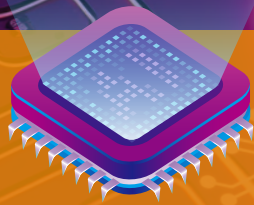# SUNIX®

2024 PRODUCT GUIDE

104 TOPS

AI

Ver.1

AI Inference Accelerator PCIe Card

104 TOPS

- Delivering 26-104 TOPS (Tera Operations Per Second)
- OS Support: Linux / Windows
- AI framworks: Tensorflow / Tensorflow Lite / Keras / Pytorch & ONNX
- Highest power-efficiency (FPS/Watt) compared with GPU solutions
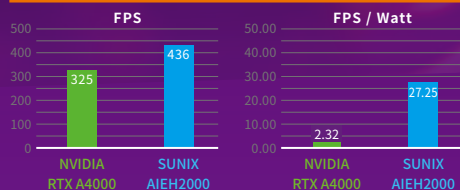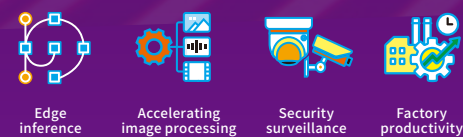- Comprehensive software suite supported and model conversion service

SUNIX Advantages

► Model Compiling Service
Model Conversion Service
► Model Fine-tune
► Fast Deployment

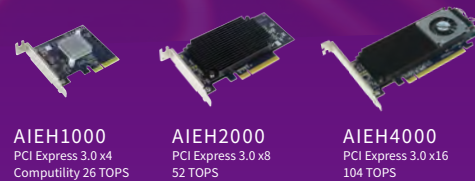### Model Fine-tuning

Model Compile

Keras / TensorFlow / PyTorch / ONNX
❶ Machine Learning Frameworks

- Model Parser
- Model Optimizer
- Resource Allocator
- Compiler
- Emulator
- Profiler

❷ Hailo Dataflow Compiler

Model Conversion

❸ SUNIX Accelerator Card

Deploy

HailoRT
Runtime Software Suite

Performance comparison (Yolov5m)

FPS

NVIDIA RTX A4000	325
SUNIX AIEH2000	436

FPS / Watt

NVIDIA RTX A4000	2.32
SUNIX AIEH2000	27.25

Application / Field

- Edge inference
- Accelerating image processing
- Security surveillance
- Factory productivity

Product family

AIEH1000
PCI Express 3.0 x4
Computility 26 TOPS

AIEH2000
PCI Express 3.0 x8
52 TOPS

AIEH4000
PCI Express 3.0 x16
104 TOPS

PCB AI AOI System

❶ PCB Manufacture
AOI Camera
Board
Image
Storage
NG
Quality Analysis
With SUNIX AI Card

❷ Ready to ship
AOI Camera
Image
Ship-out
NG
Quality Analysis
With SUNIX AI Card

❸ RMA Analysis
AOI Camera
Image
Problem Analysis
With SUNIX AI Card

License Plate AI Recognition

Edge PC + SUNIX AI Card
Video input
Action

- Vehicle type
- Driver's identity
- Visiting schedule
- Stay duration
- Weight detection
- Whitelist & blacklist
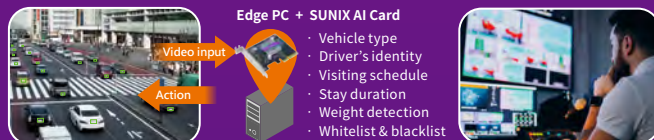
SUNIX® ODM Service

One-stop Solution Design Service for I/O Expansions
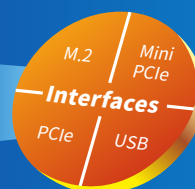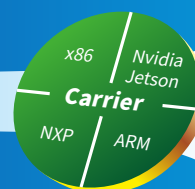
- **Multi I/O** — CANbus / UART / PoE / DIO
  Varies Combination
- **Interfaces** — M.2 / Mini PCIe / PCIe / USB
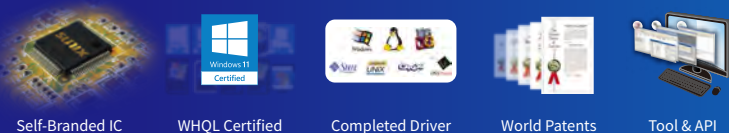 PC Expansions
- **Carrier** — x86 / Nvidia Jetson / NXP / ARM
  I/O Carrier Board

