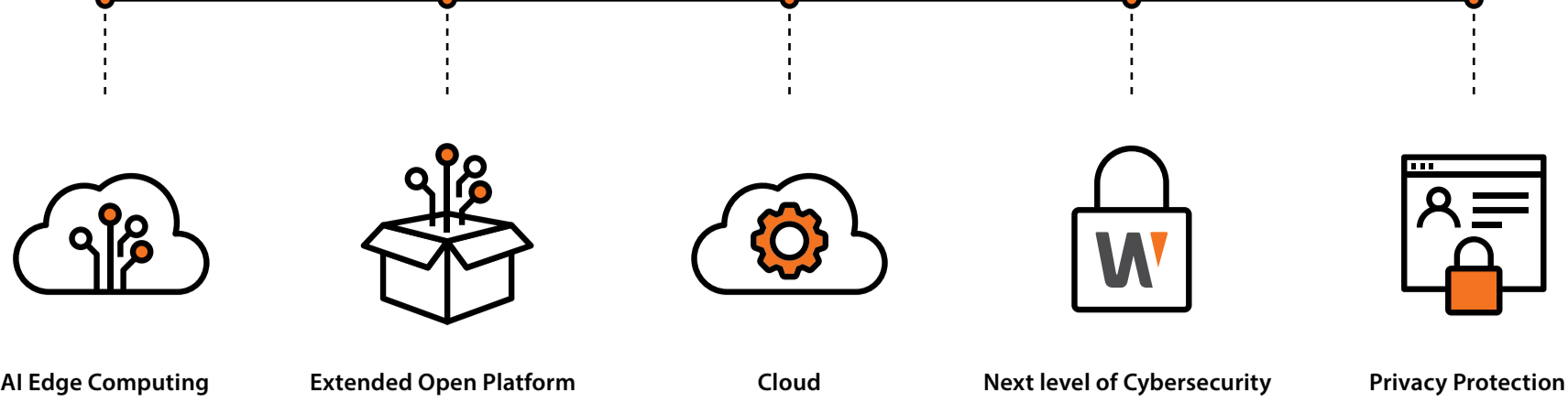
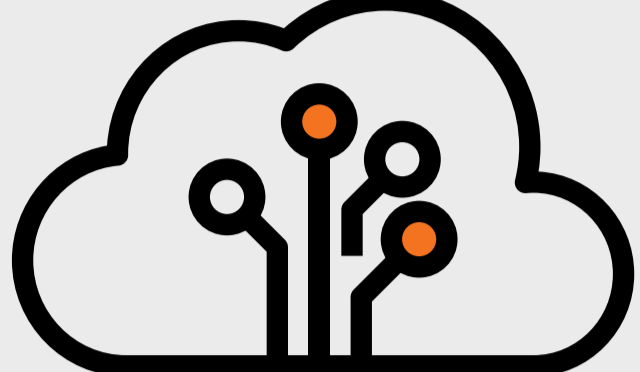


Hanwha Techwin's Top 5 Video Surveillance Trends for 2021



1 AI Edge Computing



AI Edge Computing is Growing Based on its Unlimited Application Potential

Many large tech companies, from chipset to finished products, have recently been forecasting the growth of AI edge technology. In similar strain, its integration into video surveillance is expected to be strengthened further this year. Edge computing capabilities are defined by how many additional features can be provided at the end device using various data resources. Edge devices in today's video surveillance industry serve as a sensor for detecting video data, radar, and thermal imaging, while processing much of the data on the edge and sending refined data to the server unit can increase resource efficiency and save process time.

Thus, in order to take advantage of the enhanced processing capabilities and performance of the edge, it is important to look at the design of chipsets used for edge devices. Taking chipset performance as a key consideration in R&D, Hanwha Techwin has been developing and upgrading its System on Chip (SoC) throughout its history.

It is expected that the edge will become an open platform to create a new ecosystem through partnerships, connect devices, functions and solutions to provide high scalability and availability that can meet customer demands in a timely manner. Hanwha Techwin also intends to expand partnerships by strengthening its AI-based open platform.

2 Extended Open Platform



Extended Open Platform Allows Customer-tailored Solutions and Widens Array of Choices

Long held open source software traditions that honor collaborative development and freedom to add new features upon user suggestions are increasing and entering the process of enterprise software development. Due to rapidly changing environments and swiftly shifting consumer demands, software development cannot remain in a siloed process led by a single in-house enterprise developer team. Thus, collaboration enabled by open platforms are further extending into the video security industry as well. Open API (Application Programming Interface) has allowed various analysis solutions to integrate into core software infrastructure, which empowers users to collect, analyze and report to meet specialized data demands.

Likewise, Hanwha Techwin uses an open platform to collaborate with its partners and plans to further reinforce the platform by partnering with third party companies with solution expertise in key areas to provide a wide array of optimized solutions to the customers. Furthermore, Hanwha Techwin plans to strengthen compatibility and interoperability of its entire solutions in the video surveillance ecosystem, encompassing eco partners, edge, VMS and cloud solutions. This will allow users to take advantage of the integrated solutions suite and scale up according to user requirements.

