Bridge for Demanding Duties

SUNIT Computer Technologies

MINING

DESIGN FROM FINLAND

S COMPUTERS SUNIT

20 Years
1996 - 2016
SUNIT
AUTO-POWERED VEHICLE COMPUTING

Mission Critical | In-Service Vehicles | Heavy Transport | Public Service | Machinery & C.E. | Terminal Service | Marine Service | Rail Road | Industry Process | Aviation Service

SUNIT
Bridge for Demanding Duties

COMPUTING TECHNOLOGY FOR DEMANDING DUTIES
SINCE 25 YEARS

VISION AND STRATEGY

Sunit Oy delivers always tailored computing technology in compliance with Customer Entrepreneur model.

The modular design and flexible organization enables us to offer customized product, knowledge and support to client-specific claims.

Our Business-model is to be in close co-operation with Clients ERP-organisation and Integrator, whom we consider to be our partners.
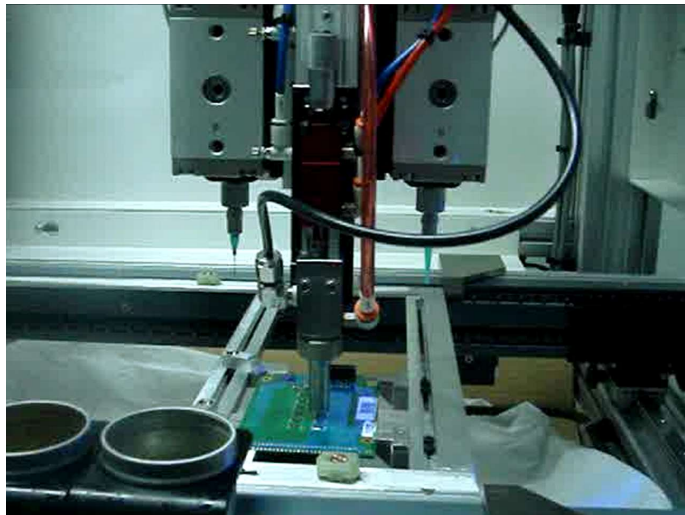

OUR VALUES

We aim always that our Clients are successful in Entrepreneur and call for high standards for daily service.

We work hard to deliver products for tough-duties.

We aim to be proud for Clients prosperity, it brings us well-being.

We always strive to be proactive in Client-relations by seeing far onwards in technology prospects.

SUNIT-QUALITY
"10⁺ YEARS IN-SERVICE"

Within QA/QC and Good Manufacturing Practice we encourage a culture of innovation, responsibility and rectitude to ensure continuous improvement of responsibility in front of our Clients.

We strive to be Client's first choice today and tomorrow and the Quality is a natural part in all collaboration forms.

In technology and process we follow Vehicle Industry Standard ISO-16750 (2, 3, 4,5) and we effort heavily our resources to deliver products and service with Standard-associated quality.

Our Products are globally UNECE E-Certified.

INSPIRED COMPUTING
FOR DEMANDING DUTIES

Core focus on Design and Supply of Computer-technology with intensive insight into the demands in Heavy-Duty Industry and Fleet environments has brought us skilful Computer technology expertise.

We serve purpose-tailored Fixed-Mount Computing technology covered by the Harsh-industry Quality standards and test procedures. Our Product design considers the Customer's enterprises. We collaborate in close ratio in information technology area of ERP, Supply-Chain, Logistics and Fleet-management.

OPEN ARCHITECT COMPUTING – EDGE ON IOT

The usual lifetime of ICT-system is 10 years. On that time the System-revisions takes several rounds. It is important that computer technology enables changes and updates at limited expenses.

An Open Architecture Computer can be easily updated and adapted to the future needs, it is trusted and desired.

An Open Architecture Computer allows operators and software developers use the same platform for all fleet vehicle-types.

