

# MICRODIS

COMPETENCE & RELIABILITY

INDUSTRIAL COMPUTERS



## INDUSTRIAL COMPUTERS

- I RUGGED BOX COMPUTERS
- I ALL-IN-ONE PANEL COMPUTERS
- I TOUCH DISPLAYS & PROJECTORS
- I RUGGED TABLETS
- I RAILWAY COMPUTERS
- I EMBEDDED BOARDS

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# INDUSTRIAL COMPUTERS AS THE BEST CHOICE

## INDUSTRIAL COMPUTER DESIGN



COMPACT SIZE

OPERATING TIME:  
24H/7DAYS

STRONG METAL HOUSING

ANTI-VIBRATION & SHOCK

DUST RESISTANT

FANLESS DESIGN

LOW POWER CONSUMPTION

MANY OPTIONS OF I/O INTERFACES

WIDE INPUT VOLTAGE RANGE

WIDE OPERATING TEMPERATURE

LONG LIFECYCLE

# CONTENT

EMBEDDED BOARDS	03
INDUSTRIAL COMPUTERS FOR DIGITAL SIGNAGE	04
AUTOMATION INDUSTRY COMPUTERS	06
WIDE OPERATING TEMPERATURE COMPUTERS	08
RUGGED TABLET PC	09
INDUSTRIAL PANEL PC	09
IN-VEHICLE INDUSTRIAL COMPUTERS	11
RUGGED RAILWAY COMPUTERS	11
DISPLAY SOLUTIONS	13
SUNLIGHT READABLE LCD	13
UNIQUE TECHNOLOGY	14
ABOUT MICRODIS PARTNERS	15

THIS FOLDER SHOWS ONLY A PART OF OUR PORTFOLIO.  
CONTACT US FOR RECOMMENDATION OF THE OTHER PRODUCTS.

# EMBEDDED BOARDS



## MAIN FEATURES:

- | Cost-effective reliable Motherboards from ASROCK Industrial based on latest Intel Atom/Celeron/Pentium/i3/i5/i7 and AMD processors
- | Only Japan-made high-quality Conductive Polymer Capacitors used
- | Fanless design
- | 24/7 operating time
- | 7-15 Years product availability
- | Various form factor: 3.5", UTX, NUC, PICO-ITX, mini-ITX, micro-STX, micro-ATX, ATX, OPS, 4x4 (NUC size),
- | Computers on modules : COM express, Qseven
- | Network M/B
- | Extended temperature boards



## Asrock SBC-250 - 3.5" cost-effective M/B

### MAIN FEATURES:

- | Intel® 11th Gen Elkhart Lake SoC Processors
- | Supports 2 x 260-pin SO-DIMM DDR4 3200 MHz, up to 32GB (16GB per DIMM)
- | 1 x USB 3.2 Gen2, 1 x USB 3.2 Gen1, 6 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 1 x M.2 Key B, 4 x COM, 1 x SATA3, 2 x Intel 2.5 Gigabit LAN
- | Support Triple display, 1 x LVDS or eDP, 1 x HDMI2.0b, 1 x VGA
- | TPM 2.0 onboard IC
- | 9-36V DC Input



## Asrock SBC-370x - 3.5" board with integrated 12th Gen. CPU

### MAIN FEATURES:

- | Intel® 12th Gen Alder Lake-P SoC Processors
- | 2 x 260-pin SO-DIMM DDR4 3200 MHz, up to 64 GB (32GB per DIMM)
- | 3 x USB 3.2 Gen2, 2 x USB 2.0, 1 x M.2 Key M, 1 x M.2 Key E, 1 x M.2 Key B, 3 x COM, 1 x SATA3, 1 x PCIe x1, 2 x Intel 2.5 Gigabit LAN
- | Support Quad display, 1 x HDMI2.0b, 1 x LVDS or eDP, 3 x DP 1.4a (2 from Type-C)
- | Supports Intel® vPro, AMT, RAID 0/1, and features a TPM2.0 on board IC
- | 12-36V DC Input



## Asrock IMB-1232-WV - powerful mini-ITX M/B with PCIe slot

### MAIN FEATURES:

- | Intel® 12th Gen (Alder Lake-S) Core™ Processors with H610 chipset
- | Supports 2 x 260-pin SO-DIMM DDR4 3200 MHz , up to 64GB (32GB per DIMM)
- | 1 x PCIe x16 (Gen4), 2 x USB 3.2 Gen2, 1 x USB 3.2 Gen1, 7 x USB 2.0, 1 x M.2 Key B, 1 x M.2 Key E, 1 x M.2 Key M, 4 x COM, 2 x SATA3, 2 x Intel 2.5 Gigabit LAN
- | Supports Triple display, 1 x HDMI 2.0b, 2 x DP 1.4a, 1 x LVDS, 1 x eDP1.4b
- | TPM 2.0 onboard IC
- | 12-28V DC Input (Lockable DC Jack)



## Asrock IMB-1712 - powerful ATX motherboard

### MAIN FEATURES:

- | Intel® 12th Gen (Alder Lake-S) Core™ Processors with Q670 chipset
- | 4 x 288-pin Long-DIMM DDR4 3200 MHz , up to 128GB (32GB per DIMM)
- | 1 x PCIe x16 (Gen4), 1 x PCIe x8 (Gen4), 2 x PCIe x4 (Gen4), 1 x PCIe x4 (Gen3), 2 x PCI, 1 x USB3.2 Gen2x2 Type C, 5 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key B, 1 x M.2 Key E, 1 x M.2 Key M, 6 x COM, 4 x SATA3, 2 x Intel 2.5 Gigabit LAN
- | Supports Triple display, 1 x HDMI 2.0b, 1 x DP1.4a, 1 x VGA
- | TPM 2.0 onboard IC
- | Supports Intel® vPro, AMT, RAID 0/1/5/10
- | ATX PWR (8+24 Pin)



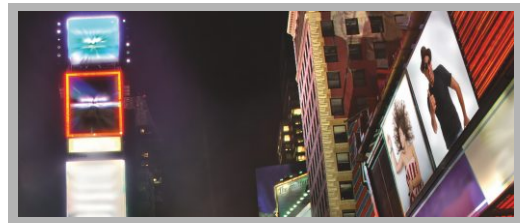
## Asrock 4x4-5400U - 4" motherboard with AMD Ryzen™ 3 CPU

