



On October 11, we visited the KES 2019 Electronic Exhibition at COEX. Since it is big from the entrance, I entered the building with anticipation because I thought I could gain diverse experiences. Among the first products to be seen was the Winner Viewer Pro S4, which divides and records black box 4 channels. This product is an interface device that connects to the vehicle black box and supports up to five-channel screen recording. It is easy to connect to existing black boxes and does not require the removal of the black boxes being used or the installation of additional devices. It is also said that the product can provide a multi-channel image display in which the capacity of images and sounds by multiple channels is equal to the capacity of images and sounds by a single channel and can be output and recorded at the same resolution, and can provide a multi-channel image display that can select the number of channels depending on the environment used. I heard the detailed explanation at the booth where this product is displayed. One of the main features of the product is that it connects to the black box that is mounted. It supports video recording up to 5 channels while still using existing black boxes and can be connected to most black box models currently on the market. Second, it supports multi-channel screen recording with same SD capacity. It supports multi-channel image recording while having same amount of image data as existing black box systems. The resolution of recording multi-channel images is the same as that of rear black box cameras. By doing so, data capacity can be greatly reduced compared to 4-channel black boxes that are recorded by CCTV Third, 12V, 24V support all voltages. It can be installed in all vehicles regardless of the voltage of 12V (passenger car, etc.) and 24V (freight car, etc.) Fourth, price competitiveness is excellent. Because it can be equipped at 1/10th the cost of 4-channel black boxes on the market, I thought it would be useful in today's world as black boxes are used a lot. The next most impressive product was NIU scooter, the world's No. 1 smart e-scooter. The N scooter

battery, designed sensibly and weighing only 10KG, can be easily charged at home or in the office. The N battery pack offers a two-year quality warranty, utilizes industry-leading Panasonic Lithium Ion technology and has also developed applications for the convenience of the product. Through its built-in GPS tracking function through the application, the NIU scooter informs the NIU cloud as soon as unauthorized movement of scooters is detected, and sends real-time location information as well as theft notifications to users. The NIU cloud is also accessible from anywhere in the world and provides local services. Authorized service providers can be searched on the app, and one-touch phone connections as well as navigation connections, so flat tires can be resolved in just minutes. The NIU cloud is a smart rider, given that it can easily collect driving details and view customer service manuals through regular scooter links for tech-savvy modern users.



**CHANGE STATION**

Next, 'sensetime', which is a Vision AI solution based on facial recognition technology, was very noticeable. Vision AI solution based on facial recognition technology 'sensetime' technology is not only security, access control, identification authentication, criminal identification, but also automatic (ADAS, driver monitoring system, self-driving system, driver authentication system), integrated control, monitoring system (smart city, intelligent transportation system, intelligent CCTV control system, and other integrated controls), mobile entertainment (camera/camera/camera authentication, mobile authentication, biometric application, biometric application, and biometric authentication application, and biometric application The "SenseTotem" face-recognition criminal investigation system was most impressive in "sensetime." "SenseTotem" supports the identification of faces of criminals by providing cross-cracks in a single or multiple database, while allowing for the identification of faces of blurred photographs and the search and identification of faces in vast databases. The 'SenseDrive' also had driver monitoring systems using the Lane Departure Warning

System (LDW)\_SDK and the Forward Collision Warning and Pedestrian Detection Warning SDK. Because face recognition technology is being used in our smartphones, we have become more interested in face recognition technology through 'sensetime' and know how many fields it is used and makes our lives easier.

In the next booth, we learned about Innovation in Network Solutions by MS Electronics. MS Electronics Product Line-up includes 'Connectors', 'Cable', 'Cable Assemblies', 'SFP & RJ45 ICM & USB C Type', 'Board to Board' and 'Cable carriers'. "Connettrs" is an optimized waterproof dustproof solution for outdoor environments and is a network, military and industrial connector. It is said that it satisfies Customized Connectors with a wide range of standard connectors and IP66, IP67-IP68 ratings and can be applied to a variety of industrial sites, including Power RF, Optic, RJ45, AISG, Signal, PCB serial connectors. 'Cables' are essential for cable-combined products and are excellent for outdoor environments. It has UL, CE, and KC certifications for variety of cable types and standard cables. 'Cable Assembly' is a cable assay for connection of network equipment that has been applied with optimized waterproof dustproof solution for outdoor environment and is an industrial cable assay applicable to various industrial sites. 'SFP & RJ45 ICM & USB C Type' is a complex and easy-to-use port for PCBs. It is used in networks, data communication, and mobile electronics and is a USB C type. 'Board to Board' is a connection connector between PCB boards, consisting of various assembly heights and transmitting Power, Signal. There are also 20,30,40,60,80pins Header & Socket. Cable carriers are cable glands, cable clamps, steel bands, and cable joints for the best ease of installation.



FOTO NATION





Usually, we were very interested in cell phones, so we went to Samsung Electronics booth and tried Galaxy Note 10+5G and felt the sense of writing. Also, Samsung Jet, Samsung Flex Wash, Samsung Dryer Grande, Samsung Air Dresser, Harman Cardon ONYX STUDIO 5, Samsung Directive Induction, Samsung Waterwall dishwasher, Samsung dishwasher Slim Fit, BESPOKE 4 Door, and Kimchi Plus BESPOKE 3 Door, all equipped with FRAME. There are many products suitable for modern people's habits and convenience, so I really want to prepare them at home in the future," he said.

In addition, the Future Car Booth learned that cars are evolving into self-driving, connected cars and spreading to mobility services through application of electric and electronic systems and artificial intelligence, communication, sensor technology and SW convergence. It is said that technological convergence requires high-level personnel who have a high understanding of fusion technology based on car knowledge and can cooperate with each other organically. It is said that among universities nationwide, Konkuk University, Kookmin University, Hanyang University, Inha University, Ajou University, etc. have special automobile specialties for such personnel. I thought it would be nice to have a special field or graduate school in the near future of Sejong University. Also, we could observe multi-sensor-utilized self-driving simulators for the verification of automobile active safety technology at the car simulator booth. Through this fair, various knowledge we learned while studying computer networks helped us understand these skills and with these products we were able to do computer networking and broaden our networking knowledge.



**LG OLED TV**



**SAMSUNG THE FRAME**



**3D MODEL**