An Open Architecture Computer makes both maintenance and service, development and deployment easier, and hence the cost of modernizing of ICT-System is reduced.
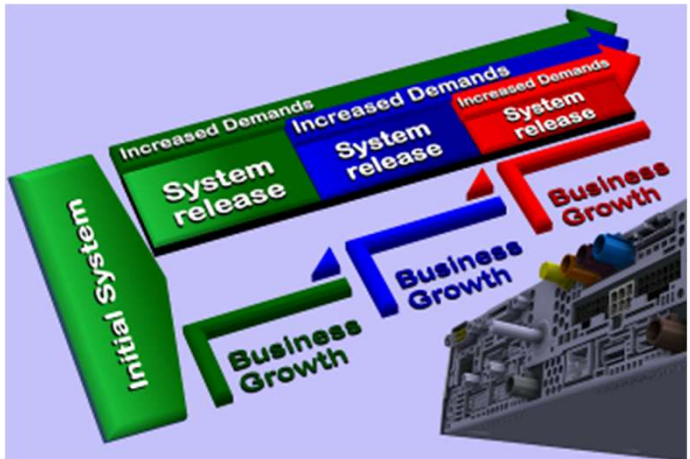
ENVIRONMENT, BE AWARE WITH LONG-LIFE SERVICE

The environment is significant aspect on Industry world and calls for contributes toward better environment by value-added technologies.

The Electronics industry itself impacts Environment seriously and Sunit realize that best contribution is to deliver products with extremely long service life.

"What-if" is our question. What if we all Electronic suppliers help environment by designing dual-life products?

Our mission is frankly Environment friendly products without reservations.

COMMON DESIGN
TAILORED PERFORMANCES

Nowadays it is common that Entrepreneur Duties obligates efficiency and operational reliability from the Computers.

Mechanically identical, with customized computer performance, significantly reduces hardware maintenance costs and minimizes application variations.

As well the swapping of Computers between duties is ease.

Common supplier for whole fleet reduces the Management expenses.

Whether the Industry calls for Single- or Multi-Screen solution, powerful Quad-Core or lower capacity Processor Unit, Small or large sized Screen on dashboard, the Sunit-computers serves always common technology in regards of Interfaces, Cables, Antennas, Positioning, Short- and Long-range broadcast communications.

Therefore the Logistics and Fleet management applications are uniform on every and each vehicle.

Whether the purpose of Duty-role alters and the In-Vehicle Computer requirements are as well altered, the upgrade (or downgrade) of Computer is ease to compliance for new demands by just swapping the CPU.

Whether the purpose of User-role alters causing alter Computer requirements, the upgrade (or degrade) of Computer is ease to compliance for new demands by just swapping the CPU.

COMPATIBILITY BETWEEN GENERATIONS
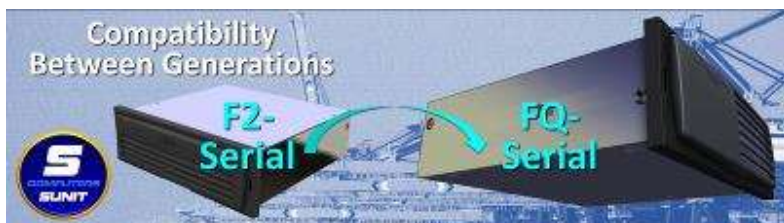
After a long lifetime, it is usually time to replace your computer as the software requirements change. We need a newer operating system, better graphics, etc. SUNS Computers are always backward compatible so only the CPU has to be replaced and the existing components can be used.

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In-Service Vehicles

Heavy Transport

FIXED-MOUNT COMPUTERS FOR DEMANDING LOGISTICS AND HAULAGE SINCE 1994

The use of Computers by Road-haulage started 1994 by Finnish Forest transports. The efficiency of Logging increased significant by using On-Board computers connected on Telephone network and using Map-application for exact location of Log-piles. Just-On-Time deliveries become safe. Short afterward Fuel-transports founded similar solutions for their Pull-Logistics system plus the Safety was notable improved. Nowadays Heavy Vehicle industries as Energy, Mining, Constructions, Waste, etc. utilizes the On-Board Computer as well for Vehicle economy and Mobile Office purposes.

