NSGate

outdoor video surveillance
Experts

Safety and communication equipment

About NSGate

NSGate is a manufacturer and supplier of industrial networking products and cutting-edge solutions for outdoor Video Surveillance Systems:

- Outdoor Access Nodes 'NSBox' that provide reliable operation of connected video cameras;
- Unique components for equipping electrical enclosures ranging from thermoelectric assemblies, fan heaters, lightning and surge protections;
- Industrial network components ranging from PoE switches, PoE injectors, Ethernet extenders and outdoor UPS.

NSGate is the creator of NSBox modular and scalable outdoor access nodes that provide trouble-proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges. The newest proposal, NSBox-cLOUDy is a cloud-based security Node, provides customers with an unmatched solution for outdoor video surveillance systems.

It is a perfect technology solution for time and money saving in the video surveillance projects for the protection of large-scale outdoor assets and critical infrastructure ranging from construction sites, dams, parking lots, warehouses and storage depots, utilities, oil & gas, schools, hotels, parks, sports facilities, airports, railways, bridges, and highways.

Hundreds of companies in Russia and the CIS as well as customers from Europe and the Middle East have already evaluated the advantages and reliability of NSGate's products.

We have much to be proud of

- 1996 г. Our first website nsg-ru.com was launched (Yandex.ru was launched in autumn 1997);
- 2001 г. There are only two VoIP FXS gateways on the Russian market, Cisco ATA186 and NSGate-3502;
- 2003 г. NSG-200F - the first Russian FE optical media converter;
- 2004 г. FoMUX-4LE - the first Russian optical multiplexer capable of transmitting "real" Ethernet traffic of 100 Mbps;
- 2005 г. qBRIDGE-206 - the first Russian G.SHDSL.bis modem with 11.4 Mbps linear speed over two copper pairs;
- 2010 г. qBRIDGE-307 winner of " The Product of the Year - 2010" competition established by LAN magazine;
- 2013 г. Outdoor Access Nodes NSBox - a product that has created a new segment of video surveillance market;
- 2018 г. NSBox Family - a new line of Access Nodes for the markets of Europe, Asia and the Middle East;
- 2019 г. NSBox Family winner of " The Best Innovative Product" competition at Securika Moscow;
- 2021 г. NSBox-cLOUDy is an unmatched cloud-based solution for the protection of large-scale outdoor assets and critical infrastructure.

2020 - 2021

New NSBon accessories

NSBox Cooling

NSBox-LTE series

Highlights

Cloud-based Video Surveillance

cloud-based security Node
NSBox-cLOUDy

NSBox + video cameras

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NSBox-ICE**

**Cabinets and NSBox with installed NVR
NSBox-NVR**

**Solar Powered Cabinets and access Nodes
NSBox-SUN**

**NSBox with embedded 4G LTE Router
NSBox-LTE**

Climate controlled enclosures, NSBox family

**Compact Fan Heater for enclosure
NSBox Heating**

**Thermoelectric Coolers
NSBox Cooling**
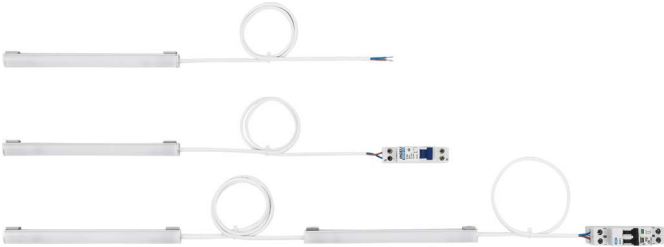
**Lighting kit for enclosure
NSBox Lighting**

**Vandal-proof filter fan Kit
NSBox Venting**

Industrial network components

**Managed/ Unmanaged Industrial Switches
NIS-3500, NIS-3200**

**Industrial PoE Extenders and Injectors
NRP and NIP series**

**Lightning and Surge protection for Ethernet ports
indoor | outdoor | weatherproof**

Industrial 4G LTE Cellular Routers

Outdoor Video Surveillance systems
Outdoor access Nodes NSBox

NSBox-xxx, modular and scalable access nodes are devised for the deployment of protected outdoor video surveillance systems. The nodes provide trouble-proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and grid power fluctuations.

It is an ideal technology solution for time and money saving in any outdoor video surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, sports facilities, airports, railways, bridges, and highways.

The NSBox is a complete product for operation in any climate. Depending on the field of application and operating conditions, various series of electrical enclosures w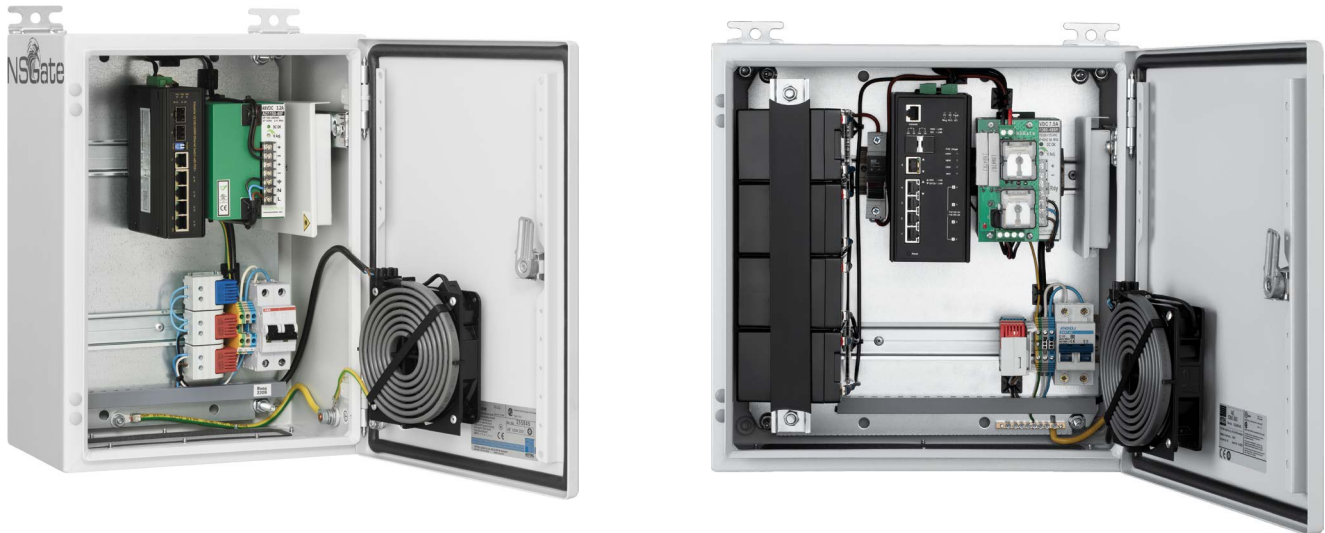ith protection category IP66 | NEMA4 are used: powder-coated sheet steel, stainless steel, glass reinforced polyester, coated aluminum alloy (ATEX compliant).

The device has one 100-240VAC power line, up to 16 PoE ports for video cameras or wireless access points and up to 4 uplink Ethernet ports. In the absence of on-grid systems you can use alternative energy sources such as Solar panels or Wind turbines. In the absence or failure of fibre-optic channels you can use alternative 4G/LTE cellular communication.

The basic NSBox equipment includes wall mounting brackets, a mounting plate with DIN rails, terminal blocks, a circuit breaker, an electrical grounding bar, a fan with a thermostat, set of sealed cable glands for electrical and optical cables, industrial grade switch and power supply.

Wall mount kit
ODF with adapters
UPS 48VDC-360VA
IP66 Cabinet
Industrial Switch
Circuit breaker
Thermostats NC/NO
Batteries 4x7 Ah
Fan Heater 75 W

60W
30W
60W
30W
30W
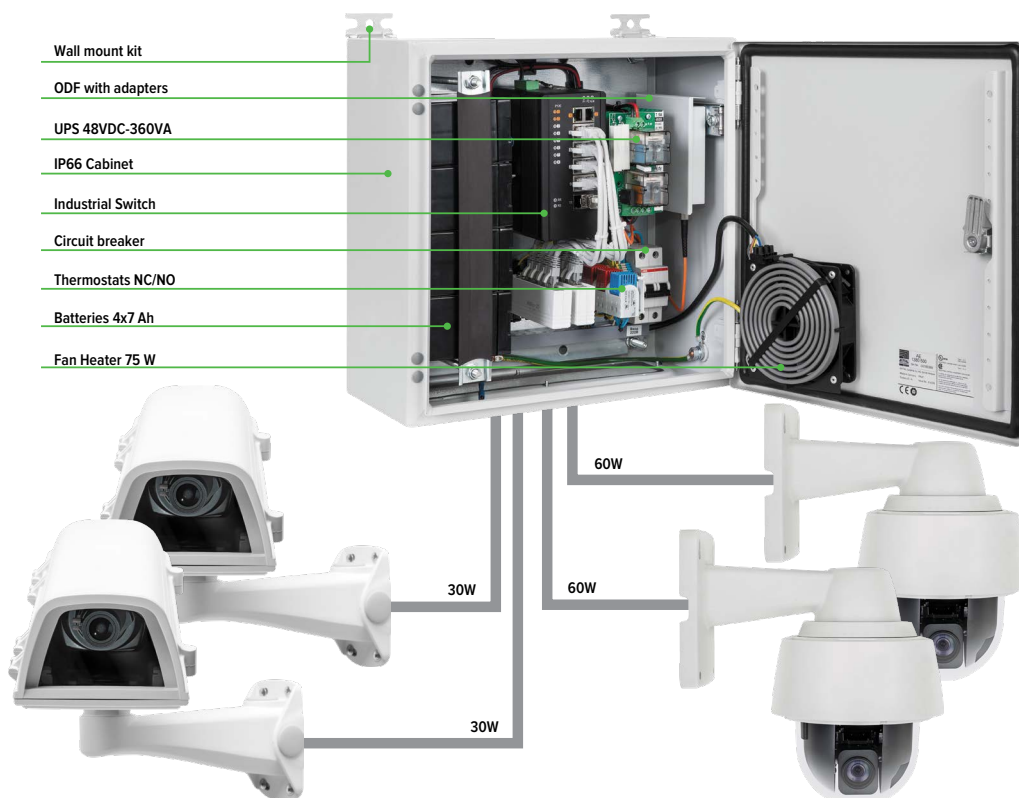
Additional modules that can be included in the assembly:

• Industrial 4-16 ports PoE switches 802.3bt | embedded PC;
• UPS 150-500VA: 24 | 48VDC with batteries 2.2 | 7 | 15 | 45Ah;
• Climate: thermostats, Fan Heater, Thermoelectric assembly;
• Fibre-optic distribution frame (ODF) for connecting optical fibers;
• Lightning and surge protection for Ethernet ports and power circuits;
• Various detectors and sensors with a controller for system monitoring;
• Indoor lighting kit for enclosure, Socket for mounting on DIN rails;
• Mechanical accessories: Pole mount kit, Rain hood, Door lock;
• 4G LTE Cellular Router, compact NVR, Solar charge controller;