### MAIN FEATURES:

- | AMD Ryzen™ 3 5400U
- | 2 x 260-pin SO-DIMM up to 64GB DDR4 3200 MHz
- | 4 x USB 3.2 Gen2, 4 x USB 2.0, 1 x M.2 Key M, 1 x M.2 Key E, 1 x COM, 1 x SATA3
- | 1 x Realtek 1 Gigabit LAN (support DASH), 1 x Realtek 2.5 Gigabit LAN
- | Supports Quad display, 1 x HDMI 2.0, 3 x DP 1.2a (2 from Type C)
- | TPM 2.0 onboard IC
- | 12V-19V DC Input
- | Also available as Box PC - 4X4 BOX-5400U (minor differences detailed in datasheets)



# INDUSTRIAL COMPUTERS FOR DIGITAL SIGNAGE



## What is DIGITAL SIGNAGE?

Digital signage is a form of dynamic communication using industrial computers called Media Players or network of customizable Media Players with display screens or projectors in public places out-of-home.

It offers good opportunity to generate revenue by promoting and advertising customers products to a specific target market on demand and build brand image by influencing customer behaviour and catching the customers eyes.

## Low power consumption

When various Digital Signage applications rapidly spread around the world, every participant is looking for a way to maximize return on investment and lower total ownership cost.

### NEXCOM NDIS B116 - ARM based compact computer with Android OS



#### MAIN FEATURES:

- | Fanless design
- | Onboard Rockchip RK3399 ARM® Cortex®-A72 and Cortex®-A53
- | 2x HDMI video outputs
- | 1x USB 3.0, 2x USB 2.0, 1x USB 2.0 OTG
- | 1x RS232/422/485 port, 2x GbE LAN
- | 1x miniPCIe socket for optional Wi-Fi / 4G module
- | -5 ~ 50°C operating temperature



### NEXCOM NEU X100 - compact & cost-effective computer



#### MAIN FEATURES:

- | Fanless design
- | Intel® Apollo Lake J3455 processor
- | 2x HDMI (4K Resolution) independent displays
- | 2x USB 3.0, 2x GbE LAN & 1x RS232/422/485 port
- | 1x miniPCIe socket for optional Wi-Fi / 4G module
- | -5 ~ 50°C operating temperature



### NEXCOM NDIS B337 - compact, cost-effective & wide temp. computer



#### MAIN FEATURES:

- | Fanless design
- | Intel® Apollo Lake J3455 processor
- | 2x HDMI (4K Resolution) independent displays
- | 2x USB 3.0 & 2x USB2.0, 2x GbE LAN & 2x COM port
- | 1x miniPCIe socket for optional Wi-Fi / 4G module
- | -20 ~ 60°C operating temperature



## High performance Ultra HD Players

### NEXCOM NEU X300 - cost-effective IPC



#### MAIN FEATURES:

- | Compact and fanless design
- | 8th Generation Intel® Core™ quad core i3/i5/i7 CPU
- | Smooth 4K2K content playback via 3x HDMI
- | 4x USB 3.0, 1x RS-232/422/485, 2x GbE LAN
- | Optional WLAN Kit with external antenna
- | -5°C to 45°C operating temperature



NEU-X300 is an ideal high-end embedded player for interactive applications like kiosks or smart retail management. Compact fanless design and high quality components provide high reliability for 24/7 usage.

## NEXCOM NDIS B360 - wide operating temperature & high performance



### MAIN FEATURES:

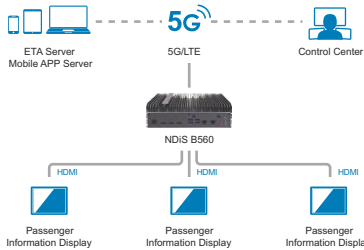
- | Compact and fanless design
- | 11th Generation Intel® Core™ (Tiger Lake-UP3) processor SoC
- | HDMI & DP++ (4K Resolution) independent displays
- | 4x USB 3.0 & 2x GbE LAN
- | 2x COM ports
- | Optional WLAN Kit with external antenna
- | -20 ~ 60°C wide operating temperature



## Application example

Passenger information display systems (PIDS) that show announcements, news items and advertisements in a visually appealing way.

Real time information update via Wi-Fi or cellular network.  
Extended operating temperature support for bus stops and other semi-outdoor environments.



## Bus Stop Display

## NEXCOM NDIS B560 - wide operating temperature & rich I/O



### MAIN FEATURES:

- | fanless design
- | 8-9th Generation Intel® Core™ quad core i3/i5/i7 CPU
- | Smooth 4K2K content playback via 3x HDMI
- | 6x USB 3.0, 4x COM ports, 2x GbE LAN
- | 2x M.2 sockets for optional Wi-Fi / 4G module
- | -20 ~ 60°C wide operating temperature



## Wall controller, up to 6 independent displays support



## NEXCOM NDIS V1000 - multi-display computer



### MAIN FEATURES:

- | On-board AMD Ryzen V1605B APU processor
- | Dual DDR4 SO-DIMM, up to 32G
- | Graphics operating at up to 1.1 GHz
- | 4x HDMI 2.0 for video wall application
- | Support M.2 M/B Key, 2280/2242 size storage device
- | 4x USB 3.0, 2x GbE, 4x USB3.0
- | 1x COM port (support RS232/422/485)
- | M.2 E key slot for optional Wi-Fi module



Powered by the AMD Ryzen processor, NDIS V1000 can smoothly playback multiple 4K@60Hz video clips and is an advanced media player for any applications to demonstrate high quality and high impact contents over multiple displays. It is especially suitable for video wall, security control room, digital menu board or corporate reception.

