



## Pre-approved 4S Products related to Mobile Plants

### - 5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone

Users shall ensure adequate quantity of sensors are deployed to fulfil BD's requirement on full coverage of the danger zone perimeter around the mobile plants as decided by the Safety Officer as per Circular Letter of BD referenced BD GR/1-115/12

[Circular Letter - Qualified Supervision of Building Works Involving Mobile Plants and Tower Cranes by Adopting Smart Site Safety System \(bd.gov.hk\)](https://www.bd.gov.hk/en/circular-letter-qualified-supervision-building-works-involving-mobile-plants-and-tower-cranes-by-adopting-smart-site-safety-system)


PA Code	Product Type	4S Categorisation	Product name	Distribution Channel	Contact	Product Descriptions	Approved Product Price (HK\$)
PA20-020	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [Detection Technology : AI Camera]	BLAXTAIR Pedestrian / Machinery Anti-collision Camera  	Gear-up Materials Limited	<a href="mailto:anourisson@gearupmaterials.com">anourisson@gearupmaterials.com</a>	The BLAXTAIR® System allows users to set detection zone and provides audible alarm and flashing signals on the driver's screen if there are pedestrians or objects within the set zone. A monitor installed in the cabin provides continuous footage captured by the sensor head. It can ensure the safety of the pedestrians nearby the work site.	<a href="#">Link</a>
PA20-025	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [CMP-Connectable]  [Detection Technology : Proximity Sensor]	SmartWorks  	SmarTone Mobile Communications Limited	2281 8818	SmartWorks is an integrated platform to enhance construction workers' health, safety and operational efficiency. The platform incorporates five modules to promote and manage worksite safety, namely Smart Helmet for worker's real-time condition sensing, SmartHealth Station for workers' health surveillance checking, Environmental Station for environmental monitoring, danger radar concerning of Safety Triggering System and Dump Truck Management.	<a href="#">Link</a>

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PA Code	Product Type	4S Categorisation	Product name	Distribution Channel	Contact	Product Descriptions	Approved Product Price (HK\$)
PA20-032	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [Detection Technology : Proximity Sensor]	Ultra-wide Band Wireless Positioning Safety System  	Transcendence Company Limited	2862 1724	The product is a “Worker Real-Time Positioning System” which incorporates smart watches and a central monitoring platform. By applying ultra-wide band positioning technology, it can track workers’ locations and health parameters even in sealed off space.	<a href="#">Link</a>

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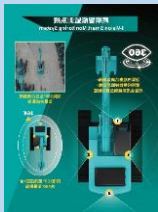

PA Code	Product Type	4S Categorisation	Product name	Distribution Channel	Contact	Product Descriptions	Approved Product Price (HK\$)
PA20-055	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  <b>[Danger Zone Detection (Workers' Intrusion)]</b>  <b>[CMP-Connectable]</b>  <b>[Detection Technology : Proximity Sensor]</b>	UWB Collision Warning System  	Beeinventor Limited	9757 2952	Collision warning system could provide real-time safety alert for workers and plant operator by using UWB technology. Many accidents happening on site involve workers being hit by moving plant and machines. An accurate collision warning system can prevent this kind of accidents in a cost effective way. The system adopts the latest UWB - Ultra Wide Band technology. The plant with a UWB detector sets a virtual working perimeter and any worker with an UWB tag entering the perimeter will trigger the alarm to warn workers and the operator to stop the plant so as to prevent collision accidents. The accuracy is up to centimeter level and in all directions.	<a href="#">Link</a>

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PA20-073	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [CMP-Connectable]  [Detection Technology : AI Camera]	I-Vision Smart Monitoring System  	Kong Chun Construction Machinery Services Centre	2475 1083	This product is a safety monitoring system installed on heavy construction plant for obstacles detection and real-time acquisition of surrounding environment. It provides synthesized image with 360° bird's-eye view, panoramic detection of obstacle within 1 metre, and siren and signal light when there are obstacles in the detection range, thus improving workers' safety when plant is in the operation.	<a href="#">Link</a>
PA20-090	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [CMP-Connectable]  [Detection Technology : AI Camera]	Danger Zone Alert Sensing System  	Customindz Limited	9125 3390	This product is a sensing system installed on construction vehicles to provide both visual alert on monitor and audio sound alert to the operator when there are pedestrians walking or standing nearby the vehicle, thus ensuring workers' safety during plant operation. This product allows users to adjust the zoning distance. It can also detect default objects (e.g. vehicles) to avoid false alarms.	<a href="#">Link</a>