OUR INDUSTRY
THE LOGISTICS AND ERP

Entrepreneur Resource Planning and Supply Chain are the Key's of effective Fleet-management.

It streamlines the Fleet-Management and intensifies the Logistic Economy significant.

Sunit Computers contributes the Fleet Efficiency continuously hundreds of thousands of hours and it is obvious that our product suits for investments, particularly for challenging vehicle assignments.

VALUE-ADD INTO LOGISTICS

Our Value is highly connected with our Clients Supply-Chain day-around Business. We offer products and service with Open Architecture computing technology.

Technology suits excellent to the vehicle computing where the Logistics, Supply Chain and Fleet management demands intensive and effective ITC-solutions for constant communications.

Tough and Smart Computer tech is crucial for Fleets that claims to keep costs down whilst running on day-and-night service.

HEAVY DUTY ON TERRAIN - OUR WORKING-CLASS BACKGROUND

Machinery and Off-Road equipment's are our "country of origin"!

Since 1991 Computer technology to tough and hard-to-satisfy Environments.

When we say "we are boiled in diesel", we really mean serious there!

FROM FORESTING TO MINING TO TANKS

30 years in Machinery and Heavy Equipment's, our technology have been identified as a trusted product for the most demanding machine-environments.

In the background there is our superior electronics and geometry designed impact protective mechanics connected to strict Quality Assurance discipline.

FIRST IN THE WORLD FOR TERRAIN AND OFF-ROADS

When cut-to-length logging was on breakthrough in the 80's, it required courage works by engineers making that industry to produce quality and efficiency, as well as environment-saving technology.

It was a premise for Computing technology within demanding environment.

The founders of Sunit Oy are several times awarded in their open-minded and determined work to brought technology to forest industry.

Nowadays SUNIT Computer technologies serves on Terrain for Safety, Machinery Control and Supply-Chain Applications with integrated communications.

Heavy Environmental Impacts are familiar realities for our products.

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SUNIT COMPUTERS ON MINING-INDUSTRY

FLEET-MANAGEMENT
EXCAVATION VEHICLES
IN-SITU MAINTENANCES
MOBILE OFFICE

In mining vehicles, working on extremely harsh environment and have high downtime cost's, SUNIT Computers are successfully serving these critical vehicles.

Nowadays SUNIT Computers run more than10 years continuously and the Users comment "computers just run – they are there" tells the quality of Product.

SUNIT Computer on excavation vehicles serve the "Both ends" on Vehicle.

EXCAVATION VEHICLES

➢ Fleet-Management & Dispatching
➢ Safety Application on Highway-Transports
➢ Digitalized Excavation Process
➢ Blasting-Analyse & Reports
➢ Forecast's of Equipment's Maintenance occasions

One CPU & Dual-Screens

➢ Dashboard
➢ Excavation Control-Cabin

CPU SUNIT is mounted into Vehicle Cabin and driving-screen on Dashboard. Rear Screen is connected via 12m long Screen cable. All applications are supplied by third part.

IN-SITU FLEET-MANAGEMENT

Serving In-Situ vehicles, the Computer shall withstand the environmental extremes and run likely without the driver's attention being directed to the computer by any action other than associated with his job. SUNIT Computers serve managements:

➢ Real-time Dispatching & Material handling
➢ Vehicle Safety Alerts & Video Applications
➢ Vehicle economy Applications

Open Architecture Computing =
Hardware-Independent Applications

Dump Trucks, Excavators, Loaders. Thanks to our almost 30 years time on Harsh-environment machineries In-Situ vehicles are kept served with reliable Products.

Service people around Mining vehicles and equipment's are employments of highly skilled technicians. They travels long distances in the mining area utilizing slow-speed road network.

All time outside Main-duty is expensive and waste.

