



STAR



HAWK 3I130TW (M12)



LEX SYSTEM TW-series provide comprehensive EN50155 compliant solutions that bring AI and IoT (AIoT) to the traffic Railway for Smart Transportation industry.

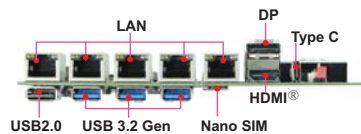
Innovating Railways and Smart Transportation through Cutting-Edge AI Solutions

Safety Certification Ready

LEX SYSTEM intelligent transportation solution remains stable even when the power input changes (Wide Range DC-IN isolation power / vehicle ignition on/off delay module). LEX solutions are with aluminum chassis will be the excellent at Low EMI and heat dispatching solution (range of - 40°C to 60°C), as well as having been fully tested for the railway operating environment in order to support EN50155 / EN50121 compliance and E-Mark ; ISO 7637 certification.



LEX SYSTEM Powerful in-vehicle solution 3I130TW- 3.5" Plus SBC with 13th Gen. Intel ® Raptor Lake Processor



• 3I130TW



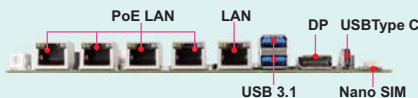
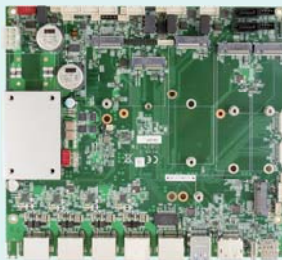
Intel® 13th Gen Raptor Lake-U, i7 / i5 / i3, Pentium CPU

- Onboard LPDDR5, 16GB / 32GB
- OEM option-Onboard (256GB / 512 GB / 1TB) NVMe,
- 2 x SATA, NVMe, M.2-SSD NVMe
- 1 x HDMI®, 1 x DP, 1 x Type C DP ALT Mode
- 5 x Intel 2.5 GbE LAN (RJ45/M12), 3 x USB 3.2, 1 x USB 2.0
- 1 x M.2 M Key, 2 x M.2 B Key, 1 x Nano SIM
- 2 x Isolated RS232 /RS422/RS485 ,
- 1 x Isolated , 4DI / 4DO, TPM 2.0, SMBus, I2C
- Wide Range 9-36VDC-IN, CPC-Ignition on/off delay control
- Wide Range DC IN +18~75V (option),
- Isolation Power Module: 1.6KVDC I/O isolation
- SIP Wide Range DC IN +20~53V (option)
- Option: 4G / 5G LTE, Wi-Fi 6, BT, GPS
- 161 x 150 mm

Carrier Board for NVIDIA® Jetson Orin™ Nano / NX SoM



Jetson Orin™



• ORIN-TW

CPU Board:

NVIDIA Jetson Nano: 4 / 8GB LPDDR5, 20 / 40 TOPs

NVIDIA Jetson NX: 8 / 16GB LPDDR5, 70 / 100 TOPs

AI Accelerator: NVIDIA® Jetson Orin™ Nano / Orin™ NX

- 1 x DP
- 5 x GbE (1 x GbE(RJ45/M12)+ 4 x PoE (RJ45/M12))
- 2 x SATA, M.2-SSD NVMe
- 1 x USB 3.1 Type C; 2 x USB 3.1 Type A ; 1x USB 2.0
- Mic-in / Line-out ; 8 DI/ 8DO
- 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
- Wide Range +9~36V, CPC-Ignition on/off delay control
- Option: 4G / 5G LTE, Wi-Fi 6 , BT, GPS
- 186 x 166 mm

Smart Transportation Industrial Computers

LEX SYSTEM revolutionizes smart transportation by integrating advanced intelligence into infrastructure, enhancing safety, efficiency, and real-time decision-making. These compliant systems support traffic management, vehicle monitoring, and predictive maintenance, ensuring seamless integration and improved performance across transportation networks.