Basic kits of Outdoor access Nodes NSBox-xxxx

NSBox with Unmanaged PoE Switches	4 ports PoE, without SFP uplink ports	LTE	Wireless	Solar panel
NSBox-123	Access Node: NSB-3030 enclosure with Fan, without Heater, without ODF; 48VDC-100W Power supply; NIS-3200-115PSG Switch: uplink 1 TP/1G, 4 ports TP/1G PoE 30W for IP cameras; Reboot PDs
NSBox-123L	Access Node: NSB-3030 enclosure with Fan, without Heater, without ODF; 48VDC-100W Power supply; NIS-3200-115PSG Switch: uplink 1 TP/1G, 4 ports TP/1G PoE 30W; NSBon-61 4G LTE router
NSBox-124R	NSB-3838 enclosure with Fan, without Heater, without ODF; UPS DR-24VDC-240VA with mounting kit for batteries 15Ah x2; NIS-3200-115PSG Switch: 1 TP/1G + 4x TP/1G PoE 30W, NSBon-48 Booster; Reboot PD
NSBox-p124S-30	NSP-4040 Polyester enclosure with Fan, without Heater; UPS DR-24VDC-240VA with mounting kit for batteries 15Ah x2; NIS-3200-115PSG Switch, NSBon-48 Booster; NSBon-51 Solar charge controller; Reboot PD
NSBox-124S-90	NSB-3860H2 enclosure with Fan, without Heater; UPS DR-24VDC-240VA with mounting kit for batteries 45Ah x2; NIS-3200-115PSG Switch, NSBon-48 Booster; NSBon-51 Solar charge controller; Reboot PD
	**4 ports PoE	SFP uplink ports**
NSBox-242	Access Node: NSB-3040F1 enclosure with Fan, without Heater, with ODF; 48VDC-150W Power supply; WI-PS306GF-I Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 30W for IP cameras
NSBox-p242	Access Node: NSP-3040F1 Polyester enclosure with Fan, without Heater, with ODF; 48VDC-150W Power supply; WI-PS306GF-I Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 30W for IP cameras
NSBox-442	NSB-3838F1 enclosure with Fan, without Heater, with ODF; 55VDC-360W Power supply; NIS-3200-464PSG Switch: uplink 2 SFP/1G + 2 TP/1G, 4 ports TP/1G High PoE 60W or 2x 30W + 2x 95W Ultra PoE
	**8 - 16 ports PoE	SFP uplink ports**
NSBox-282	Access Node: NSB-3040F1 enclosure with Fan, without Heater, with ODF; 48VDC-240W Power supply; WI-PS310GF-I Switch: uplink 2 Gigabit TP/SFP combo, 8 ports TP/1G PoE 30W for IP cameras
NSBox-360	Access Node: NSB-3860H2F1 enclosure with Fan, without Heater, with ODF; 48VDC-500W Power supply; 2x WI-PS310GF-I Switches: uplink 2 Gigabit TP/SFP combo, 16 ports TP/1G PoE 30W for IP cameras
NSBox with Managed PoE Switches L2/L2+	**4 ports PoE	SFP uplink ports**
NSBox-2040	Access Node: NSB-3030F1 enclosure with Fan, without Heater, with ODF; 48VDC-150W Power supply; NIS-3500-2204PGE Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W; Reboot PDs
NSBox-p2040	Access Node: NSP-3040F1 Polyester enclosure with Fan, without Heater, with ODF; 48VDC-150W Power supply; NIS-3500-2204PGE Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W; Reboot PDs
NSBox-2041	Access Node: NSB-3040F1 enclosure with Fan, without Heater, with ODF; 55VDC-360W Power supply; NIS-3500-3204PGE Switch: uplink 2 SFP/1G + 1 TP/1G, 4 ports TP/1G PoE 802.3bt (95W); Reboot PDs
	**8 ports PoE	SFP uplink ports**
NSBox-2080	Access Node: NSB-3040F1 enclosure with Fan, without Heater, with ODF; 48VDC-360W Power supply; NIS-3500-3208PC Switch: uplink 2 SFP/1G, 8 ports 10/100T PoE 30W for IP cameras; Reboot PDs
NSBox-4044	Access Node: NSB-4040F3 enclosure with Fan, without Heater, with ODF; 55VDC-360W Power supply; WI-PMS312GF-I Switch: uplink 4 SFP/1G, 8 ports TP/1G PoE 802.3at/3bt/Passive; Reboot PD
NSBox-p4044	Access Node: NSP-4060H2F1 Polyester enclosure with Fan, without Heater, with ODF; 55VDC-360W Power supply; WI-PMS312GF-I switch: uplink 4 SFP/1G, 8 ports TP/1G PoE 802.3at/3bt/Passive; Reboot PD
NSBox-4080	Access Node: NSB-3838F1 enclosure with Fan, without Heater, with ODF; 48VDC-360W Power supply; NIS-3500-3408PGE Switch: uplink 4 SFP/1G, 8 ports TP/1G PoE 30W for IP cameras; Reboot PD
NSBox-4082	Access Node: NSB-3838F1 enclosure with Fan, without Heater, with ODF; 55VDC-360W Power supply; NIS-3500-3226PGE Switch: uplink 2 SFP/1G + 2 TP/1G, 8 ports TP/1G PoE (2x60W + 6x30W); Reboot PD
	**16 ports PoE	SFP uplink ports**
NSBox-4161	Access Node: NSB-3860H2F1 enclosure with Fan, without Heater, with ODF; 55VDC-500W Power supply; NIS-3500-3426PGE Switch: uplink 2 SFP/1G + 2 TP/1G, 16 ports TP/1G PoE 30W; Reboot PDs
NSBox-4161HR	Access Node: NSB-3860H3F1 enclosure with Fan Heater; UPS NR-48VDC-500VA with mounting kit for batteries 7Ah x4; NIS-3500-3426PGE Switch: uplink 2 SFP/1G + 2 TP/1G, 16 ports TP/1G PoE 30W; Reboot PD
NSBox-xxxx H C R L N	H - installed Heater C - installed Thermoelectric Cooler L - installed 4G LTE Router R - installed UPS N - installed NVR

Outdoor Video Surveillance systems
Basic kits of electrical Enclosures

NSGate electrical enclosures are designed to install outdoor video surveillance systems and full protection communication equipment against both harsh environments and acts of vandalism. It is a complete product for installation and operation in any climate. Depending on the field of application and operating conditions, various series of electrical enclosures with protection category IP66 / NEMA4 are used:

NSB-xxyy
Powder-coated sheet Steel

NSE-xxyy
Coated Aluminum alloy (ATEX compliant)

NSP-xxyy
Glass Reinforced Polyester

The NSBox assembled in an NSE-xx enclosure can be used for outdoor/indoor installations in hazardous areas.

 In the basic equipment includes wall mounting brackets, a mounting plate with DIN rails for customer equipment, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, set of sealed cable glands for electrical and optical cables. These modules can also be included in the assembly:

• Climate: thermostats, Fan Heater, Thermoelectric cooler/ assembly;
• Fibre-optic distribution frame (ODF) with LC/SC/FC adapters, pigtails, patch cords;
• Mechanical accessories: pole mounting kit, Rain hood, Door lock, etc.

The name of each model and product code contain relevant information for this electrical enclosure ranging from the dimensions, and preset subsystems.

NSB | NSP-xxyy H1 H2 H3 F1 F2 F3 F4 C2 C4:

NSB-xxyy : Dimensions	preset subsystems
3030 : 300x300x210mm	H1 : Fan Heater
3040 : 300x400x210mm	H2 : Thermal insulation
3838 : 380x380x210mm	H3 : Fan Heater and Thermal insulation
4040 : 400x400x230mm	F1 : ODF with 4x FC adapters
3860 : 380x600x210mm	F2 : ODF with 8x FC adapters
6060 : 600x600x210mm	F3 : ODF with 12x SC adapters
NSP-xxyy : Dimensions	F4 : ODF with 16x LC adapters
3040 : 300x400x200mm	preset subsystems
4040 : 400x400x200mm	C2 : Thermoelectric assembly TC-100-AC
4060 : 400x600x230mm	C4 : Thermoelectric assembly FR-208-AC

All NSGate electrical enclosures of any series have preset kits of options (Sets): [1, 2, 3, 4, 5], where the digits denote the subsystems installed inside the enclosure during assembling:

[1] BASIC: DIN rails, cable glands, circuit breaker, terminal blocks; Fan with thermostat.

[2] HEATER: Fan Heater 75W with thermostats.

[3] FIBER: ODF with 4 FC, 8 FC or 16 LC adapters, pigtails, patch cords.

[4] IZOLUX: Thermal insulation of foamed polyethylene.

[5] COOLER: Thermoelectric assembly; C2= TC-100-AC, C4= FR-208-AC.