The Challenges:
➢ Long distances between Office & In-Situ
➢ Effective Working time strongly limited

The Solution:
Create the Service-Car as Mobile Office

Utilizing Wireless communication (Wi-Fi / LTE) for Mobile Office
➢ Working orders
➢ Reports

IN-SITU MAINTENANCE & SERVICE

Increase Effective In-Situ Time significantly

The Service vehicle receives Orders via Wireless communication (Wi-Fi / LTE). All Service orders are in que with priorities. When Service have taken place, the Computer sends report to Server. Print on paper is either on Vehicle installed printer or Office-printer thru Wi-Fi (when passing the office).
All applications are supplied by third part.

MOBILE TOUCH WORK-STATIONS

The Challenges
➢ Current / Ongoing Plans & Drawings waits for paperwork's
➢ Printed documents not on site.

The Solution:

Utilizing Wireless communication (Wi-Fi / LTE) and SUNIT Server with powerful Processor and Graphic-controller
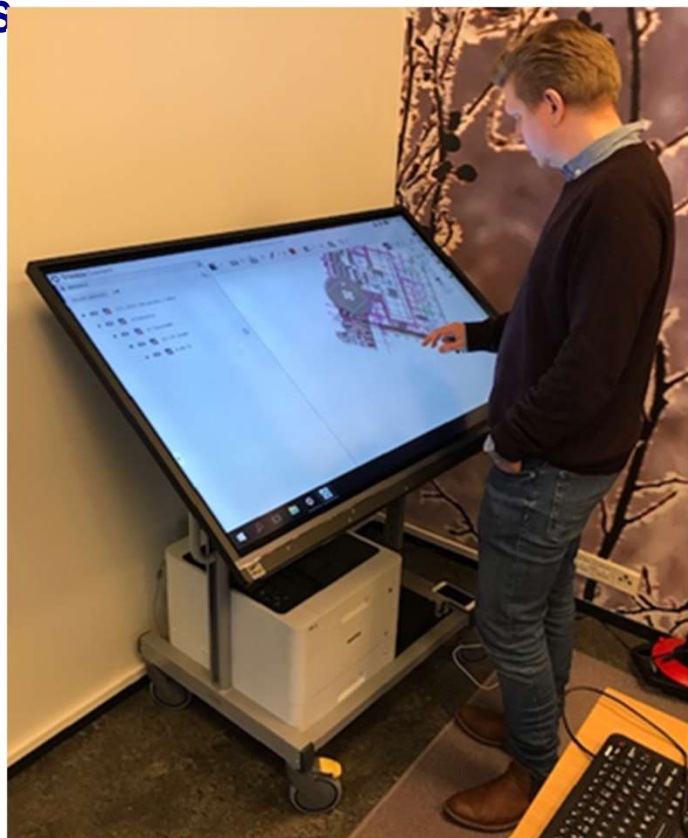➢ Currents always available
➢ 3D-Visibilities available

Up-to 55" Touch Screen

E.g.: By Utilizing e.g. Drone, the Terrain Inventory is carried to Work-Station.

Work-Station is controlled by SUNIT-Computer and have Communication toward Drone.

3D-Mapping is dispatched to Work-Station.

All applications are supplied by third part.

SUNIT Computer is build for extremely environments. Utilizing Mobile Work-Station with SUNIT Technology warrants full service — not only on office — but as well on areas with heavy Humidity and Temperature impacting rooms.

SUNIT-FQA

FANLESS ATOM 4 X 2.0GHZ FOR HEAVY DUTIES

- Wide-temperature Intel Atom 64-bit E3845 BayTrail
- 4 x 1.9GHz
- Intel Full-HD Dual-Graphics
- 1 x Screen Interface
- 1 x Video
- DB Wi-Fi & BT4.2, GB-Ethernet, 4G / LTE, Dual-SIM
- Stereo-Lines, Audio-I/O with Wake-Up, Screen-Audio
- Microphone Line-In
- Accurate 72-channles 3D GNNS w. ADR & Gyro
- CAN, Digital I/O's
- Vehicles; VSS, Gearshift sense, FMS
- Intelligent Power-Moding

