

AI

Product Roadmap



Embedded Mainboard & SBC

Embedded Fanless PC

IP65/66/67/69K Panel PC / Box PC



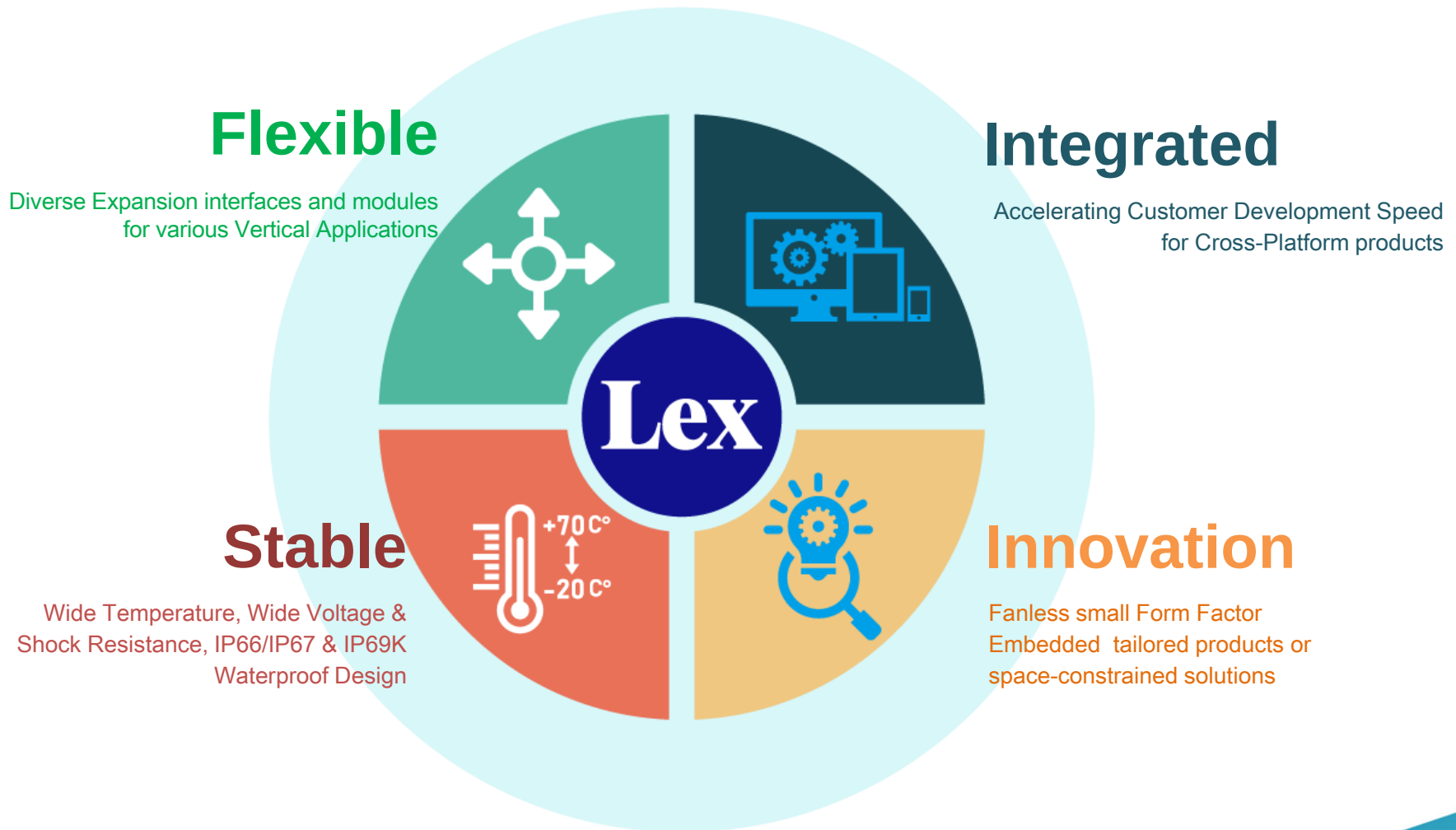
Lex SYSTEM®

2025 Q1

Contents

- LEX System Features & Advantages
- Embedded Solution Overview
- Embedded Solution Case Study
- Product Highlights
- Product Development Timeline
- Product long term supply
- Contact Information

