

LEX SYSTEM

Embedded Solution Product Roadmap

Embedded Solution Product Roadmap

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- Applications Overview
- Product Development Timeline
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- LEX SYSTEM Box PC Portfolio
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LEX SYSTEM Compelling Features

Flexible

Various expansions interface & modules
Easy customized for vertical applications



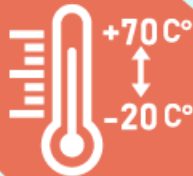
Integrated

Easy Installation without cable
Multiple platform for efficient development



Stable

Extreme Temp. & Anti-Shock Ability
IP66/IP67 & IP69K Waterproof



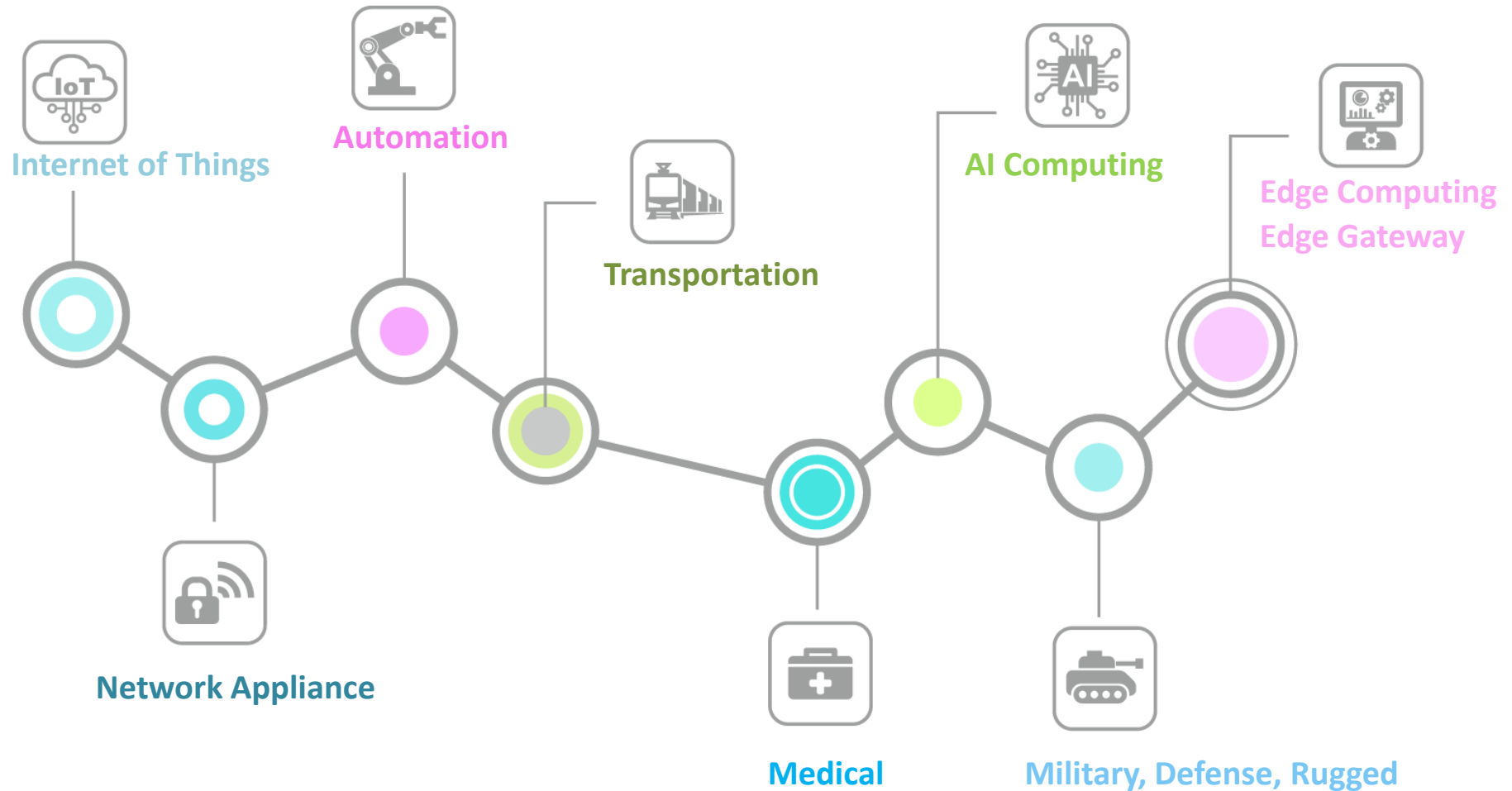
Compact

Small form factor fanless system
Ultra compact and slim solution

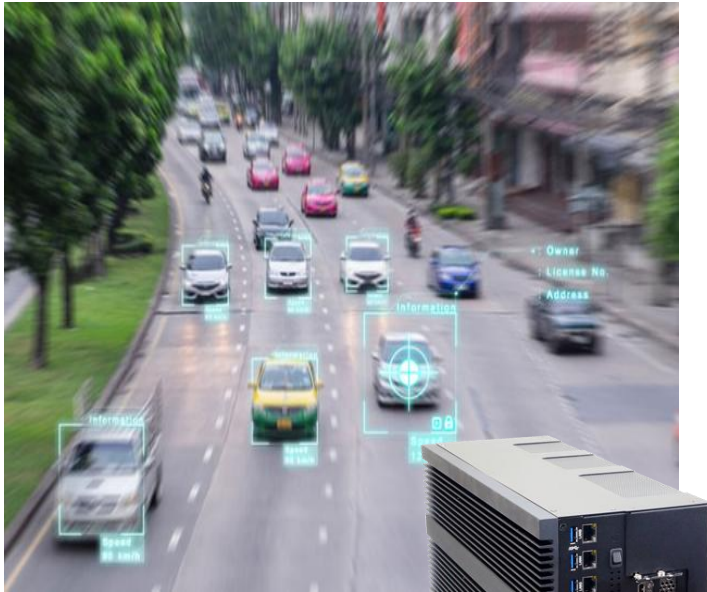


Lex

Applications Overview



Embedded Solution Case Study



Spain

Intelligent Transportation Surveillance System



China

Highway ETC smarting billing system

Embedded Solution Case Study



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

