

LEX SYSTEM

Embedded Solution Product Roadmap

Embedded Solution Product Roadmap

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LEX SYSTEM Compelling Features

Flexible

Various expansions interface & modules
Easy customized for vertical applications



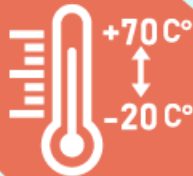
Integrated

Easy Installation without cable
Multiple platform for efficient development



Stable

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



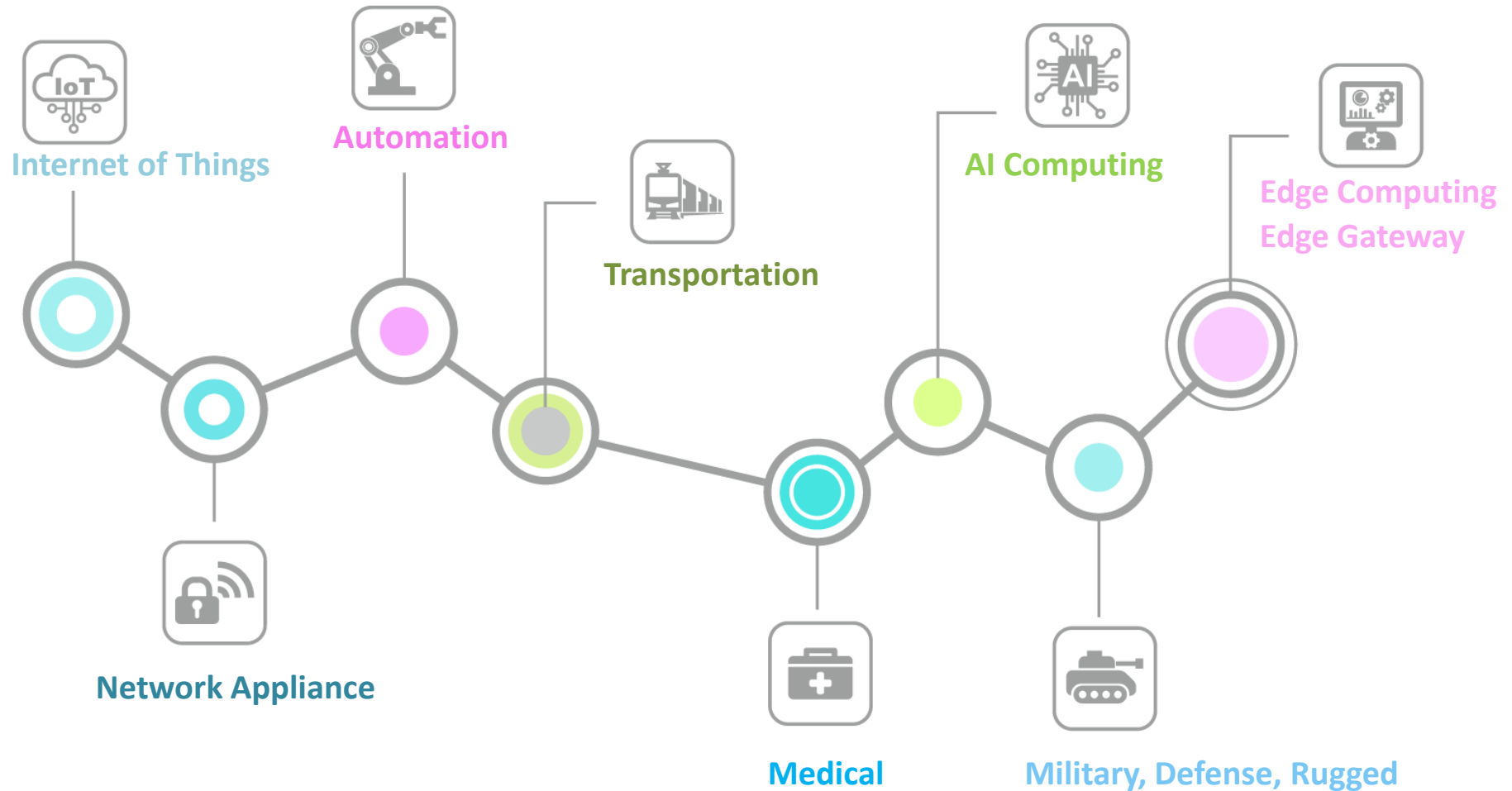
Compact

Small form factor fanless system
Ultra compact and slim solution

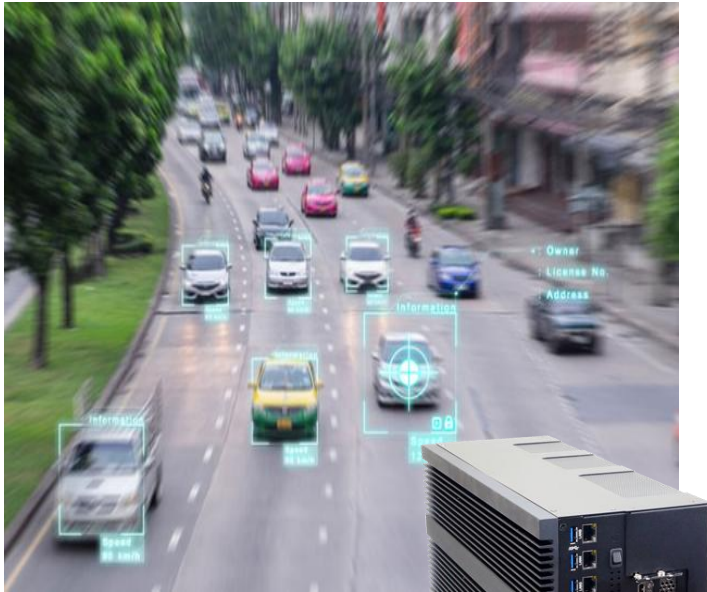


Lex

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

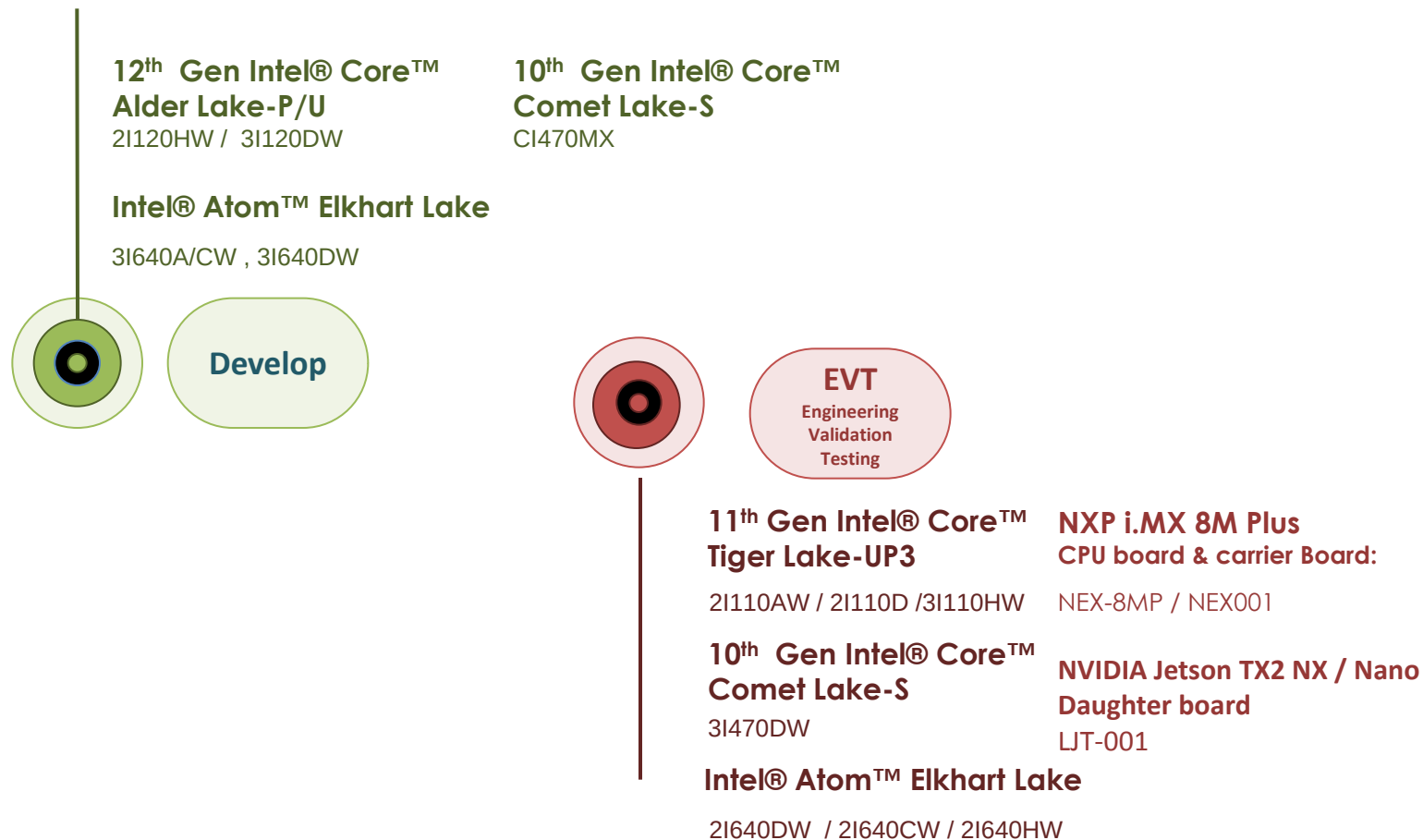


Netherlands



Fleet management and communication

2022 Q4 Product Development timeline



Embedded SBC