Features & Advantages



LEX SYSTEM – Embedded Solution

LEX offers design and manufacturing of industrial motherboards, industrial computers, expansion boards, and customized industrial computers, including edge computing systems and AI intelligent application platforms. Our in-house developed products cover four major categories:



Total : 83 pcs

1 Embedded IPC Board

- Femto-ITX 1.8" : 3pcs
- 3.5"SBC : 30 pcs
- Computer On Module : 5 pcs
- UPS board : 4 pcs *
- double counting with SBC
- Pico-ITX 2.5" : 27 pcs
- 5 ¼ " (200 x 150mm) : 4 pcs
- CPU board : 3 pcs
- ARM based : 7pcs



2 Customized Motherboard & Chassis

Innovating Research & Integration Services for
Global OEM/ODM and System Integrators

• Applications



AI / Visual Analytics



Smart Manufacturing /
Machine Vision



IoT / IIoT



Smart Healthcare/
AI Medical Imaging



Smart Transportation &
Railways



Maritime Shipping
& Navigation



Defense / Military
Robust Computers



Edge Computing
Edge Gateway Control



Networking/
Communication Equipment

LEX SYSTEM – Embedded Solution



3 Fanless Rugged Panel PC, Fanless Embedded Systems, Servers



4 Expansion Boards/Cards & Related Accessories

Fanless Rugged Panel PC



•SUPER series (7"/10.1"/10.4"/15")



•VITA series (10.1"/15"/21.5"/23.8")



•Slim series (8.4"/10.2"/15.1"/17")



•SHARK IP66/67 **waterproof** (10.1"/13.3")



•STAR IP66/67 **waterproof** (10.4"/12.1"/15.1")

•**Stainless** IP66/IP67/IP69K **waterproof**

(10.4"/15.1"/19")

Fanless Embedded System



•Rugged /Waterproof System



•In-vehicle System

•DIN Rail System



•1U server

•AI image Analysis & Machine Vision

•Ultra Compact / Compact System

•High-Speed Ethernet Network Card / PoE / Fiber Card

•4G / 5G / WiFi / Bluetooth Module

•Video Capture Card

•USB / SIM / COM / Display Conversion Card

•M.2 / eIO Expansion Card

•Storage Card

•Digital IO Card

•Carriers and Converter Boards

•Power Boards and Charger Modules

Embedded Solution— Case Study



Spain
Intelligent Transportation
Surveillance System



China
Highway ETC smarting
billing system



Germany
3D Surgery Navigation



China
Servotronics EtherCAT
Robot Motion Control

Embedded Solution— Case Study



Kiosk-Self Service
Harsh outdoor Panel PC
for Winter Olympics



Video Analysis
Metro Real-time
Surveillance System



Poland
Railway in-train
communication



Netherlands
Fleet management

2025 Q1 Product Highlights

3I140DW-3.5" SBC



Intel® 14th/15th Gen Meteor Lake-H /Arrow Lake Core Ultra CPU
2 x HDMI @, eDP
2 x DDR5 SODIMM Max 64GB
5 x Intel 2.5 GbE, USB 3.2, USB 2.0
1 x Mini PCIe, 2 x M.2, 1 x Nano SIM
2 x COM, 4DI / 4DO
146 x 110 mm

CI870CW-Industrial SBC



Intel® 15th Gen Arrow Lake-S CPU
DP/HDMI@/Type C, eDP
DDR5 UDIMM*4 W/ECC
5 x Intel 2.5 GbE, 5 xUSB 3.2, 4~6 USB 2.0
1 x PCIe, 3 x M.2, 1 x Nano SIM
4 x COM, 4DI / 4DO

ME225

Video Capture Card
(from HDMI@ device)

NXP-HAI01



Carrier Board for NXP
Vision Learning solution
Onboard Hailo-8 AI processor

PW505

Isolation power board for
Railway 60W with
CPC-Ignition on/off delay

2024 Product Highlights (Embedded IPC Board)



2I130HW-2.5" Plus SBC
2I130DW-2.5" Plus SBC
3I130DW-3.5" Plus SBC
3I130TW-161x150 mm SBC



2I110D-2.5" Plus SBC
2I110AW-2.5" Plus SBC
3I110HW/BW-3.5" Plus SBC



2NOR01- 2.5" Plus carrier board
Carrier Board for Edge AI solution with
NVIDIA® Jetson Orin™ Nano / NX