In 2021, Hanwha Techwin aims to build a standardized and accessible framework along with the OSSA (Open Security & Safety Alliance), which was founded by leading global security companies to offer more options to its customers. In order to address a number of market demands varied by regions and geographies, Hanwha Techwin products support customers to add features and solutions best optimized and localized for individual needs.

3 Cloud



Cloud is a Tool to Grow Business and Expand Insights

Cloud technology is becoming increasingly important as the roles of edge device are strengthened and its functions advance. The reliance increasingly requires tools to safely manage these devices, analyze mass data in time and derive insights. The cloud's role has been in the limelight as it plays an integral role in quickly installing security patches, updating new features, and managing and maintaining the latest features, as cloud connectivity can integrate and manage all edges as one.

Recently, the need to integrate and manage data collected from different devices has been increasing, expecting that business collaboration via cloud platforms such as expansion of business areas and creation of new insights will also take shape.

Hanwha Techwin plans to introduce a cloud solution that manages security devices and monitors real-time status as well as a cloud solution that publishes reports and derives insights based on the results analyzed at each edge.

4 Next level of Cybersecurity



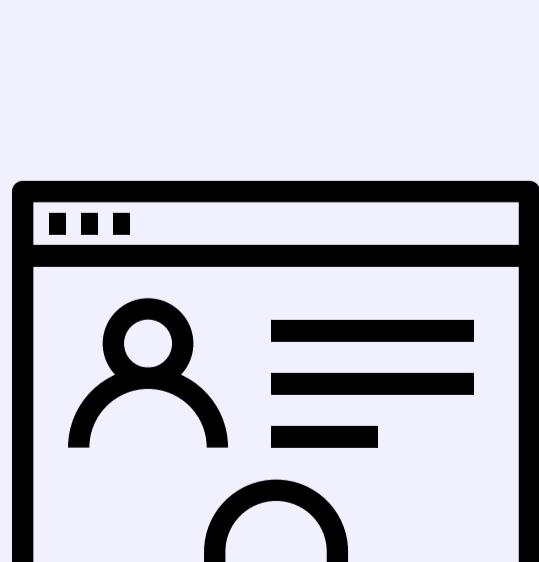
Next Level of Cybersecurity; Cybersecurity Becomes More Important with Increased End-point Edge Devices

In an environment where intelligent infrastructures such as smart cities, smart factories, and smart retail are expanding and data is being secured at the edge level, the vulnerability of cyberattack is also increasing. In other words, it is difficult to prevent and mitigate cyberattacks that are becoming more intelligent and advanced and incoming from various touchpoints.

Verifying trusted edges through mutual authentication at the point of data transmission to the server or while circulating the edge's open platform is now an essential feature. As an effort to go beyond the company's own security verification standards, Hanwha Techwin has aspired to establish a system that customers can trust by obtaining a cybersecurity certification from a reputable third-party certification authority.

In 2020, Hanwha Techwin applied strong cybersecurity functions to its line-up equipped with Wisenet7 chipsets (SoC). In addition to security verification from the system boot stage, the entire process was revamped to ensure secure operation, including the introduction of an OS and storage space dedicated to storing and processing sensitive information, data encryption, and a dedicated device certificate system. Hanwha Techwin also obtained the UL CAP certification of UL, which is known to be the most reliable, and is undertaking the TTA security certification process to obtain an official certification for its overall security procedures.

5 Privacy Protection



Privacy Protection Requires a Balanced Guideline for Technology Prowess and Boundaries for Justifiable Use

Regulations on privacy such as the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA) are getting stronger over the years and region-specific compliance rules based on local privacy requirements are increasingly being introduced. Companies that utilize personal data need to comply with international guidelines and implement privacy policies that specifically meet the level required by each local authority.

In the video surveillance industry, the issue of protecting personal identification information based on video data continues to emerge, and it is important to find a balance that fulfills privacy compliance while utilizing data and technology.

Therefore, it is crucial for enterprises to develop clear guidelines for utilizing and applying technologies, to understand compliance for each region, and to implement them transparently to strengthen trust.

Hanwha Techwin has already introduced a VPM (Video Privacy Management) solution, a Smart Cover of Privacy (S-COP) lineup to comply with overseas GDPR, and its integrated management solution, Smart Security Manager (SSM), which applies privacy masking features to leverage the benefits of the technology and protect privacy at the same time.

In case a customer decides to use Hanwha Techwin AI NVR equipped with a face matching feature, Hanwha Techwin provides locally relevant legal details and guidelines for use in advance to help customers meet local compliance rules while using the feature and also obtain user consent where needed.

Not only helping customers meet local compliance with helpful guidelines, it is a part of corporate responsibilities to ensure that the most needed technologies are utilized in appropriate situations under just causes.