Moscow Metro Real-time Surveillance System

Embedded Solution Case Study



Poland



Railway in-train communication



Netherlands

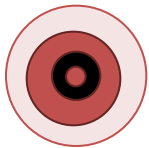


Fleet management and communication

2023 Q2 Product Development timeline

EVT

Engineering Validation Testing



13th Gen Intel® Core™ Raptor Lake-P/U
12th Gen Intel® Core™ Alder Lake-P/U

2I120HW

3I120DW

11th Gen Intel® Core™ Tiger Lake-UP3

2I110AW / 2I110D

3I110HW

Intel® Atom™ Elkhart Lake

2I640HL – onboard Hailo-8 AI Accelerator

2I640DW / 2I640CW / 2I640HW

3I640A/CW / 3I640DW

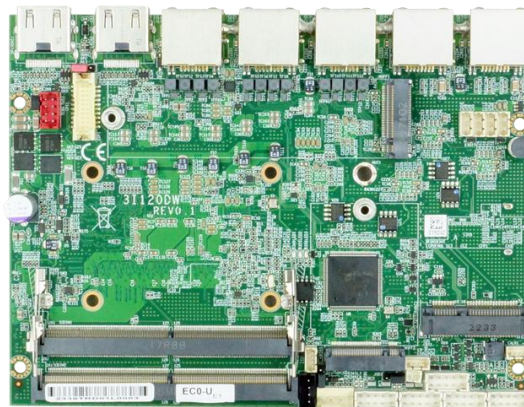
Embedded SBC

Intel® 13th / 12th Gen Core™ i processor

Product Development Timeline

31120DW

Intel® 13th Gen Raptor Lake-P / Raptor Lake-U CPU
Intel® 12th Gen Alder Lake-P / Alder Lake-U CPU
2 x DDR5 SODIMM (Max. 64GB)
Multiple Independent display: 2 x HDMI, eDP
5 x Intel 2.5 GbE LAN, 3 x USB 3.0, 5 x USB 2.0
1 x Mini PCIe, 1 x M.2 M Key, 1 x M.2 B Key,
1 x Nano SIM 2 x COM, 4DI / 4DO
TPM 2.0, SMBus, I2C