ORIN-TW

Carrier Board for Railway solution with
NVIDIA® Jetson Orin™ Nano / NX



3I470DW-155 x150 mm SBC



CI370D-217 x 185 mm SBC
CI371D-217 x 223 mm SBC
3I370DW-155 x150 mm SBC



2N8MP01- 2.5" Plus SBC



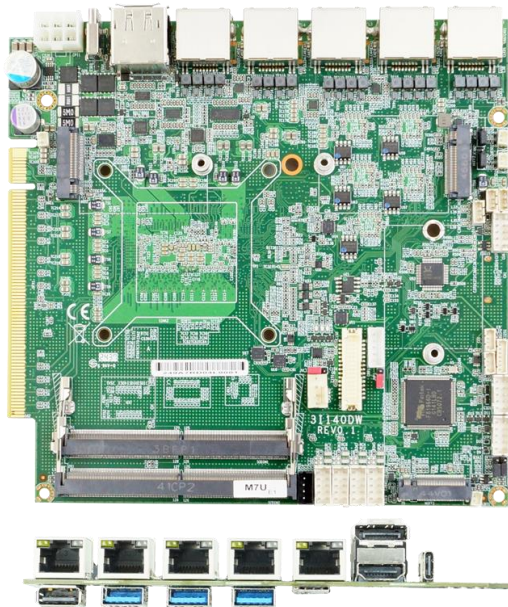
2I810D-2.5" Plus SBC
3I810DW-3.5" Plus SBC
3I810HW/BW-3.5" Plus SBC



2I640PW-Compute on Module
2I640HL-2.5" Plus SBC with Hailo-8
2I640DW-2.5" Plus SBC
2I640CW-2.5" Plus SBC
2I640HW-2.5" Plus SBC
2I640SW-2.5" Plus SBC
3I640DW-3.5" SBC
3I640CW-3.5" SBC

2025 Q1 Product Development timeline

15th /14th Gen Intel® Core™ Ultra CPU



31140DW - EVT

Intel 14th Gen Meteor lake-H Core Ultra CPU
Intel 15th Gen Arrow lake Core UltraCPU
2 x DDR5 SODIMM Max 64GB
5 x Intel 2.5 GbE , 4 x COM
3 x USB 3.2 ; 3 x USB 2.0
1 x HDMI®, 1 x DP, 1 x Type C, LVDS/eDP(eDP for OEM),
1 x M.2 M key Type 3042 / 3080 (PCIe x 4), Support NVMe,
1 x M.2 B key Type 3042 / 3052 (USB 3.2 Gen 1x1/ USB 2.0),
1 x Nano SIM
1 x M.2 B key Type 3042 (PCIe x 2/ USB 2.0)
HD Audio with Amplifier
TPM 2.0
4 DI/ 4DO
1 x SATA
I2C, I2S, SMBus
PCIe x 16 golden finger with PCIe x 8, PCIe x 4 signal,
Wide Range DC IN+9~36V
Dimension: 150 x 155 mm

2025 Q1 Product Development timeline



13th Gen Intel® Core™ Raptor Lake-P/U



2I130HW

Intel® 13th Gen Raptor Lake-U/P CPU
1 x DDR5 SODIMM (Max. 32GB)
HDMI, eDP, LVDS
2 x Intel 2.5 GbE, 4 x USB 3.2
4 x USB 2.0, 2 x COM, 4DI / 4DO,
HD Audio, 1 x Mini PCIe, 1 x M.2
108 x 10mm



2I130DW

Intel® 13th Gen Raptor Lake-U CPU
1 x DDR5 SODIMM (Max. 32GB)
HDMI, eDP
4 x Intel 2.5 GbE, 3 x USB 3.2
4 x USB 2.0, 2 x COM, 4DI / 4DO,
2 x M.2, 1 x Nano SIM
108 x 10mm



SKY 2 I130DW



ROCK 2 I130DW



3I130DW

Intel® 13th Gen Raptor Lake-P / U CPU
2 x DDR5 SODIMM (Max. 64GB)
2 x HDMI, eDP
5 x Intel 2.5 GbE, 3 x USB 3.2, 5 x USB 2.0
1 x Mini PCIe, 2 x M.2, 1 x Nano SIM
2 x COM, 4DI / 4DO
146 x 110 mm



3I130TW - EVT

Intel® 13th Gen Raptor Lake- U CPU
On-board LPDDR5 (16GB/32 GB)
HDMI, DP, eDP, 5 x Intel 2.5 GbE,
3 x USB 3.2, 5 x USB 2.0, 3 x M.2,
1 x Nano SIM, 2 x ISO-COM, HD Audio
2 x ISO-CANBus, 4DI / 4DO, onboard NVMe
CPC - Ignition Delay on/off control
161 x 150 mm



