YNOT

YNOT COMPANY
INTRODUCTION

와이낫은 오랜 기간 반도체 업계 경험을 바탕으로
IT 기업들의 신뢰할 만한 반도체 공급 및 파트너 역할을 수행합니다.

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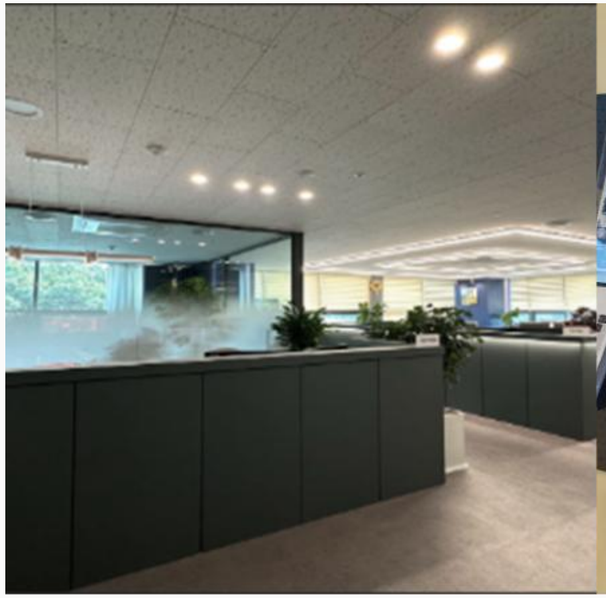
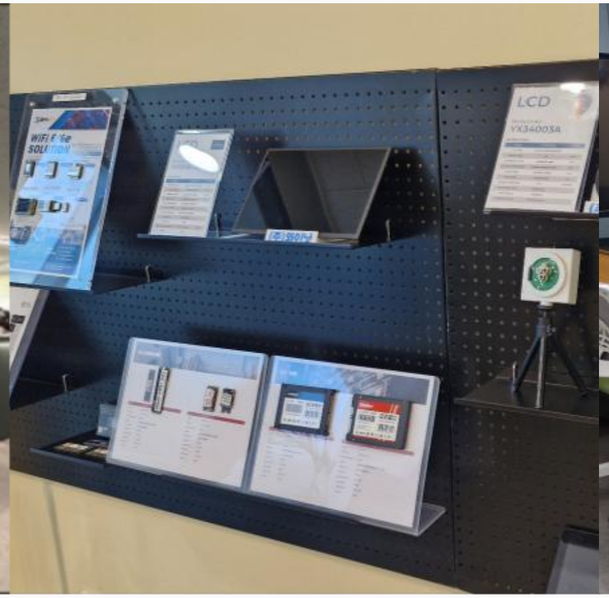
About YNOT

H.Q location	Seoul , South Korea
Business Registration #	322-87-00686
Established in	Nov, 2015
C E O	최 헌영 Jake Choi
Capital	300,000 USD
Revenue	15.50M USD
Manpower	Sales & Marketing 4, QC 1, Engineers 3, SCM 2, CS 1

Entrance to YNOT

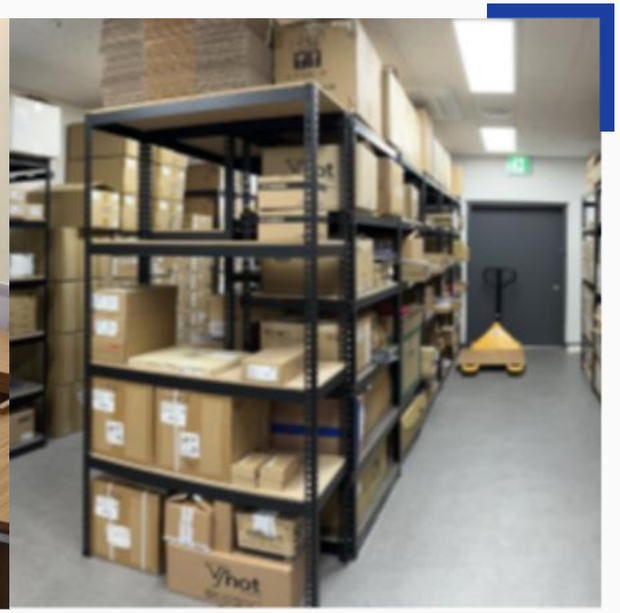


Office & RND



Show Room

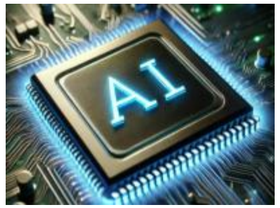
Conference Room



Inhouse Ware House

Hardware Eco-system

와이낫 적용분야



와이낫 설계지원

Edge IPC

Vision & Sensing

Display HMI(LCD, OLED)/ Android PAD

Wi-Fi, BT , LTE , 5G GNSS , LoRa, UWB

Memory storage (SSD/SD Card/DRAM)

Battery & Charger adapter & Power Supply

Edge AI

AI Solutions

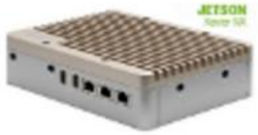
BOXER-8658AI

BOXER-8640AI

BOXER-8623AI

BOXER-8645AI

BOXER-8652AI



BOXER-8253AI

Computing System

UP Boards
& UP System

+ AI Modules

Hailo-8™
M.2 2280

AI CORE X

MXM-ACMA

Embedded Boards

Rugged Mobile Devices & Panel PC

Single Board Computer

de next-TGU8

86 x 55mm Single Board with 11th Generation Intel® Core™ i7/i5/i3 Processor

de next-V2K8

86 x 55mm Single Board with AMD Ryzen™ Embedded V2000 Series Processor

PICO-RAP4

Pico-ITX Board with 13th Gen Intel® Core™ i7/i5/i3 Processor

PICO-ADN4 REV.B

Pico-ITX Board with Intel Atom® x7000E Series, Intel® Processor N-series, and Intel® Core™ i3 Processor N-series

UP SQUARED 7100

UP Squared 7100 | Developer Board with Intel® N-series SoC

UP XTREME 7100

UP Xtreme 7100 I UPX-ASLN Developer Board with Intel Processor N-series Processor

UP Squared Pro 7100 Edge I Intel N100 Prosessor.8GB RAM.64GB eMMC

Intel Processor N Series ; 12V DC-in

UP Squared Pro 7000 Edge Series

Intel Atom x 7000E Series / Processor N Series / N305 ; 12V DC-in

UP Squared IoT Edge [Wifi + LTE-Global]

Intel Atom x 7 - E3950; 5V DC in

HMI touch panel

android

Rugged All in One PC

AHP-1125

12.1" LCD with 500 Nits XGA LED Backlight
Onboard Intel® N3710/N3060 Processor
IP65 Plastic Front Bezel
DC 12V/ DC 9-30V
Fanless Operation

AHP-1154

Intel® Celeron® J1900, 2.0 GHz/ N2807, 1.58 GHz
15" LCD with 450 nits XGA LED Backlight
IP65 Plastic Front Bezel
RS-232/422/485 x 2, RS-232 x 2
Fanless Operation
Support DC 12V/ DC 9~30V

10.1 Inch Capacitive Screen, 10.1 inch 1280*800 HD, G+G Multi Touch Screen
Capacitive multi-touch screen (10 point)
MTK6762,OCTA CORE,1.6GHz
4GB LPDDR4
64GB
802.11 a/ac/b/g/n , 2.4GHz+5GHz
YES
YES
Front 16.0MP + Rear 16.0MP beauty, panorama, night view
GSM:850MHZ/900MHZ/1800MHZ/1900MHZ WCDMA:B1/B5/B8
TD-SCDMA:(B34/B39) ; LTE-TDD:(B38/B39/B40/B41); LTE-FDD:(B1/B2/B3/ B4/ B5/B7/B8/B12/B17/B20/B25/B26/B28/B66)
1*Type C
1* Dual sim card slot
1*Micro SD Card (TF Card)
1*3.5mm Earphone Jack
1*Power Button / 1*Volume +/-
15600mah/9V2.2A polymer battery
IP67 Rugged Waterproof / Anti-Dust and Drop

SBC SoC / SoM

	System On Module (1~25 TOPs support)	Embedded Board
REALTEK		
Rockchip	Quad Cortex-A76 2.4GHz Quad Cortex-A55 1.8GHz * **Processor**: Rockchip RK3588, 4x Cortex-A76 cores @ 2.4GHz + 4x Cortex-A55 cores @ 1.8GHz * **NPU**: 6 TOPS * **RAM**: 8GB/16GB * **Storage**: 32GB/64GB/128GB * **Pin out**: 5x UART, USB3.0 HOST, 2x USB2.0 HOST, 2x Type-C, 2x MIPI CSI, MIPI DSI, MIPI DPHY, 2x HDMI TX, HDMI RX, DP, GbE, PCIe3.0/2.1, SATA, SDMMC, SDIO, PWM, SPI, CAN, SPDIF, ADC, I2C, I2S, PDM, GPIO, etc. * **Operating system**: Android 13, Debian 12, Buildroot * **Dimensions**: 67 x 53 mm * **Package**: 230-pin, 1.0mm pitch QFN, and 39-pin FPC connector for Camera	
NXP	• NXP LX2160A Plus Quad Cortex-A53 1.6 GHz RISC Processor • Onboard LPDDR4 2GB / eMMC 16GB (Optional 4GB RAM/ eMMC 32GB) • HDMI 2.0a • GbE x 2 • USB 3.0 x 2, Full size mPCIe x 2, CAN FD x 2 CH, Micro SD Card Slot x 1, RTC, TPM 2.0 • Wide DC Input 9~36V • Wide Temperature -20 °C ~ 70 °C • UL61010 certificated; PLC and heavy industry IEC61000-6-2, IEC61000-6-4, IEC61131-2 qualified • Pre-Install Linux Debian 11; Support Android 13, Win 10 IoT, Yocto • Supports Modbus/ MQTT Library/ OPCUA/ Security boot/ GUI/ Machine learning eIQ (by request)	
Qualcomm	**Open-Q™ 8250CS SOM (System on Module)** Based on Qualcomm® QCS8250 System-on-Chip with Android™ 13 OS Develop with the smallest QCS8250 SOM module in world Production ready	

System On Module MEDIATEK

- High-performance MediaTek Genio 1200 Octa-Core SoC
- Powerful and efficient MediaTek Deep Learning Accelerators 2.0 and Cadence® Tensilica® Vision P6 NPUs supporting up to 4.8 TOPS
- Dual-band Wi-Fi 6 and optional 4G LTE
- 4K hardware accelerated H.265/H.264 video processing
- Dual display and dual MIPI CSI-2 camera support

Software Packages

Support Android 13, Yocto 4.0, and Debian 12. Software customization services that speed up time to market and minimize development costs are also available.