- SPI / eSPI module
- Daughter board
- Carrier board
- OPS extension
- Embedded I/O Module

SUNIX I/O Card Feature

- Self-Branded IC
- WHQL Certified (Windows 11 Certified)
- Completed Driver
- World Patents
- Tool & API

SUNCAN Advantages

- **SUNCAN Controller**
  · Higher performance
  · Less unnecessary process
- **Optimized Software**
  · Driver / API
  · SDK / SocketCAN
- **Wide Support**
  · Windows / Linux
  · Python / Node-RED
- **Cross-platform**
  · x86
  · NXP i.MX6 & i.MX8
  · Rockchip
  · NVIDIA Jetson
- **CAN FD Protocol**
  · Flexible date rate
  · Up to 8 Mbit/s

IoT Products

Gateway Ethernet IO Gateway

EZG1200
Microsoft Azure Gateway

EZG1300
MQTT Gateway

DevicePort I/O Remote IO (DIO/AI)

AI model	DIO model	Industrial	Serial model	AI model	DIO model	Combo model
EZR5231	EZR5002		EZISNNN40	EZIAINN80	EZIDIDIFF	EZIAIDI8F
4-port AI	2-port DI		4-port COM	8-port AI	32-port DI	8-port AI
	4-port DO					16-port DI
	EZR5003		EZISNSN44		EZIDCNN80	EZIAIDC88
	3-port DI		8-port COM		8-port DI	8-port AI
	3-port DO				8-port DO	8-port DI
	EZR5004				EZIDIDOFF	8-port DO
	4-port DI				16-port DI	
	2-port DO				16-port DO	

DevicePort Remote IO (RS-232/422/485)

Industrial

DPA301HTP
1-port RS-232/422/485
(3-in-1)

DPAD02HTP
2-port RS-422/485

DPAS01D00
1-port RS-232

DPA301D00
1-port RS-232/422/485
(3-in-1)

DPAS02H00
2-port RS-232

DPAS04H00
4-port RS-232

DPAS08H00
8-port RS-232

Device Server

IDSX02DW0	IDSX04DW0	IDSX08DW0
RS-232	RS-232	RS-232
IDSD02DW0	IDSD04DW0	IDSD08DW0
RS-422/485	RS-422/485	RS-422/485
IDS302DW0	IDS304DW0	IDS308DW0
RS-232/422/485	RS-232/422/485	RS-232/422/485
IDS302DWS	IDS304DWS	IDS308DWS
RS-232/422/485	RS-232/422/485	RS-232/422/485
w/ Surge & Isolation	w/ Surge & Isolation	w/ Surge & Isolation

2-port

4-port

8-port

ECS Application Kits

Microsoft Azure Certified

KSF1001G
IoT Integrated Solution

KPE1301
Smart Meter Monitoring

KEM1103
Environmental Monitoring

KEM1401
Machine Operation Rate

KEM1501
Intelligent Virtual Fence

Add-on Cards

M.2 Card

CAN FD NEW

CANM2102SI
2-port CAN FD
Industrial
M.2 Card
w/ Surge & Isolation
(Type-2280)

Digital I/O NEW

IPC-M4443I
4-Ch Digital In
4-Ch Digital Out
Industrial
M.2 Card
w/ Isolation
(Type-2280)

IPC-M4884I
8-Ch Digital In
8-Ch Digital Out
Industrial
M.2 Card
w/ Isolation
(Type-2280)

RS-232

M2S6437A
2-port RS-232

M2S6456A
4-port RS-232
M.2 Card
(Type-2242)

RS-422/485

IPC-M2202S
Industrial 2-port

IPC-M2204S
Industrial 4-port
RS-422/485
M.2 Card
w/ Surge
(Type-2280)

RS-232/422/485 NEW

IPC-M3202
Industrial 2-port
RS-232/422/485
M.2 Card
(Type-2280)