Basic kits of NSB-xxyy	Sheet steel Enclosure	IP66	
NSB-3030	Cabinet 300x300x210, set [1], with Fan, without Heater, without ODF
NSB-3030F1	Cabinet 300x300x210, set [1, 3], with Fan, without Heater, with ODF
NSB-3030H1	Cabinet 300x300x210, set [1, 2], with Fan Heater, without ODF
NSB-3030H1F1	Cabinet 300x300x210, set [1, 2, 3], with Fan Heater, with ODF
NSB-3040	Cabinet 300x400x210, set [1], with Fan, without Heater, without ODF
NSB-3040F1	Cabinet 300x400x210, set [1, 3], with Fan, without Heater, with ODF
NSB-3040H1	Cabinet 300x400x210, set [1, 2], with Fan Heater, without ODF
NSB-3040H1F1	Cabinet 300x400x210, set [1, 2, 3], with Fan Heater, with ODF
NSB-3838	Cabinet 380x380x210, set [1], with Fan, without Heater, without ODF
NSB-3838F1	Cabinet 380x380x210, set [1, 3], with Fan, without Heater, with ODF
NSB-3838H1	Cabinet 380x380x210, set [1, 2], with Fan Heater, without ODF
NSB-3838H1F1	Cabinet 380x380x210, set [1, 2, 3], with Fan Heater, with ODF
NSB-4040	Cabinet 400x400x230, set [1], with Fan, without Heater, without ODF
NSB-4040F3	Cabinet 400x400x230, set [1, 3], with Fan, without Heater, with ODF / 12SC
NSB-4040H1	Cabinet 400x400x230, set [1, 2], with Fan Heater, without ODF
NSB-4040H1F3	Cabinet 400x400x230, set [1, 2, 3], with Fan Heater, with ODF / 12SC
NSB-3860	Cabinet 380x600x210, set [1], with Fan, without Heater, without ODF
NSB-3860F1	Cabinet 380x600x210, set [1, 3], with Fan, without Heater, with ODF
NSB-3860H1	Cabinet 380x600x210, set [1, 2], with Fan Heater, without ODF
NSB-3860H1F1	Cabinet 380x600x210, set [1, 2, 3], with Fan Heater, with ODF
NSB-6060	Cabinet 600x600x210, set [1], with Fan, without Heater, without ODF
NSB-6060F1	Cabinet 600x600x210, set [1, 3], with Fan, without Heater, with ODF
NSB-6060H1	Cabinet 600x600x210, set [1, 2], with Fan Heater, without ODF
NSB-6060H1F1	Cabinet 600x600x210, set [1, 2, 3], with Fan Heater, with ODF
Basic kits of NSP-xxyy	Glass Reinforced Polyester Enclosure	IP66	
NSP-3040	Cabinet 300x400x200, set [1], with Fan, without Heater, without ODF
NSP-3040F1	Cabinet 300x400x200, set [1, 3], with Fan, without Heater, with ODF
NSP-3040H1	Cabinet 300x400x200, set [1, 2], with Fan Heater, without ODF
NSP-3040H1F1	Cabinet 300x400x200, set [1, 2, 3], with Fan Heater, with ODF
NSP-4040	Cabinet 400x400x200, set [1], with Fan, without Heater, without ODF
NSP-4040F1	Cabinet 400x400x200, set [1, 3], with Fan, without Heater, with ODF
NSP-4040H1	Cabinet 400x400x200, set [1, 2], with Fan Heater, without ODF
NSP-4040H1F1	Cabinet 400x400x200, set [1, 2, 3], with Fan Heater, with ODF
NSP-4060	Cabinet 400x600x230, set [1], with Fan, without Heater, without ODF
NSP-4060F1	Cabinet 400x600x230, set [1, 3], with Fan, without Heater, with ODF
NSP-4060H1	Cabinet 400x600x230, set [1, 2], with Fan Heater, without ODF
NSP-4060H1F1	Cabinet 400x600x230, set [1, 2, 3], with Fan Heater, with ODF
Basic kits of NSE-xxyy	Coated Aluminum alloy	1Ex d/ ATEX compliant	IP67	
NSE-3242	Cabinet 325x425x297, set [1], with Fan, without Heater, without ODF, without cable glands
NSE-4565	Cabinet 450x650x337, set [1], with Fan, without Heater, without ODF, without cable glands
Cabinets with installed **Thermoelectric Assembly**	
NSB-3838C2	Sheet steel cabinet 380x380x210 set [1, 4, 5], with Cooler TC-100-AC: Cover_AC_S0_100W
NSB-3860C4	Sheet steel cabinet 380x600x210 set [1, 4, 5], with Cooler FR-208-AC: Standard_AC_S2_200W
NSB-4040C4	Sheet steel cabinet 400x400x230 set [1, 4, 5], with Cooler FR-208-AC: Standard_AC_S2_200W
NSP-4060C4	Polyester cabinet 400x600x230 set [1, 4, 5], with Cooler FR-208-AC: Standard_AC_S2_200W

Outdoor Access nodes NSBox can be equipped with additional modules, accessories NSBon-xx:

- Industrial 4-16 ports PoE switches 802.3bt | embedded PC;
- UPS 150-500VA: 24 | 48VDC with batteries 2.2 | 7 | 15 | 45Ah;
- Climate: thermostats, Fan Heater, Thermoelectric assembly;
- Fibre-optic distribution frame (ODF) for connecting optical fibers;
- Lightning and surge protection for Ethernet ports and power circuits;
- Various detectors and sensors with a controller for system monitoring;
- Indoor lighting kit for enclosure, Socket for mounting on DIN rails;
- Mechanical accessories: Pole mount kit, Rain hood, Door lock, etc.;
- 4G LTE Cellular Router, compact NVR, Solar charge controller;

Optional accessories NSBon-xx

Mechanical Devices	
NSBon-00	Rails for interior installation
NSBon-01	Pole mount kit for enclosure, diameter 40-190mm
NSBon-02 // NSBon-03	Rain hood	sun shield, stainless steel, 300x210mm // 380x210mm
NSBon-04	Plastic handle with lock cylinder insert, Lock no. 3524 E
Electrical Devices	
NSBon-05	Door-operated switch, with accessory for interior installation
NSBon-08	Socket for mounting on DIN rail
NSBon-36	Cold start system
NSBon-47	Active to Passive PoE Converter, Input 802.3af/at/bt PoE	Output 24V Passive PoE
NSBon-48	Power Booster 24-56VDC, 72W
NSBon-49	Isolated DC-DC power converter, terminal blocks 4 pcs
Lightning and Surge protection	
NSBon-10 // NSBon-11	Surge protection for low-voltage power circuits, 220VAC
NSBon-14	Lightning and Surge protection of 1x 10/100/1000Base-T Ethernet port + PoE, indoor
NSBon-15	Lightning and surge protection of 4x 10/100/1000Base-T Ethernet ports + PoE, indoor
NSBon-29	Lightning and surge protection of 1 Giga Ethernet port + PoE, outdoor, Weatherproof
Built-in 24VAC Power Systems for PTZ Network Cameras	
NSBon-31 // NSBon-33	Toroidal transformer OCM T 220/24 -0.xx, 0.10kVA // 0.25kVA
**Uninterruptible Power Supplies	Battery Charger**	
	UPS DR-24VDC-240VA; Mounting kit for Battery 15Ah x2, w/o batteries
	UPS DR-24VDC-240VA; Mounting kit for Battery 45Ah x2, w/o batteries
	UPS CR-48VDC-155VA; Mounting kit for Battery 7Ah x4, w/o batteries
	UPS NR-48VDC-240VA/ 360VA/ 500VA; Mounting kit for Battery 7Ah x4, w/o batteries
	UPS NR-48VDC-500VA/220VAC-300VA; Mounting kit for Battery 7Ah x4, w/o batteries
NSBon-51	Solar charge controller 20A	24V	PWM, Relay, mounting installation kit
Original Author's Products	
NSBon-06 // -06-1 // -06-2	Indoor lighting kit for enclosure; two LED // one LED // one LED lamp w/o circuit breaker
NSBon-18	Compact Fan Heater for enclosure. DIN Rail mounting. NSBox Heating
NSBon-18-1	Compact Fan Heater for enclosure. Wall mounting. NSBox Heating
NSBon-19	Vandal-proof filter fan Kit for electrical enclosure	2x case+fan+filter. NSBox Venting.
NSBon-37	Thermoelectric Coolers. Series Standard_DC, 24/48VDC. NSBox Cooling
NSBon-38	Thermoelectric Coolers. Series Standard_AC, 220VAC. NSBox Cooling
NSBon-40	Thermoelectric Coolers. Series Cover_AC, 220VAC. NSBox Cooling
Improved communication equipment	
NSBon-44	Mini NVR: 1 10/100/1000T, 4 10/100T PoE, 2 USB, HDMI, 9-Ch Input, 10Tb, 48VDC
NSBon-45	Mini NVR with DIN Rail mounting: 1 10/100/1000T, 2 USB, HDMI, 9-Ch Input, 2 2Tb
NSBon-61	Industrial 4G LTE Cellular Router: 1 WAN, 1 LAN, 1 RS232, DI/DO, 1 micro SIM Slot
NSBon-62	Industrial 4G LTE Cellular Router: 1 WAN, 1 LAN, 2 RS232, DI/DO, 2 SIM Card Slots
NSBon-63	Industrial 4G LTE Cellular Router: 1 WAN, 3 LAN, 2 RS232, DI/DO, 2 SIM Card Slots
NSBon-59	Antenna with bracket: GSM 900/1800	4G LTE	Wi-Fi, 3m cable
NSBon-66	Controller of AC fails, temperature and sensor alarm. GSM, DIN Rail mounting

Cloud-based Video Surveillance

Video surveillance systems are rapidly evolving into smart platforms with capabilities going far beyond traditional monitoring and recording systems. More and more businesses today are leveraging cost-effective cloud services to extend the flexibility of their operations, deployment and management. Cloud eliminates all the headaches of traditional video surveillance systems. With no servers or software to install, small businesses can deploy their video surveillance system in no time without any IT involvement for on-going maintenance.

It means you can quickly deploy several cameras in multiple locations via specific cloud platforms, record and stream encrypted video, securely store video footage on-premises or in the cloud and easily access it from anywhere at any time using a mobile phone, tablet, or computer.

Eagle Eye Networks is the world's leading company in cloud video surveillance. NSGate is the creator of NSBox modular and scalable outdoor access nodes, and became an Eagle Eye Networks partner. Our partnership affords customers an unmatched solution for outdoor video surveillance systems.

NSBox-cLOUDy Mobile cloud-based security Node

NSBox-cLOUDy is a complete cloud-based security Node that's perfect for construction site security or virtually any outdoor or remote location.

Apart from the basic equipment, from PoE switch, power supply and battery backup, through to IP cameras the NSBox-cLOUDy includes a hardware bridge to the cloud and industrial 4G LTE cellular router. The enclosure of the Node is made of glass reinforced polyester and has a protection category of IP66/ NEMA4 for dust and water ingress protection. Ruggedized enclosure is resistant to corrosion, chemicals and some acidic environments. It can be installed in a dirty and constantly wet environment. The Node can be placed anywhere an acceptable cellular signal can be obtained. No other infrastructure is required on site other than power. If there is no mains power supply solar powered enclosures can be used.

NSBox-cLOUDy receives and analyses video streams from the connected video cameras and automatically transmit encrypted video and system status information to the data center through the hardware bridge and 4G LTE router. These devices also perform local video data buffering for intelligent bandwidth control so no data will be lost even if there are bandwidth shortages. The cloud VMS provides view live video, search historic video, adjust camera settings and manage the video footage on your computer or smart device and generate push notifications and emails in the event detection of Line Crossing, Intrusion and Loitering. Notifications can be sent to a monitoring center or directly to security personnel for immediate threat assessment and response. When the construction project is done, the NSBox-cLOUDy is simply moved to a new site.

NSBox-cLOUDy is a perfect technology solution for time and money saving in the video surveillance projects for the protection of large-scale outdoor assets and critical infrastructure ranging from construction sites, dams, parking lots, warehouses and storage depots, utilities, oil & gas, schools, hotels, parks, sports facilities, airports, railways, bridges, and highways.

Outdoor UPS

✓ Compact design	✓ Output 24 | 48 VDC; 24 | 220 VAC	✓ Ready for installing customer equipment

Outdoor UPS, NSBox-UPS are designed to operate in extreme environments and provide a reliable operation of outdoor video surveillance cameras, wireless monitoring and access control systems. The units are mounted in variety of electrical enclosures with protection category IP66 / NEMA4: powder-coated sheet metal, stainless steel, glass reinforced polyester, coated aluminium alloy (explosion-proof), depending on the field of application and operating conditions. With standard wall mounting or optional pole mounting kit (option NSBon-01), the installation for the NSBox-UPS is quick and easy.

The basic kit includes the selected UPS-xx with a mounting kit for batteries 7Ah | 15Ah | 45Ah, a mounting plate with DIN rails for customer equipment, terminal blocks, a circuit breaker, an electrical grounding bar, a fan with a thermostat, the set of selected cable glands. The cable glands are mounted in the bottom of the enclosure, e.g. on a removable metal plate for sheet metal cabinets. For reliable operation at low temperatures use a Fan Heater (option NSBon-18).

NSBox-UPS provides running of the load during AC power failure, provides battery charge and battery protection from deep discharge, protects the load from a short circuit and excess output voltage. It has a built-in charger for sealed lead acid or gel type batteries.