SUNIT-FQ5

KABYLAKE 4 X 2.9GHZ I5 FOR INDUSTRY DUTIES
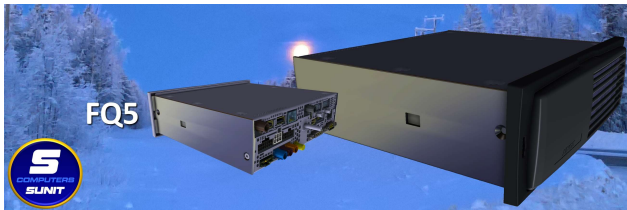
- 7th Gen. Wide-temp. Intel® i5 7440EQ Kaby Lake
- 4 x 2.9GHz
- Intel HD Graphics 630
- 3 x Screen Interfaces
- Up to 4 x Stand-alone Video
- DB Wi-Fi & BT4.2, GB-Ethernet, 4G / LTE, Dual-SIM
- Stereo-Lines, Audio-I/O with Wake-Up, Screen-Audio
- Microphone Line-In
- Accurate 72-channles 3D GNNS w. ADR & Gyro
- 2 x CAN, Digital I/O's, Analog-In's
- Vehicles; VSS, Gearshift sense, FMS
- Intelligent Power-Moding

SUNIT-FDQ

SKYLAKE 4 X 2.0GHZ FOR ADVANCED DUTIES

- 6th Gen. Wide-tmp Intel® Core i7 6822EQ Skylake
- 4 x 2.0GHz
- Intel HD Tri-graphic
- 3 x Screen Interfaces
- Up to 4 x Stand-alone Video
- DB Wi-Fi & BT4.2, GB-Ethernet, 4G / LTE, Dual-SIM
- Stereo-Lines, Audio-I/O with Wake-Up, Screen-Audio
- 2 x CAN, D-IO's, Analog-In's
- Accurate 72-channles 3D GNNS w. ADR & Gyro
- Vehicles; VSS, Gearshift sense, FMS
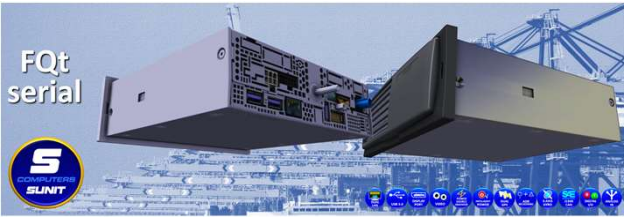- Intelligent Power-Moding

SUNIT-FMD

SKYLAKE 4 X 3.0GHZ FOR INTELLIGENCE DUTIES

- 7th Gen. Wide-temp. Intel® i7 7820EQ Kaby Lake H
- 4 x 3.0GHz
- Intel HD Tri-graphic
- 3 x Screen Interfaces
- Up to 4 x Stand-alone Video
- DB Wi-Fi & BT4.2, GB-Ethernet, 4G / LTE, Dual-SIM
- Stereo-Lines, Audio-I/O with Wake-Up, Screen-Audio
- 2 x CAN, D-IO's, Analog-In's
- Accurate 72-channles 3D GNNS w. ADR & Gyro
- Vehicles; VSS, Gearshift sense, FMS
- Intelligent Power-Moding

SUNIT

Bridge for Demanding Duties

SUNIT-FQt

DUAL-LAN for INDUSTRY & Automations

FQt serial

WORKBOOK

- ➤ Intel HD Tri-graphic
- ➤ 2 x GB-Ethernet for multiple Gateways
- ➤ 2 x Screen Interfaces
- ➤ Up to 4 x Stand-alone Video
- ➤ DB Wi-Fi & BT4.2, 4G / LTE, Dual-SIM
- ➤ Stereo-Lines, Audio-I/O, Screen-Audio
- ➤ 2 x CAN, D-IO's, Analog-In's
- ➤ Accurate 72-channles 3D GNNS w. ADR & Gyro
- ➤ Vehicles; VSS, Gearshift sense, FMS
- ➤ Intelligent Power-Moding