PCI/104 Card

RS-422/485

IPC-B2108
8-port RS-422/485
PCI/104 Card

PCIe Card

RS-232 / Parallel
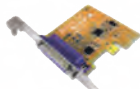
SER6427A
1-port RS-232
PCIe Card

SER6437A
2-port RS-232
PCIe Card

SER6456A
4-port RS-232
PCIe Card

SER5466A
8-port RS-232
PCIe Card
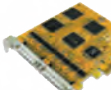
SER5416H
16-port RS-232
PCIe Card

PAR6408A
1-port IEEE1284
Parallel
PCIe Card

PAR5418A
2-port IEEE1284
Parallel
PCIe Card

MIO6469A
1-port RS-232 &
1-port Parallel
PCIe Multi-I/O Card

MIO6479A
2-port RS-232 &
1-port Parallel
PCIe Multi-I/O Card

MIO5499A
4-port RS-232 &
1-port Parallel
PCIe Multi-I/O Card

RS-422/485

IPC-E2202SI
Industrial 2-port
RS-422/485
PCIe Card
w/ Surge & Isolation

IPC-E2204SI
Industrial 4-port
RS-422/485
PCIe Card
w/ Surge & Isolation

IPC-E2108SI
Industrial 8-port
RS-422/485
PCIe Card
w/ Surge & Isolation

RS-232/422/485 NEW

IPC-E3202S
Industrial 2-port
RS-232/422/485
PCIe Card
w/ Surge

IPC-E3204S
Industrial 4-port

IPC-E3308S
Industrial 8-port
RS-232/422/485
PCIe Card
w/ Surge

CAN FD NEW

CANE2102SI
2-port CAN FD
Industrial PCIe Card
w/ Surge & Isolation

CANE2104SI
4-port CAN FD
Industrial PCIe Card
w/ Surge & Isolation

Digital I/O

SDC0880I
8-Ch Digital In
8-Ch Digital Out

SDC0FF0I
16-Ch Digital In
16-Ch Digital Out
Industrial PCIe Card
w/ Isolation

Serial + Digital I/O

SDC4880B
2-port internal RS-232/422/485
2-port external RS-232/422/485
8-Ch Digital In
8-Ch Digital Out
Industrial PCIe Card
w/ Surge & Isolation

MiniPCIe Card

CAN FD NEW

CANC2102SI
2-port CAN FD
Industrial
MiniPCIe Card
w/ Surge & Isolation

Digital I/O

IPC-C4443I
4-Ch Digital In
4-Ch Digital Out

IPC-C4884I
8-Ch Digital In
8-Ch Digital Out
Industrial
MiniPCIe Card
w/ Isolation

RS-422/485

IPC-C2202S
2-port RS-422/485

IPC-C2204S
4-port RS-422/485
Industrial
MiniPCIe Card

RS-232

MCS6437A
2-port RS-232

MCS6456A
4-port RS-232
MiniPCIe Card

MCS6456P
4-port RS-232
MiniPCIe Card
w/ Power Output

PCI Card
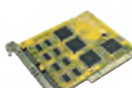
RS-232 / Parallel

SER5027A
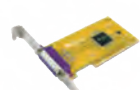1-port RS-232
PCI Card

SER5037A
2-port RS-232
PCI Card

SER5056A
4-port RS-232
PCI Card

SER5066A
8-port RS-232
PCI Card

SER5016H
16-port RS-232
High Speed
PCI Card

PAR5008A
1-port Parallel
PCI Card

PAR5018A
2-port Parallel
PCI Card

MIO5079A
2-port RS-232 &
1-port Parallel
PCI Multi-I/O Card

MIO5099A
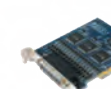4-port RS-232 &
1-port Parallel
PCI Multi-I/O Card

RS-422/485

IPC-P2102SI
Industrial 2-port
RS-422/485
PCI Card
w/ Surge & Isolation

IPC-P2104SI
Industrial 4-port
RS-422/485
PCI Card
w/ Surge & Isolation

IPC-P2108SI
Industrial 8-port
RS-422/485
PCI Card
w/ Surge & Isolation

IPC-P2116
Industrial 16-port
RS-422/485
PCI Card
w/ Surge & Isolation

RS-232/422/485

IPC-P3104
Industrial 4-port

IPC-P3108
Industrial 8-port
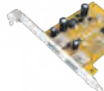RS-232/422/485
PCI Card