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PA20-119	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [CMP-Connectable]  [Detection Technology : AI Camera]	SAFERAI v3.0 	Karta-X Technologies Limited	3619 0620	This product is a construction site safety monitoring platform. It has an AI analytical tool for determining workers behaviour captured by CCTVs with functions including workers' attendance and PPE identification, machine identification and suspicious personnel detection for better site management. Alert could be delivered by web, emails or APPs.	<a href="#">Link</a>
PA22-037	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [CMP-Connectable]  [Detection Technology : AI Camera]	5G Smart Site 	Synergos Systems Company Limited	3176 2121	This product is an integrated alert and authorisation platform which collects signals from various types of safety-related sensors and cameras for monitoring of collision and entry to unauthorised or danger zones. The gathered information is relayed via mobile network to the online centralised monitoring platform. It also enables facial authentication for moving plant activation.	<a href="#">Link</a>

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PA22-043	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [Detection Technology : AI Camera]	Mobile360 M500 - Dual purpose safety monitoring system  	T-Smart Logistics Limited	2488 8888	With dual monitoring functions, the A.I. intelligent wide-angle dual camera lens detects the movement of pedestrians in the dangerous area of work, real-time visual alarm and audio reminder to the operator, solves emergencies and provides protection for blind spots. In order to ensure that the operator is fully focused on the operation, the M500 indoor AI face-specific camera lens can monitor whether the operator is fatigue, smoking, or focusing on the phone. Real-time visual alarms and audio reminders can prevent unsafe conditions and associated accidents from happening. The system can be used with mobile phone applications to ensure the safety of pedestrians and operators.	<a href="#">Link</a>

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PA Code	Product Type	4S Categorisation	Product name	Distribution Channel	Contact	Product Descriptions	Approved Product Price (HK\$)
PA23-028	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [CMP-Connectable]  [Detection Technology : AI Camera]	Blindspot Detection System 	GreenSafety Technology Limited	2662 6460	This product is able to determine the distance between a vehicle and the detected obstacles through real-time image analysis facilitated by the onboard camera. Warnings are given to the driver to prevent accidents.	<a href="#">Link</a>
PA23-029	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [CMP-Connectable]  [Detection Technology : Proximity Sensor]	IoT, BLE, GPS, Mobile Technology, Artificial Intelligence 	Infotronic Technology Limited	9106 7601	This product is a location-based monitoring system which worker's data such as location, conditions and attendance records are collected wirelessly. Those data would be transmitted to a remote server for analysis for safety improvement and management purposes.	<a href="#">Link</a>

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PA23-052	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [CMP-Connectable]  [Detection Technology : AI Camera / Proximity Sensor]	GTwin-4S 	Digital G Limited	2516 8717	GTwin-4S (previously named as ForesightTwin) is a smart worksite safety system that integrates IoT devices and solutions. The system centralizes visual data in a web-based platform, enabling project teams to access this data and monitor high-risk construction activities to identify safety hazards.	<a href="#">Link</a>
PA24-027	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [CMP-Connectable]  [Detection Technology : Proximity Sensor]	RFID Anti-Collision System 	Transcendence Company Limited	2862 1724	This product is an open collaborative mobile application and cloud platform related to the on-site construction management including Productivity and Safety management. Function include RFID, Speaker, GPS, IOT, Dashboard; Summary and Report.	<a href="#">Link</a>





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PA24-045	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  <b>[Danger Zone Detection (Workers' Intrusion)]</b>  <b>[CMP-Connectable]</b>  <b>[Detection Technology : AI Camera / Proximity Sensor]</b>	Plant Proximity Fatal Zone Alarm System   	Hornbird Technology Limited	6705 0848	Plant Proximity Fatal Zone Alarm System is an integrated system composed of AI cameras, ultra-wide band (UWB) anchor with tags, wireless gateway, and a web-based dashboard. The core function of the system is to trigger real-time alarm automatically to the machine (i.e. crane) operator and safety officer when workers enter a fatal zone. Alarm will also be triggered automatically when the machine enters a plant collision zone. Video footage and alarm record will be transmitted to cloud server through the wireless gateway for storage. The alarm records and video footages can be displayed and reviewed through a web-based dashboard. Alarm threshold can also be configured from the web-based dashboard. Incident records are sent in real time to the safety officer by SMS, WhatsApp or email and recorded in the web-based dashboard.	<a href="#">Link</a>

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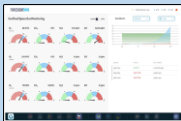