# AUTOMATION INDUSTRY COMPUTERS

## Low Power, compact size computers



### APPLICATIONS

- | Ticket machine
- | Vision inspection
- | Communications control
- | Transportation control system
- | M2M server
- | Machinery computer
- | Industrial automation
- | Kiosk computer
- | Self-service computer



## NEXAIOT NISE 53 - slim PC-based controller / IOT gateway



### MAIN FEATURES:

- | Onboard Intel® Celeron J6413 quad core / Atom x6211E
- | Up to 16G RAM Memory, optional 32G eMMC storage
- | 3x HDMI Display, 2x USB 3.0 & 2x USB 2.0
- | 3x GbE LAN ports; 2x RS232/485
- | 3x mini-PCIe/M.2 sockets for optional Wi-Fi / BT / 4G LTE modules
- | -5 ~ 55 °C operating temperature
- | 12/24V DC Input

It offers power-efficient performance designed for the next generation of industrial edge-connected embedded systems that require high resolution graphics and low power consumption - such as industrial automation, intelligent transportation, retail, and smart city IoT solutions.



## NEXAIOT NISE 109 - PC-based controller with multi-I/O



### MAIN FEATURES:

- | Onboard Intel® Celeron J6413 quad core / Atom x6211E
- | 2x display output: 1x HDMI and 1x DP port
- | 2x GbE LAN ports support WoL, Teaming, PXE & Ethercat
- | 3x USB 3.0 & 3x USB 2.0
- | 2x RS232 & 2x RS232/422/485
- | Support 1x 2.5" SSD & 1x M.2 Key B storage
- | 1x mini-PCIe socket for optional Wi-Fi / BT / LTE modules
- | -20 ~ 70°C operating temperature (with Atom CPU)
- | 9 ~ 30V DC Input

Factory Automation controller, IOT gateway, Self-service machine f.e. Ticket machine, Transportation control system, M2M server are the main applications this IPC is suited for.



## NEXAIOT NISE 70 - high performance with only 15W CPU



### MAIN FEATURES:

- | Onboard Intel® Tiger Lake 11th gen CPU i5-1145G7E / i7- 1185G7E
- | 4x HDMI , Onboard TPM 2.0 chip
- | 3x GbE LAN ports support WoL, Teaming, PXE
- | 3x USB 3.0 & 1x USB 2.0
- | 1x RS232 & 1x RS232/422/485
- | 2x mini-PCIe / M.2 socket for optional Wi-Fi / BT / LTE modules
- | 0 ~ 50°C operating temperature
- | 12 ~ 24V DC Input

Powered by the latest generation Intel® processors codenamed "Tiger Lake-UP3", NISE 70 is fanless PC designed for industrial applications which demand low power consumption and abundant I/O interfaces but with limited installation space.



## NEXAIOT NISE 3600CE - high performance & multi-OS support

NEXAIOT

### MAIN FEATURES:

- | Support 6-9th generations Intel® i3 / i5 / i7 CPU
- | Dual Intel® GbE LAN ports; support WoL, teaming and PXE
- | 4x USB3.0 & 2x USB2.0, 5x RS232 and 1x RS232/422/485
- | 1x VGA, 1x HDMI + 2x DP with independent display function
- | External M.2 socket and SIM card holder
- | 1x mini-PCIe socket for Wi-Fi / 4G LTE & 1x PCIe expansion
- | 12 - 30V DC Input
- | OS support: Windows 7/10



Integrated with 6, 7, 8, 9th Gen. Intel® Core™ i7/i5/i3 and H310C PCH platform, A new generation called NISE 3600C series. It not only sustained its good reputation on quality and user friendly features, but also innovated its mechanical design.

PROFI<sup>®</sup>  
BUS

DeviceNet

PROFI<sup>®</sup>  
NET

EtherNet/IP

EtherCAT

## NEXAIOT TT300 - high performance, multi-I/O & expansion

NEXAIOT

### MAIN FEATURES:

- | Support 6-9th generations Intel® i3 / i5 / i7 CPU
- | Dual Intel® GbE LAN ports, 4x USB3.0
- | 2x RS232/422/485 & up to 8x RS232
- | 2x HDMI (dual display)
- | 1x mini-PCIe socket for Wi-Fi / 4G LTE
- | 1x PCIe x16 & 2x PCIe x4 expansion
- | 12 - 30V DC Input
- | OS support: Windows 7/10



## NEXAIOT CMC 300-F0x - cabinet mount fanless PC with IP65 heatsink

NEXAIOT

### MAIN FEATURES:

- | Intel® Xeon® E-2278GEL & 8/9th gen. i3/i5/i7 CPU
- | Dual Intel® GbE LAN ports;
- | 2x USB3.0 & 2x USB2.0,
- | 1x RS232/422/485
- | 1x DVI-D display output
- | 2x Easy-access 2.5" SSD trays
- | 1x mini-PCIe socket for Wi-Fi / 4G LTE & 1x PCIe expansion
- | IP65 protection on the outside heatsink
- | 18 -24V DC Input with reverse polarity protection



Designed with the purpose of being installed in the plate of the control cabinet or in the rear plate of a control cabinet. Fits to a suitable cut-out in the control cabinet, placing the heatsink outside - with IP65 protection. This product meets easy maintenance conditions in such industrial applications as wind power or charging stations.

## Asrock IEP-9000E - Intelligent Edge Platform

ASRock<sup>®</sup>  
— Industrial —

### MAIN FEATURES:

- | Intel® 10th Gen Xeon® W or Core™ Processors with W480E Chipset
- | 4 x 260-pin DDR4 SO-DIMM up to 128GB (32GB per DIMM)
- | 1 x M.2 Key M, 1 x M.2 Key B, 1 x M.2 Key E, 2 x Mini PCIe
- | 4 x USB 3.2 Gen2x1, 2 x USB 2.0, 6 x COM, 4 x SATA3, 8 x DI, 8 x DO
- | 5 x Intel Gigabit LAN (2 support PoE)
- | Supports Triple Display, 2 x Displayport, 1 x VGA
- | 9-36V DC Input



## Asrock IEP-5000G - industrial IoT controller

ASRock<sup>®</sup>  
— Industrial —

### MAIN FEATURES:

- | Latest and Powerful Intel® Atom® x6000E Processor
- | Fan-less and Rugged Design
- | Most Flexible IOs and Expansion for Industrial Applications
- | Intel® TCC and TSN Support for Real-Time Computing
- | DIN Rail or Wall Mount Options
- | 6-36V DC Wide Range Power Inputs
- | Wide Temperature Operation (-40 °C to 70 °C)