Intel® 12th Gen Core™ i processor

Product Development Timeline



Embedded SBC

Intel® Elkhart Lake ATOM /Celeron processor

Product Development Timeline

31640DW

Elkhart Lake X6413E/J6412
DDR4 socket, max 32GB
2 x HDMI, 4 x USB 3.1, Audio
5 x Intel 2.5 GbE, 6 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

31640A/CW

Elkhart Lake X6413E/J6412
DDR4 socket, max 32GB
HDMI, DVI, LVDS, 4x USB 3.1, Audio
2 x Intel 2.5 GbE, 6 x COM, Touch Screen
2 x M.2, 1 x Mini PCIe, 1 x SIM, DI/O
DC 12V or Wide Range +9~36V DC IN

Q4'22

Q1'23

Q2'23

Q3'23

Q4'23

Develop

Embedded SBC

Intel® Elkhart Lake ATOM /Celeron processor

Product Development Timeline

21640DW

Elkhart Lake X6413E/J6412
1 X DDR4, Max. 32GB
2 x HDMI, 1 x eDP, 5 x USB
3 x Intel GbE, 2 x COM
2 x M.2, 1 x Nano SIM



**NET-III
21640DW**



Dimension:
135W x 110D x 35H mm

**SKY 2
21640DW**



Dimension:
145W x 111.2D x 71.9H mm

**TEGA
21640DW**



Dimension:
145W x 102.4D x 56.5H mm

21640CW

Elkhart Lake X6413E/J6412
On board LPDDR4 4/8GB
2 x HDMI, 1 x eDP, 7 x USB
2 x Intel 2.5GbE, 4 x COM
1 x M.2, 1 x Mini PCIe, 1 x Nano SIM



**NET-III
21640CW**



Dimension:
135W x 110D x 40H mm

**SKY 2
21640CW**



Dimension:
145W x 111.2D x 71.9H mm

**TERA
21640CW**



Dimension:
145W x 102.4D x 56.5H mm

21640HW

Elkhart Lake X6413E/J6412
On board LPDDR4 4/8GB
HDMI, LVDS, 1 x eDP, 6x USB
2 x Intel GbE, 4 x COM, Touch Screen
1 x M.2, 1 x Mini PCIe, 1 x Nano SIM



Q4'22

Q1'23

Q2'23

Q3'23

Q4'23



EVT

Embedded SBC

Intel® 11th Gen Core™ i processor

Product Development Timeline

3I110BW/HW

Tiger Lake-UP3
DDR4, Max. 64GB
HDMI, DP ALT, VAG, eDP or LVDS
3 x GbE, 4 x COM, 7 x USB
Battery Charger



