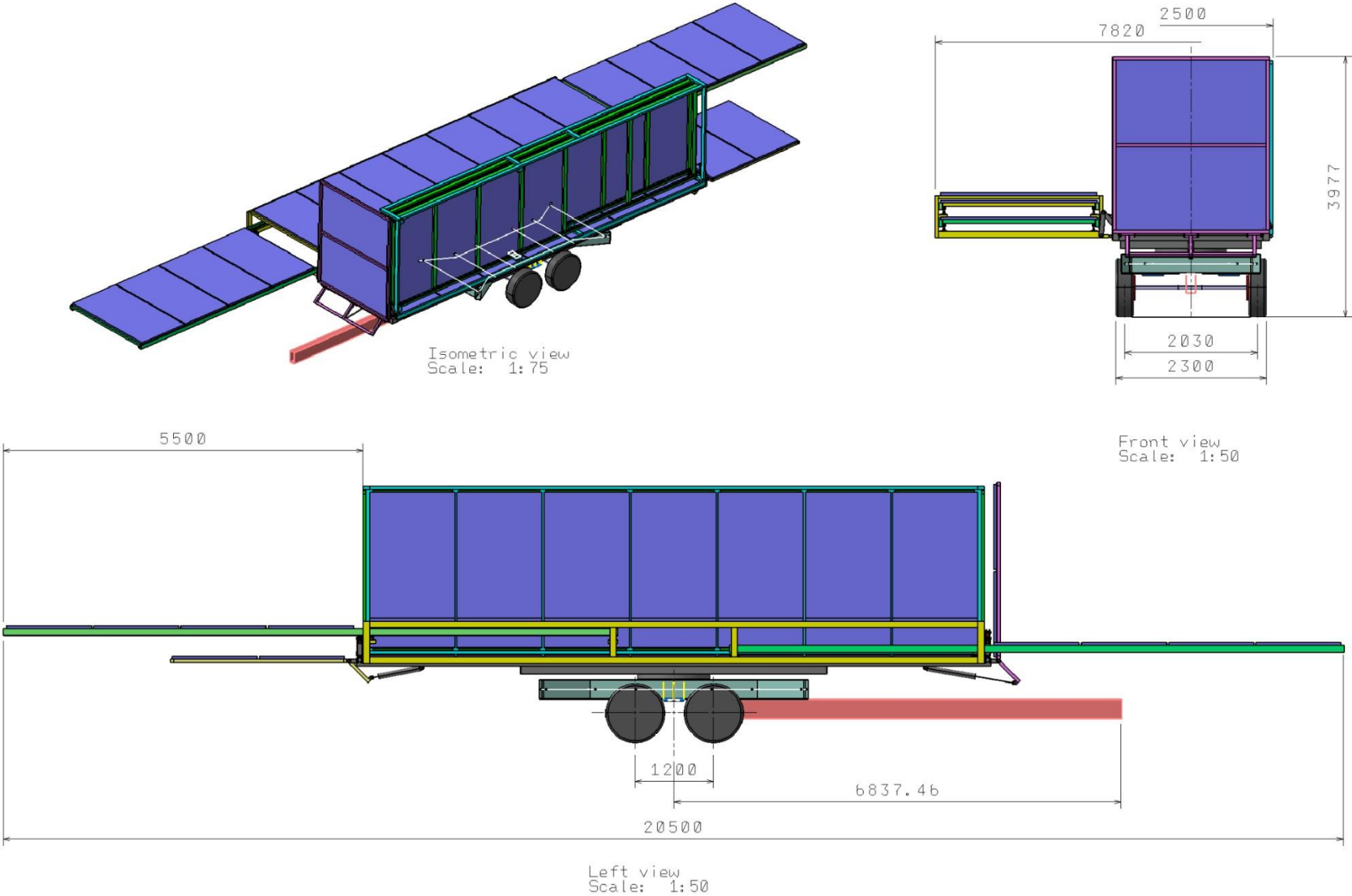
44-46

Platform tilft angle:

180° max 360°

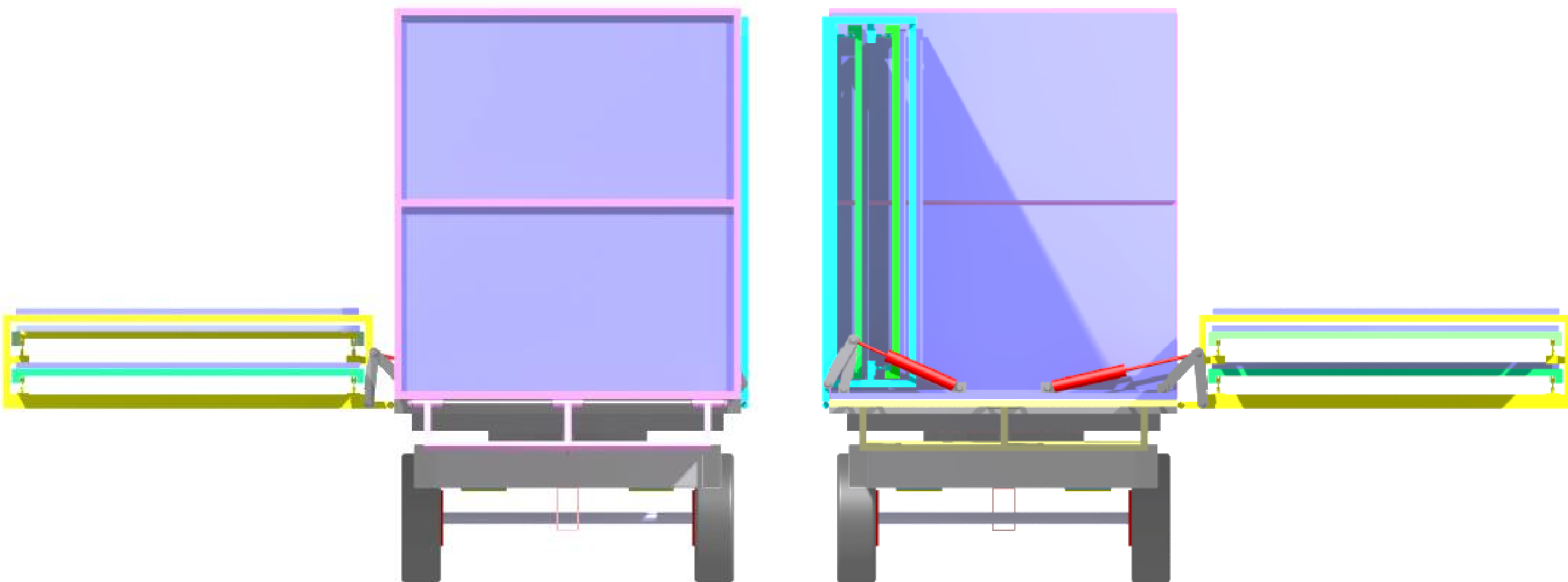
Max. Horizontal tilt:

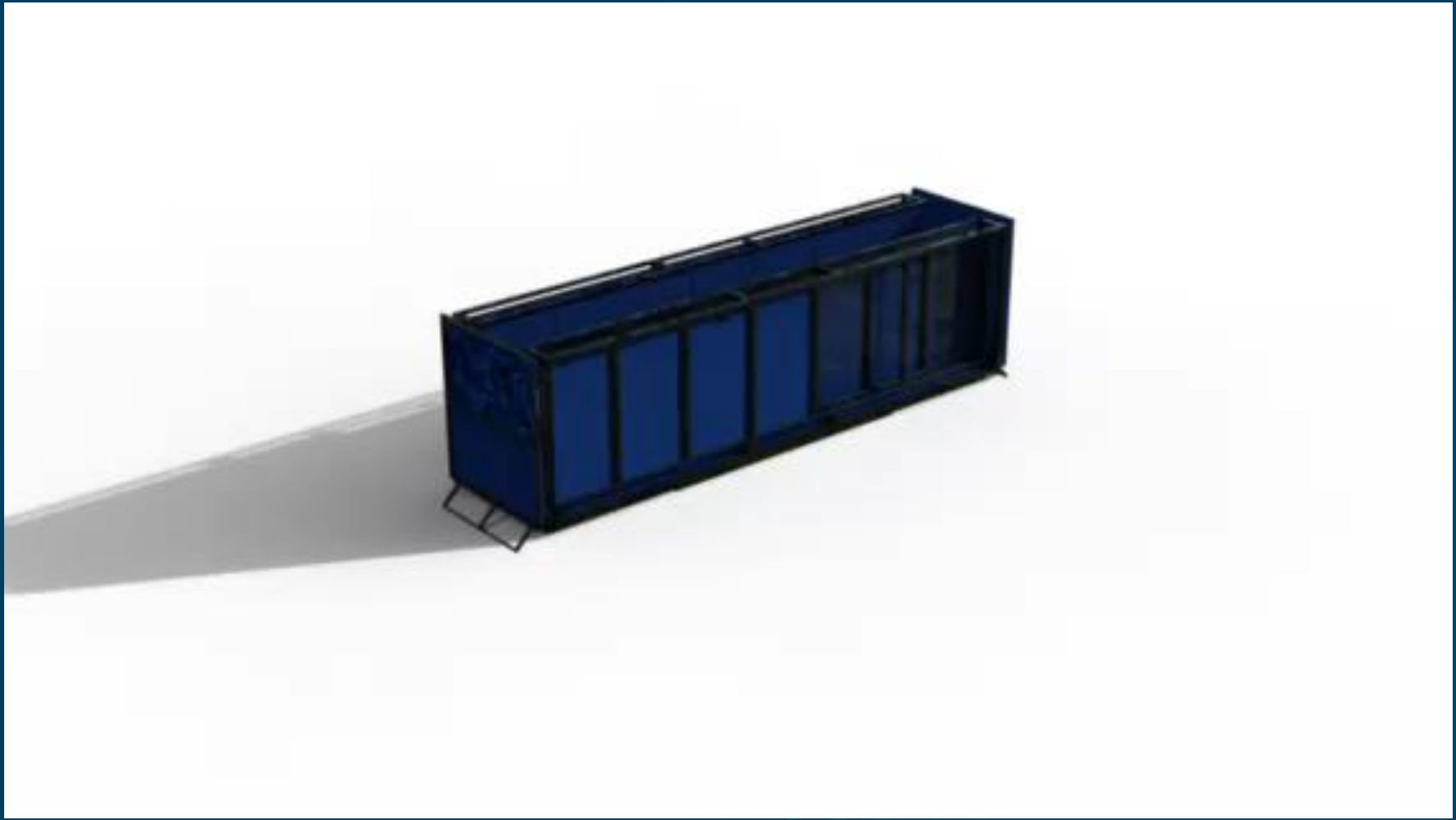
26 °



Верзија 2







Mini-pc–Sol's mind



Specification

NVIDIA® Jetson TX2 Dual-Core NVIDIA Denver2 +
Quad-core ARM Cortex-A57

NVIDAI® Pascal™ 256 CUDA cores GPU

8GB LPDDR4 и 32GB eMMC NAND Flash

1 Gigabit Ethernet port and 2 RoE ports (IEEE
802.3af) TensorRT/cuDNN, VisionWorks/OpenCV AI
support 4K H.264/H.265 encoder and decoder

Work temp.: -20 ~60 °C

Power supply: 19V DC

Communication gateway –4G/5G



Specifications

Rich interface set

2 x 2 MIMO 802.11ac Wi-Fi

1x RS232 + 1x RS485

1x digital input and output

Qualcomm npprocessor 4 cores

Working temp.: -40 to 70 °C

LoRaWAN gateway



Specifications

LoRaWAN communication channels: 64 Rx / 2 Tx

Optimizes for use on vehicles

Protection: IP67

Connection to the main server: 4G/5G, Ethernet

Highly selective filter: installed

Meteo station +



Specifications

Temperature and humidity

Air pressure

Light intensity

Rainfall (optical sensor)

Speed and direction of the wind (ultrasonic sensor without moving parts)

Electronic compass – magnetogram for an easier installation

IP66 protection

Integrated heater in case of extreme weather

Interfaces: RS 485 (MODBUS-RTU) / 232 / 422 (Modbus) / SDI-12

Calibrated sensors

CE и FCC certification

Sensor for monitoring fixes assets



Specification

ID, temperature and humidity, movement and magnetic field changes detection

Bluetooth : 80m radius

LoRaWAN communication: 10km radius

5+ battery autonomy (Tx=2 dBm; sending interval: 10s)