21120HW

Intel® 13th Gen Raptor Lake-P / Raptor Lake-U CPU
Intel® 12th Gen Alder Lake-P / Alder Lake-U CPU
1 x DDR5 SODIMM (Max. 32GB)
Multiple Independent display: HDMI, eDP, LVDS
2 x Intel 2.5 GbE LAN, 4 x USB 3.0 (type A),
6 x USB 2.0 2 x COM, 4DI / 4DO,
HD Audio 1 x Mini PCIe, 1 x M.2 M Key



Q2'23

Q3'23

Q4'23

Q1'24

Q2'24

EVT

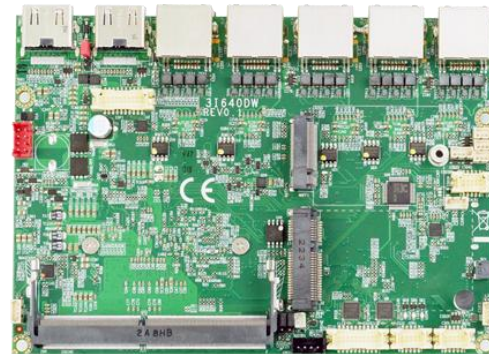
Embedded SBC

Intel® Elkhart Lake ATOM /Celeron processor

Product Development Timeline

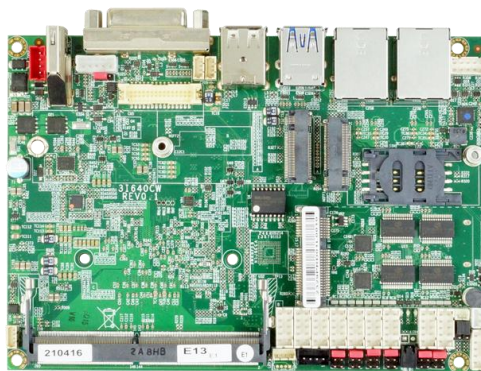
3I640DW

Elkhart Lake X6413E/J6412
DDR4 socket, max 32GB
2 x HDMI, 1 x USB 3.0, 7 x USB 2.0
5 x Intel 2.5 GbE, 2 x COM,
1 x M.2, 1 x Mini PCIe, 1 x Nano SIM, DI/O
DC 12V or Wide Range +9~36V DC IN



3I640CW

Elkhart Lake X6413E/J6412
DDR4 socket, max 32GB
HDMI, DVI, LVDS, 2 x USB 3.0, 4 x USB 2.0
2 x Intel 2.5 GbE, 6 x COM, Touch Screen
2 x M.2, 1 x Mini PCIe, 1 x Mini SIM, DI/O
DC 12V or Wide Range +9~36V DC IN



Q2'23

Q3'23

Q4'23

Q1'24

Q2'24

EVT

Embedded SBC

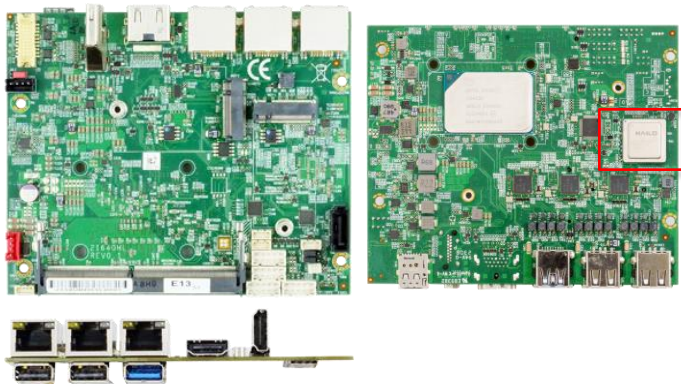
Intel® Elkhart Lake ATOM /Celeron processor
+ Onboard Hailo-8™ AI Accelerator