NSBox-UPS is a predefined power system with ultimate flexibility. It's perfect to use in security, communication, traffic and many other critical industrial environments. You can install any additional equipment inside the cabinet: PoE switch or injector, cellular gateway, any registration or monitoring system.

Technical Data

Input voltage: 100 ~ 240VAC	Output voltage: 24VDC, 48VDC; 24VAC, 220VAC
Protection category: IP66 / NEMA4	Battery protection from deep discharge and short circuit
Operating Temp.: -40°C to +50°C	Output 24/48VDC: rated load current 5.0A
Mounting: wall or pole mount	Dimensions of Steel enclosures: 380x380x210 | 380x600x210mm
Microclimate system (option)	Dimensions of Polyester enclosures: 400x400x200 | 400x600x230mm
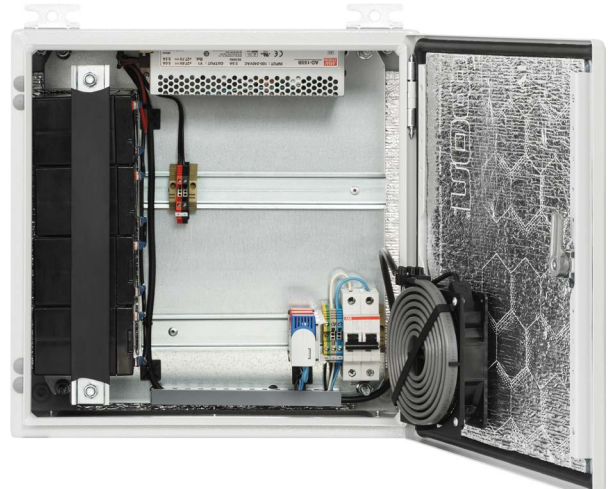
Ordering Information

	Output voltage: 24VDC
NSBox-UPS-2453	Outdoor UPS DR-24VDC-240VA with mounting kit for batteries 15Ah x2, NSB-3838H2 enclosure with Fan, without Heater
NSBox-UPS-2453H	Outdoor UPS DR-24VDC-240VA with mounting kit for batteries 15Ah x2, NSB-3838H3 enclosure with Fan Heater
	Output voltage: 48VDC
NSBox-UPS-1873	Outdoor UPS CR-48VDC-155VA with mounting kit for batteries 7Ah x4, NSB-3838H2 enclosure with Fan, without Heater
NSBox-UPS-1873H	Outdoor UPS CR-48VDC-155VA with mounting kit for batteries 7Ah x4, NSB-3838H3 enclosure with Fan Heater
NSBox-UPS-3873	Outdoor UPS NR-48VDC-360VA with mounting kit for batteries 7Ah x4, NSB-3838H2 enclosure with Fan, without Heater
NSBox-UPS-3873H	Outdoor UPS NR-48VDC-360VA with mounting kit for batteries 7Ah x4, NSB-3838H3 enclosure with Fan Heater
NSBox-UPS-5873	Outdoor UPS NR-48VDC-500VA with mounting kit for batteries 7Ah x4, NSB-3838H2 enclosure with Fan, without Heater
NSBox-UPS-5873H	Outdoor UPS NR-48VDC-500VA with mounting kit for batteries 7Ah x4, NSB-3838H3 enclosure with Fan Heater
	Output voltage: 220VAC+48VDC
NSBox-UPS-4876	Outdoor UPS NR-48VDC-500VA/220VAC-300VA with mounting kit for batteries 7Ah x4, NSB-3860H2 with Fan, w/o Heater
NSBox-UPS-4876H	Outdoor UPS NR-48VDC-500VA/220VAC-300VA with mounting kit for batteries 7Ah x4, NSB-3860H3 with Fan Heater

Cabinets with installed Thermoelectric Assembly

✓ Compact design	✓ 90...305 VAC Power supply	✓ Installation in any position

Electronic equipment installed inside a cabinet emits heat, which raises the internal temperature. Over time, rising temperature can cause electronic devices to a fail. Thermoelectric Coolers or Thermoelectric Assemblies are designed to divert an excess heat from electronic equipment installed inside an electrical enclosure.

NSBox-ICE is a special series of electrical enclosures with installed thermoelectric assembly. The units are mounted in various series of electrical enclosures with protection category IP66 / NEMA4: powder-coated sheet metal, glass reinforced polyester, depending on the field of application and operating conditions.

The basic kit includes the selected assembly with a thermostat, a mounting plate with DIN rails for customer equipment, terminal blocks, a circuit breaker, an electrical grounding bar, the set of selected cable glands. The cable glands are mounted in the bottom of the enclosure, e.g. on a removable metal plate for sheet metal cabinet.

For the thermoelectric assemblies with AC power don't require an additional power supply located inside the cabinet. This is the main advantage of this series, since a power supply takes up a lot of space and emits extra heat, which must be compensated by the thermoelectric cooler itself.

Technical Data

Input voltage: 90 ~ 305VAC	Fitting position of cooler: Variable
Protection category: IP66 / NEMA4	Thermoelectric Assemblies: NSBon-38-2 | NSBon-40
Operating Temp.: -40°C to +70°C	Dimensions of Polyester enclosures: 400x600x230mm
Mounting: wall or pole mount	Dimensions of Steel enclosures: 380x380x210 | 400x400x230 | 380x600x210mm

Ordering Information

NSB-3838C2	Sheet steel cabinet 380x380x210 set [1, 4, 5], with Cooler TC-100-AC: Cover_AC_S0_100W
NSB-3860C4	Sheet steel cabinet 380x600x210 set [1, 4, 5], with Cooler FR-208-AC: Standard_AC_S2_200W
NSB-4040C4	Sheet steel cabinet 400x400x230 set [1, 4, 5], with Cooler FR-208-AC: Standard_AC_S2_200W
NSP-4060C4	Polyester cabinet 400x600x230 set [1, 4, 5], with Cooler FR-208-AC: Standard_AC_S2_200W

NSBox with installed NVR
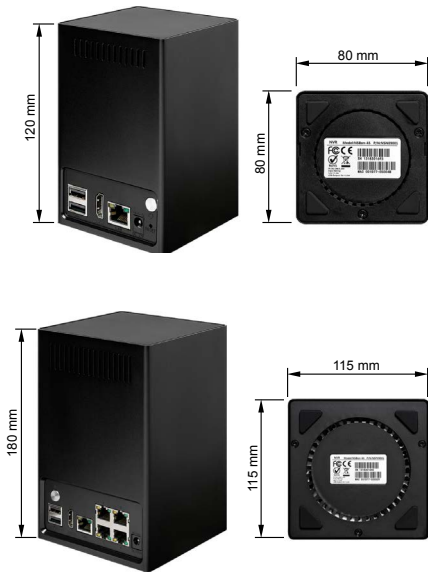
✓ The most compact design	✓ DIN rail mounting	✓ Ready for installing customer equipment

80 mm

120 mm

80 mm

115 mm

180 mm

115 mm

NSBox-NVR is devised to provide a reliable operation of outdoor video surveillance system with quick deployment on unprepared or temporary sites that do not have high-speed fibre-optic channels. The unit is mounted in an enclosure with IP66 protection and ideally suited for video cameras located outdoors. The NSBox-NVR has an installed NVR, which serves as an intermediate memory device. NVR can be used for offline recording or as a required element for LTE/4G Router connecting. It supports recording by manual, by timing and by motion detection. The total hard disk storage up to 10TB or 4TB. 1*SATA HDD(3.5") or 2*SATA HDD(2.5") are supported. 9-Ch NVR can work with all ONVIF-compliant IP cameras, supporting dual stream, and up to 4K definition. It supports and intelligently switches between H.264 and H.265 compressions. Compact device design allows DIN rail mounting. The aluminum casing serves as a heat sink. General features of both NVR:

- Network Video Input: 9 (5MP); Maximum Resolution: 8MP;
- Video Compression: H.265/H.264; Audio Compression: G.711/AAC;
- ONVIF Compatibility; Bandwidth Incoming/Outgoing 90/90Mbps;
- Recording: Manual, Timing, Motion Detection Recording;
- Housing: aluminum, IP20 protection, DIN Rail mounting;
- Network Protocols: IPv4/IPv6, TCP, UDP, RTP, RTSP, RTCP, HTTP, HTTPS, DNS, DDNS, DHCP, NTP, SNTP, SMTP, SNMP, UPnP.

Technical Data

NSBox-NVR		NSBon-45
Input voltage: 100 ~ 240VAC	Interfaces: 1 10/100/1000T, 2 USB, HDMI, 2 SATA HDD 2.5" (4TB)	
Protection category: IP66 / NEMA4	Dimensions 80x80x120mm; Weight 0.85Kg; Power supply 12VDC 1,5A	
Operating Temp.: -40°C ~ +60°C		NSBon-44
Mounting: wall or pole mount	Interfaces: 1 10/100/1000T, 2 USB, HDMI, 1 SATA HDD 3.5" (10TB)	
Microclimate system (option)	Dimensions 115x115x180mm; Weight 1.1Kg; Power supply 48VDC; PoE budget 40W	
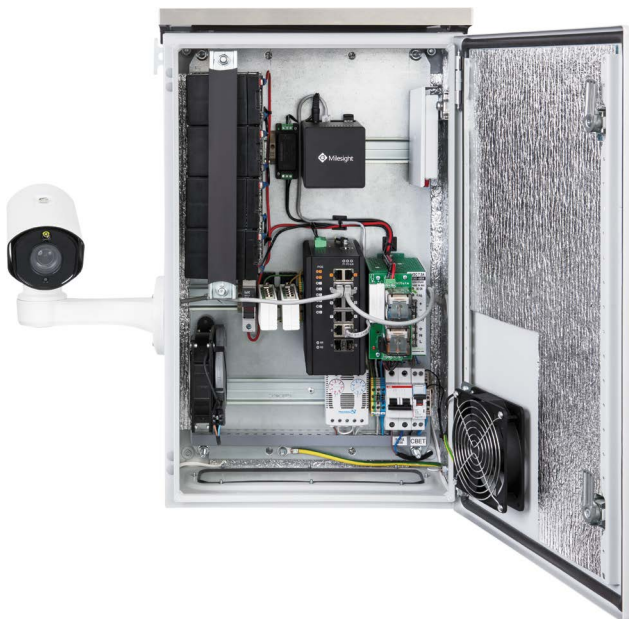
Ordering Information

NSBon-45	Mini NVR with DIN rail mounting: 1 10/100/1000T, 2 USB, HDMI, 9-Ch Input, 2 2Tb, 12VDC
NSBon-44	Mini NVR with PoE: 1 10/100/1000T, 4 10/100T PoE, 2 USB, HDMI, 9-Ch Input, 10Tb, 48VDC

Cabinets and access Nodes Solar Powered

✓ Autonomous applications	✓ IP66 protection for harsh environments	✓ Renewable energy powered