HAWK 3I130TW (M12)



HAWK 3I130DW



SKY 3 I130DW

2025 Q1 Product Development timeline

NVIDIA Jetson Orin Nano(Super)/ NX SOM Carrier Board

JETSON
Orin™ NX

JETSON
Orin™ Nano



ORIN-TW

1 x DP, 5 x GbE (1 + 4 x PoE)
1 x USB 3.1 Type C ; 2 x USB 3.1 Type A ; 1x USB 2.0
Mic-in / Line-out ; AMP 2W, 2 x SATA
2 x Isolated RS232 / RS422 / RS485, 1 x Isolated CANBus
1 x M.2 M key, 4 x M.2 B key, 1 x M.2 E Key, 1 x Nano SIM
2 x MIPI CSI, SPI, I²S, 3 x I²C, 8DI / 8 DO,
ISO Wide Range +9~36V, CPC-Ignition on/off delay control
Dimension: 186 x 166 mm



CPU Board:

NVIDIA Jetson NX: 8 / 16GB LPDDR5, 70 / 100 TOPs
NVIDIA Jetson Nano(Super): 4 / 8GB LPDDR5, 20 / 40 TOPs
AI Accelerator: NVIDIA® Jetson Orin™ Nano(Super) / Orin™ NX

2NOR01 - EVT

NVIDIA® Jetson Orin™ Nano(Super) / Orin™ NX
2 x HDMI , 2 x 2.5GbE, 1 x GbE
4 x USB 3.1, 1 x Type C USB 3.1 / 2.0 (OTG), 1 x USB 2.0
Mic-in / Line-out ; AMP 2W
2 x RS232 (Option RS422), 1 x CANBus
1 x M.2 M key 2 x M.2 B key, 1 x SIM, 4DI / 4DO
Internal wafer: SPI, I²S, I²C, USB 2.0



HAWK ORIN-TW



Back Panel
Optional M12 GbE I/O
Optional Anti-Vibration kit



Front Panel
Optional Mobile Rack

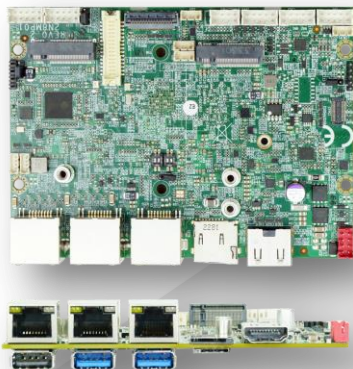


SKY 2 2NOR01

2025 Q1 Product Development timeline



NXP i.MX8M Plus /ARM Cortex-A53



2N8MP01 - EVT

NXP i.MX8M Plus (Quad core)
ARM Cortex A53 + M7 CPU
LPDDR4, 4GB / 8GB
Independent display: 1 x HDMI, LVDS, 1 x MIPI Display
3 x GbE LAN, 2 x USB 3.0, 3 x USB 2.0
2 x COM, 3 x M.2, 1 x Nano SIM
4DI / 4DO, 1 x MIPI (CSI), 1 x CANBus
115.4 x 84.5 mm

NET 2N8MP01



PALM-NEX001 - EVT

NXP i.MX8M Plus (Quad core)
ARM Cortex A53 CPU
LPDDR4, 8GB (NEX-8MP)
32GB eMMC 5.1 (NEX-8MP),
expandable to 256GB
HDMI ; 2 x GbE ; 2 x USB 3.0 / 2.0
1 x Micro SD, 1 x RS232, 1 x RS485
DC input : +5V
71.4W x 71.4D x 29.5H mm



NXP-HAI01 (NEX002)

Carrier Board with onboard Hailo AI chip

NXP i.MX8M Plus(Quad core)ARM Cortex-A53
processor up to 1.8 GHz
Memory: LPDDR4, 8GB (NEX-8MP)
32GB eMMC 5.1, option 64 / 128 / 256GB
1 x Micro SD
Onboard Hailo-8™ AI processor ;
2 x MIPI – CSI; 1 x Mini HDMI® ;
1 x GbE (M8 I/O) ; 1 x USB 3.0 Type A,
1 x USB 3.0 Type C ; 1 x RS485 + 2 DI/2DO(M8 I/O)
Power : Wide Range DC IN 9-24V (M8 Connector)
Dimension: 60W x 86D x 20.08H mm
(NEX-8MP: 58.42 x 58.42 mm)



