Parking :

| **Product code** | CZK-Parking |
| --- | --- |
| **Hardware Platform** | Edge: Nvidia Jetson Series, Sophgo Micro Servers  Central: Nvidia H100, L40, RTX 4000 Series, RTX 5000 Series Ada, A16, A30, Sophon AI server |
| **Operating System** | Ubuntu, MS Windows |
| **Management Interface** | Web-Based Management Software |
| **Database** | PostgreSQL |
| **Development Approach** | Microservice, containerized |
| **Frontend** | React |
| **Backend** | Python |
| **3rd party Integration** | 3rd Party API Integration  Camera Support: RTSP, ONVIF |
| **Keywords** |  |

**Workplace Safety Monitoring**

* Detects slip and fall incidents in real-time.
* Monitors employee adherence to safety protocols.
* Sends alerts for hazardous behaviors (e.g., running, improper use of machinery).

**Personal Protective Equipment (PPE) Compliance Detection**

* Ensures workers wear helmets, gloves, vests, and other required PPE.
* Sends alerts when safety gear is missing.
* Prevents workplace violations and reduces accident risks.
* \*\*\*Safety rope detection on scaffolding with UAV.

**Hazardous Zone Monitoring**

* Detects unauthorized access to restricted or high-risk areas.
* Ensures compliance with industry safety regulations.
* Reduces the risk of workplace injuries and fatalities.

**Machine Operation Monitoring**

* Tracks operational efficiency of heavy machinery.
* Detects malfunctions and potential breakdowns before they occur.
* Reduces downtime and improves maintenance scheduling.

**Intrusion Detection & Perimeter Security**

* Identifies unauthorized personnel attempting to access the facility.
* Monitors fence lines and restricted areas for security breaches.
* Prevents industrial espionage and asset theft.

**Fire and Smoke Detection**

* Provides early warnings of fire or hazardous smoke.
* Reduces damage to critical equipment and infrastructure.
* Ensures quick emergency response to prevent workplace accidents.

**Smart Motion Detection**

* Differentiates between human and vehicle movements in industrial zones.
* Detects unusual activity patterns and sends security alerts.
* Optimizes workflow and traffic management within the facility.

**Loitering and Suspicious Behavior Detection**

* Detects individuals lingering in unauthorized zones.
* Prevents potential security breaches and theft.
* Enhances employee and asset protection.

**Real-Time Vehicle and Equipment Tracking**

* Monitors movement of forklifts, trucks, and machinery inside the facility.
* Prevents vehicle-related accidents and ensures optimized logistics.
* Tracks asset utilization to improve operational efficiency.

**Defect Detection & Quality Control**