Android 13.0 EVK	[1.25 GB]	v1.1.0
Yocto 4.0.17 EVK	[1.33 GB]	v2.1.0

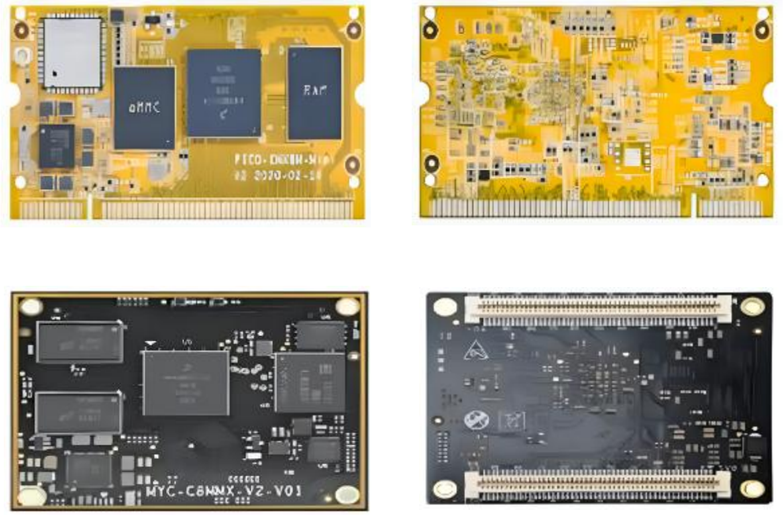
Application

System On Module

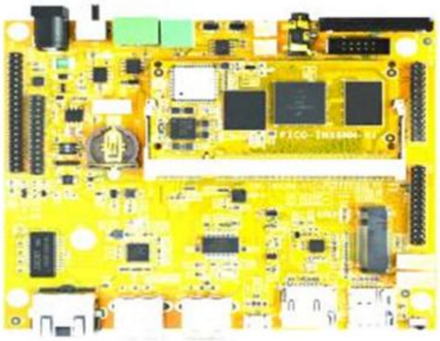
- NXP i.MX 8M Plus Quad Application Processor based on 1.6 GHz Arm Cortex-A53 and 800MHz Cortex-M7 Cores
- A Neural Processing Unit (NPU) Operating at up to 2.3 TOPS
- 2GB/3GB/4GB LPDDR4, 8GB eMMC Flash, 32MB QSPI Flash
- Power Management IC (PMIC)
- 0.5mm pitch 314-pin MXM 3.0 Gold-finger-edge-card Connector
- Supports Working Temperature Ranging from -40°C to 85°C
- Supports Running Linux L5.10.9

Family	Part Number	Configuration	Temperature
i.MX 8M Plus Quad	MIMX8ML8DVNLZAB	4x A53 (1.8Ghz), VPU, NPU, ISP	0°C - +95°C
i.MX 8M Plus Quad	MIMX8ML6DVNLZAB	4x A53 (1.8Ghz), VPU, ISP	0°C - +95°C
i.MX 8M Plus Quad Lite	MIMX8ML4DVNLZAB	4x A53 (1.8Ghz)	0°C - +95°C
i.MX 8M Plus Dual	MIMX8ML3DVNLZAB	2x A53 (1.8Ghz), VPU, NPU, ISP	0°C - +95°C
i.MX 8M Plus Quad	**MIMX8ML8CVNKZAB**	**4x A53 (1.6Ghz), VPU, NPU, ISP, CAN-FD**	**-40°C - +105°C**
i.MX 8M Plus Quad	MIMX8ML6CVNKZAB	4x A53 (1.6Ghz), VPU, ISP, CAN-FD	-40°C - +105°C
i.MX 8M Plus Quad Lite	MIMX8ML4CVNKZAB	4x A53 (1.6Ghz), CAN-FD	-40°C - +105°C
i.MX 8M Plus Dual	MIMX8ML3CVNKZAB	2x A53 (1.6Ghz), VPU, NPU, ISP, CAN-FD	-40°C - +105°C

Formfactor

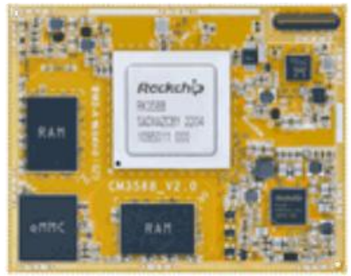


Application



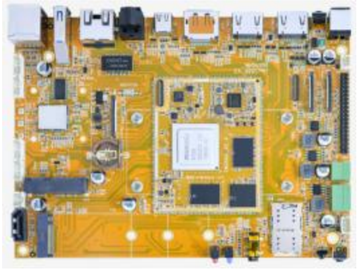
System On Module Rockchip

Quad Cortex-A76 2.4GHz
+
Quad Cortex-A55 1.8GHz

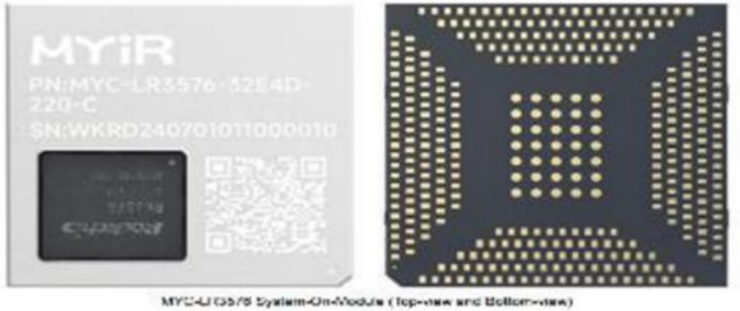


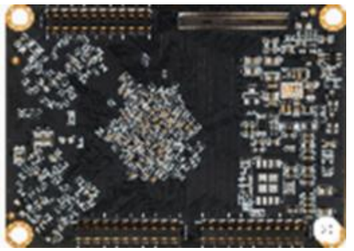
* Processor: Rockchip RK3588. 4x Cortex-A76 cores @ 2.4GHz + 4x Cortex-A55 cores @ 1.8GHz
* NPU: 6 TOPS
* RAM: 8GB/16GB
* Storage: 32GB/64GB/128GB/256GB
* Pin out: 5x UART, USB3.0 HOST, 2x USB2.0 HOST, 2x Type-C, 2x MIPI CSI, MIPI DSI, MIPI DPHY, 2x HDMI TX, HDMI RX, DP, GbE, PCIe3.0/2.1, SATA, SDMMC, SDIO, PWM, SPI, CAN, SPDIF, ADC, I2C, I2S, PDM, GPIO, etc.
* Operating system: Android 14, Debian 12, Buildroot
* Dimensions: 67 x 53 mm
* Package: 230-pin, 1.0mm pitch QFN, and 39-pin FPC connector for Camera

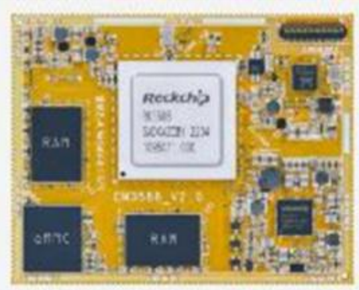
Application



Formfactor







System On Module Qualcomm

Hardware Specifications:

• **Processors**	Qualcomm® 8250CS SoC built on 7nm technology: Kryo™ 585 Octa-core CPU: 1 Kryo Gold prime @ 2.84 GHz + 3 Kryo Gold @ 2.42 GHz + 4 Kryo Silver @ 1.81 GHz Hexagon™ 698 DSP with quad Hexagon Vector eXtensions	
	Adreno™ 650 GPU @ Fmax = 587 MHz Spectra™ 480 Image Signal Processor Adreno™ 665 Video Processing unit	Adreno™ 995 Display Processing unit NPU230 Neural Processing unit SPU240 Secure Processing unit
• **Memory/Storage**	8GB or 16GB LPDDR5 @ 2750MHz, 128GB UFS	
• **Wireless**	802.11ax 2x2 MU-MIMO + Bluetooth 5.1, Bluetooth Milan ready	
• **Display Interfaces**	Up to three 4K displays (1 internal display through DSI and 2 external displays through DisplayPort) 2x 4-lane MIPI DSI D-PHY 1.2, up to 5040 × 2160 @ 60 fps (or 120 Hz in VR mode) + touchscreen support DisplayPort v1.4 on USB Type-C, at 8.1 Gbps/lane, with USB3 and USB2 data concurrency	
• **Camera Interfaces**	3x 4-lane MIPI CSI camera ports + CCI I2C control	Spectra 480 ISP supporting multiple concurrent cameras 64 MP 30 fps ZSL with a dual ISP
• **Video Performance** • Decode	Video decode up to 4K240/8K60. Native decode support for H.265 Main 10, H.265 Main, H.264 High, VP9 profile 2, VP8, and MPEG-2 codecs	
Encode	Video encode up to 4K120/8K30. Native encode support for H.265 Main 10, H.265 Main, H.264 High, and VP8 codecs	
Dec & Enc	Concurrent 4K60 Dec and 4K30 Enc	
• **Audio**	Supports WCD938x high fidelity audio codec and WSA881x speaker amp on carrier board Dedicated Hexagon™ audio DSP, SoundWire, MI2S, DMIC, TDM/PCM interfaces for audio devices on carrier board	
• **High Speed Connectivity**	1x PCIe Gen3 2-lane 1x USB 3.1 with support for Type-C + DisplayPort v1.4 with USB SS data concurrency 1x USB 3.1 Type-A	
• **I/O Interfaces**	4-bit SD 3.0, UART, I2C, I3C, SPI, configurable GPIOs, sensor I/O to dedicated Hexagon™ sensor DSP	
• **Power/Battery**	Power management and battery charging solution on SOM	
• **Operating Environment**	Input voltage: 3.7V nominal Operating Temperature: -25 to +85°C	
• **Form Factor**	50mm x 29mm with 2x 100-pin + 1x 120-pin board to board connectors	