Extension Accessories

USB Series

USB4 NEW

UPB2430 (ODM)
USB4 40 Gbit/s
PCIe Host Card
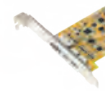w/ Type-C Receptacle
Support DP1.4a

USB 3.2 Gen1

USB2302
USB 3.2 Gen1 2-port
PCIe Host Card
(USBIF TID 350000174)

USB4300NS
USB 3.2 Gen1 4-port
PCIe Host Card
(USBIF TID 350000211)
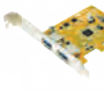
USB 3.2 Gen2(Alt-Mode)

UPA2015 NEW
USB 3.2 Gen2 10G & DisplayPort 1.4/1.2
PCIe Host Card w/ Dual Type-C Receptacle
(Alt-Mode)

USB 3.2 Gen2x2

USB2321C
USB 3.2 Gen2x2 20G
PCIe Host Card
w/ Type-C Receptacle

USB 3.2 Gen2

USB2312A
USB 3.2 Gen2 2-port
PCIe Host Card
w/ Type-A Receptacle

USB2312C
USB 3.2 Gen2 2-port
PCIe Host Card
w/ Type-C Receptacle

Powered USB

PUB1200X
1-port 24V Powered USB
& 2-port 12V Powered USB
PCIe Host Card

USB Type-C Adapter

C2VC7C0
USB Type-C
to VGA Adapter

A2CZ0T0
USB 3.1 Gen2 10G
USB Type-A to Type-C
Active Dongle

C2HF3C1 NEW
USB-C to **HDMI 2.1 (8K@60Hz / 4K@144Hz) Active Adapter**
W/ Detachable USB-C PD Cable

C2HF3C1P NEW
USB-C to **HDMI 2.1 (8K@60Hz / 4K@144Hz) Active Adapter**
W/ Detachable USB-C PD Cable
W/ PD Powered 60W USB-C Charging Port

Video Converter

D2H13MD
DisplayPort
**to HDMI 2.0 4K@60Hz
Active Dongle**

D2H13N0
DisplayPort
to HDMI Dongle

D2V17C0
DisplayPort
to VGA Dongle

H2V37C0
HDMI
to VGA Dongle

I2V67C0 NEW
DVI-D
to VGA Adapter

H2V97C0
HDMI
to VGA Adapter

H2V57C0
Micro HDMI
to VGA Adapter

2.5G Network PoE Series

LAN1225PS
1-port 2.5G BASE-T
Network PoE
PCIe Card

Power Input options:
PCIe Bus power - 12V
SATA power - 12V

LAN2225P
2-port 2.5G BASE-T
Network PoE
PCIe Card

Power Input options:
PCIe Bus power - 12V
6 pin GPU power - 12V
External power - 12V~24V

OCuLink Series

OCUM4221 NEW
M.2 2280 M key PCIe Gen4x4
to OCuLink 4i SFF-8612
Adapter

+

OCUE4241 NEW
OCuLink 4i SFF-8612
to PCIe Gen4x16 slot(4 lanes)
Extension Board

PCIe to M.2

P2M04M01
PCIe Gen3x4
to M.2 (Key-B+M)
PCIe Card
(Support PCIe #CLK_REQ)