Product Development Timeline

HAILO
Empowering Intelligence **Hailo-8™**

21640HL

Elkhart Lake ATOM® X6413E / J6412 CPU CPU
Onboard Hailo-8™ AI Accelerator
1 x DDR4 SODIMM socket, Max. 32GB
Multiple Independent display: 2 x HDMI (1 x OEM to DP)
3 x Intel 2.5 GbE LAN, 1 x USB 3.0, 2 x USB 2.0, 2 x COM
2 x M.2, 1 x Nano SIM



NET-III
21640HL

Dimension:
135W x 110D x 40Hmm



SKY 2
21640HL

Dimension:
141W x 111.2D x 71.9H mm



Q2'23

Q3'23

Q4'23

Q1'24

Q2'24

EVT

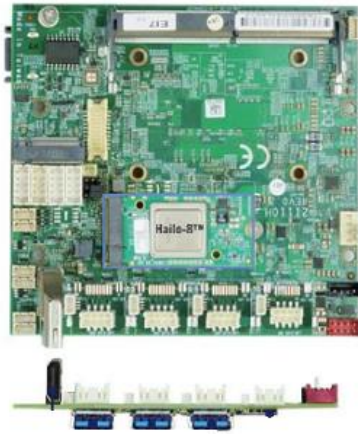
Lex SYSTEM®

2.5" SBC
110 x 100 mm

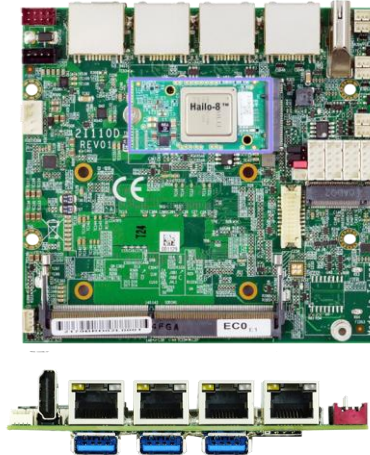
Embedded SBC

+ Hailo-8™ edge AI module

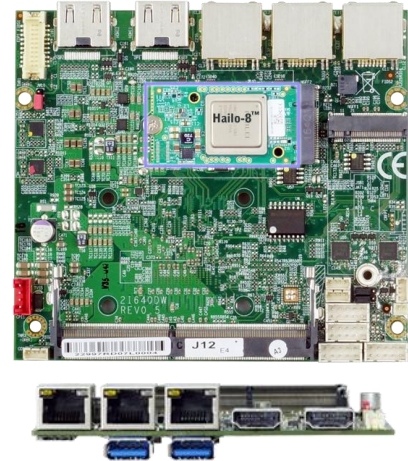
Product Development Timeline



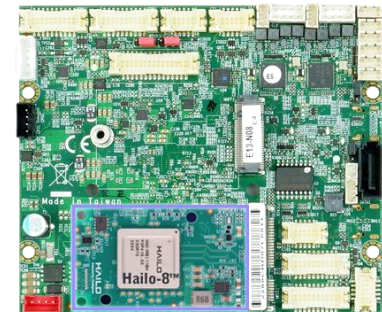
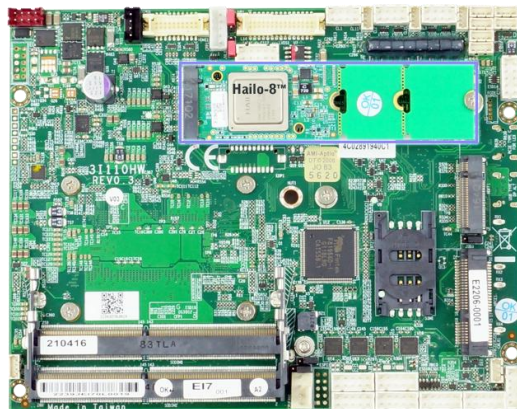
11th Gen Tiger Lake-UP3
2I110H
3I110HW