Software:

• **OS Support**	Android™ 13

Formfactor

Applicaition

System On Module AMD XILINX

Features

Mechanical Parameters

- Dimensions: 75mm x 55mm (12-layer PCB design)
- Power supply: 5V/0.5A
- Working temp.: -40~85 Celsius (industrial grade)

SoC

Xilinx XC7Z015-2CLG485 (Zynq-7015)

- 766MHz ARM® dual-core Cortex™-A9 MPCore processor (up to 866MHz)
- Integrated Artix-7 class FPGA subsystem with 74K logic cells, 46,200 LUTs, 160 DSP slices
- NEON™ & Single / Double Precision Floating Point for each processor
- Supports a Variety of Static and Dynamic Memory Interfaces
- Four high-speed SerDes transceivers up to 6.25Gbps
- Four PCIe Gen2 hardened, integrated IP blocks

Memory

- 1GB DDR3 SDRAM (512MB*2) / 4GB eMMC / 32MB QSPI Flash (16MB is optional)

Peripherals and Signals Routed to Pins (MYC-C7Z015 pin-out description)

- 10/100/1000M Ethernet PHY / USB PHY / External watchdog / Three LEDs
- One blue LED for power indicator
- One red LED for FPGA program done indicator / One green user LED

Two 0.8mm pitch 140-pin board-to-board expansion connectors bring out below signals:

- One Gigabit Ethernet / One USB OTG 2.0
- Up to two Serial ports (reused from PS_MIO, can also be implemented through PL pins)
- Up to two I2C (reused from PS_MIO, can also be implemented through PL pins)
- Up to two CAN BUS (reused from PS_MIO, can also be implemented through PL pins)
- One SPI (reused from PS_MIO, can also be implemented through PL pins)
- ADC (one independent differential ADC, 16-channel ADC brought out through PL pins)
- One SDIO (PS SDIO 0)
- Bank 13 (PL I/O configurable as up to 18 LVDS pairs and 1 single-ended I/O or 37 single-ended I/O)
- Bank 34 (PL I/O configurable as up to 24 LVDS pairs and 2 single-ended I/O or 50 single-ended I/O)
- Bank 35 (PL I/O configurable as up to 24 LVDS pairs and 2 single-ended I/O or 50 single-ended I/O)
- Bank 112 (4 GTP serial transceivers, 2 reference clock input)

OS Support

- Linux 5.4.0

Formfactor

- Xilinx Zynq UltraScale+ ZU3EG / ZU4EV /ZU5EV MPSoC based on 1.2 GHz Quad Arm Cortex-A53 and 600MHz Dual Cortex-R5 Cores
- 4GB DDR4 SDRAM (64 bit, 2400MHz)
- 4GB eMMC Flash, 128MB QSPI Flash
- Gigabit Ethernet PHY, USB PHY
- Power Module, Clock Generator
- Two Samtec 0.5mm pitch 160-pin Razor Beam High-Speed Headers
- Ready-to-Run PetaLinux
- Supports Xilinx Vitis Software Development Platform

Application

System On Module NVIDIA.

PERFORMANCE		MAINSTREAM			ENTRY	
2022	2023	2022	2023	2022	2022	2022
Jetson AGX Orin	Jetson Orin NX	Jetson AGX Xavier	Jetson Orin Nano	Jetson Xavier NX	Jetson TX2	Jetson Nano
▣ GPU/NPU Specification						*GC : Graphic Core* *TC : Tensor Core*
248~275 TOPS	70~100 TOPS	30~32 TOPS	20~40TOPS	21 TOPS	1.26~1.33 TFLOPS	472 GFLOPS
2048GC / 64TC	1792GC / 56TC	512GC / 64TC	512~1024GC / 32TC	384GC / 48TC	256GC	128GC
1.3 GHz (Max)	978MHz (Max)	1.3 GHz (Max)	625 MHz (Max)	1.1 GHz (Max)	1.3 GHz (Max)	912 MHz (Max)
▣ CPU Specification						*C : CPU Core*
8C ~ 12C	6C~8C	8C	6C	6C	2C	4C
2.2 GHz (Max)	2~2.2 GHz (Max)	2~2.2 GHz (Max)	1.5 GHz (Max)	1.9 GHz (Max)	1.92 ~ 2.0 GHz (Max)	1.43 GHz (Max)

Application

Edge AI PC & Server

BOXER-8642AI

AI@Edge Fanless Embedded AI System with NVIDIA® Jetson AGX Orin™

BOXER-8645AI

AI@Edge Fanless Embedded AI System with NVIDIA® Jetson AGX Orin™

BOXER-8652AI

AI@Edge Compact Fanless Embedded AI System with NVIDIA® Jetson Orin™ NX

BOXER-8651AI

AI@Edge Compact Fanless Embedded AI System with NVIDIA® Jetson Orin NX

BOXER-8622AI

AI@Edge Compact Fanless Embedded AI System with NVIDIA® Jetson Orin Nano™

UP SQUARED PRO 710H EDGE

UP Squared Pro 710H Edge | Intel AI solution with Hailo module

UP SQUARED PRO 710H EDGE

UP Squared Pro 710H Edge | Intel AI solution with Hailo module

- Intel Atom® x7000 RE Series, Intel® Processor N Series, and Intel® Core™ i3-N305 Processors
- Onboard Hailo-8™ edge AI processor
- Onboard LPDDR5 Memory, up to 16GB
- Onboard eMMC Storage, up to 128GB
- 2.5GbE x 2 (Intel® I226-IT)
- USB 3.2 (Type-A) x 2
- 40-pin GPIO x 1
- DP 1.2 x 1/HDMI 2.0b x 1
- RS-232/422/485 x 2
- M.2 2230 E-Key/M.2 2280 M-Key (Optional: M.2 3052 B-Key x 1)
- Onboard TPM 2.0
- 12V~36V DC-in with Phoenix Connector

MAXER-2100

AI Inference Server, 2U Rackmount, 12/13th Gen CPU

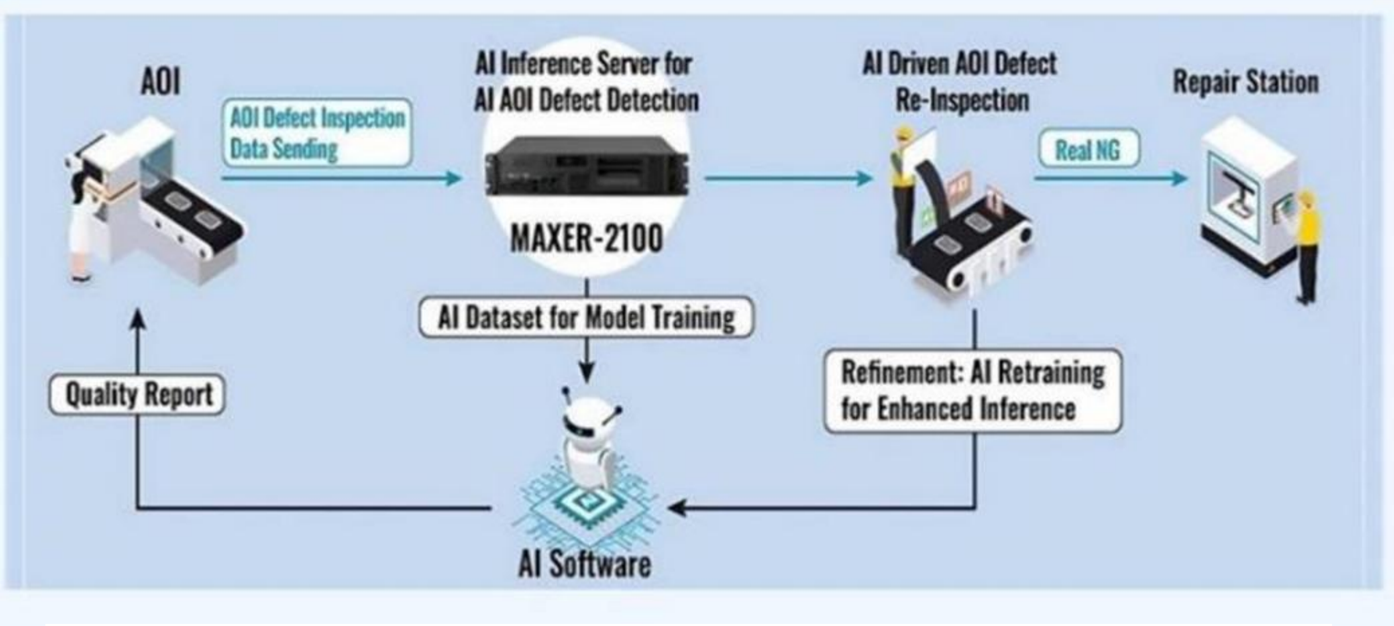
- High-performance for AI inference
- 12/13th Gen Intel® Core™ LGA1700 Socket Processors
- High CPU computing performance: Built-in i9-13900, up to i9-13900E supported
- 2U Rack Mount, Front Access I/O Design
- M.2 2242/2280 M-Key x 2
- M.2 3042/3052/2242 B-Key + Micro SIM Slot
- M.2 2230 E-Key x 1
- Onboard TPM 2.0