M.2 Module Format:
2280 / 2260 / 2242 / 2230

P2M16M40 NEW
PCIe Gen4
to M.2 Key-M x4
PCIe Card

M.2 Module Format:
2280 / 2260 / 2242

USB to I/O Adapter

RS-232

UTS1009GC
USB to 1-port

UTS1009DF
USB to 1-port w/FTDI IC

UTS2009GC
USB to 2-port
RS-232 Adapter

UTS4009PF
USB to 4-port
RS-232 Serial HUB

RS-422/485 NEW

UTS1109B
USB to 1-port
RS-422/485 Adapter

UTS4109P
USB to 4-port
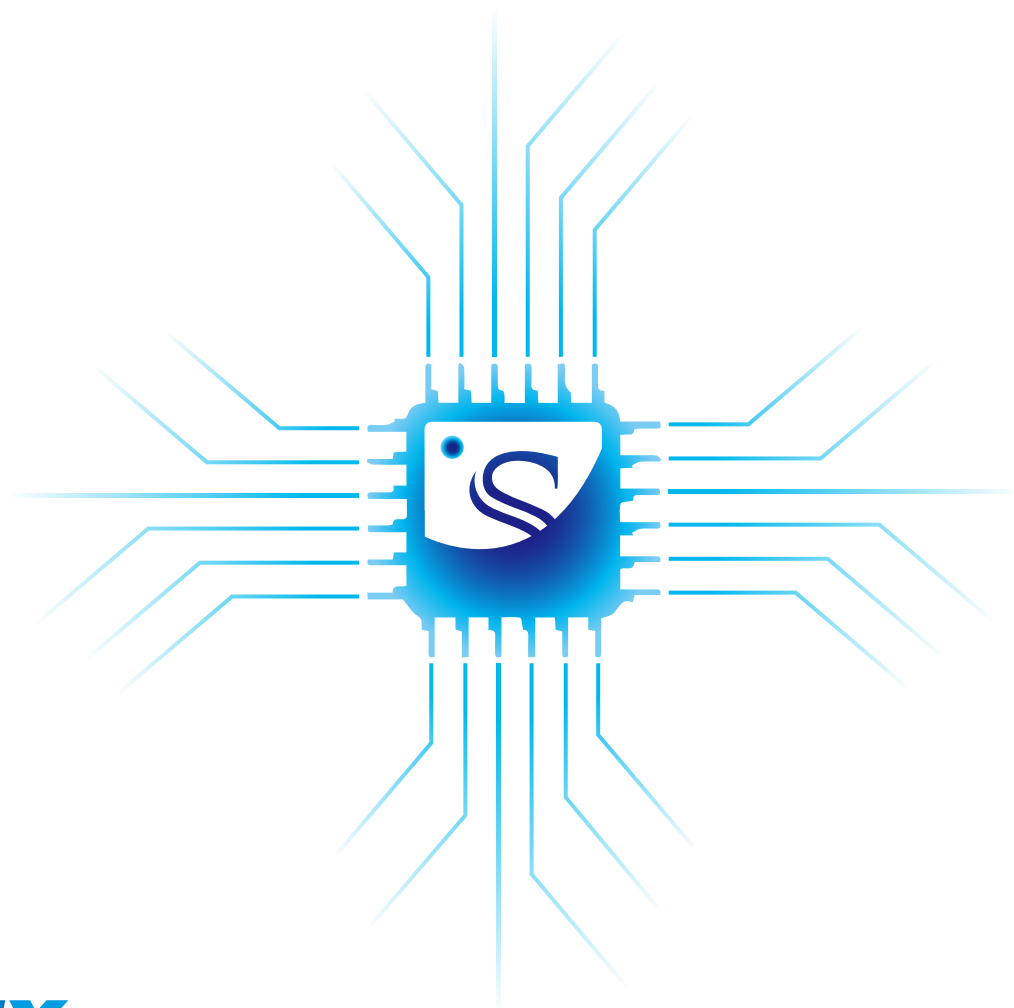RS-422/485 ComHUB

Powered COM NEW

UTS4009C
USB-C to 4-port
Powered RS-232
Serial Hub

Printer Port

UTP1025B
USB to Printer
Adapter

UTM1925C
USB to RS-232 + Printer
Adapter

SUNIX

TAIWAN

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GERMANY
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Email : info@sunix-euro.de

SUNIX was established in 1986. In 1995, we released the world's first RS-232 single-chip communication card; ever since, we have become the go to serial cards specialist, and number one world sales leader for serial cards. SUNIX's headquarter and R&D Center is located in Taiwan, and our factory in Kunshan, China. SUNIX is one of very few vertical integration suppliers with original chip design, software/hardware/firmware designs and supports, high quality products manufacturing, as well as global sales capabilities. For more than 30 years, SUNIX has specialized in the field of "Commercial communication". In this past year, we announced a revolutionary design for the IoT era, EAZInet, a true "Plug and Play" networking technology, which is able to provide the best intelligent transmission solutions for IoT applications. At SUNIX, we are striving for environmental protection and active participation in public welfare. Like our slogan "*Plug Into A Brand-new World*."

www.sunix.com