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PA Code	Product Type	4S Categorisation	Product name	Distribution Channel	Contact	Product Descriptions	Approved Product Price (HK\$)
PA24-092	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [CMP-Connectable]  [Detection Technology : AI Camera]	Unsafe Acts and Dangerous Situation Alert for Mobile Plant Operation Danger Zone  	Smart Construction Laboratory Limited	2776 4164 han@sclab.hk	The product is an intelligent safety monitoring system, powered by AI, offers proactive detection and early warning capabilities for both pedestrians and vehicles. It supports high-definition surveillance during nighttime. Users can configure alerts for hazardous zones and blind spots. The system also features an automatic full-screen rearview while reversing and external flashing warnings for pedestrians. These comprehensive features significantly enhance safety on roads and construction sites.	<a href="#">Link</a>
PA24-113	Safety Monitoring System	5. Unsafe acts / dangerous situation alert for mobile plant operation danger zone  [Danger Zone Detection (Workers' Intrusion)]  [CMP-Connectable]  [Detection Technology : AI Camera / Proximity Sensor]	Varadise 4S - Smart Site Safety System  	Varadise Limited	2312 6880 business@varadise.cloud	Varadise 4S is a management platform which serves as a Centralized Management Platform (CMP), combines with different kind of data such as imagery, video, and IoT sensor inputs. It functions as a Common Data Environment (CDE) platform which is capable of receiving and displaying Smart Site Safety System component data.	<a href="#">Link</a>

## Pre-approved 4S Products related to Mobile Plants and Tower Cranes

### - 6. Unsafe acts / dangerous situation alert system for tower crane lifting zone


Users shall ensure adequate quantity of sensors are deployed to fulfil BD's requirement on full coverage of all loading/unloading areas danger zone perimeter at all floor levels involved of the tower cranes as decided by the Safety Officer as per Circular Letter of BD ([Circular Letter - Qualified Supervision of Building Works Involving Mobile Plants and Tower Cranes by Adopting Smart Site Safety System \(bd.gov.hk\)](https://www.bd.gov.hk/en/circular-letter-qualified-supervision-of-building-works-involving-mobile-plants-and-tower-cranes-by-adopting-smart-site-safety-system))

PA Code	Product Type	Smart Site Safety System Categorisation	Product name	Distribution Channel	Contact	Product Descriptions	Approved Product Price (HK\$)
PA23-052	Safety Monitoring System	6. Unsafe acts / dangerous situation alert system for tower crane lifting zone  [Loading/ unloading danger zone monitoring]  [CMP-Connectable]  [Detection Technology : AI Camera / Proximity Sensor]	GTwin-4S 	Digital G Limited	2516 8717	GTwin-4S (previously named as ForesightTwin) is a smart worksite safety system that integrates IoT devices and solutions. The system centralizes visual data in a web-based platform, enabling project teams to access this data and monitor high-risk construction activities to identify safety hazards.	<a href="#">Link</a>
PA24-085	Safety Monitoring System	6. Unsafe acts / dangerous situation alert system for tower crane lifting zone  [Loading/ unloading danger zone monitoring]  [CMP-Connectable]  [Detection Technology : AI Camera]	AI-Lift  	FJ Dynamics International Limited	9127 3219	The proposed product is a camera system, powered by Artificial Intelligence (AI), designed to detect workers that enter the loading/unloading area during the operation of a tower crane. When a worker enters the loading / unloading area during the lifting process, the system will promptly send alerts to the related personnel via SMS, WhatsApp, email, or in-app notifications. The tower crane operators will have a clear view of the virtual zone and the detected workers on their screen. In addition, workers within the zone will be warned by auditory alarms and lights. Furthermore, managers will have the access right to review alert history and video replays through the CMP.	<a href="#">Link</a>

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Users shall ensure adequate quantity of sensors are deployed to fulfil BD's requirement on full coverage of all loading/unloading areas danger zone perimeter at all floor levels involved of the tower cranes as decided by the Safety Officer as per Circular Letter of BD ([Circular Letter - Qualified Supervision of Building Works Involving Mobile Plants and Tower Cranes by Adopting Smart Site Safety System \(bd.gov.hk\)](https://www.bd.gov.hk/en/circular-letter-qualified-supervision-building-works-involving-mobile-plants-and-tower-cranes-by-adopting-smart-site-safety-system))


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PA24-093	Safety Monitoring System	6. Unsafe acts / dangerous situation alert system for tower crane lifting zone  <b>[Loading/ unloading danger zone monitoring]</b>  <b>[CMP-Connectable]</b>  <b>[Detection Technology : AI Camera]</b>	Unsafe Acts / Dangerous Situation Alert for Tower Crane Lifting Zone  	Smart Construction Laboratory Limited	2766 4164 han@sclab.hk	This product is an innovative safety monitoring system, tailor-made for tower cranes. It employs wireless AI cameras to provide real-time surveillance of the work environment beneath the crane hook. Should workers enter the monitored area, the system will automatically trigger alarm and signal lights. This serves as a reminder for the operator to suspend the hoisting process, thereby playing a pivotal role in safeguarding worker safety in construction site.	<a href="#">Link</a>

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Users shall ensure adequate quantity of sensors are deployed to fulfil BD's requirement on full coverage of all loading/unloading areas danger zone perimeter at all floor levels involved of the tower cranes as decided by the Safety Officer as per Circular Letter of BD

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