ZEUS-PURO

4U Rackmount Purley Platform Server System, Support Xeon® FPGA CPU | ZEUS-PURO

- 4U Rackmount Server System
- Dual Intel® Xeon® Processor Skylake-SP and Cascade Lake -SP processor
- Intel® Communications Chipset C621
- 16 DIMM slots DDR4 RDIMM, max. 1024GB (8 channel memory architecture)
- 512 GB
- IPMI Support
- Up to 12 Gigabit Ethernet Ports via NIC (Front: Up to 10 Gigabit Ethernet Ports via NIC)
- 6 x 3.5" SATA HDD or 2.5" SATA HDD in 6 x M.2 2280 Socket x 1
- Option Rear Side PCIe (x8) x 1 (or PCIe (x8) x 2) + PCIe (x16) x 2 (or PCIe (x16) x 1)
- Option Front PCIe (x16) x 2
- Optional Parallel LCM with Keypad x 1
- 1 x 4K Console + 1 x DP 1.2 + 2 x 10GbE LAN + 2 x 1GbE LAN + 2 x USB 3.0
- 800W/1200W CRPS Redundant Power

AI Inspection



YNOT Core

1. SoM 을 이용한 Embedded 보드 개발지원
2. SoM Customizing for 동아엘텍 SPEC
3. SoM + Carrier H/W Customizing
4. AI Edge H/W Customizing
5. AI Engine support (라벨링 / 추론 데이터 학습)

MAXER-2100

AI Inference Server, 2U Rackmount, 12/13th Gen CPU

- High-performance for AI inference
- 12/13th Gen Intel® Core™ LGA1700 Socket Processors
- High CPU computing performance: Build in i9-13900, up to i9- 13900K supported
- 2U Rack Mount, Front Access I/O Design
- M.2 2242/2280 M-Key x 2
- M.2 3042/3052/2242 B-Key + Micro SIM Slot
- M.2 2230 E-Key x 1
- Onboard TPM 2.0

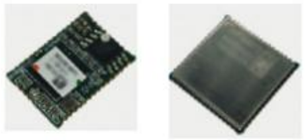
BOXER-8642AI

AI@Edge Fanless Embedded AI System with NVIDIA® Jetson AGX Orin™

UP SQUARED PRO 710H EDGE

UP Squared Pro 710H Edge | Intel AI solution with Hailo module

Wireless Connectivity

	WiFi BT module KC / FCC / CE / TELEC Certified	Automotive WLAN Module AQC-100 Certified	WiFi BT Combo IoT with Matter Module KC / FCC / CE / TELEC Certified	Industrial WiFi module KC / FCC / CE / TELEC Certified	Cellular Module IoT / LTE-M / NB-IoT
MAKER	AMPAK Technology Inc. Advanced Module Packaging Solution	shinwa A JVCKENWOOD COMPANY	GSD	SparkLAN	Telit Cinterion
ITEM					
MODEL	· WLAN Module · WLAN+BT Combo Module	Automotive WIFI/BT Module · LENS · BMS supplier with · design support	· WLAN Module · BT Module · WLAN+BT Combo Module · IoT / IoT with Matter Module	· WLAN Module · PCIe / M.2 / USB interface · BT Module · WLAN+BT Combo Module · IoT Module	Cellular 5G : mmWave, Sub-6 Cellular LTE : Cat1, 4, 6, 11, 12, 13, 18 Cellular LPWA : LTE-M, NB-IoT Global Major Network certified LG U+ / KT certified

Display - AMOLED, LCD Module

Whatever Size & Spec you need ????

AMOLED / TFT Touch LCD
Flexible Display
Round Watch OLED
Transparent Display
Customized Display

- Customizing Service at Reasonable price

- Best Quality

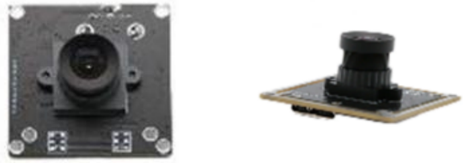
- Customizing service: I/F, Touch IC, Brightness, etc
- Providing QC process info to Customers
- Extra QC (Reliability Test) Available at manufacturer side
- AD board Customizing

- TFT-LCD Display Module

(1.22″ ~ 21.5″ , LVDS, eDP, SPI, MIPI, RGB I/F)

- Touch Panel and AD Board Customizable.(CTP & RTP)
- On/In Cell touch compatible
- 1.39″ AMOLED MIPI SPI I/F
- 0.96″ to 2.8″, PMOLED enable On/In cell touch

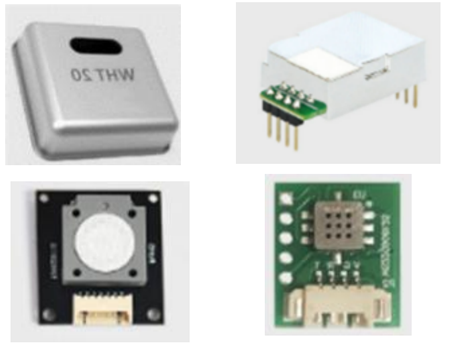
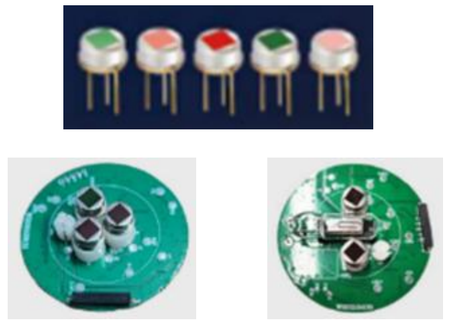
Camera Module

	GMSL	USB 3.0	Stereo
MODEL			
SPEC	Model : SG2-IMX390C-5200-G2A-Hxxx Resolution : 1920H*1080V Frame Rate : 1920*1080@30fps Sensor : SONY 2.12MP IMX390 RGGB Connector : Amphenol Fakra (ZCode) Output data : YUV422@8bit Serializer : MAXIM MAX9295A Sensor Type : Rolling Shutter Operating temp.range : -40°C ~ +85°C Dimensions : 30mm*30mm*22.5mm FOV : HFOV 30°/100°/118.4°/196° Weight : <50g		

Sensor	1/2.8" SONY IMX307 CMOS
Pixel	2 Mega Pixel
Most effective pixels	1920(H) x 1080(V)
Pixel Size	2.9μm x 2.9μm
Image area	1937(H) x 1097(V)
Compression format	MJPEG / YUV2/H.264
Shutter Type	Electronic rolling shutter
Power supply	USB BUS POWER
Power consumption	DC 5V, 260mW
Dimension	32mm x 32mm
Storage temperature	-40 — 85 °C
Operating temperature	30 — 85 °C
Support OS	WinXP/Vista/Win7/Win8/Win10 Linux with UVC(above linux-2.6.26) MAC-OS X 10.4.8 or later Android 4.0 or above with UVC

Model No	SNS-5MP-DualOV5640
Sensor	1/4" Omnivision OV5640 CMOS
Pixel	5 Mega Pixel
Shutter Type	Electronic rolling shutter
Focus type	Fixed focus
Interface type	USB2.0
Dimension	65MM x 42MM
Storage temperature	-20°C to 70°C
Operating temperature	0°C to 60°C
Support OS	WinXP/Vista/Win7/Win8/Win10 Linux with UVC(above linux-2.6.26) MAC-OS X 10.4.8 or later Android 4.0 or above with UVC

Sensors1

	Vision Camera / LiDAR	환경 계측 (Environmental)	불꽃 감지 (Flame Detection)
Desc	GMSL / ToF / Depth / RGB Stereo / Vision 2D 3D LiDAR	Co2 / Gas / Dust Temp / Humidity / Mems	Pyroelectric Flame UV Sensor Combination Module
ITEM			
MODEL	· ToF LiDAR – 12~40 meter, 32,000~60,000 scan/sec, 270~360 degree, operating at 80,000 lux, Indoor/Outdoor · Depth (87° × 58°, Stereoscopic), RGB (69° × 42°, Rolling Shutter), .3 m to 3 m · Depth (87° × 58°, Stereoscopic), RGB (90° × 65°, Global Shutter), .6 m to 6 m	· CO Sensor – 500~1,000ppm · CO2 Sensor - 400~10,000ppm, +/-50ppm Temp. & Humidity Sensor · VOC (Volatile organic compounds, Air-Quality) Sensor · Combo Sensor Module	· Pyroelectric Flame Sensor – IR Flame Sensor, Range from 3.8um to 5.0um, Long and Wide Range, Low Noise & Anti-vibration Interference · UV Sensor – 185~260nm wavelength, High-sensitivity and Fast response, Electric Spark · Module Sensor – Combination module of IR sensors and IR/UV sensors for enhanced-performance

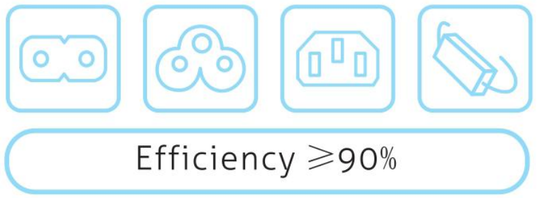
Sensors2

	IMU Sensor	Vibration Sensor
Desc	9-Axis Accelerator/Angular Velocity/ Magnetometer	Vibration Velocity, Displacement & Frequency
ITEM		
MODEL	· High Precision Accelerator/ Angle Velocity / Magnetic Field detector · Module & Case type Products for VR device, Robot, UAV, AGV, Platform Stability, Auto Safety System, etc.	· 3-axis vibration velocity, 3-axis vibration displacement, vibration frequency, · Magnetic or Screw for firm and stable connection · Module & Case type Products for Water pump, Electric Machinery, Engine Vibration Monitoring, Water Tower Monitoring, etc.