SUNIT-FQt –serial offers alternatively

SUNIT-FDQt

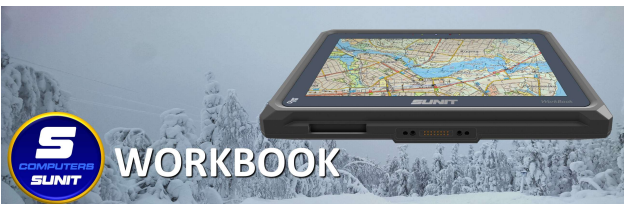✓ 6th Gen. Wide-temp. Intel® Core i7 6822EQ Skylake 4 x 2.0GHz

SUNIT-FMDt

✓ 7th Gen. Wide-temp. Intel® i7 7820EQ Kaby-Lake H 4 x 3.0GHz

GB-Ethernet
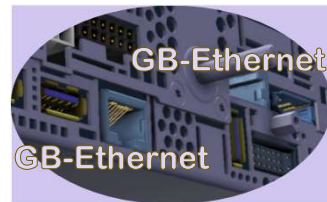
GB-Ethernet

WorkBook Q10

QUAD-CORE TABLET FOR HARSH ENVIRONMENTS

- ➤ Intel Atom® x7-E3940 Processor
- ➤ 4 x 1.8GHz
- ➤ Intel HD Graphics 500
- ➤ Front & Rear Cameras
- ➤ Wi-Fi & Bluetooth, Ethernet, 4G / LTE, SIM
- ➤ Micro-SD, DC Jack, Line-Out, uHDMI, USB2.0 Micro
- ➤ Audio with Speakers, Microphone
- ➤ Accurate 72-channles 3D GNNS w. ADR & Gyro
- ➤ 1* red/green LED for power & system status
- ➤ 2 x Bright Lights on Bottom side for Desk-lightning
- ➤ 10.1" WUXGA. 1920 x 1200 resolution.
- ➤ 850cd/m2 LED. Dual-Channel LVDS.
- ➤ Capacitive Touch (Multi-touch)

SUNIT-AT7

QUICK-START ALL-IN-ONE PANEL-PC

Panel-PC
SUNIT-AT7

- ➤ Intel Atom x7-E3950, Apollo Lake
- ➤ 4 x 1,6 GHz. Quick-start Core-CPU
- ➤ 4GB DDR3L RAM
- ➤ 2D and 3D Graphics
- ➤ Touch Interface
- ➤ 7" W-VGA Full Digital LCD Screen
- ➤ Loud Speakers
- ➤ 72-Channel GPS / GLONASS
- ➤ 4G/LTE
- ➤ Integrated 3G Gyro
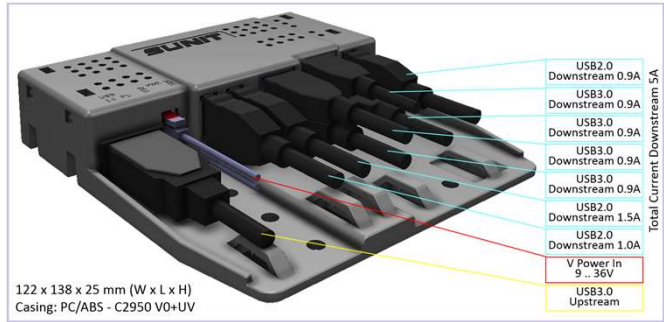- ➤ Intelligent Power-moding
- ➤ CAN, USB, LAN, Serial Interfaces.