2I110DW
2I110AW



ATOM Elkhart Lake
2I640DW
2I640HW



HAILO
Empowering Intelligence
Hailo-8™

Q2'23

Q3'23

Q4'23

Q1'24

Q2'24

Embedded SBC + Hailo-8™ edge AI module



Product Development Timeline



9/8th Gen Coffee Lake-S
31370HW



10th Gen Comet Lake-S
31470HW

Q2'23

Q3'23

Q4'23

Q1'24

Q2'24

Embedded System + Hailo-8™ edge AI module

HAILO
Empowering Intelligence
Hailo-8™

Product Development Timeline



Compact Fanless AI Box:



Product Development Timeline



EVT

Computer on Modules

ARM Cortex-A53 processor

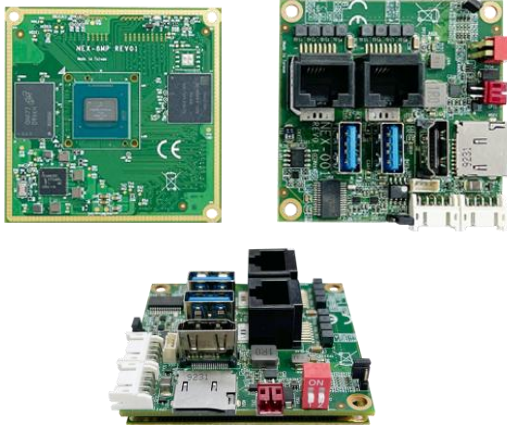


Product Development Timeline

Computer on Module (58.42 x 58.42 mm)

NEX-8MP+NEX-001

CPU: NXP i.MX8M Plus with Quad core
ARM Cortex-A53 processor up to 1.8 GHz
Memory: LPDDR4, 8GB, 32bit, 2133Mbps
Flash: NOR Flash 256Mbit 166MHZ
eMMC: NAND Flash 32GB, eMMC 5.1
HDMI, 1 x Micro SD , 2 x GbE,
2 x COM, 2 x USB 3.0, DC-IN 5V



PALM Compact Machine Learning controller



Dimension:
71.4W x 71.4D x 29.5H

Q2'23

Q3'23

Q4'23

Q1'24

Q2'24

EVT



Lex SYSTEM[®]

Box PC Portfolio

For CPU Board



APOLLO



APOLLO-Compact



APOLLO-RS



For 5 1/4" SBC



TINO



TINO-2PCI



TWISTER



TWISTER



MiTex



1U

For 3.5" SBC



TWITTER



TASK



PALM



BRIK

DIN Rail



MIRO-3



SKY-3

For 2.5" SBC



BLADE



TWIN



TERA



TEGA

DIN Rail



NET-I



NET-III



ARK-II



ARK-I



MIRO-2
MIRO-2 RS



SKY-2

For 1.8" SBC
& IP 67



PALM-I



SHARK **IP67**

Lex SYSTEM

Panel PC & Touch Monitor

SUPER

SHARK

STAR

STAINLESS

VITA

NEW



Panel Size
Resolution

7" (1024 x 600)
10.1" (1280 x 800)
10.4" (1024 x 768)
15.1" (1024 x 768)

7" (1024 x 600)
10.1" (1280 x 800)

10.4" (1024 x 768)
12.1" (1024 x 768)
15.1" (1024 x 768)
21.5" (1920 x 1080)

10.1" (1280 x 800)
15 " (1024 x 768)
21.5" (1920 x 1080)
23.8" (1920 x 1080)

Touch
Type

Resistive /
Capacitive

Resistive

Resistive
(21.5" Capacitive)

Projected Capacitive

IP66/67
Waterproof

Panel Size
Resolution

10.1" (1280 x 800)

10.4" (1024 x 768)
12.1" (1024 x 768)
15.1" (1024 x 768)

Optional IP69K

10.4" (1024 x 768)
15.1" (1024 x 768)
19 " (1280 x1024)

Touch Monitor



7" (1024 x 600)
10.1" (1280 x 800)
10.4" (1024 x 768)
15.1" (1024 x 768)

8.4" (800x 600)
10.4" (1024 x 768)
12.1" (1024 x 768)
15.1" (1024 x 768)
21.5" (1920 x 1080)