Renewable energy sources like solar and wind are ideal for powering equipment in remote locations. These types of off-grid systems are commonly used to power equipment for a variety of different industrial applications. Common applications include lighting, wireless surveillance cameras, sensors, environmental monitors, traffic signals, oil/gas pipes network, pump stations, telecommunication equipment, and anything else that requires reliable power in a remote location.
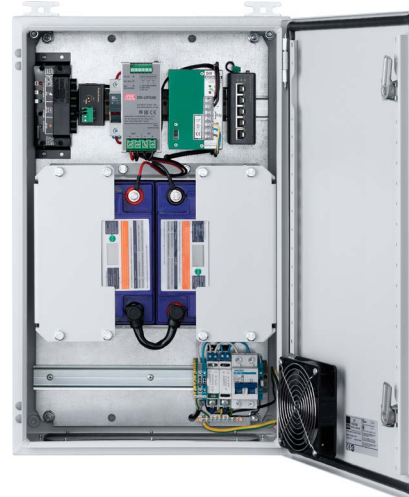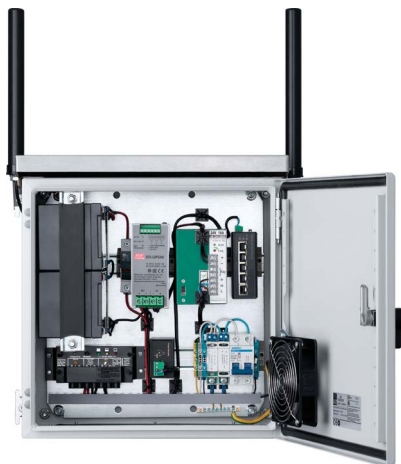
NSBox-SUN Outdoor Access Node is used to deploy protected autonomous or semi-autonomous outdoor applications in the area with no 24/7 electricity available and solar panels can be installed. Typical application for NSBox-SUN is wireless surveillance system that is powered from street lighting where AC power is available only at the night time. NSBox-SUN can be even used if there is no AC power at all if PDs connected to it have low power consumption that can be filled up with energy the sun provides during the day time.

Off-grid Solar Systems work by generating electricity from solar panels and using it to charge a solar battery via a charger controller. NSBox-SUN contains a charger controller that supports 18-40V panels up to 350W and embedded batteries controller that maintains the proper charge of the battery to prevent overcharging and deep discharge. It can be equipped with 24V battery up to 200 Ah and can use 220 VAC power or a solar panel as a power source. NSBox-SUN consists of the Industrial switch with embedded battery and charger controller and a 24VDC-240W power supply installed into electrical enclosures with protection category IP66 / NEMA4.

NSBox-SUN provides connection IP video cameras or other PoE PD devices using wireless uplink 4G | LTE | Wi-Fi and can provide PoE to different types of PDs including 30W PoE and passive 24V PoE.

Technical Data

Input Power: 18V Solar Pannel	100-240VAC	Uplink: 4G	LTE	Wi-Fi	fiber optic
Battery: 24V/50-200Ah (Lead Acid/Lithium)	Operating Temp.: -40°C ~ +60°C
Solar Pannel: 18-40V Up to 350W	Dimensions: depends on the model
PoE: 802.3at	802.3bt	Passive 24V	Weight: Up to 20 kg
PoE Budget: up to 240 W	Protection category: IP66 / NEMA4

NSBox-124S-30	Access Node: NSB-3838 enclosure with Fan, without Heater; UPS DR-24VDC-240VA with mounting kit for
SX44W38F	batteries 15Ah x2; NIS-3200-115PSG Switch, NSBon-48 Booster, NSBon-51 Solar charge controller
NSBox-p124S-30	Access Node: NSP-4040 Polyester enclosure with Fan, without Heater; UPS DR-24VDC-240VA with mounting
UX44W44F	kit for batteries 15Ah x2; NIS-3200-115PSG Switch, NSBon-48 Booster, NSBon-51 Solar charge controller
NSBox-124S-90	Access Node: NSB-3860H2 enclosure with Fan, without Heater; UPS DR-24VDC-240VA with mounting kit
SX44W36F	for batteries 45Ah x2; NIS-3200-115PSG Switch, NSBon-48 Booster, NSBon-51 Solar charge controller
NSBox-124SL-30	Access Node: NSB-3838 enclosure with Fan; UPS DR-24VDC-240VA with mounting kit for batteries 15Ah x2;
SX44L38F	NIS-3200-115PSG Switch, NSBon-48 Booster, NSBon-51 Solar charge controller, NSBon-61 4G LTE router

NSBox with embedded 4G LTE Router

✓ 4G	LTE	Wi-Fi Uplink	✓ Harsh environments and IP66 protection	✓ Cloud VMS service

There are a variety of industrial applications in remote and challenging locations where effective temporary CCTV monitoring and recording is required. But these applications, ranging from construction sites, environmental monitors, highways & rail, pipelines, pump stations, tunnels, public infrastructure, and local events, usually have no wired broadband or the wired service is unavailable.

A problem? Not a problem, using the access nodes of NSBox-LTE series.

NSBox-LTE allows 4G/LTE streaming of data pack large enough for CCTV. The system offers highest levels of security and encryption. A compact NVR can be added to NSBox-LTE as an intermediate buffer for video recordings.

You can devise own bespoke Security systems like rapid deployment towers with mobile cloud VMS service and an extended temperature range.

As models for the NSBox-LTE application use bespoke NSBox models by adding to the configuration a wireless 4G LTE router and compact NVR if necessary. The optimal choice would be special compact models NSBox-123 | NSBox-124 with 4-port PoE switches but without fiber optic SFP ports.

- NSBox-123: NSB-3030 enclosure; 48VDC-100W Power supply;
  NIS-3200-115PSG switch: uplink 1 TP/1G, 4 ports TP/1G PoE 30W; Reboot PDs
- NSBox-124: NSB-3838 enclosure; UPS DR-24VDC-240VA;
  NIS-3200-115PSG switch: uplink 1 TP/1G, 4 ports TP/1G PoE 30W; Reboot PDs

There is a choice of two models of 4G LTE routers. Each has one or two SIM Card slots with FDD LTE / TDD LTE / WCDMA / GSM / LTE Cat4 support.

4G LTE cellular routers

NSBon-61: Industrial 4G LTE Router: 1 WAN, 1 LAN, 1 RS232, DI/DO, 1 micro SIM Slot
NSBon-63: Industrial 4G LTE Router: 1 WAN, 3 LAN, 2 RS232, DI/DO, 2 SIM Card Slots

There is a choice of two models of compact NVR, NSBon-45 and NSBon-44. It supports recording by manual, by timing and by motion detection. 9-Ch NVR can work with all ONVIF-compliant IP cameras, supporting dual stream, and up to 4K definition. The total hard disk storage is up to 10TB. Compact device design allows DIN rail mounting. The aluminum casing serves as a heat sink.

As a result, NSBox-LTE models are assembled for a variety of applications.

NSBox-123L	Access Node with embedded 4G LTE router NSBon-61/63
NSBox-124LN	Access Node with embedded 4G LTE router NSBon-61/63 and NVR NSBon-45/44
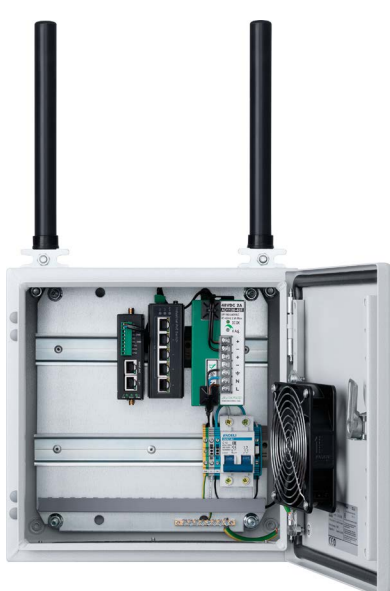
Unmanaged Industrial switch

| ✓ Only copper RJ45 ports | ✓ 4 ports PoE 30W + 1 TP/1G | ✓ Predefined for wireless AP | 4G LTE routers |

The NSBox access Nodes are devised for the deployment of protected outdoor Video Surveillance systems. The Nodes provide trouble proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and power fluctuations. It is a perfect technology solution for time and money saving in any outdoor Video Surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, shopping mall, sports facilities, airports, railways, bridges, and highways.

The basic equipment of the NSBox-123 includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

- Unmanaged Industrial switch: uplink 1 TP/1G, 4 ports TP/1G PoE 30W;
- Power Supply 48VDC-100W; UPS CR-48VDC-155VA with mounting kit for batteries 7Ah x4;
- Climatic control system inside enclosure: thermostats, fan, Fan Heater;
- Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC;
- NSBon-47: Active to Passive PoE Converter, Input 802.3af/at/bt PoE | Output 24V Passive PoE;
- NSBon-61: Industrial 4G LTE Cellular Router: 1 WAN, 1 LAN, 1 RS232, DI/DO, 1 micro SIM Slot.

The switch installed in the NSBox-123 has no fibre-optic ports, only copper ports. Therefore, for the traffic transmission, wireless communication is used, ranging from access points, nodes of the Ubiquiti UniFi / airMAX series, and to Industrial 4G LTE Cellular Routers.

The basic NSBox-123 models are: NSBox-123 | NSBox-123R | NSBox-123L (LTE)

NSBox-123	Access Node: NSB-3030 enclosure with Fan, without Heater, without ODF; 48VDC-100W Power supply;
PX45W33F	NIS-3200-115PSG Switch: uplink 1 TP/1G, 4 ports TP/1G PoE 30W for IP cameras; Reboot PD
NSBox-123R	Access Node: NSB-3838 enclosure with Fan, without Heater, without ODF; UPS CR-48VDC-155VA with mounting
RX45W38F	kit for batteries 7Ah x4; NIS-3200-115PSG Switch: uplink 1 TP/1G, 4 ports TP/1G PoE 30W; Reboot PD
NSBox-123L	Access Node: NSB-3030 enclosure with Fan, without Heater, without ODF; 48VDC-100W Power supply;
PX45L33F	NIS-3200-115PSG Switch: uplink 1 TP/1G, 4 ports TP/1G PoE 30W; Reboot PDs; NSBon-61 4G LTE router

Technical Data

Input Voltage	Power consumption	: 100 - 240VAC	300 W (no more)
Enclosure material (cabinet, door)	: Sheet steel, powder-coated
Protection category	: IP66 / NEMA4	IK08
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp.	: -40°C to +60°C
Dimensions (no cable glands)	: 300x300x210; 380x380x210 mm for R
Shipping weight (approx.)	: 8 kg	15 kg for R (with batteries)
Heater with thermostats (for H)	: NSBon-18 option, Fan Heater
UPS (NSBox-123R)	: CR-48VDC-155VA with mount kit for batteries 7Ah x4
Hardware specification	**Unmanaged Industrial switch NIS-3200-115PSG**
4x 10/100/1000T PoE 30W + 1 TP/1G	PSE 30W/port, support PoE Auto-check function
Alarm: PoE off, power off, network broken	Redundant Power Input 48-56VDC

Applications

Remote or temporary video surveillance sites
Wireless app: Ubiquiti UniFi, airMAX | 4G LTE
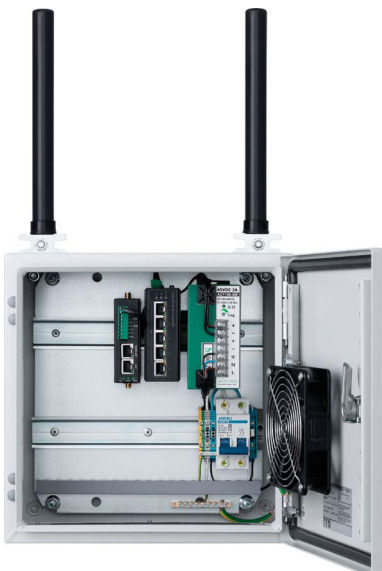
Unmanaged Industrial switch

| ✓ 4 ports PoE 30W + 1 TP/1G | ✓ Ready for wireless 4G | LTE | ✓ Predefined for a variety of Solar Powered applications |

The basic equipment of the NSBox-124 includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

- Unmanaged Industrial switch: uplink 1 TP/1G, 4 ports TP/1G PoE 30W; Power Booster 24-56VDC
- Power Supply 48VDC-100W; UPS DR-24VDC-240VA with mounting kit for batteries 15Ah x2;
- Climatic control system inside enclosure: thermostats, fan, Fan Heater;
- Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC;
- NSBon-61: Industrial 4G LTE Cellular Router: 1 WAN, 1 LAN, 1 RS232, DI/DO, 1 micro SIM Slot;
- Solar charge controller NSBon-51: 20A 24V, relay, mounting installation kit.