Power Block

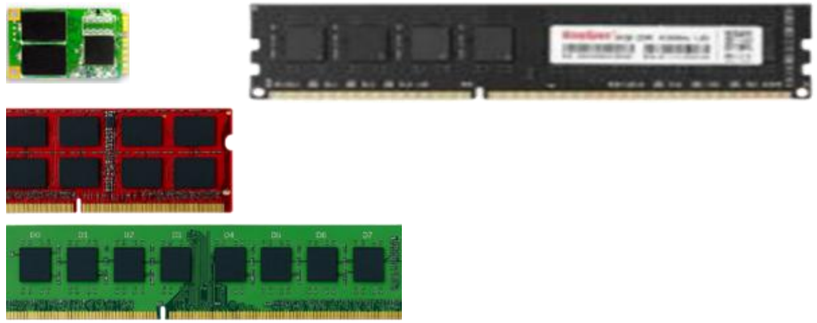
Power Supply	Category	Wattage Range	Features
DC-DC	Brick Type	33 – 800W	Quarter, half and full bricks 2:1, 4:1, 8:1, 12:1 14:1 18:1 Input range
	M2 grade high reliability	30 to 300W	DIP 1x1,2.05x1.2, Quarter, half bricks Up to 8:1 input range
	Railway	6.6W – 600W	EN 50155, UL 62368-1, UL 60950-1 EN 45545-2, Shock & Vibration
	Low Power	1 - 75W	SIP, SMD, DIP 24, 1x1, 2x1” 1x1.6”, 2x2”, 2.05x1.2” Up to 18:1 Input Range
AC-DC	ITE & Industrial	4 – 750W	Open frame, Encapsulated, Base-plate cooled (IEC/EN62368-1)
	Medical	15 – 500W	Open frame, Encapsulated, Adapters, Base-plate cooled (IEC/EN 60601-1)

Charger Adapter



Battery Charger / Power Adapter / LED Power Supply						
Input	Voltage	100-240 VAC		Frequency	50-60 HZ	
Output	Voltage	28.8 V	Current	8 A	Power max	280 W
Dimension	210 X 108 X 48 MM			Weight	1 kgs / pcs	
Certification	UL CUL GS UKCA CE SAA KC PSE 3C					

Memory Storage - SSD / SD card / DRAM / eMMC

	SSD / SDCARD	DRAM Module
SPEC	Industrial SPEC -40 C ~ +85 C 3 year warranty	Industrial SPEC -40 C ~ +85C 5years warranty
ITEM		
MODEL	· SSD - M.2 / SATA / 1.8″ / 2.5″ · SD Card - Micro SD / Embedded Emmc · FLASH CARD · USB Disk	· DRAM Module · DDR 4 · DDR 5

Battery Pack

SPEC

Li-Ion

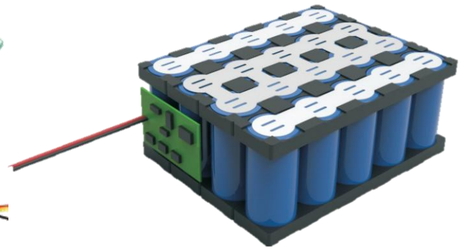
18650	3.2 and 3.7V
	2000 to 4000mah
	1C to 10C
21700	3.7V
	4000 to 5000mah
	1C to 5C
26650	3.2 and 3.7V
	2500 to 5000mah
	1C to 20C
32700	3.2V
	6000mAh
	1C
Others	18350,18500,14500,14650,14450,14430,10440,13380,16500,33138

Li Polymer

MODEL	CAPACITY	REMARKS
9017130	2100mAh	Extra long
154545	210mAh	Ultra Thin
471162	260mAh	Ultra Narrow
802540	750mAh	Low Temperature
955565	5000mAh	High Temperature
702193	1200mAh	10C rate Discharge
123030	950mAh	3C rate Charge
383559	800mAh	2C Charge, 5C Diascharge

Rated capacity	1200 mAh
Rated voltage	3.7V
Standard discharge current	240 mA
Maximum discharge current	1200 mA
Charging mode	Constant current and constant voltage charging
Maximum charging current	1200 mA
Charging voltage limit	4.2V
Internal resistance of battery	≤120 mΩ
Discharge temperature	-20~60 °C

Images



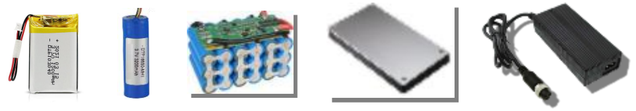
Application – 협동로봇 / 서비스로봇

Mobility Control (AP, Edge AI)

· Nvidia Jetson + Carrier board Edge box
· AP + NPU Module (ex : Intel CPU + Hailo NPU)
· Qualcomm / Intel / Rockchip based AP

Charger & Battery

· DC/DC & AC/DC Converter (Wide Input & Output range)
· AC/DC Adapter/ Barrey Charger Adapter
· Lithium ion / Lithium polymer
· Battery pack (BMS)

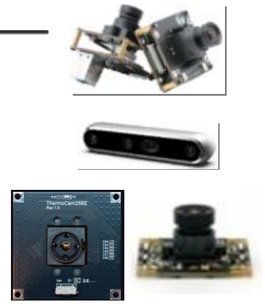


Display (LCD,OLED) Customizing

· LCD : 1.9″ ~ 24″
· OLED : 1.9″ ~ 13.3″ QXGA

Camera Module

· GMSL / Stereo Camera
· USB3.0 (1080P 30FPS)
· Depth Camera
· 열화상 (Thermal Imaging)

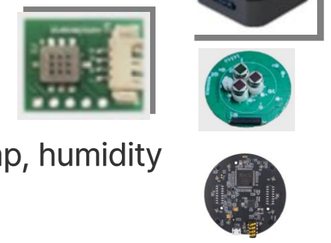


Memory & Storage

· SSD / uSD card
· DRAM module (S0-DIMM / U-DIMM)

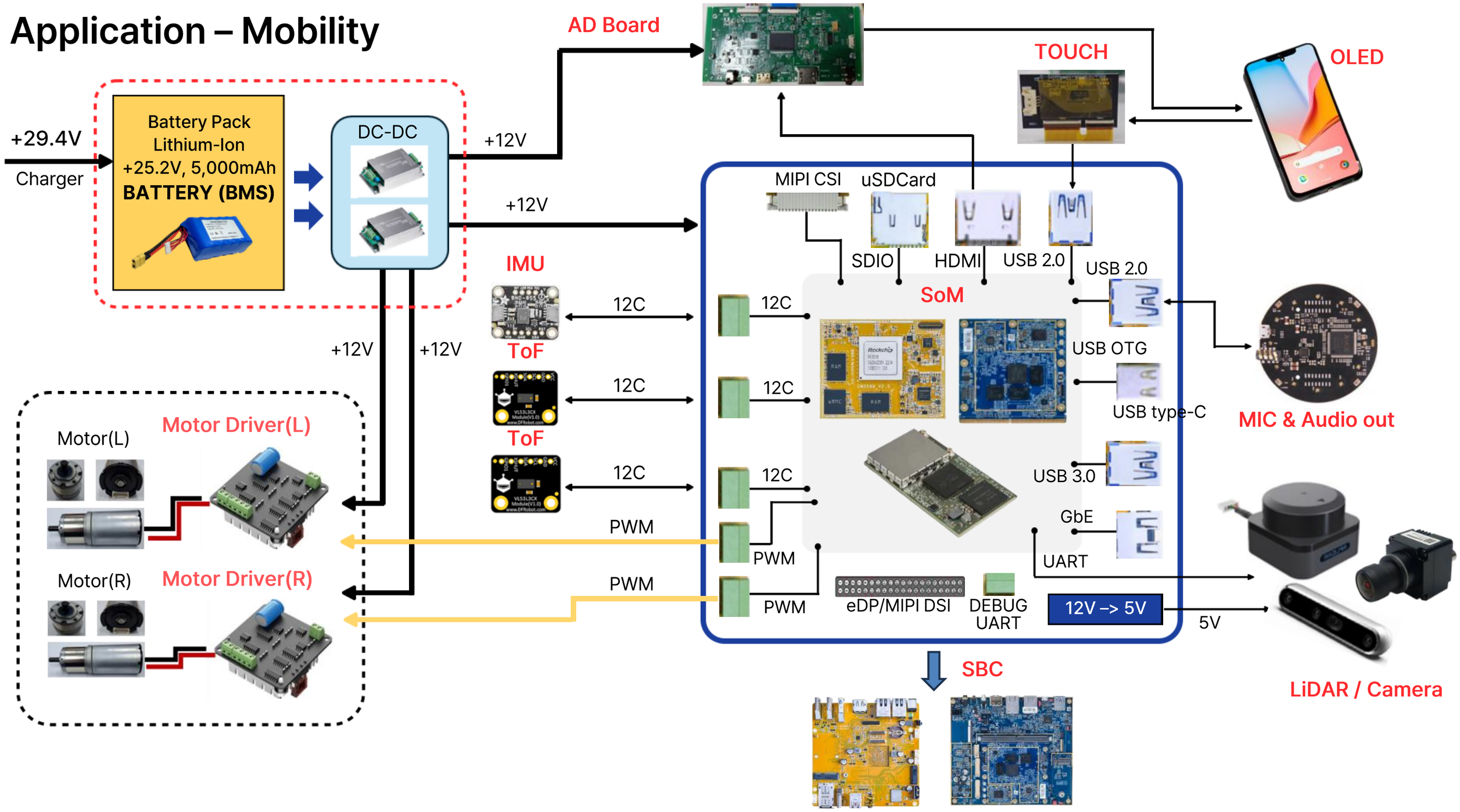
Sensors & MIC/Speakers

· LiDAR / ToF sensor
· IMU / Vibration sensor
· Flame detection
· VOC / CO2 (Other GAS) / temp, humidity
· MIC/Speaker board



Wireless (WiFi/BT/LTE/5G)