• 2 Mobile Rack



• **HAWK 31130TW**

Intel® 13th Gen Raptor Lake-U, i7 / i5 / i3, Pentium CPU

- Onboard LPDDR5, 16GB / 32GB
- OEM option-Onboard (256GB / 512 GB / 1TB) NVMe, Mobile Rack x 2 (option), M.2-SSD
- 1 x HDMI®, 1 x DP, 1 x Type C DP ALT Mode
- 5 x Intel 2.5 GbE LAN, 3 x USB 3.2, 1 x USB 2.0
- 1 x M.2 M Key, 2 x M.2 BKey, 1 x Nano SIM
- 2 x Isolated RS232 /RS422/RS485 ,
- 1 x Isolated CANBus (option), 4DI / 4DO, TPM 2.0, SMBus, I2C
- Wide Range 9-36V DC-IN, CPC-Ignition on/off delay control
- Wide Range DC IN +18~75V (option),
- Isolation Power Module: 1.6KVDC I/O isolation
- SIP Wide Range DC IN +20~53V (option)
- Option: 4G / 5G LTE, Wi-Fi 6, BT, GPS
- 220W x 176.6D x 80H mm (Mobile Rack-option)



Jetson Orin™



• Mobile Rack



• 4 PoE

• **HAWK ORIN-TW**

CPU Board:

NVIDIA Jetson Nano: 4 / 8GB LPDDR5, 20 / 40 TOPs

NVIDIA Jetson NX: 8 / 16GB LPDDR5, 70 / 100 TOPs

AI Accelerator: NVIDIA® Jetson Orin™ Nano / Orin™ NX

- 1 x DP
- Mobile Rack x 1 (option), M.2-SSD
- 5 x GbE (1 x GbE(RJ45)+ 4 x PoE (RJ45))
- 1 x USB 3.1 Type C; 2 x USB 3.1 Type A ; 1x USB 2.0
- Mic-in / Line-out ; 8 DI/ 8DO
- 2 x Isolated RS232 /RS422/RS485 , 1 x Isolated CANBus
- 1 x M.2 M Key, 4 x M.2 BKey, 1 x M.2 E Key
- 1 x Nano SIM
- Wide Range +9~36V, CPC-Ignition on/off delay control
- Option: 4G / 5G LTE, Wi-Fi 6, BT, GPS
- 220W x 176.6D x 80H mm (Mobile Rack-option)

Anti - Vibration



EN50155





• HAWK 3I130 TW (M12)

Intel® 13th Gen Raptor Lake-U, i7 / i5 / i3, Pentium CPU

- Onboard LPDDR5, 16GB / 32GB
- OEM option-Onboard (256GB / 512 GB / 1TB) NVMe, Mobile Rack x 2 (option), M.2-SSD
- 1 x HDMI®, 1 x DP, 1 x Type C DP ALT Mode
- 5 x Intel 2.5 GbE LAN (M12), 3 x USB 3.2, 1 x USB 2.0
- 1 x M.2 M Key, 2 x M.2 BKey, 1 x Nano SIM
- 2 x Isolated RS232 /RS422/RS485 ,
- 1 x Isolated CANBus (option), 4DI / 4DO, TPM 2.0, SMBus, I2C
- Wide Range 9-36V DC-IN, CPC-Ignition on/off delay control
- Wide Range DC IN +18~75V (option),
- Isolation Power Module: 1.6KVDC I/O isolation
- SIP Wide Range DC IN +20~53V (option)
- Option: 4G / 5G LTE, Wi-Fi 6, BT, GPS
- 220W x 176.6D x 80H mm (Mobile Rack-option)



Jetson Orin™



• HAWK ORIN-TW (M12)

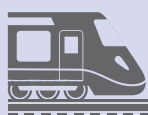
CPU Board:

NVIDIA Jetson Nano: 4 / 8GB LPDDR5, 20 / 40 TOPs

NVIDIA Jetson NX: 8 / 16GB LPDDR5, 70 / 100 TOPs

AI Accelerator: NVIDIA® Jetson Orin™ Nano / Orin™ NX

- 1 x DP
- Mobile Rack x 1 (option), M.2-SSD
- 5 x GbE (1 x GbE(M12)+ 4 x PoE (M12))
- 1 x USB 3.1 Type C; 2 x USB 3.1 Type A ; 1x USB 2.0
- Mic-in / Line-out ; 8 DI/ 8DO
- 2 x Isolated RS232 /RS422/RS485 , 1 x Isolated CANBus
- 1 x M.2 M Key, 4 x M.2 BKey, 1 x M.2 E Key
- 1 x Nano SIM
- Wide Range +9~36V, CPC-Ignition on/off delay control
- Option: 4G / 5G LTE, Wi-Fi 6, BT, GPS
- 220W x 176.6D x 80H mm (Mobile Rack-option)



EN50155



M12 Connectivity

Customerized OEM/ODM Service

In-vehicle Rugged Panel PC system

Robust Panel-PCs designed for easy integration into in-vehicle applications. Ready to meet the harsh demands required of them such as sunlight readability, vibration resistance, and water proofing.