# WIDE OPERATING TEMPERATURE COMPUTERS

## NEOUSYS POC-400 - DIN-rail embedded controller



### MAIN FEATURES:

- | Fanless, rugged, front I/O access DIN-mounting design
- | Intel® Elkhart Lake Atom® x6425E quad-core 2.0GHz
- | 3x 2.5GbE with optional PoE+ and screw-lock
- | 2x USB3.1 & 2x USB2.0 with screw-lock
- | Dual DP display outputs supporting 4096 x 2160 resolution
- | 1x RS-232/422/485 port & 3x RS-232 / 1x RS422/485
- | MeziO™ interface for easy I/O expansion, 1x miniPCIe slot with SIM card socket
- | 8 - 35V DC Input
- | -25 - 70°C extended operating temperature



POC-400 series has an ingenious mechanical design that combines DIN-rail mounting chassis with front-accessible I/O in one ultra-compact enclosure. It utilizes the latest Intel® Elkhart Lake platform Atom® x6425E 4-core CPU that can deliver 1.8x CPU and 2x GPU performance improvement, compared to the previous generation.

In addition to the performance boost, POC-400 features an ultra-compact design measuring just 56 x 108 x 153 mm, which can easily fit into restricted spaces. The system comes with a DIN-rail mounting chassis and an abundance of front-access I/O interfaces. Featuring three 2.5GBASE-T Ethernet ports with IEEE 802.3 PoE+ capability, they provide higher data bandwidth for devices such as NBASE-T cameras and is backward-compatible with 1000/100/10 Mbps Ethernet.

## NEOUSYS Nuvo-9000 series - high performance multi-purpose IPC



### MAIN FEATURES:

- | Supports Intel® 12th-Gen Alder Lake Core™ 16C/ 24T 35W/ 65W CPU
- | Patented Cassette for PCI/PCIe add-on card accommodation and MeziO™ interface
- | Up to 6x GbE LAN with optional PoE+,
- | 6x USB 3.2 Gen2x1 (10 Gbps) ports in type-A connectors & 2x USB 2.0 ports
- | 1x USB 3.2 Gen2x2 (20 Gbps) port in type-C connector with screw-lock
- | 2x RS-232/422/485 & 2x RS232
- | 2x 2.5" SATA HDD/SSD with RAID 0/1 (One hot-swappable)
- | VGA/DVI/DP support triple independent display and 4K2K resolution
- | M.2 2280 M key socket (Gen4 x4) supporting NVMe SSD
- | 1x M.2 2242/3052 B key socket with SIM slot for M.2 5G/ 4G module
- | 8 - 48V DC Input
- | -25 - 70°C extended operating temperature



Nuvo-9000 series is Neosys' new rugged embedded computer based on Intel® 12th-Gen Alder Lake platform. Benefiting from cutting-edge Intel 7 photolithography, the latest Core™ desktop processor comes with up to 16 cores and 24 threads and presents an incredible boost of computational performance. Combining the increase of DDR5 memory bandwidth and PCIe Gen4 NVMe high-speed disk read/write, users can expect an overall system performance improvement of up to 1.8x when compared to previous 10th or 11th-Gen platforms.

With its field-proven thermal design, significant CPU and I/O upgrades, and multiple expansion methods, the Neosys Nuvo-9000 series fits your need for ruggedness, performance, and versatility for a variety of applications.

## GPU Computing

### NEOUSYS Nuvo-7168GC - wide-temperature rugged IPC with GPU expansion



### MAIN FEATURES:

- | Supports NVIDIA® RTX A2000 GPU
- | Supports 8th-Gen Intel® Core™ i3/i5/i7 35W/ 65W LGA1151 CPU
- | MeziO™ interface for easy expansion
- | 6x GbE LAN, 4x USB 3.1 Gen2 ports and 4x USB 3.1 Gen1 ports
- | 2x RS-232/422/485 & 2x RS232
- | 2x 2.5" SATA HDD/SSD with RAID 0/1
- | M.2 2280 M key socket (Gen3 x4) supporting NVMe SSD
- | M.2 2242 B key socket with dual front-accessible SIM sockets, supporting dual SIM mode with selected M.2 LTE module
- | VGA/DVI/DP support triple independent display and 4K2K resolution
- | 8 - 35V DC Input
- | -25 - 60°C extended operating temperature
- | Patented ventilation design for graphics card



Nuvo-7168GC series is a ruggedized AI inference platform supporting NVIDIA® RTX A2000 GPU which offers better longevity for industrial AI inference applications, such as machine vision inspection, machine automation, and intelligent video analytics. Operating with NVIDIA® RTX A2000, Nuvo-7168GC delivers 8 TFLOPS in FP32 GPU computing power for real-time AI inference.

Nuvo-7168GC inherits the market-proven passive cooling design for motherboard components; Neosys' patented Cassette module to segregate electrical and heat interferences; the innovative "tunnelled" ventilation design for add-on cards that can efficiently dissipate the heat generated by RTX A2000, and together, they sustain optimum performance for both the CPU and GPU in high-temperature environments.



## NEOUSYS NUVO-8208GC – Rugged GPU Computing Edge AI platform supporting dual 250W NVIDIA® GPU



### MAIN FEATURES:

- | Supports dual 250W NVIDIA® graphics cards up to 28 TFLOPS in FP32
- | Supports Intel® Xeon® E or 9th/ 8th-Gen Core™ i7/ i5 LGA1151 CPU
- | Up to 128GB ECC/ non-ECC DDR4 2133 (4x SODIMM)
- | 2x PCIe x16, 2x PCIe x8, 1x PCIe x4 Gen3 expansion slots
- | 2x hot-swappable 2.5" SATA HDD/ SSD with RAID 0/ 1 support
- | 8- 35V wide-range DC input with built-in ignition power control
- | Patented thermal design for -25°C to 60°C rugged operation\* (\* R.O.C Pat. M534371)
- | Patented damping brackets\* to withstand 1 Grms vibration (\* R.O.C Pat. M491752)



Nuvo-8208GC is the world's first dual GPU edge ai platform with industrial-grade design and in-vehicle features. Designed specifically to support two high-end 250W NVIDIA® graphics cards, it offers tremendous GPU power up to 28 TFLOPS in FP32 for emerging GPU-accelerated edge computing, such as autonomous driving, vision inspection and surveillance/ security.