Resistive Touch

Resistive Touch

Resistive Touch
(19 " Capacitive)

Resistive / Capacitive

Lex SYSTEM
(21.5" Capacitive)

Touch
Type

Computer on Modules

LEX SMART & LEX PICO Express® with evaluation Board

SMART Computer on Modules

ST385W

Bay Trail-I E3845 1.91 GHz
DDR3L, Max. 8GB
LVDS or HDMI, Touch, VGA,
2 x GbE, 8 x USB, 4 x COM
2 x PCIe, 8 DI/ 8DO,
Wide Range DC-IN +9~36V



ST610W

Skylake-U/Kaby Lake-U Soc
DDR4, Max. 32GB
LVDS, HDMI, Touch, VGA,
2 x GbE, 7 x USB, 4 x COM
4 x PCIe, 8 DI/ 8DO,
Wide Range DC-IN +9~36V



SMART evaluation Board

ST001

VGA, HDMI
7 x mini PCIe, 3 x SIM
2 x USB 3.0, 2 x USB 2.0,
4 x COM, 2 x GbE, Audio



ST002

Concept Sample



ST004

Concept Sample



PICO Express Computer on Modules

21385PW

Bay Trail-I E3845 1.91 GHz
DDR3L 4 GB, 4 DI/4DO
LVDS, Touch, VGA, HDMI,
2 x GbE, 6 x USB, 4 x COM
2 x PCIe mini card, 1 x PCIe,
Wide Range DC-IN +9~36V



PICO Express Carrier Board

DK001

DVD-D, VGA,
USB, COM,
2xGbE, Audio

DK002

HDMI, VGA,
USB, COM,
2xGbE, Audio

DK005

8x PoE
1x GbE
VGA, HDMI
USB, COM

DK006

2 x GbE
USB, COM,
VGA, 4 x BNC

DK007

2 x PoE
VGA, USB,
COM

DM001

M12 IO :
8 x PoE, 1x GbE,
4x COM, 2xUSB,
VGA, mini HDMI

DM002

M12 IO :
2x GbE, VGA
4 x COM, 5xUSB,
mini HDMI,

DV001

DVD-D, VGA,
USB, COM,
RJ45, Audio

DV002

3xUSB, 4x COM,
Work w/ DV001

Extension Card 1/6

Multi Ethernets/PoE/Fiber/USB/Wireless extension

LAN /PoE LAN/Fiber LAN extension



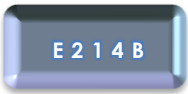
PCle x 4 card
2 x 10 GbE LAN



PCle x 1 card
4 x PoE 802.3AF/AT



PCle x 4 card
4 x PoE 802.3AF/AT



PCle x 1 card
4 x GbE LAN
(LAN by Pass)



PCle x 1 card
PSE Switch
4 x PoE 802.3AF



Wireless Module



USB 2.0 (3.3V)
Bluetooth 2.0
EDR support



Mini PCle Card
HSPA/UMTS
EDGE/GPRS/GSM
EV-DO/CDMA



Mini PCle Card
802.11 b/g/n



Mini PCle Card
50 channels GPS



Mini PCle card
1 x Fiber LAN
Work with CN052



Mini PCle card
4 x GbE LAN
Work with CL005
(LAN By Pass)



Mini PCle card
1~2 x GbE LAN
Work with CL001
Work with CL002
Work with PW352



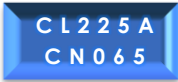
Mini PCle card
4 x GbE LAN
Work with CL004
Work with PW353
Work with PW354



Mini PCle Card
1~2 x 2.5G LAN
Work with CL007



M.2 B/N Key Card
1~2 x 2.5G LAN
Work with CL006



Mini PCle to 2 x 2.5 GbE LAN



Extension Card 2/6

Mini PCIe/USB/ SIM /M.2 extension/ Converter , Storage Card

Mini PCIe & SIM extension

CN030

Mini PCIe card
1 x 3G SIM socket



CN047

Mini PCIe card
4 x Mini PCIe slot
2 x Micro SIM



CN048

Mini PCIe card
2 x Mini PCIe slot
1 x PCIe M.2 B Key
2 x USB 2.0



CN049

Mini PCIe card
3 x Mini PCIe slot
1 x USB 2.0
Or
2 x Mini PCIe slot
2 x USB 2.0



CN041

USB 2.0 card
2 x Mini PCIe slot
2 x 3G/3.5G SIM



CN053

USB 2.0 card
4x Mini PCIe slot
4 x Micro SIM



M.2 extension

CN060

CN060-42 : 1 x M.2 B key 2242
CN060-52 : 1 x M.2 B key 2252 (5G)
2 x Nano SIM socket (option)