IP67 protection

Working temp.: -20 °C / +60 °C, 0% up to 100% humidity

Video cameras and microphones



Specification

2/8 MP

4X/12X optical zoom

3 y 1WDR Pro

1/1.8" STARVIS Starlight sensor

0.002 Lux

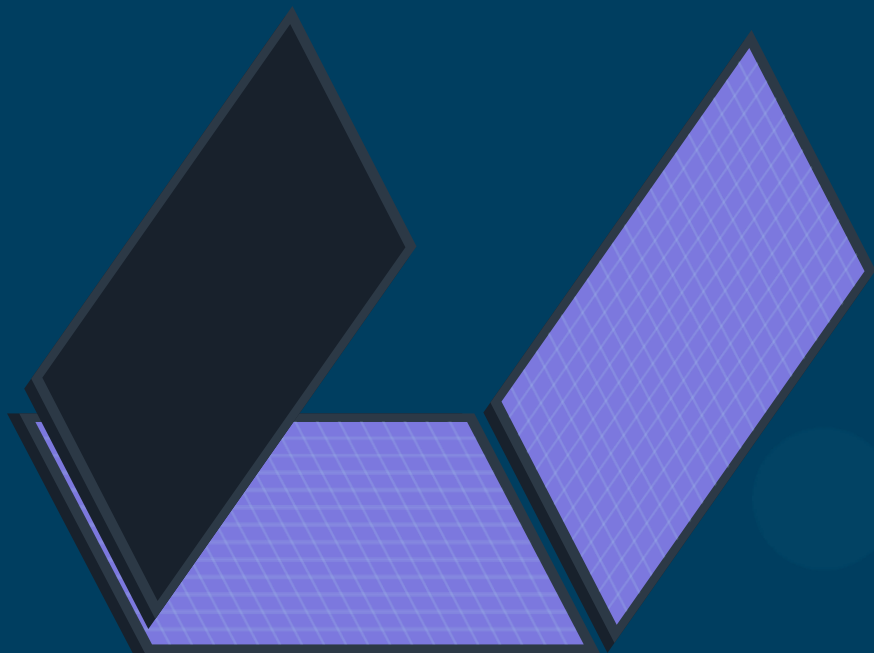
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IP67

Smart IR II

180m infrared sensor working radius

Power supply by network cable(PoE)



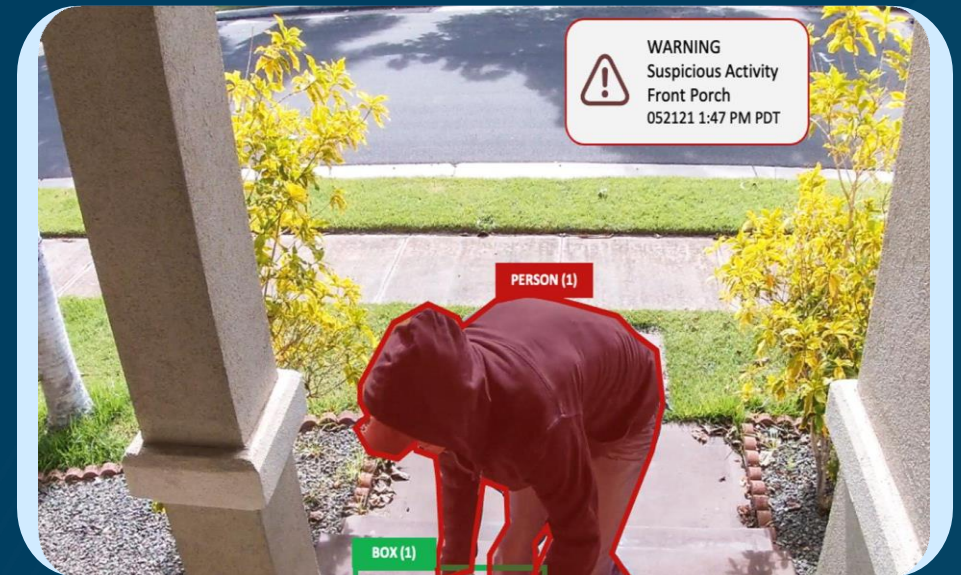
Сол в2.0

Additional Applications:

Automatic Navigation and Asset Interaction

Enables automated approach and positioning at predefined locations and around key assets.

Facilitates precise movement and alignment for deployment, charging, or data collection tasks.



Automatic control of safety equipment usage



Automatic control of loading and unloading



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