## RUGGED TABLET PC

### AAEON RTC-700/1000/1200



### MAIN FEATURES:

- | From ARM based through Celeron N3350 up to 7th gen i3 / i5
- | High brightness 7" /10" /11,6" (up to Full HD) TFT LCD
- | Projected Capacitive Multi-Touch screen (Gorilla glass)
- | 5M Pixel Rear Camera, 1.2M Pixel Front Camera
- | Wireless connectivity WLAN / 3.5G / Bluetooth
- | Integrated GPS receiver, G-sensor, 3-axis gyroscope. E-compass
- | Two hot-swappable batteries
- | Programmable function keys
- | IP65 compliance for dust and water protection
- | -20 ~ 60°C operating temperature
- | Compliant with MIL-STD-810G from vibration
- | Optional MSR / Barcode reader
- | Optional accessories: docking station, carry bag etc.



This rugged tablet PC utilizes the Android or Windows operating system. RTC-series supports high performance and low power consumption processors. The high capacity battery provides about 12 hours working time for operator usage during the whole working day. The compact size and light weight brings tremendous mobility to any application. The latest design has scratchproof LCD and protect against shock, vibration, water and dust.

## INDUSTRIAL PANEL PC

They adopt an all-in-one concept that integrates a single board fanless computer, LED display, and a user-friendly touch screen within a slick and compact NEMA4/IP65 chassis. Designed to serve as a flexible and reliable industrial computing platform, each Panel PC is a highly integrated, network-ready computer with exceptional I/O connectivity. The industrial graded machinery and electronics is designed for use in harsh environments where shock and vibration are an issue.

### NEXCOM XPPC series – cost-effective panel PCs



### MAIN FEATURES:

- | Intel Celeron J3455 or 11th gen i3 / i5 CPU
- | 10,1" , 15,6" (Full HD) , 21,5" (Full HD) size available
- | 10 points P-Cap multi-touch with IP65 front protection
- | Many I/O ports: 4x USB, 2x GbE LAN, 1x RS232/422/485
- | Fanless System & Aluminium Design
- | 1x mini-PCIe / M.2 socket for Wi-Fi / 4G LTE
- | VESA / Panel / Open frame mount
- | 0 ~ 50 °C operating temperature



NEXCOM XPPC panels perfect fit to any light industrial application which requires 24h/7 operating time and 230VAC power supply.

## NEXAIOT APPC xx50T series - 4:3 with resistive Touch



### MAIN FEATURES:

- | 8-19" Fanless LED Panel Computer
- | Intel® Celeron J13455 Quad Core CPU & 4G RAM default
- | Flush Panel by 5-wire Resistive Touch Screen
- | 2x GbE LANs, 2x USB3.0 & 2x USB2.0,
- | 2x RS232 & 1x RS232/422/485 with 2.5kV isolation
- | 1x Mini-PCIe socket for optional Wi-Fi
- | IP65 compliant front panel
- | VESA / Panel mount
- | 24V DC Input
- | 0 - 50 °C operating temperature



The front IP65 compliant panel provides protection from water and moisture damage which allows users to clean the surface directly using high-pressure water jets. This feature makes the APPC series machinery computer especially suitable for applications where stringent hygiene levels are important, such as within the food and beverages industry.

## NEXAIOT IPPC xx50P/80P series - heavy industrial panel PC



### MAIN FEATURES:

- | 16:9 10.1" / 15.6" / 21.5" fanless LED Panel Computer
- | Intel® Celeron® J3455 or 6th gen i3 / i5 CPU
- | Metal housing with robust aluminium front zero bezel for harsh environment
- | IP66 front & Capacitive 10-points multi-touch
- | 2x GbE LANs, 2x USB3.0 & 2x USB2.0,
- | 2x RS232 & 1x RS232/422/485 with 2.5kV isolation
- | 1x Mini-PCIe socket for optional Wi-Fi
- | IP65 compliant front panel
- | VESA / Panel mount
- | 24V DC Input
- | 0 - 50 °C operating temperature



IPPC series is a heavy industrial panel PC equipped with powerful processors. It's ideal for use in oil and gas rigs, wind farms, chemical factories, pharmaceutical factories, and hazardous working areas.

## Industrial touch displays

### NEXAIOT APPD series 4:3 12", 15", 17", 19" IPPD series 16:9 15.6", 21.5"



### MAIN FEATURES:

- | Resistive touchscreen in 4:3 ratio / Capacitive 10-points multi-touch in 16:9 ratio
- | Video input: analog VGA and DVI-D (additional DP for IPPD)
- | Dual touch interface: RS-232/USB
- | -10 ~ 60°C operating temperature
- | 12 ~ 24V DC Input
- | VESA / Panel mount
- | High shock and vibration resistance



The APPD/IPPD series has also an IP65/IP66 flush front panel, which can keep water and dust off the surface. They are the best solution for NEXCOM NISE fanless computer and APPC/IPPC panel PC when a 2nd display is required.

## Stainless water-proof Panel PCs

### MAIN FEATURES:

- | 10" - 21.5" size available
- | Intel Celeron N2930 or 6-8th gen i3 / i5 CPU
- | Water-Proof M12 connectors
- | Customized I/O
- | 9 ~ 30V DC Input with isolation protection
- | -20 ~ 60°C wide operating temperature
- | High shock and vibration resistance
- | Resistive / capacitive Touchscreen
- | IP67 / NEMA4x Compliant Stainless Type 316L System
- | Anti-Scratch Touch Screen: 7H



They are built from highest grade stainless steel type 316L enclosure with polished surface for easy cleaning and maintenance. Device offers protection against extreme vibration and shock, dust accumulation, corrosive acid and alkaline. Power input protection mechanism with over-voltage protection, low-voltage protection and reverse protection make the systems more reliable. These waterproof solutions are ideal for chemical and food industry applications.