The switch installed in the NSBox-124 has no fibre-optic ports, only copper ports. Therefore, for the traffic transmission, wireless communication is used, ranging from access points, nodes of the Ubiquiti UniFi / airMAX series, and to Industrial 4G LTE Cellular Routers.

### The basic models are: NSBox-124R | NSBox-124S-30 | NSBox-124SL-30 | NSBox-p124S-30 | NSBox-124S-90

NSBox-124R RX44W38F	Access Node: NSB-3838 enclosure with Fan, without Heater, without ODF; UPS DR-24VDC-240VA with mounting kit for batteries 15Ah x2; NIS-3200-115PSG Switch: 1 TP/1G + 4x TP/1G PoE 30W, NSBon-48 Booster; Reboot PD
NSBox-124S-30 SX44W38F	Access Node: NSB-3838 enclosure with Fan, without Heater; UPS DR-24VDC-240VA with mounting kit for batteries 15Ah x2; NIS-3200-115PSG Switch, NSBon-48 Booster; NSBon-51 Solar charge controller; Reboot PD
NSBox-124SL-30 SX44W38F	Access Node: NSB-3838 enclosure with Fan; UPS DR-24VDC-240VA with mounting kit for batteries 15Ah x2; NIS-3200-115PSG Switch, NSBon-48 Booster; NSBon-51 Solar charge controller; NSBon-61 4G LTE router; Reboot PD
NSBox-p124S-30 UX44W44F	Access Node: NSP-4040 Polyester enclosure with Fan, without Heater; UPS DR-24VDC-240VA with mounting kit for batteries 15Ah x2; NIS-3200-115PSG Switch, NSBon-48 Booster; NSBon-51 Solar charge controller; Reboot PD
NSBox-124S-90 SX44W36F	Access Node: NSB-3860H2 enclosure with Fan, without Heater; UPS DR-24VDC-240VA with mounting kit for batteries 45Ah x2; NIS-3200-115PSG Switch, NSBon-48 Booster; NSBon-51 Solar charge controller; Reboot PD

Technical Data

Input Voltage	Power consumption	: 100 - 240VAC	300 W (no more)
Enclosure material (cabinet, door)	: Sheet steel, powder-coated; Polyester (GRP)
Protection category	: IP66 / NEMA4	IK08
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp.	: -40°C to +60°C
Dimensions (no cable glands)	: 380x380x210; 400x400x200 or 380x600x210mm
Shipping weight (approx.)	: 15 kg	22 kg	30 kg for R (with batteries)
Power Booster 24-56VDC	: 24-56VDC Input	48-55VDC Output; 72W booster power
Uninterruptible Power Supply	: DR-24VDC-240VA with mount kit for batteries 15/45Ah x2
Hardware specification	**Unmanaged Industrial switch NIS-3200-115PSG**
4x 10/100/1000T PoE 30W + 1 TP/1G	PSE 30W/port, support PoE Auto-check function
Relay alarm: PoE off, power off, network broken	Redundant Power Input 48-56VDC; Power Booster
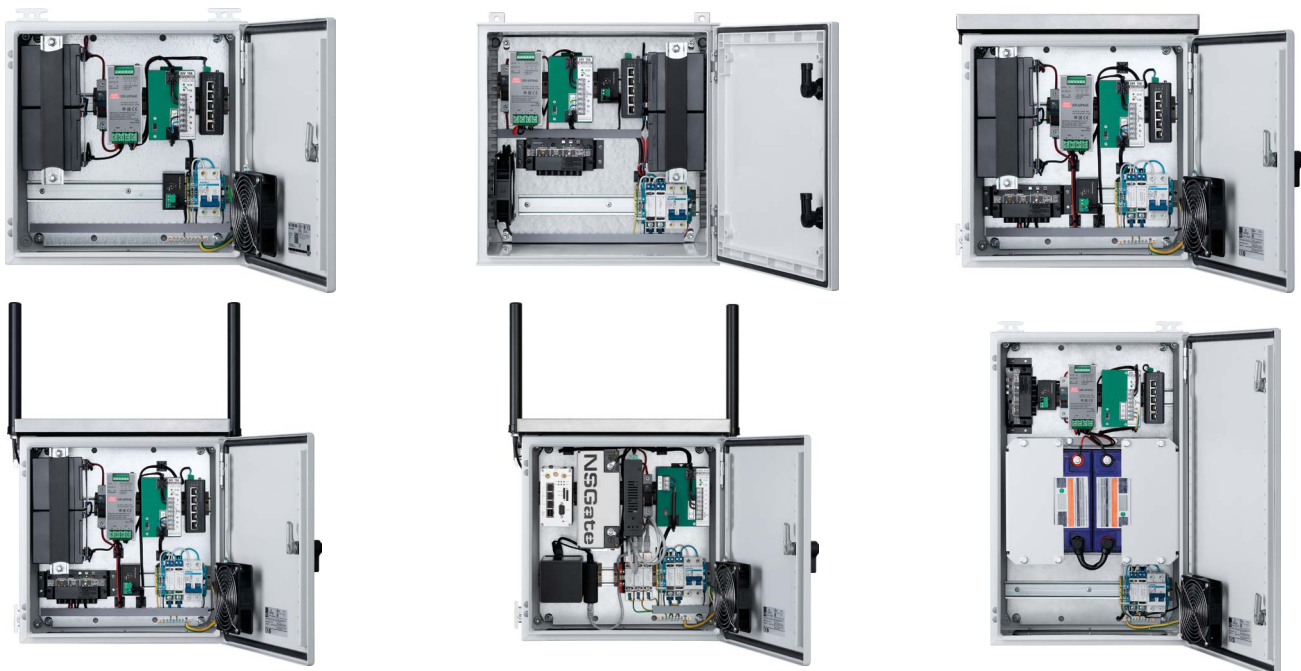
Unmanaged Industrial switch

✓ 4 ports PoE 30W	✓ 2 SFP/1G Uplink	✓ IP66	NEMA4	IK08

The NSBox access Nodes are devised for the deployment of protected outdoor Video Surveillance systems. The Nodes provide trouble proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and power fluctuations. It is a perfect technology solution for time and money saving in any outdoor Video Surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, shopping mall, sports facilities, airports, railways, bridges, and highways.

The basic equipment of the NSBox-242 includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

- Unmanaged Industrial switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 30W;
- Power Supply 48VDC-150W or UPS CR-48VDC-155VA with mounting kit for batteries 7Ah x4;
- Climatic control system inside enclosure: thermostats, Fan Heater, Thermoelectric Cooler/ Assembly;
- Fibre-optic distribution frame (ODF), complete with SC/LC adapters, pigtails, patch cords, and a mounting kit;
- Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC.

In order to include additional modules in assembling of Nodes needs to select Optional Accessories NSBon-xx.

The basic NSBox-242 models are: NSBox-242 | NSBox-242H | NSBox-242R | NSBox-242HR

Model	Description
NSBox-242 PX33F34F	Access Node: NSB-3040F1 enclosure with Fan, without Heater, with ODF; 48VDC-150W Power supply; WI-PS306GF-I Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 30W for IP cameras
NSBox-242H PX33F34H	Access Node: NSB-3040H1F1 enclosure with Fan Heater, with ODF; 48VDC-150W Power supply; WI-PS306GF-I Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 30W for IP cameras
NSBox-242R RX33F38F	Access Node: NSB-3838F1 enclosure with Fan, without Heater, with ODF; UPS CR-48VDC-155VA with mounting kit for batteries 7Ah x4; WI-PS306GF-I Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 30W for IP cameras
NSBox-242HR RX33F38H	Access Node: NSB-3838H1F1 enclosure with Fan Heater, with ODF; UPS CR-48VDC-155VA with mounting kit for batteries 7Ah x4; WI-PS306GF-I Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 30W for IP cameras

Technical Data

Input Voltage	Power consumption	: 100 - 240VAC	300 W (no more)
Enclosure material (cabinet, door)	: Sheet steel, powder-coated
Protection category	: IP66 / NEMA4	IK08
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp.	: -40°C to +60°C
Dimensions (no cable glands)	: 300x400x210 or 380x380x210mm for R
Shipping weight (approx.)	: 12 kg	22 kg for R (with batteries)
Fibre-optic distribution frame (ODF)	: complete with SC/LC adapters, pigtails, patch cords
Heater with thermostats (for H)	: NSBon-18 option, Fan Heater
Uninterruptible Power Supply (for R models)	: CR-48VDC-155VA with mounting kit for batteries 7Ah x4
Hardware specification	**Unmanaged Industrial switch WI-PS306GF-I**
4x 10/100/1000Base-T RJ45 PoE 30W	Total PoE Budget 120W, PSE 30W/port
2x 100/1000M SFP slot	Switch Fabric 12Gbps, 8K MAC, Jumbo Frame 10Kb
802.3at / 802.3af (PoE auto detection)	Redundant Power Input 48-56VDC

Unmanaged Industrial switch

✓ 4 ports PoE 30W	✓ 2 SFP/1G Uplink	✓ Polyester electrical enclosure IP66	NEMA4	IK10

The NSBox access Nodes are devised for the deployment of protected outdoor Video Surveillance systems. The Nodes provide trouble proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and power fluctuations. It is a perfect technology solution for time and money saving in any outdoor Video Surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, shopping mall, sports facilities, airports, railways, bridges, and highways.

Glass Reinforced Polyester enclosures, NSP-xxyy series are used for NSBox-p242 access Nodes. The basic equipment includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

- Unmanaged Industrial switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 30W;
- Power Supply 48VDC-150W or UPS CR-48VDC-155VA with mounting kit for batteries 7Ah x4;
- Climatic control system inside enclosure: thermostats, Fan Heater, Thermoelectric Cooler/ Assembly;
- Fibre-optic distribution frame (ODF), complete with SC/LC adapters, pigtails, patch cords, and a mounting kit;
- Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC.