CN061

2 x M.2 USB extension
2 x M.2 B key 3042
2 x Micro SIM socket



CN063

4 x M.2 USB extension
4 x M.2 B key 3042
4 x Micro SIM socket



CN064

M.2 B key 2242 to
M.2 AE Key 2230



CN066

Mini Card to
M.2 AE Key 2230



CN067

M.2 B key to
M.2 B Key 2252



CN069

M.2 B /M key to
Mini PCIe



Storage Card

M061R

Mini PCIe card
2 x SATA 3.0
Hardware RAID 0/1



M061M

Mini PCIe card
2 x Mini PCIe slot
mSATA RAID 0/1



CF006

SATA to CFast



M465A

USB to SD card reader



CF007

SATA to 2 x CFast ,
RAID 0/1



Extension Card (3/6)

Audio / Display / COM /Fiber Converter board & Video Capture module

Converter board

CN059

USB to Line-out/Mic-in



AU001

USB to 4 ch
audio & amplifier



FB001

USB to 10/100 Fiber



CN058

System Power on
(Auto Boot)



COM Converter

CN045

SBC wafer card
4 x RS232 convert to
4 x RJ 45 connector



M303A

USB 2.0 card
USB to RS232
USB to RS485



M954B

Mini PCIe card
4 x RS232 /422/485
Isolation



M954C

Mini PCIe card
4 x RS232 /422/485



Video Capture Card

HD-SDI

Mini PCIe Card
1CH HD-SDI
Video Capture
card



M878B

Mini PCIe Card
2 CH or 4 CH
Video Capture
card



Display related

eDP001

eDP to LVDS



DP001

eDP to VGA



eDP003

eDP to DVI



eDP004

eDP to HDMI



ADC001

Analog In to Digital



M422A

Light Sensor –
Control Board
USB to I2C interface



CN054

VGA Surge Protector
Against lightning surge



CN055

SBC wafer card
SCSI LVDS to Touch
Monitor Connection



Extension Card 4/6

Digital IO extension , Backplanes / Riser Card

Digital IO

CN034

4 DI + 4 DO
4~8 DI
(Photo Coupler Isolator)
2~4 DO
(Relay Isolator)



CIO016

16 DI or 16 DO



CIO108

8 x DI or 8 x DO or
4 x DI+4 x DO
(2 Power Relay + 2 SSR)
Optocoupler Digital
Input isolation



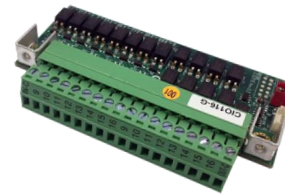
CIO208

8 x DI or 8 x DO or
4 x DI+4 x DO



CIO116

8 x DI + 8 x DO or
8 x DI+8 x DO w/
F75111N (GPIO)