SUNIT-SCREENS

RELIABLE TOUCH-SCREENS FOR HARSH DUTIES

7" W-VGA   10,4" XGA   12,4" XGA   18,5" V-XGA

- ➤ Excellent Wide Viewing Angles
- ➤ High-Bright & Super-Bright
- ➤ Brightness Auto-control
- ➤ Touch Interface
- ➤ Full Digital LCD TFT Screen
- ➤ Smart Powered
- ➤ Loud Speakers
- ➤ Auto-ambient Brightness
- ➤ OSD (On-Screen-Display) -technology
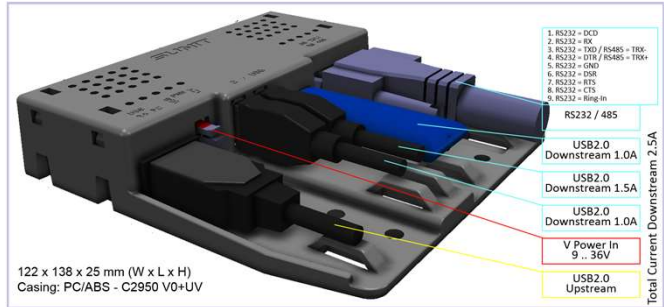- ➤ Touch-on-Windows
- ➤ Touch-on-OSD

USB-3.0 HUB

- ➤ 3 x USB2.0 Downstream
- ➤ 4 x USB3.0 Downstream
- ➤ USB-3.0 Upstream
- ➤ Self Powered
- ➤ High-Powered Downstream for rough devices

122 x 138 x 25 mm (W x L x H)
Casing: PC/ABS - C2950 V0+UV

USB2.0 Downstream 0.9A	
USB3.0 Downstream 0.9A	
USB3.0 Downstream 0.9A	
USB3.0 Downstream 0.9A	
USB3.0 Downstream 0.9A	
USB2.0 Downstream 1.5A	
USB2.0 Downstream 1.0A	
V Power In 9 .. 36V	
USB3.0 Upstream	

Total Current Downstream 5A

USB-2,0 HUB

- ➤ 3 x USB2.0 Downstream
- ➤ 1 x RS-232/485
- ➤ USB-2.0 Upstream
- ➤ For Harsh Conditions
- ➤ Self Powered
- ➤ High-Powered Downstream for rough devices

122 x 138 x 25 mm (W x L x H)
Casing: PC/ABS - C2950 V0+UV

1. RS232 = DCD
2. RS232 = RX
3. RS232 = TXD / RS485 = TRX-
4. RS232 = DTR / RS485 = TRX+
5. RS232 = GND
6. RS232 = DSR
7. RS232 = RTS
8. RS232 = CTS
9. RS232 = Ring-In

RS232 / 485

USB2.0 Downstream 1.0A	
USB2.0 Downstream 1.5A	
USB2.0 Downstream 1.0A	
V Power In 9 .. 36V	
USB2.0 Upstream	

Total Current Downstream 2.5A

SUNIT-GateGear

**POE⁺ EXTENDER FOR
INDUSTRY FLEET AND INFRA**

- ➤ Plug and play PoE+ network devices
- ➤ 4 x PoE+ Ethernet port
- ➤ Supplies power to
- ➤ PoE (up to 15 W) per device
- ➤ PoE⁺ (up to 30 W) per device
- ➤ 2 x Gigabit Ethernet port
- ➤ 1 x Upstream
- ➤ 1 x Downstream
- ➤ Metal enclosure
- ➤ Net-connection up to 100 meters
- ➤ LED indicators for PoE and network connectivity
- ➤ Individual PoE+ I/O Control from User-application

SUNIT-FOX

IR-CAMERA

- ➤ Composite video/50 fps
- ➤ 22.2-6mm Focal Length with 2.7x Zoom
- ➤ 1/2" CCD Sensor. 132° View-Angle
- ➤ Auto/Manual White Balance and Exposure
- ➤ Composite video output
- ➤ RS-485 Control
- ➤ 2.7x optical zoom F1.3 to T360
- ➤ Manual focus
- ➤ IR-Light Operational Distance 15 m
- ➤ LED IR-Light Flash synchronized on Frame-Frequency

SUNIT LVDS-Gear

**CONNECT SUNIT-SCREEN ON TABLET AS
DUAL-SCREEN**

- ➤ Connected on USB3.0 or Display-Port Interface
- ➤ Transfer of:
    - ➤ Graphic
    - ➤ Voice
    - ➤ Touch
- ➤ Self-Powered
- ➤ Strain-reliefs for Harnesses
- ➤ For Harsh Conditions
- ➤ Impact-resist Casing