In order to include additional modules in assembling of Nodes needs to select Optional Accessories NSBon-xx.

NSBox-xxxxR with UPS are delivered without preset Batteries, only mounting kit for Batteries 7 | 15 | 45Ah is included.

The basic NSBox-p242 models are: NSBox-p242 | NSBox-p242H | NSBox-p242R | NSBox-p242HR

NSBox-p242	Access Node: NSP-3040F1 enclosure with Fan, without Heater, with ODF; 48VDC-150W Power supply;
GX33F34F	WI-PS306GF-I Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 30W for IP cameras
NSBox-p242H	Access Node: NSP-3040H1F1 enclosure with Fan Heater, with ODF; 48VDC-150W Power supply;
GX33F34H	WI-PS306GF-I Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 30W for IP cameras
NSBox-p242R	Access Node: NSP-4040F1 enclosure with Fan, without Heater, with ODF; UPS CR-48VDC-155VA with mounting
UX33F44F	kit for batteries 7Ah x4; WI-PS306GF-I Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 30W for IP cameras
NSBox-p242HR	Access Node: NSP-4040H1F1 enclosure with Fan Heater, with ODF; UPS CR-48VDC-155VA with mounting kit for
UX33F44H	batteries 7Ah x4; WI-PS306GF-I Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 30W for IP cameras

Technical Data

Input Voltage | Power consumption	: 100 - 240VAC | 300 W (no more)
Enclosure material (cabinet, door)	: Glass Reinforced Polyester (GRP)
Protection category	: IP66 / NEMA4 | IK10
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp. | with thermal insulation	: -40°C to +60°C | -50°C to +60°C
Dimensions (no cable glands)	: 300x400x200 or 400x400x200mm for R
Shipping weight (approx.)	: 10 kg | 18 kg for R (with batteries)
Fibre-optic distribution frame (ODF)	: complete with SC/LC adapters, pigtails, patch cords
Heater with thermostats (for H)	: NSBon-18 option, Fan Heater
Uninterruptible Power Supply (for R models)	: CR-48VDC-155VA with mounting kit for batteries 7Ah x4
Hardware specification	**Unmanaged Industrial switch WI-PS306GF-I**
4x 10/100/1000Base-T RJ45 PoE 30W	Total PoE Budget 120W, PSE 30W/port
2x 100/1000M SFP slot	Switch Fabric 12Gbps, 8K MAC, Jumbo Frame 10Kb
802.3at / 802.3af (PoE auto detection)	Redundant Power Input 48-56VDC

Unmanaged Industrial switch

✓ 4 ports PoE 30 | 60 | 90W	✓ 2 SFP/1G + 2 TP/1G Uplink	✓ PoE ports: 4x 60W | 2x 95W + 2x 30W

The NSBox access Nodes are devised for the deployment of protected outdoor Video Surveillance systems. The Nodes provide trouble proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and power fluctuations. It is a perfect technology solution for time and money saving in any outdoor Video Surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, shopping mall, sports facilities, airports, railways, bridges, and highways.

The basic equipment of the NSBox-442 includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

- Unmanaged Industrial switch: uplink 2 SFP/1G + 2 TP/1G, 4 ports TP/1G High PoE 60W or 2x 30W + 2x 95W Ultra PoE;
- Power Supply 55VDC-360W or UPS NR-48VDC-360VA with mounting kit for batteries 7Ah x4;
- Climatic control system inside enclosure: thermostats, Fan Heater, Thermoelectric Cooler/ Assembly;
- Fibre-optic distribution frame (ODF), complete with SC/LC adapters, pigtails, patch cords, and a mounting kit;
- Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC.

In order to include additional modules in assembling of Nodes needs to select Optional Accessories NSBon-xx.

NSBox-xxxxR with UPS are delivered without preset Batteries, only mounting kit for Batteries 7 | 15 | 45Ah is included.

The basic NSBox-442 models are: NSBox-442 | NSBox-442H | NSBox-442R | NSBox-442HR

NSBox-442	Access Node: NSB-3838F1 enclosure with Fan, without Heater, with ODF; 55VDC-360W Power supply; NIS-3200-464PSG Switch: uplink 2 SFP/1G + 2 TP/1G, 4 ports TP/1G High PoE 60W or 2x 30W + 2x 95W Ultra PoE
PX30F38F	
NSBox-442H	Access Node: NSB-3838H1F1 enclosure with Fan Heater; 55VDC-360W Power supply; NIS-3200-464PSG Switch: uplink 2 SFP/1G + 2 TP/1G, 4 ports TP/1G High PoE 60W or 2x 30W + 2x 95W Ultra PoE
PX30F38H	
NSBox-442R	Access Node: NSB-3838F1 enclosure with Fan, without Heater; UPS NR-48VDC-360VA (4x 7Ah); NIS-3200-464PSG Switch: uplink 2 SFP/1G + 2 TP/1G, 4 ports TP/1G PoE 60W or 2x 30W + 2x 95W
RX30F38F	
NSBox-442HR	Access Node: NSB-3838H1F1 enclosure with Fan Heater; UPS NR-48VDC-360VA with mounting kit for batteries 7Ah x4; NIS-3200-464PSG Switch: uplink 2 SFP/1G + 2 TP/1G, 4 ports TP/1G PoE 60W or 2x 30W + 2x 95W
RX30F38H	

Technical Data

Input Voltage | Power consumption	: 100 - 240VAC | 500 W (no more)
Enclosure material (cabinet, door)	: Sheet steel, powder-coated
Protection category	: IP66 / NEMA4 | IK08
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp.	: -40°C to +60°C
Dimensions (no cable glands)	: 380 x 380 x 210 mm
Shipping weight (approx.)	: 12 kg | 22 kg for R (with batteries)
Fibre-optic distribution frame (ODF)	: complete with SC/LC adapters, pigtails, patch cords
Heater with thermostats (for H)	: NSBon-18 option, Fan Heater
Uninterruptible Power Supply (for R models)	: NR-48VDC-360VA with mounting kit for batteries 7Ah x4
Hardware specification	**Unmanaged Industrial switch NIS-3200-464PSG**
4x 10/100/1000Base-T RJ45 PoE 30 | 60 | 90W	PoE ports: 4x 60W | 2x 95W + 2x 30W
2x 10/100/1000Base-T RJ45	Total PoE Budget 240W, Power Input 54-56VDC
2x 100/1000M SFP slots	Switch Fabric 16Gbps, 8K MAC, Jumbo Frame 9Kb
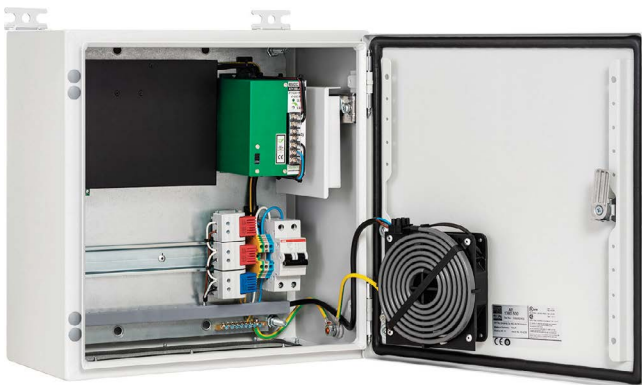
Unmanaged Industrial switch

✓ 8 ports PoE 30W	✓ 2 Giga TP/SFP combo uplink	✓ IP66 | NEMA4 | IK08

The NSBox access Nodes are devised for the deployment of protected outdoor Video Surveillance systems. The Nodes provide trouble proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and power fluctuations. It is a perfect technology solution for time and money saving in any outdoor Video Surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, shopping mall, sports facilities, airports, railways, bridges, and highways.

The basic equipment of the NSBox-282 includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:
- Unmanaged Industrial switch: uplink 2 Gigabit TP/SFP combo, 8 ports TP/1G PoE 30W for IP cameras;
- Power Supply 48VDC-240W or UPS NR-48VDC-240VA with mounting kit for batteries 7Ah x4;
- Climatic control system inside enclosure: thermostats, Fan Heater, Thermoelectric Cooler/ Assembly;
- Fibre-optic distribution frame (ODF), complete with SC/LC adapters, pigtails, patch cords, and a mounting kit;
- Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC.

In order to include additional modules in assembling of Nodes needs to select Optional Accessories NSBon-xx.

The basic NSBox-282 models are: NSBox-282 | NSBox-282H | NSBox-282R | NSBox-282HR

NSBox-282	Access Node: NSB-3040F1 enclosure with Fan, without Heater, with ODF; 48VDC-240W Power supply;
PX37F34F	WI-PS310GF-I Switch: uplink 2 Gigabit TP/SFP combo, 8 ports TP/1G PoE 30W for IP cameras
NSBox-282H	Access Node: NSB-3040H1F1 enclosure with Fan Heater, with ODF; 48VDC-240W Power supply;
PX37F34H	WI-PS310GF-I Switch: uplink 2 Gigabit TP/SFP combo, 8 ports TP/1G PoE 30W for IP cameras
NSBox-282R	Access Node: NSB-3838F1 enclosure with Fan, without Heater, with ODF; UPS NR-48VDC-240VA with mounting
RX37F38F	kit for batteries 7Ah x4; WI-PS310GF-I Switch: uplink 2 Gigabit TP/SFP combo, 8 ports TP/1G PoE 30W
NSBox-282HR	Access Node: NSB-3838H1F1 enclosure with Fan Heater, with ODF; UPS NR-48VDC-240VA with mounting kit for
RX37F38H	batteries 7Ah x4; WI-PS310GF-I Switch: uplink 2 Gigabit TP/SFP combo, 8 ports TP/1G PoE 30W for IP cameras

Technical Data

Input Voltage | Power consumption	: 100 - 240VAC | 500 W (no more)
Enclosure material (cabinet, door)	: Sheet steel, powder-coated
Protection category	: IP66 / NEMA4 | IK08
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp.	: -40°C to +60°C
Dimensions (no cable glands)	: 300x400x210 or 380x380x210mm for R
Shipping weight (approx.)	: 12 kg | 22 kg for R (with batteries)
Fibre-optic distribution frame (ODF)	: complete with SC/LC adapters, pigtails, patch cords
Heater with thermostats (for H)	: NSBon-18 option, Fan Heater
Uninterruptible Power Supply (for R models)	: NR-48VDC-240VA with mounting kit for batteries 7Ah x4
Hardware specification	**Unmanaged Industrial switch WI-PS310GF-I**
8x 10/100/1000Base-T RJ45 PoE 30W	Total PoE Budget 240W, PSE 30W/port
2x 100/1000M TP/SFP Combo	Switch Fabric 24Gbps, 8K MAC, Jumbo Frame 10Kb
802.3at / 802.3af (PoE auto detection)	Redundant Power Input 48-56VDC

Managed Industrial switch

✓ 4 ports PoE 36W	✓ 2 SFP/1G Uplink	✓ G.8032 ERPSv2 Ring protection

The NSBox access Nodes are devised for the deployment of protected outdoor Video Surveillance systems. The Nodes provide trouble proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and power fluctuations. It is a perfect technology solution for time and money saving in any outdoor Video Surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, shopping mall, sports facilities, airports, railways, bridges, and highways.