M113A

Mini Card to 32pin GPIO
Work with
CIO116/108/208



Backplanes & Riser Card

BPM001

2 Slots
PClex16 + PCIe x 4
Work w/PM170DW



BPM002

2 Slots
PClex1 + PCIe x 4
Work w/PM610DW
Work W/ PM390CW



BPM003

2 Slot :PCIe x 8
Work w/PM170DW



RS701

PClex16 to PClex16
W/PM170DW



RS802

PCIe to 2 x PCIe slot
PCIe x 16+PCIe x 4
TINO CI370D



RS803

PCIe to 2 x PCIe slot
PCIe x 16+PCIe x 4
1U CI370D



RS804

PCIe to PCIe slot
Apollo-RS 3I3700DW



BPM004

PCIe to 1 x M.2 + 1 x PCI
PCIe x8 to 1 x PCI slot &
1x M.2 key M 2280/2242



BPM005

PCIe to 3 x PCIe Slot
PClex16+PClex8 to
2*PClex8 + 1*PClex4



RS814

PCIe x16 to 1 x PCIe x16 w/power
Max. 240W



RS815

PCIe x16 to 1 x PCIe x16 w/power
Max.500W



Extension Card 5/6

Power Board

PoE



PoE IN to ISO DC 12V



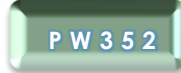
PoE IN to ISO DC 12V
& Charger 2S



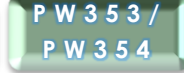
PoE IN to ISO DC 12V
PoE++ 60W PD



1 x PoE OUT



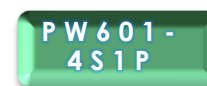
2 x PoE OUT



4 x PoE OUT



Power Backup Supercapacitor module



Super capacitor
4S1P power backup



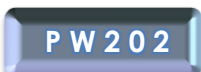
Super capacitor
2S1P power backup



Car Power Control & Power ON/OFF Delay



DC IN :+9V to 36V
Adjustable power
on/off delay time
60 Watt
DC Out: 12V/5A



DC IN :+15V to 36V
Adjustable power
on/off delay time
120 Watt
DC Out: 12V/10A



DC IN :+9V to 36V
Surge / UVP / OVP
protection
CPC function



Wide Range (Isolated)



Input : DC IN 18V~36V
DC IN 18V~75V
DC IN 9V~36V
Output: 4 x DC +12V
Power :120W



Input : DC IN 18V~75V
DC IN 16.6V~154V
DC IN 9V~36V
Output: 4 x DC +12V
Power :200W



Input : DC IN 43V~160V
Output: 5 x DC +12V
Power :200W



DC-IN Redundant



Redundant Power board
DC IN :+12V or 24V



TB Redundant Power board
DC IN :+12V or 24



Wide Range



DC IN :+9V to 36V
DC Out: 12V/5A
Power : 60W



DC IN :+9V to 36V
DC Out: 12V/20A
Power : 200W



Charger Board



Battery Charger
DC IN:5V~12V
DC Out: 12V/3.5A



Smart Battery Charger
DC IN:12V or 24V
Output:DC+12V(60W)
Support ErP



Extension Card 6/6

Flexible eIO extension Card

PoE LAN/ LAN/ Fiber / Mini PCIe



3I610DW+ L2M001

L2L001

- 5 x Intel Giga LAN
- 1 x Mini PCIe (USB)
- 1 x SIM push-push



L2L002

- 4 x Intel Giga LAN
- 1 x Fiber
- 1 x Mini PCIe (USB)
- 1 x SIM push-push



L2L003

- 4 x PoE (Switch)
- 1 x Fiber
- Wide Range +9~36V



L2L004

- 2 x PoE M12 Type
- 1 x Fiber (option)
- 1 x Mini PCIe (USE)
- 1 x SIM
- Wide Range +9~36V



L2M001

- 4 x Mini PCIe (Full size)
- (Support USB /PCIe)
- 4 x SIM push-push



Riser Card

RS601

- 1x PCIe x 1
- 1 x mini Card



RS602

- 2 x PCIe x 1
- 1 x mini Card



RS603

- 1x PCIe x 1
- 1x PCI
- 1 x mini Card



Contact us

LEXCOM B.V.
(The Netherlands)

Tel:+31-73-6872390
Fax:+31-73-6872398
Email: info@lex.com.tw

LEX COMPUTECH CO.,LTD.
(Taiwan Headquarters)

Tel:+886-2-2228-1055
Fax:+886-2-2228-1056
Email: lex.sales@lex.com.tw

LEX COMPUTECH CO.,LTD.

Tel:+7-906 082 8862
Email: anton@lex.com.tw

LEX COMPUTECH CO.,LTD.
(Xi'an CHINA)

Tel:+86-29-86239340
Fax:+86-29-86239340
Email: lex.sales@lex.com.tw