Application – Mobility



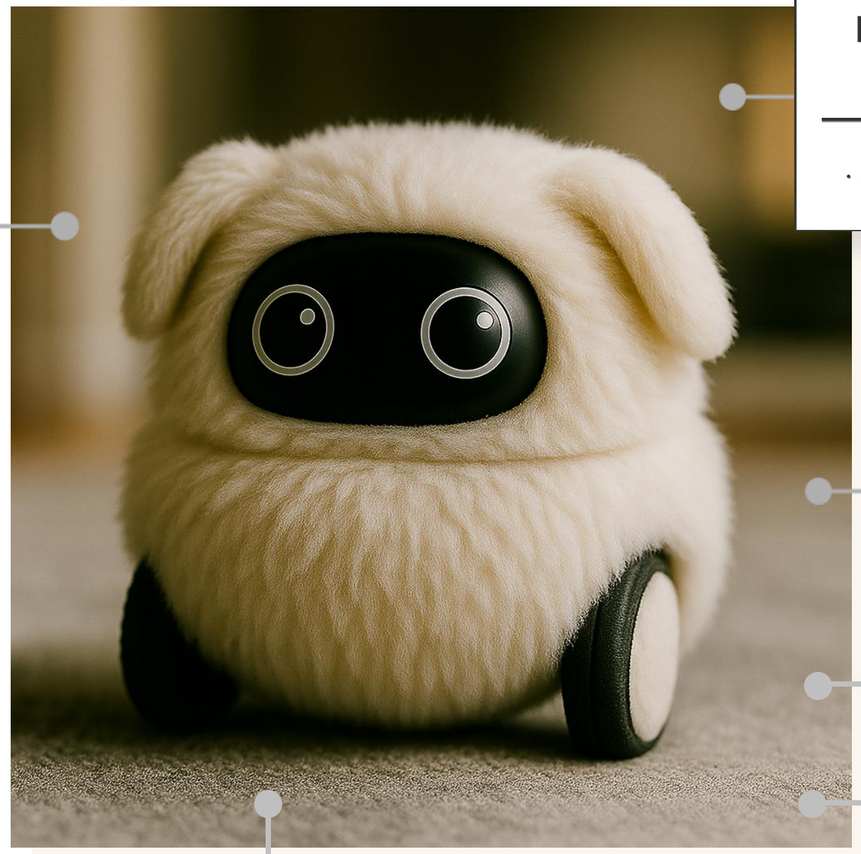
Application – 반려로봇

Robot Control

· Intel CPU (Intel Atom® x7000RE Series, Intel® Processor N-series, and Intel® Core™ i3-N305 Processors) + Hailo NPU Edge box (Hailo-8™ edge AI processor)

· Jetson Orin NX / AGX Orin

· Processor : Rockchip RK3588. 4x Cortex-A76 cores @ 2.4GHz + 4x Cortex-A55 cores @ 1.8GHz
· NPU : 6 TOPS



Display (LCD) Customizing

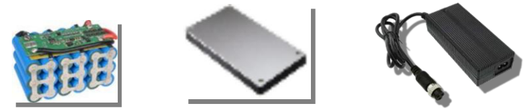
· 5″ (Round LCD Display)

Memory & Storage

· SSD / uSD card
· DRAM module (S0-DIMM / U-DIMM)

Charger & Battery

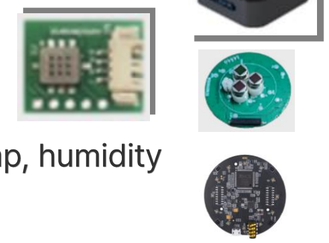
· Lithium-ion battery
· AC/DC Adapter/ Barrey Charger Adapter



Wireless (WiFi/BT)

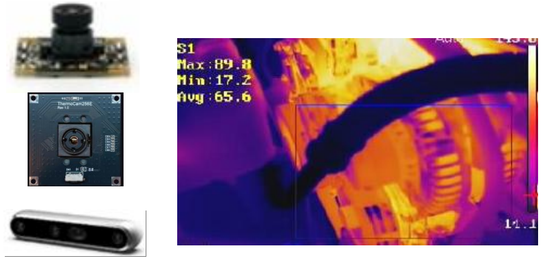
Sensors & MIC/Speakers

· LiDAR / ToF sensor
· IMU / Vibration sensor
· Flame detection
· VOC / CO2 (Other GAS) / temp, humidity
· MIC/Speaker board



Camera Module

· USB3.0 (1080P 30FPS)
· Realsense D430 + HSF
· 열화상 (Thermal Vision)



Application – Humanoid Robot

Robot Control

· de next-RAP8 (Card size) 86mm x 55mm Single Board with 13th Generation Intel® Core™ i7/i5/i3 Processor

· Jetson Orin NX / AGX Orin

· Processor : Rockchip RK3588. 4x Cortex-A76 cores @ 2.4GHz + 4x Cortex-A55 cores @ 1.8GHz

· NPU : 6 TOPS

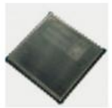
Camera Module

· GMSL / Stereo / Depth Camera
Depth Algorithm Running on NVIDIA Platform
· USB3.0 (1080P 30FPS)
· Realsense D430 + HSF
· 열화상 (Thermal Vision)

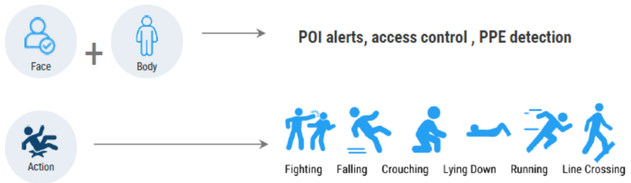
Memory & Storage

· SSD / uSD card
· DRAM module (S0-DIMM / U-DIMM)

Wireless (WiFi/BT/LTE/5G)



AI Vision

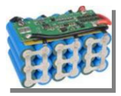


Sensors & Audio Speakers

· IMU / Vibration sensor
· ToF / Depth Camera
· Flame detection
· Cas / Co2 / Dust / temp humidity

Charger & Battery

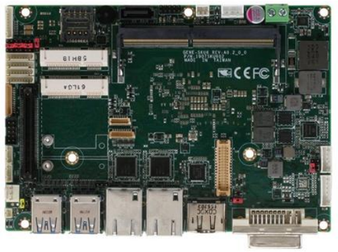
· Lithium-ion battery
· AC/DC Adapter/ Barrey Charger Adapter



Application – Four legged robot

Robot Control

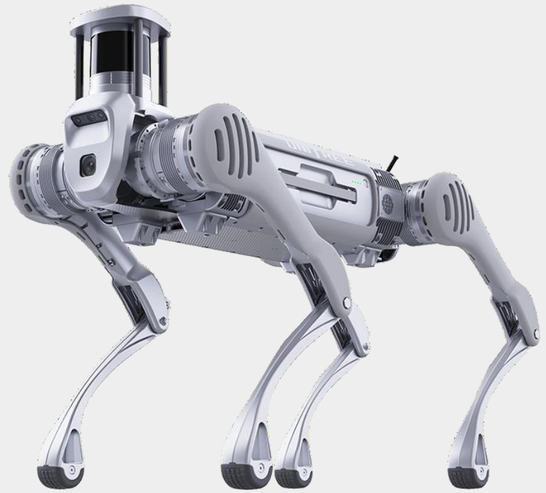
· GENE-SKU6 3.5″ SubCompact Board with Intel® Core™ i7/i5/i3/Celeron® Processor SoC



· Jetson Orin NX / AGX Orin

· Processor : Rockchip RK3588. 4x Cortex-A76 cores @ 2.4GHz + 4x Cortex-A55 cores @ 1.8GHz · NPU : 6 TOPS

Quad Cortex-A76 2.4GHz
+
Quad Cortex-A55 1.8GHz

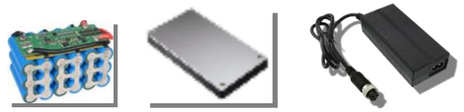


Camera Module

· GMSL / Stereo / Depth Camera
Depth Algorithm Running on NVIDIA Platform
· USB3.0 (1080P 30FPS)
· Realsense D430 + HSF
· 열화상 (Thermal Vision)

Charger & Battery

· Lithium-ion battery
· AC/DC Adapter/ Barrey Charger Adapter



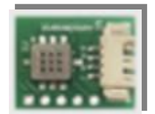
Wireless (WiFi/BT/LTE/5G)

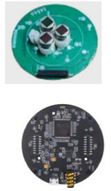
Memory & Storage

· SSD / uSD card
· DRAM module
(S0-DIMM / U-DIMM)

Sensors & MIC/Speakers

· LiDAR / ToF sensor
· IMU / Vibration sensor
· Flame detection
· VOC / CO2 (Other GAS) / temp, humidity
· MIC/Speaker board





Application – Security robot

Robot Control

· de next-RAP8 (Card size) 86mm x 55mm Single Board with 13th Generation Intel® Core™ i7/i5/i3 Processor

· Jetson Orin NX / AGX Orin

· Processor : Rockchip RK3588. 4x Cortex-A76 cores @ 2.4GHz + 4x Cortex-A55 cores @ 1.8GHz
· NPU : 6 TOPS

Camera Module

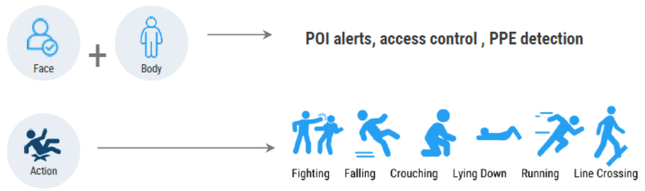
· USB3.0 (1080P 30FPS)
· Realsense D430 + HSF
· 열화상 (Thermal Vision)

Wireless (WiFi/BT/LTE/5G)

Charger & Battery

· Lithium-ion battery
· AC/DC Adapter/ Barrey Charger Adapter

AI Vision



Sensors & Audio Speakers

· IMU / Vibration sensor
· ToF / Depth Camera
· Flame detection
· Cas / Co2 / Dust / temp humidity

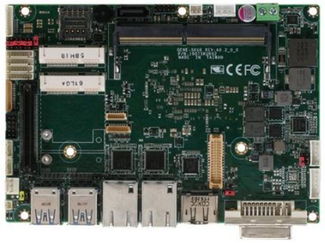
Memory & Storage

· SSD / uSD card
· DRAM module (S0-DIMM / U-DIMM)

Application – Human robot hand

Robot Control

· GENE-SKU6 3.5" SubCompact Board with Intel® Core™ i7/i5/i3/Celeron® Processor SoC