# IN-VEHICLE INDUSTRIAL COMPUTERS

## NEOUSYS POC-351VTC - ultra-compact in-vehicle controller



### MAIN FEATURES:

- | Intel® Atom™ E3950 quad-core processor
- | 3x GbE with optional PoE+, One isolated CAN port for in-vehicle communication
- | 2x USB3.0 & 2x USB2.0, DVI + VGA dual display outputs
- | 1x RS-232/422/485 port & 3x RS-232 / 1x RS422/485, 4-CH isolated DI and 4-CH isolated DO
- | One M.2 socket and three mini-PCIe sockets with SIM support
- | 8 - 35V DC Input
- | -25 - 70°C extended operating temperature



POC-351VTC is an ultra-compact, fanless embedded in-vehicle controller powered by Intel® Atom™ Apollo Lake E3950 quad-core processor. It combines good performance, high reliability and affordable cost for versatile in-vehicle applications. POC-351VTC has mechanical design with front-accessible I/O and DIN-rail mounting. Moreover PoE+ function is available on 2 of the 3 GbE ports to power cameras for machine vision or surveillance applications. Wireless and internet access is essential for modern day in-vehicle applications. POC-351VTC has a total of four M.2/ mPCIe sockets and six antenna holes to accommodate a variety of 4G, 3G, WIFI and GPS modules to satisfy in-vehicle communications. An aluminium heat-spreader is designed to dissipate heat generated by modules to maintain superior operating stability, for the system and communication modules.

# RUGGED RAILWAY COMPUTERS

## Railway box controllers

### GERSYS VC7412 - Apollo Lake based Box PC



### MAIN FEATURES:

- | Extremely compact size
- | Only front-side connections
- | Perfect cooling no matter the installation position
- | Versatile and expandable extension via PC/104 and mini PCIe slot possible (f.e., MVB, GSM, WiFi, video)
- | Optional: up to 4 analog video inputs
- | High reliability in extreme climatic conditions
- | Vibration-resistant
- | -40 - 70°C extended operating temperature
- | Wide-range power supply unit: 24-110V DC (+/- 40%)
- | Integrated, maintenance-free UPS with double-layer capacitors (DLC)
- | EN50155 certificate



Gersys VC-series has been specifically designed for the operation on railway vehicles. Highlights are the integrated uninterruptible power supply (UPS) and the sophisticated cooling concept, which works at horizontal and vertical installation. The modular concept with different processor technologies, expandability with various interfaces and the universal mounting possibilities with optional mounting frames offer a large bandwidth of potential areas of use.

## NEOUSYS NUVO-7200VTC - high performance IPC with GbE PoE & PCIe expansion



### MAIN FEATURES:

- | Support 8th/9th Gen Intel® Core™ i7 / i5 / i3 socket-type CPU
- | 4x USB3.1 gen1 & 4x USB3.1 gen2, 2x RS-232/422/485 & 2x RS232
- | 4x 802.3at Gigabit PoE+ ports via M12 connectors
- | On-board isolated CAN bus for in-vehicle communication
- | 4-CH isolated DI and 4-CH isolated DO
- | 2x hot-swappable 2.5" SATA HDD/SSD with RAID 0/1
- | VGA/DVI/DP support triple independent display and 4K2K resolution
- | 2x M.2 B key and 3x full-size mini-PCIe sockets with SIM card slots
- | 1x M.2 2280 M key socket (PCIe Gen3 x4) for NVMe SSD or Intel® Optane™ memory installation
- | 8 - 35V DC Input with built-in ignition control
- | -40 - 70°C extended operating temperature
- | E-Mark & EN 50155 certificate



Nuvo-7200VTC is a rugged in-vehicle controller featuring Neosys' patented Cassette module with a x16 PCIe slot for add-on application card flexibility. With wide range of I/O and high performance CPU is perfect for advanced in-vehicle application. Patented damping bracket and connectors with screw-lock mechanisms guarantee extreme rugged connectivity in shock & vibration environments.

## NEOUSYS NRU-52S - nVidia Jetson rugged PC



### MAIN FEATURES:

- | Powered by NVIDIA® Jetson Xavier™ NX
- | 4x GbE LANs with IEEE 802.3bt PoE++ and screw-lock
- | 2x USB3.1 , 1x RS-232/422/485 port, 1x DisplayPort
- | 2x mini-PCIe sockets for WIFI/GNSS/NVMe/CAN modules
- | 1x 3042/3052 M.2 B key socket for 4G/5G mobile communication
- | 8 - 35V DC Input
- | -25 - 70°C extended operating temperature
- | MIL-STD-810G and EN 50155 certified

NRU-52S is a rugged, wide temperature, fanless edge AI computer delivering 21 TOPS for AI-based video analytics applications requiring H.264/H.265 video decoding and real-time inference. Powered by NVIDIA® Jetson Xavier™ NX system on module (SOM), it comprises a 6-core ARM CPU and NVIDIA® Volta GPU with 384 CUDA cores, 48 Tensor cores, and 2 NVDLA (NVIDIA® deep learning accelerator).

NRU-52S can decode up to 44 streams of 1080p video at 30 FPS. The low power consumption makes NRU-52S ideal for applications with a limited power source, such as in a robot, vehicle, or rolling stock.

## All-in-one devices for Train Control & Management Systems

### GERSYS 6.5", 8.4", 10.4", 12.1", 15"

state-of-the-art multi-functional TCMS display with integrated computer



### MAIN FEATURES:

- | Latest Intel Apollo Lake processor
- | Rich I/O: RS232/422/485, Ethernet, CAN, USB, PS/2
- | Expansion via PC/104 (f.e. MVB) or miniPCIe (GSM, WLAN)
- | Extremely low installation depth (45mm)
- | USB charging port on the front for tablets and mobile phones
- | PCAP touch screens for multi-touch operation,
- | Custom or UIC612 keyboard layout
- | High-resolution displays with IPS technology for better viewing angles
- | Very low heat generation (thus high MTBF)
- | Versions with protection class IP65 all-round
- | -40 - 70°C extended operating temperature
- | Wide range power supply 24-110V DC (+/- 40%)
- | EN50155 certificate



Gersys engineers are proud from their high knowledge about complete systems in cockpits and driver cabins. They are in permanent contact with international railway manufacturers. Computers manufactured by this German company have unusually long lifecycle and maximum product quality.