SKY 3
3I110HW

OEM

Dimension:
183 W x 141 D x 98.9 H



2I110D

Tiger Lake-UP3
DDR4, Max. 32GB
1 x HDMI, eDP, 4 x GbE, 9 x USB
1 x Nano SIM, 2 x M.2
DC IN +12V



SKY 2
2I110D



Dimension:
141W x 111.2D x 71.9 H

2I110AW

Tiger Lake-UP3
DDR4, Max. 32GB
4 x HDMI, 3 x 2.5GbE, 6 x USB
1 x Nano SIM, 2 x M.2, 2 x COM
Wide Range +9~36V DC IN



SKY 2
2I110AW



Dimension:
141W x 111.2D x 71.9 H

Q4'22

Q1'23

Q2'23

Q3'23

Q4'23

EVT

Lex SYSTEM®

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

Q4'22

Q1'23

Q2'23

Q3'23

Q4'23

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 x 1024)

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)

Touch
Type

Resistive Touch

Resistive Touch

Resistive Touch
(19" Capacitive)

Resistive / Capacitive

Lex SYSTEM
(21.5" Capacitive)

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



2 x PoE
VGA, USB,
COM

DK007

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

E 5 5 0 A

PCIe x 4 card
2 x 10 GbE LAN



E 6 9 1 A

PCIe x 1 card
4 x PoE 802.3AF/AT



E 6 9 4 A

PCIe x 4 card
4 x PoE 802.3AF/AT



E 2 1 4 B

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



E 6 1 7 A

PCIe x 1 card
PSE Switch
4 x PoE 802.3AF



Wireless Module

Bluetooth

USB 2.0 (3.3V)
Bluetooth 2.0
EDR support



3G / 4G

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



WiFi

Mini PCIe Card
802.11 b/g/n



GPS

Mini PCIe Card
50 channels GPS



USB extension

M 2 1 3 A

Mini PCIe card
1 x Fiber LAN
Work with CN052



M 2 1 5 A

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



M 2 1 2 A

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



M 2 1 4 A

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



M 2 2 5 A

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



N F 2 2 5 A

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



CL 2 2 5 A
CN 0 6 5

Mini PCIe to 2 x 2.5 GbE LAN



E 1 4 2 U

PCIe x 4 card
2 x USB 3.1



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



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

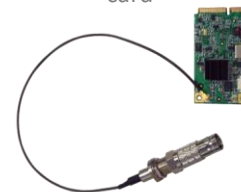
SBC wafer card
SCSI LVDS to Touch
Monitor Connection



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



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



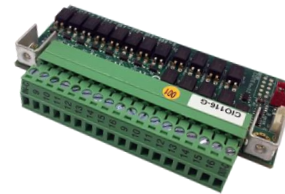
CIO208

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



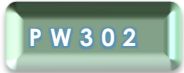
Extension Card 5/6

Power Board

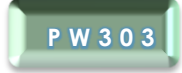
PoE



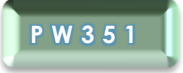
PoE IN to ISO DC 12V



PoE IN to ISO DC 12V & Charger 2S



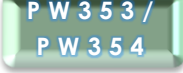
PoE IN to ISO DC 12V PoE++ 60W PD



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



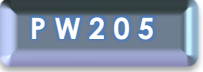
Car Power Control & Power ON/OFF Delay



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



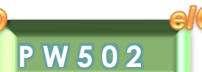
DC IN :+9V to 36V
Surge / UVP / OVP protection
CPC function



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



Isolated power with Car power Ignition
Delta 1/8 brick



DC-IN Redundant



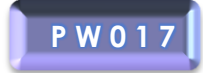
Redundant Power board
DC IN :+12V or 24V



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



Battery Charger
DC IN:12V or 24V
Output:DC+12V(60W)
Support 2S Battery pack



Battery Charger
DC IN:12V or 24V
Output:DC+5V/12V(15W)
Support 2S Battery pack



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

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