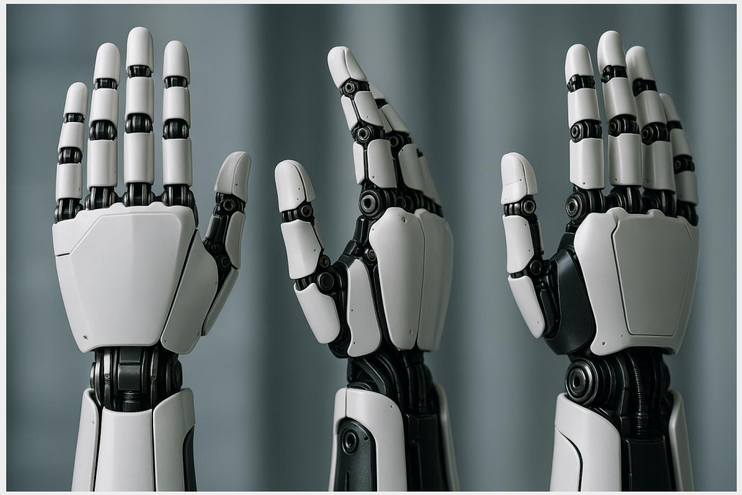


· Jetson Orin NX / AGX Orin

· Processor : Rockchip RK3588. 4x Cortex-A76 cores @ 2.4GHz + 4x Cortex-A55 cores @ 1.8GHz
· NPU : 6 TOPS

Quad Cortex-A76 2.4GHz
+
Quad Cortex-A55 1.8GHz

HUMAN ROBOT HAND



Robot Motion Controller

Wireless (WiFi/BT/LTE/5G)

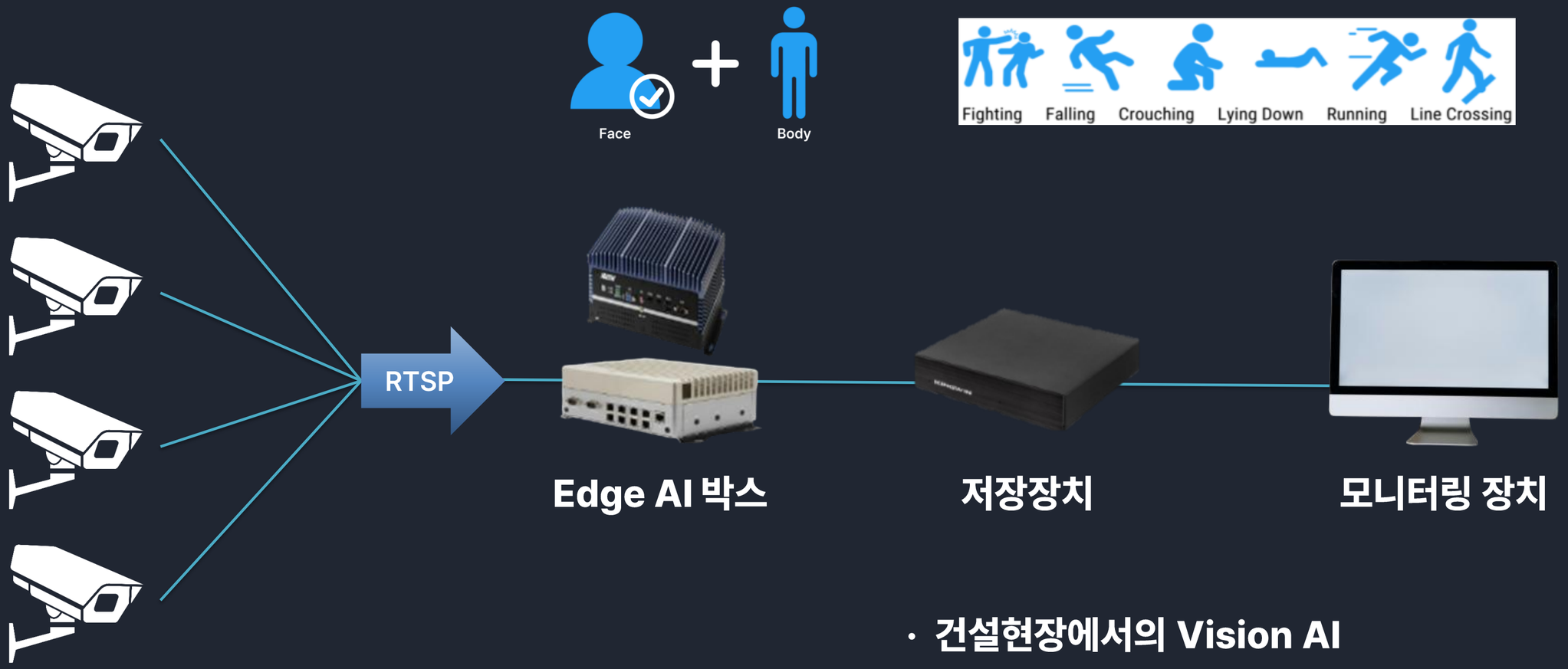
Power Supply

· Power Supply & Adapter

Memory & Storage

· SSD / uSD card
· DRAM module
(S0-DIMM / U-DIMM)

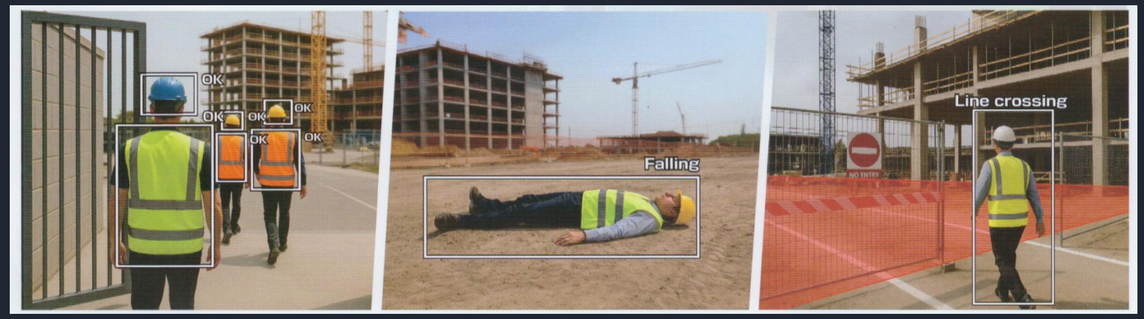
Vision AI



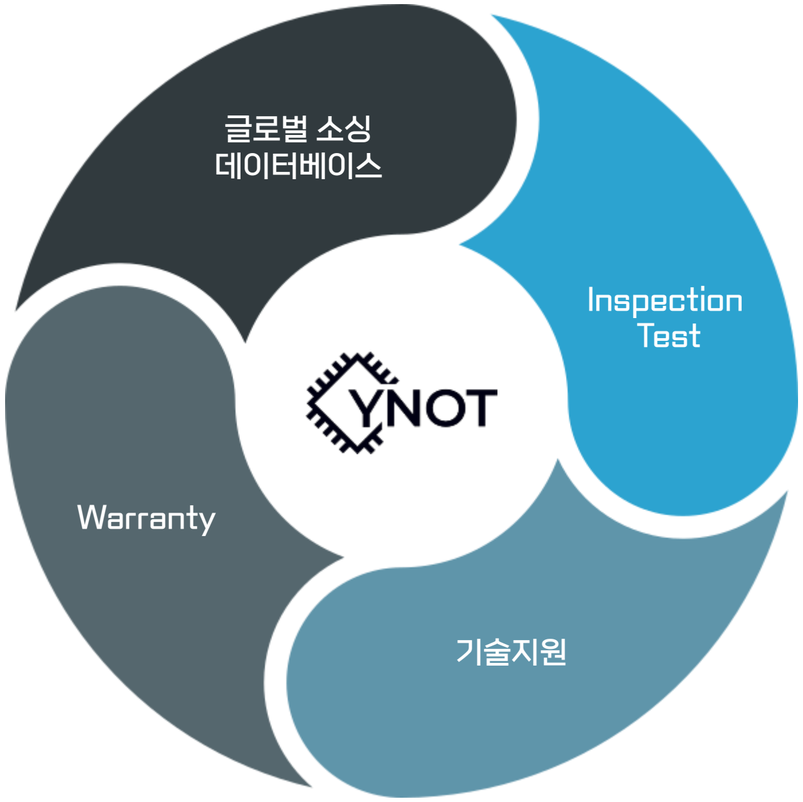
네트워크 CCTV

(최대 4대)

- 건설현장에서의 Vision AI



단 납기 턴키 소싱 (Sourcing)



- 필요한 만큼만
- 생산 스케쥴에
- 원하는 가격에
- 원하는 품질로

CPU

BROADCOM · REALTEK · MARVELL · XILINX

MEMORY

Micron · SAMSUNG · SK hynix

IC

life.augmented · ANALOG DEVICES · Texas Instruments

CONNECTORS

Amphenol · HRS · TE

AP Chipset Level Design

REALTEK RENESAS

- SoC Roadmaps for POS/IPC/AIoT

Production
Developing
Planning

Performance Multi-Purpose

Great Multi-Purpose

Good Streamer

Veronica — 4K HDR — 6nm — In Planning — AI

Stark — 4K HDR — 12nm — RTD1900 — AI

A55x4 , Mali-G57
32bit DDR3/DDR4/LPDDR4
AV1/NPU/DSP/VAD/MIPI DSI/HDMI 2.1a
USB 2.0 x2, USB 3.0 x1, PCIe 2.0 x2
10/100/1000

Kent — 4K HDR — 12nm — In Development — AI

A78x4 , 70K+ DMIPS
Mali-G310V5, 4Kp60 UI
32bit LPDDR4x-4266/LPDDR5-5500/LPDDR5X-5500
VVC/DSP/AV1
Video Encoder: AV1 1080p
eDP/DP/HDMI 2.1b
USB 2.0 x3, USB 3.2 gen 1 x2
PCIe 2.0 x1, PCIe 3.0 x1
10/100
AISR/AIPQ advance

ES: Q4'24
MP: Q4'25

yocto PROJECT · Linux · debian · android · ubuntu

Embedded H/W & S/W ODM Service

1. Hardware Development Service

- MPU/MCU based Hardware Design (Renesas/Qualcomm/NXP/Rockchip/Nvidia)
- Hardware Customizing Design Service (free)
- PCB Drawing & Mechanical Design service
- Support Certification
- Process(KC/CE/FCC/TELEC)

2. Software Development Service

- Development Environment Support
- Device Driver Development Support
- Application Development Support
- Supported OS(Android/Linux/RTOS)

3. Project Management Service

- HW, SW Development Outsourcing
- Support Mass Production
- Developer Management
- Schedule Management

Customers

We are serving over 100+ customers including key players in the markets.