Applications: Data Distribution Service (DDS), Train Radio Display (TRD), Technical and diagnostic display (TDD), Control and command display (CCD), Electronic timetable display (ETD), anti-collision system etc.

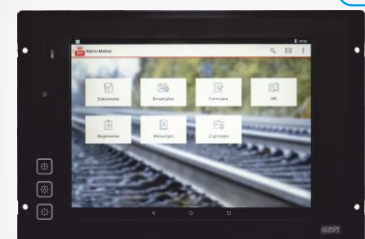


## GERSYS VM series - professional CCTV 10.4", 12.1", 15" monitors



### MAIN FEATURES:

- | Display scaling and mirroring
- | No delays, real-time display
- | Resolution VGA, SVGA and XGA (4:3)
- | Optional PCAP Touch Sensor
- | FBAS port for camera
- | Surface-mounted or panel mounted
- | -40 - 70°C extended operating temperature
- | Wide range power supply 24-110V DC (+/- 40%)
- | EN50155 certificate



GERSYS references: Deutsche Bahn EBUla system, Bombardier, Skoda, Alstom, CAF, Kapsch, Siemens, Haslerail, Stadler, CAT, Voith, Vossloh, Transmashholding etc.

# DISPLAY SOLUTIONS

Large format: from 32" up to 98"  
 Open frame: from 10" up to 65"  
 Touchscreens: from 10" up to 86"  
 Desktops: from 17" up to 40"  
 Projectors



## MAIN FEATURES:

- | TN / VA / AMVA3 / MVA / IPS panel technology with Full HD & Ultra HD resolution, LED Backlight
- | Projective Capacitive, Infrared or Optical Multi-Touch Technology with up to 50 compatible points
- | Durable and professional design / full metal structure, IP65 front
- | iSignage - you can easily create, publish and manage your own digital signage content from a desktop PC in the same network
- | Anti-glare coating and scratch resistance surface
- | Key lock - You can easily lock and unlock the controls preventing unauthorised change settings
- | USB Media Playback
- | LAN Control - enables making adjustments through your network
- | Black tuner, 1ms response time, overdrive function
- | Fanless design eliminates noise and reduces dust contamination
- | ACR - Advanced Contrast Ratio is a feature that automatically adjusts contrast and brightness of the screen to assure perfect picture quality
- | Flicker-Free & Blue Light - the solution for the comfort and health of your eyes
- | 24h/7 operating time
- | Great viewing angles & exceptional colour clarity
- | Built-in speakers & ambient light sensor
- | Ball-Drop-Test Proof
- | Wide range of video and audio inputs
- | VESA mounting
- | Remote control
- | Expansion slot for Open Pluggable computers



**SHARP / NEC**



## Projectors

Laser projectors - Sharp/NEC laser projection brings benefits through long lasting maintenance-free operation of typically 20,000 - 30,000 hours, leading to significant savings in terms of operational costs. Impressive visualisation with versatile projection characteristics alongside high installation flexibility makes installation easy and worry free.

- | Super silent
- | Long-life and zero maintenance
- | Versatile installation capabilities

# SUNLIGHT READABLE LCDs

LITEMAX Sizes from 6.5" up to 65"

## MAIN FEATURES:

- | MTBF 100,000 Hours
- | Blackening Defect Free
- | DC power input
- | Optional Touchscreen
- | Daisy Chain
- | Display via USB

## CORE TECHNOLOGY:

- | LED Backlight Technology
- | Low power consumption
- | High efficiency optical design
- | Brightness up to 3000 nits
- | Aluminium base board
- | Fanless design



## MaxRGB



Litemax MaxRGB™ - the best-in-class colour calibration and enhancement.

**Intelligent Thermal Management** Display automatically cools down or heats up

**Local dimming** Dims the backlight to optimize the heat and save the energy.

**Advanced Optical Bonding (AOT)** protective glass that is glued in front of the Litemax display to enhance its readability under the sunlight or in high humidity outdoor environments.

## Spanpixel



Litemax has an exclusive patent license to design and manufacture innovative stretched displays with ultra-wide, customized aspect ratios. Certified with EN50155 for railways and rolling stock applications.



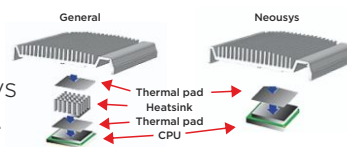
# UNIQUE TECHNOLOGY

Used by our partners in their designs

## Excellent Thermal Design

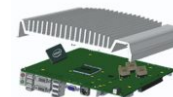
### Dedicated Fanless Architecture Design

In order to have all hot components attached directly to the main heatsink Neosys places the I/O connectors under the PCB. It provides a very efficient heat dissipation.



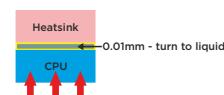
### Well-Arrangement of Hot Components

All hot components (e.g. CPU, PCH, GbE, Power Choke and etc.) arranged on the top side of the PCB to contact the heatsink directly.



### Phase-Changed Thermal Pad

Phase-changed thermal pad melts when temp. goes over 45° C. It helps CPU cling to the heatsink closer and increases the thermal conductivity.



## Patented Expansion Cassette

Neosys' Patented Cassette innovates a brilliant way for accommodating an add-on card, not only because the modularized design makes easy installation/replacement, but also because the possibility of passive cooling for add-on card brings more reliable operation. You can install any PCI/PCIe card to expand versatility of Neosys' IPC, or choose Neosys' offer of Cassette module with pre-installed heat-spreader to include PoE+, USB 3.0 or independent graphics card.