Back



With NEX-8MP computer on module



2025 Q1 Product Development timeline



Intel® Elkhart Lake ATOM /Celeron processor



2I640PW - EVT

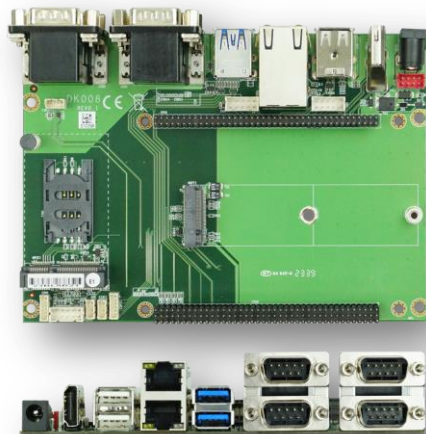
Pico Express Computer on Module

Intel® Elkhart Lake ATOM® x6413E / J6412 CPU
On Board LPDDR4 4GB or 8GB
Independent display: 1 x HDMI, 1 x LVDS, 1 x VGA
2 x Intel 2.5 GbE LAN, 2 x USB 3.0, 5 x USB 2.0
4 x COM, 1 x Mini PCIe, 1 x M.2
1 x PCIe x2 (Pico-Express)
Touch Screen, HD Audio, 4DI / 4DO
102 X 85 mm



2I640SW

Intel® Elkhart Lake ATOM® x6413E / J6412
1 x DDR4 SODIMM Max 32GB
2 x HDMI, LVDS/eDP
Touch Screen Controller
2 x Intel 2.5GbE ,2 x USB 3.1, 5 x USB 2.0
4 x RS232/422/485
4 DI / 4 DO
2 x M.2 B Key Type3042 , 1 x Nano SIM
110 x 98 mm



DK008 - EVT

Evaluation Board for 2I640PW

I/O: 1 x HDMI, 2 x RJ45 , 2 x USB 3.0, 2 x USB 2.0
4 x COM, 1 x Mini PCIe, 1 x M.2, 1 x PCIe x1,
4DI / 4DO, Wide Range DC -IN
104 x 146 mm

2025 Q1 Product Development timeline

Expansion Card and Modules



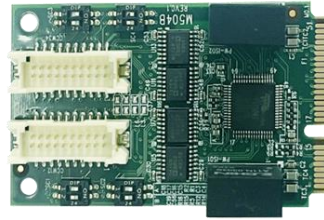
NF226A

M.2 2242 B+M key to
1 x Intel I226IT 2.5GbE



NF226B

M.2 3042 B+M key to
2 x Intel 2.5 GbE



M504B

Mini PCIe to 4* RS232/485/422
(F81504U)



CIO308 DI/O Board

4 Digital Input + 4 Digital Output
4 Optocoupler DI / 2 SSR DO + 2 Relay DO



CN063

USB to 4 x M.2 B-key 3042 / 3052
size + 4 port SIM



CN063 Bottom



NF212A

M.2 2242 B+M key to
1 x Intel I210IT GbE



NF212B

M.2 3042 B+M key to
2 x Intel GbE



PW505

Isolation power board
with CPC-Ignition on/off control

- 1.5KVDC I/O isolation
- PW505-36: 9–36V in, 12V out, max 60W
- PW505-75: 18–75V in, 12V out, max 60W



ME225

Video Capture Card
(from HDMI@ device)

4K@30 RAW or 4K@60fps MJPEG

LEX SYSTEM with Long-Term Supply

EOL Timeline	2028	2029	2030	2031	2032	2033	2034	2035	2036
Raptor Lake-U						Q1			
Tiger Lake-UP3			Q3						
Comet Lake-S			Q2						
Whisky Lake-U						Q3			
Coffee Lake-S 9 th							Q2		
Coffee Lake-S 8 th						Q2			
Kaby Lake-U/S 7 th					Q1				
Skylake-U/S 6 th			Q3						
Elkhart Lake				Q1					
Apollo Lake				Q3					
Bay Trail	Q4								
Jetson Orin			Q1						
i.MX8M Plus									Q1
AMD Ryzen V/R1000		Q1							

* Product life span in alignment with Intel's IOTG / NVIDIA modules Life cycle /NXP CPU /AMD longevity.

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