Panel brightness

Standard 250-500nit brightness
Optional 1000-1500nit
(ISP super brightness)



Wide Range DC-IN

Wide Range DC-IN 9~36V Isolation power brick
Wide Range DC IN +18~75V (OEM option),
Wide Range DC IN +40~160V (OEM option)

Touch screen thickness

Industrial grade Touch screen thickness 1.1mm
Full fit Touch screen (optional to anti-AG/AR/UV)



Rugged Design

IP67 Rating
M12 Connectivity



WATERPROOF

STAR series



M12 I/O



10.4 inch Panel PC

- 1024 x 768 resolution, IP 67 rating
- 500nit brightness (Optional 1000-1500nit)
- **Intel® 13th Gen Raptor Lake Core CPU or Intel® Elkhart Lake ATOM® x6000E CPU**
- **M12 I/O:** LAN / COM / USB
- **M12 I/O:** Wide Range 9~36V DC-IN



12.1 inch Panel PC

- 1024 x 768 resolution, IP 67 rating
- 500nit brightness (Optional 1000-1500nit)
- **Intel® 13th Gen Raptor Lake Core CPU or Intel® Elkhart Lake ATOM® x6000E CPU**
- **M12 I/O:** LAN / COM / USB
- **M12 I/O:** Wide Range 9~36V DC-IN



15.1 inch Panel PC

- 1024 x 768 resolution, IP 67 rating
- 450nit brightness
- **Intel® 13th Gen Raptor Lake Core CPU or Intel® Elkhart Lake ATOM® x6000E CPU**
- **M12 I/O:** LAN / COM / USB
- **M12 I/O:** Wide Range DC-IN



21.5 inch Panel PC

- 1920 x 1080 resolution resolution, IP 67 rating
- 250nit brightness
- **Intel® 13th Gen Raptor Lake Core CPU or Intel® Elkhart Lake ATOM® x6000E CPU**
- **M12 I/O:** LAN / COM / USB
- **M12 I/O:** Wide Range DC-IN



USB 3.2 Gen 1 x 1

21130HW

Intel® 13th Gen Raptor Lake-P / U

- 1 x DDR5 SODIMM (Max. 32GB)
- Multiple Independent display: HDMI®, eDP, LVDS
- 2 x Intel 2.5 GbE LAN, Touch Screen Controller
- 4 x USB 3.2 Gen 1 x 1 (type A), 4 x USB 2.0
- 2 x RS232 /RS422/RS485, 4DI / 4DO, Audio with Amplifier
- 1 x Mini PCIe, 1 x M.2 B Key, TPM 2.0
- Wide Range 9~36V DC-IN
- 102 x 88 mm



21640HW

Intel® Elkhart Lake ATOM® x6413E / J6412 CPU

- On Board LPDDR4 up to 8GB
- Independent display: 1 x HDMI®, 1 x LVDS, 1 x eDP
- 2 x Intel 2.5 GbE LAN, Touch Screen Controller
- 1 x USB 3.0, 5 x USB 2.0
- Audio with Amplifier, 4DI / 4DO
- 1 x Mini PCIe, 1 x M.2, 1 x Nano SIM, 1 x PCIe x 2
- 1 x RS232 /RS422/RS485, 3 x RS232, SMBus, TPM 2.0
- Wide Range 9~36V DC-IN
- 102 x 88 mm

Expansion

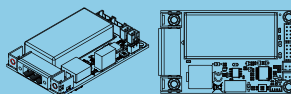
Supporting Industrial I/O Module Expansion

LEX SYSTEM offers flexible and modular support for various smart transportation applications, allowing customers to easily customize without changing their system.

Power Module

PW505

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



PW506

Isolation power board for Railway 150W with CPC-Ignition on/off control

PoE Module

PW351

1 x PoE Out board



PW352

2 x PoE Out board (RJ45 / M12)



PW353

4 x PoE Out board (RJ45)



PW354

4 x PoE Out board (M12)



DI/O Board

CIO208

Digital Input & output Isolation
8DI or 8DO or 4DI+4DO



CIO108

Digital Input Isolation
8DI or 8DO or 4DI+4DO (2 Power relay +2 SSR)