AUTOMOTIVE & CHARGER

HUMAX
CHAEVI
SEBANG
DH AUTOWARE
Mobile Appliance
CHEMTRONICS
MEDIA HILLS
STARKOFF
carvi
HWA YOUNG
kyungshin
DRIMAES

ROBOTIC / MOBILITY / AI

ing Robotics
everybot.
COGA robotics
IB TECH
Polaris3D
AIDIN ROBOTICS
Hanwha Aerospace
ROBOTIS
SK magic
HYODOL
신성델타테크
DREAMTECH
SOLUTIONS COME FROM DREAMTECH
HWA YOUNG
엘티메트릭
Cellplus Korea
AI data solution @ Edge computing
suprema

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ubiQuoss
DASAN Networks
동아엘텍 DONG A ELTEK
MSSELTEK
WiNTECH SYSTEM VICTORY OF TECHNOLOGY
SAtech
lot vacuum Leader Of Technology Vacuum
SOLUM
SOLiD SOLiD
HUINS Human Intelligent System
I DO IT Co., Ltd.
ATEC T&
KCT Inc. KOREA COMPUTER TERMINAL
SIN WOO ENG Co. LTD SINWOO

MEDICAL & HEALTH CARE

MediThinQ
VIEWTEL
MEK Healthcare
CHUNGWOO
WONTECH
PRECISION BIOSENSOR
Seegene
ISC Total Test Solutions
(주) 씨유메디칼시스템
LUTRONIC
REMED Rehabilitation Medical Company
Eunsung
MEDICALPARK
GENORAY
OSSTEM IMPLANT

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KAON
SCSpro
INTEK DIGITAL
MARUSYS
ITXM2M
TJ
KEUMYOUNG entertainment
K VISION
FlexWATCH®
한단정보통신
GOLFZON
CMOS CMOSMEDIATECH
HyBus
Dreamus

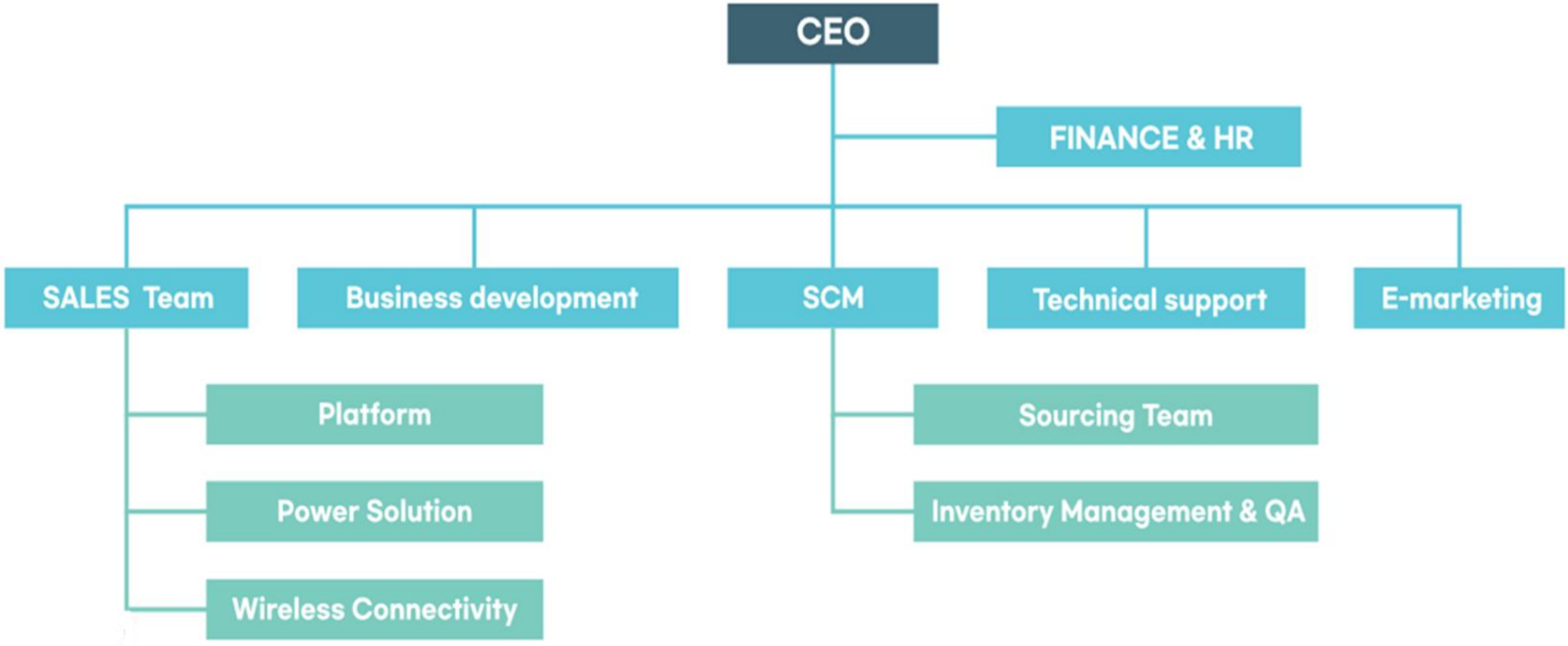
SMART HOME & AIoT

SK telecom
NAVIEN
OVIO
QUBER
CITECH
SMART HOME KOCOM
TETA
zigbang
Cellplus Korea AI data solution @ Edge computing
hansung sysco

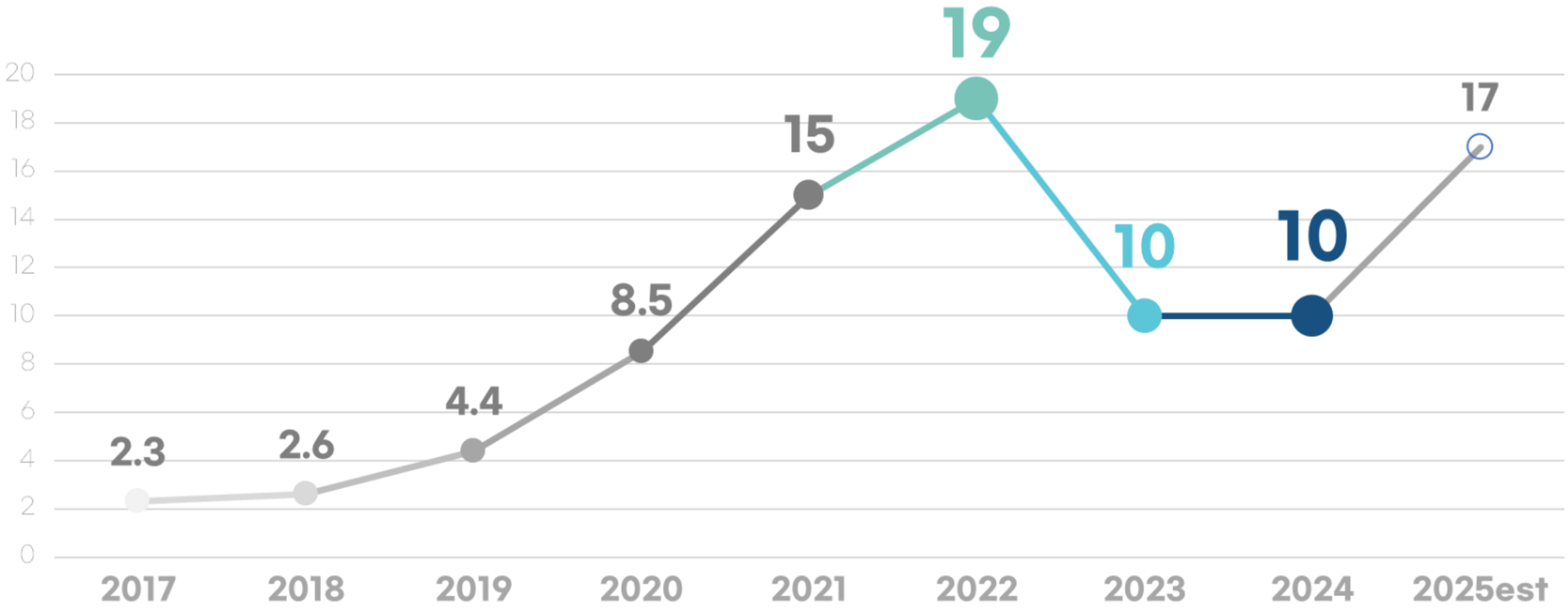
Partners

AAEON
an ASUS assoc. co.
APRO Co., Ltd.
Axeme
CINCON
SparkLAN
Connections Made Easy
BOARDCON
Embedded Design
GSD
AMPAK Technology Inc.
Advanced Module Packaging Solution
Geehy
SEMICONDUCTOR
FN-LINK
Innovation For Surfing
FEASYCOM
KingSpec
kingfull
FEIYUXIN
飞宇信
SINOSEEN
camera module pro
CET
UNIQUEST
HiMAX
Firefly
shinwa
VATS BATTERY
沥拓科技
LEETOP
intel
Sunlord
NVIDIA
BROADCOM
RENESAS
Renesas Electronics
LANTRONIX
Fuyuang
Variscite
NXP
LONTIUM
SEMICONDUCTOR
Thundercomm
infineon
SK hynix
GigaDevice

Organization



Growth Trend



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