## Cassette modules

### FEATURED IN:

- | **CSM-R800** - Cassette module with 4-drives hardware RAID 0/1/10, accommodating four 2.5" HDD/SSD
- | **CSM-POE354** - Cassette module with PCIe-PoE354at and pre-installed passive heat-spreader
- | **CSM-U380** - Cassette module with PCIe-USB380 and pre-installed passive heat-spreader
- | **PB-2500J-CSM** - Intelligent ultracapacitor-based power backup Cassette module with 2500 watt-second energy capacity



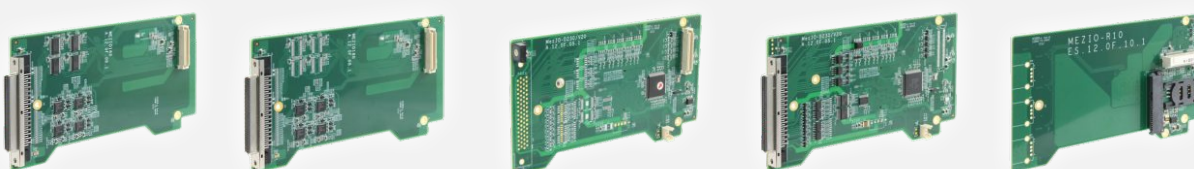
## The MezIO™ Interface and Modules

MezIO™ is the interface designed for incorporating application-oriented I/O functions into a embedded system. It offers computer signals, power rails and control signals via a high-speed connector. MezIO™ is also mechanically reliable benefited from its 3-point mounted mezzanine structure. A MezIO™ module can leverage these signals to implement comprehensive I/O functions.

Neosys provides various MezIO™ modules, as listed below. Users can also leverage signals/powers on MezIO™ to create a module with specific domain know-how. MezIO™ presents a cost-effective way to build a tailor-made embedded system for your application.

## The MezIO™ Modules

- | **MezIO-C180** - 4x RS-232/422/485 ports and 4x RS-232 ports
- | **MezIO-C181** - 4x RS-232/422/485 ports and 4x RS-422/485 ports
- | **MezIO-D220** - 8-CH isolated digital input and 8-CH isolated digital output
- | **MezIO-D230** - 16-CH isolated digital input and 16-CH isolated digital output
- | **MezIO-V20** - ignition power control function and 1x mini-PCIe socket for in-vehicle usage



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# PARTNERS

## Microdis Electronics cooperates only with carefully selected manufacturers

**AAEON** established in 1992 in Taiwan, and became a member of ASUS Group in 2011. With more than 25 years of experience in developing and producing allows to offer innovative solutions based on brand new technologies for industry, transport, entertainment and others. Aaeon is the guarantee of high quality, world-class design & professional technical and application support.

**ASRock Industrial Computer** was established as an independent company in July 2018, focusing on the fields of motherboards, edge computers, and other products for the manufacturing, business, and retail industries. It is the world's leader in Industrial PC motherboards, with customers located around the globe. Previously, it had been a business unit of ASRock Inc. (est. 2002) that was set up in 2011. ASRock Inc. The company has been growing fast and became world third largest motherboard brand with headquarter in Taipei, Taiwan and branches in Europe and the USA.

**GERSYS** has been developing and manufacturing railway technology at the highest quality levels for the last two decades. Product range includes onboard computers as well as display and driver assistance systems (HMI, IDU, MMI) for railway and special vehicles are developed in accordance to railway standards EN50155 and EN45545. Development and design, production and manufacturing from a single source is located in Wolfratshausen near Munich. GERSYS doesn't outsource core processes. All tasks are completed internally by its team of experts. In 2019 Gersys has become a part of the HÜBNER Group.

**iiyama** is a Japanese manufacturer of computer monitors. They started in 1973 as small colour TV's supplier. Now they are one of the world's leading players in the market. Efficiency, performance, reliability and user comfort are all key to the development of iiyama products. iiyama success has been achieved by the consistent evolution of high quality product and by bringing them to market at an accessible price.

**LiteMAX** has been founded in 2001. They are an expert in production of sunlight readable, high brightness and resized industrial displays. LiteMAX technology and innovation can be found in high-performing, ultra-efficient solutions for transportation, industrial, marine, digital signage, rugged portable devices and data mining.

**Neusys Technology**, established in 2010, designs and manufactures rugged embedded platforms and modules. With the core expertise ranging from embedded computing to data acquisition and processing, manufacturer's goal is to innovate and integrate feature sets into products for various vertical markets with simple yet elegant architecture. Neusys' effective thermal design ensures reliable wide temperature operation in harsh environment. The efficient heat transfer allows Neusys systems to operate with 100% CPU load under extreme conditions and therefore maximize processing power.

**NexAloT** was incorporated in 2014 and is a subsidiary of the NEXCOM Group. NexAloT is committed in delivering Industry 4.0 total solution to clients globally, which includes iAutomation (Level 1), M2M Gateway (Level 2), IoT Edge (Level 3) and Cloud-based Enterprise War Room (Level 4) of the Industrial IoT ecosystem.

**NEXCOM** has been founded in 1992 and headquartered in Taipei, Taiwan, NEXCOM is committed to being trustworthy partner in building the intelligent solutions for 24/7 usage in harsh environment. To meet customers' expectations, NEXCOM makes the difference by utilizing its decades of industrial computing experience, a highly talented R&D team, and by providing exceptional levels of customer service. With these core strengths, NEXCOM has enabled its customers to win key projects in a diverse range of industries. Wide product portfolio allows to match appropriate computer to specified application.

**SHARP/NEC** founded in 1985 has been constantly developing to its role as a total display solutions company. Headquartered in Tokyo, Japan. In 2020 NEC Display Solutions started business operations as a subsidiary of Sharp and changed its name to Sharp NEC Display Solutions.

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Currently the Microdis Group employs over 100 people, with a large number of electronic engineers, mostly involved in sales and application support.

As a company with an extensive experience in the distribution of electronic components, and a purchasing center in Germany for many years, we are able to offer almost any product from a wide variety of electronic components. We offer also the production of cable harnesses and programming of crystal oscillators for a customised frequency. Cooperation with a catalogue distributor provides fast deliveries (2 days) of a wide range of catalogue products.

We have certificates of quality management DIN EN ISO 9001:2015 for the distribution of electronic components.



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 UL/CSA/DIN certified, customized industrial cables  
 Terminal block connectors - screw, spring and pins  
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 Industrial computers and panels  
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