The basic equipment of the NSBox-2040 includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

- Managed Industrial switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W for IP cameras;
- Power Supply 48VDC-150W or UPS CR-48VDC-155VA with mounting kit for batteries 2.2Ah x4;
- Climatic control system inside enclosure: thermostats, Fan Heater, Thermoelectric Cooler/ Assembly;
- Fibre-optic distribution frame (ODF), complete with SC/LC adapters, pigtails, patch cords, and a mounting kit;
- Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC.

The basic NSBox-2040 models are: NSBox-2040 | NSBox-2040H | NSBox-2040R | NSBox-2040HR

NSBox-2040	Access Node: NSB-3030F1 enclosure with Fan, without Heater, with ODF; 48VDC-150W Power supply;
PX15F33F	NIS-3500-2204PGE Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W; Reboot PD
NSBox-2040H	Access Node: NSB-3030H1F1 enclosure with Fan Heater, with ODF; 48VDC-150W Power supply;
PX15F33H	NIS-3500-2204PGE Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W for IP cameras; Reboot PD
NSBox-2040R	Access Node: NSB-3838F1 enclosure with Fan, without Heater; UPS CR-48VDC-155VA with mounting kit
RX15F38F	for batteries 2.2Ah x4; NIS-3500-2204PGE Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W; Reboot PD
NSBox-2040HR	Access Node: NSB-3838H1F1 enclosure with Fan Heater; UPS CR-48VDC-155VA with mounting kit for
RX15F38H	batteries 2.2Ah x4; NIS-3500-2204PGE Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W; Reboot PD

Technical Data

Input Voltage | Power consumption	: 100 - 240VAC | 300 W (no more)
Enclosure material (cabinet, door)	: Sheet steel, powder-coated, primed
Protection category IP/NEMA | IK Code	: IP66 / NEMA4 | IK08
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp. | with thermal insulation	: -40°C to +60°C | -50°C to +60°C
Dimensions (no cable glands)	: 300x300x210 or 380x380x210mm for R models
Shipping weight (approx.)	: 10 kg | 15 kg for R models (with batteries)
Fibre-optic distribution frame (ODF)	: complete with SC/LC adapters, pigtails, patch cords
Heater with thermostats (for H models)	: NSBon-18 option, Fan Heater
Uninterruptible Power Supply (for R models)	: CR-48VDC-155VA with mounting kit for batteries 2.2Ah x4
Hardware specification	**Managed Industrial switch NIS-3500-2204PGE**
4x 10/100/1000Base-T RJ45 PoE 30W	IEEE 802.3at / 802.3af (PD Alive Check)
2x 100/1000M SFP slots (with DDM)	Total PoE Budget 144W, PSE 30W/port, max 36W
	G.8032 ERPSv2 Ring protection;

Management Interface | Diagnostic

Console/CLI, Web GUI, Telnet, SNMP | Syslog, VLAN mirroring, RMON, SNMP Trap

Network Protocols:

Spanning Tree: STP, RSTP, MSTP; **Ring Topology**: G.8032 ERPSv2, Chain; **VLAN**: Port-based, 802.1q tag-based, 802.1ad Q in Q; **IGMP** Snooping v1/v2/v3 & Querier; **QoS**: 802.1p, 8 queues per port, WRR/SPQ; **DHCP** Client, Server, Relay, Snooping, Option 82; 802.1ab **LLDP**; Multicast/Broadcast/Flooding **Storm Control**; Access Control: IP/ MAC-based/ 802.1x authentication; **Security**: HTTPs, SSH, Radius Client; NTP/SNTP;

Managed Industrial switch

| ✓ 4 ports PoE 36W | ✓ 2 SFP/1G Uplink | ✓ Polyester electrical enclosure | G.8032 ERPSv2 |

The NSBox access Nodes are devised for the deployment of protected outdoor Video Surveillance systems. The Nodes provide trouble proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and power fluctuations. It is a perfect technology solution for time and money saving in any outdoor Video Surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, shopping mall, sports facilities, airports, railways, bridges, and highways.

Glass Reinforced Polyester enclosures, NSP-xxyy series are used for NSBox-p2040 access Nodes. The basic equipment includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

- Managed Industrial switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W for IP cameras;
- Power Supply 48VDC-150W or UPS CR-48VDC-155VA with mounting kit for batteries 7Ah x4;
- Climatic control system inside enclosure: thermostats, Fan Heater, Thermoelectric Cooler/ Assembly;
- Fibre-optic distribution frame (ODF), complete with SC/LC adapters, pigtails, patch cords, and a mounting kit;
- Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC.
  In order to include additional modules in assembling of Nodes needs to select Optional Accessories NSBon-xx.

The basic NSBox-p2040 models are: NSBox-p2040 | NSBox-p2040H | NSBox-p2040R | NSBox-p2040HR

NSBox-p2040	Access Node: NSP-3040F1 enclosure with Fan, without Heater, with ODF; 48VDC-150W Power supply;
GX15F34F	NIS-3500-2204PGE Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W; Reboot PDs
NSBox-p2040H	Access Node: NSP-3040H1F1 enclosure with Fan Heater, with ODF; 48VDC-150W Power supply;
GX15F34H	NIS-3500-2204PGE Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W for IP cameras; Reboot PDs
NSBox-p2040R	Access Node: NSP-4040F1 enclosure with Fan, without Heater; UPS CR-48VDC-155VA with mounting kit for
UX15F44F	batteries 7Ah x4; NIS-3500-2204PGE Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W; Reboot PDs
NSBox-p2040HR	Access Node: NSP-4040H1F1 enclosure with Fan Heater; UPS CR-48VDC-155VA with mounting kit for
UX15F44H	batteries 7Ah x4; NIS-3500-2204PGE Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W; Reboot PDs

Technical Data

Input Voltage	Power consumption	: 100 - 240VAC	300 W (no more)
Enclosure material (cabinet, door)	: Glass Reinforced Polyester (GRP)
Protection category IP/NEMA	IK Code	: IP66 / NEMA4	IK10
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp.	with thermal insulation	: -40°C to +60°C	-50°C to +60°C
Dimensions (no cable glands)	: 300x400x200 or 400x400x200mm for R
Shipping weight (approx.)	: 10 kg	18 kg for R (with batteries)
Fibre-optic distribution frame (ODF)	: complete with SC/LC adapters, pigtails, patch cords
Heater with thermostats (for H models)	: NSBon-18 option, Fan Heater
Uninterruptible Power Supply (for R models)	: CR-48VDC-155VA with mounting kit for batteries 7Ah x4

Hardware specification	Managed Industrial switch NIS-3500-2204PGE
4x 10/100/1000Base-T RJ45 PoE 30W	IEEE 802.3at / 802.3af (PD Alive Check)
2x 100/1000M SFP slots (with DDM)	G.8032 ERPSv2 Ring protection;

Management Interface	Diagnostic
Console/CLI, Web GUI, Telnet, SNMP	Syslog, VLAN mirroring, RMON, SNMP Trap

Network Protocols:
Spanning Tree: STP, RSTP, MSTP; **Ring Topology**: G.8032 ERPSv2, Chain; **VLAN**: Port-based, 802.1q tag-based, 802.1ad Q in Q; **IGMP** Snooping v1/v2/v3 & Querier; **QoS**: 802.1p, 8 queues per port, WRR/SPQ; **DHCP** Client, Server, Relay, Snooping, Option 82; 802.1ab **LLDP**; Multicast/Broadcast/Flooding **Storm Control**; Access Control: IP/ MAC-based/ 802.1x authentication; **Security**: HTTPs, SSH, Radius Client; NTP/SNTP;

Managed Industrial switch

| ✓ 4 ports 802.3bt PoE | ✓ 2 SFP/1G + 1 TP/1G Uplink | ✓ G.8032 ERPSv2 Ring protection | ✓ 2 DI | 2 DO |

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The basic equipment of the NSBox-2041 includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

- Managed Industrial switch: uplink 2 SFP/1G + 1 TP/1G, 4 ports TP/1G PoE 802.3bt, G.8032 ERPSv2, DI/DO;
- Power Supply 55VDC-360W or UPS NR-48VDC-360VA with mounting kit for batteries 7Ah x4;
- Climatic control system inside enclosure: thermostats, Fan Heater, Thermoelectric Cooler/ Assembly;
- Fibre-optic distribution frame (ODF), complete with SC/LC adapters, pigtails, patch cords, and a mounting kit;
- Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC.

The basic NSBox-2041 models are: NSBox-2041 | NSBox-2041H | NSBox-2041R | NSBox-2041HR

NSBox-2041	Access Node: NSB-3040F1 enclosure with Fan, without Heater, with ODF; 55VDC-360W Power supply;
PX14F34F	NIS-3500-3204PGE Switch: uplink 2 SFP/1G + 1 TP/1G, 4 ports TP/1G PoE 802.3bt (95W); Reboot PD
NSBox-2041H	Access Node: NSB-3040H1F1 enclosure with Fan Heater, with ODF; 55VDC-360W Power supply;
PX14F34H	NIS-3500-3204PGE Switch: uplink 2 SFP/1G + 1 TP/1G, 4 ports TP/1G PoE 802.3bt (95W); Reboot PD
NSBox-2041R	Access Node: NSB-3838F1 enclosure with Fan, without Heater; UPS NR-48VDC-360VA with mounting kit for
RX14F38F	batteries 7Ah x4; NIS-3500-3204PGE Switch: uplink 2 SFP/1G + 1 TP/1G, 4 ports TP/1G PoE 802.3bt (95W)
NSBox-2041HR	Access Node: NSB-3838H1F1 enclosure with Fan Heater; UPS NR-48VDC-360VA with mounting kit for
RX14F38H	batteries 7Ah x4; NIS-3500-3204PGE Switch: uplink 2 SFP/1G + 1 TP/1G, 4 ports TP/1G PoE 802.3bt (95W)

Technical Data

Input Voltage	Power consumption	: 100 - 240VAC	500 W (no more)
Enclosure material (cabinet, door)	: Sheet steel, powder-coated, primed
Protection category IP/NEMA	IK Code	: IP66 / NEMA4	IK08
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp.	with thermal insulation	: -40°C to +60°C	-50°C to +60°C
Dimensions (no cable glands)	: 300x400x210 or 380x380x210mm for R models
Shipping weight (approx.)	: 12 kg	22 kg for R models (with batteries)
Fibre-optic distribution frame (ODF)	: complete with SC/LC adapters, pigtails, patch cords
Heater with thermostats (for H models)	: NSBon-18 option, Fan Heater
Uninterruptible Power Supply (for R models)	: NR-48VDC-360VA with mounting kit for batteries 7Ah x4

Hardware specification	Managed Industrial switch NIS-3500-3204PGE
4x 10/100/1000Base-T RJ45 802.3bt PoE	IEEE 802.3af / 802.3at / 802.3bt (PD Alive Check)
1x 10/100/1000Base-T RJ45	802.3bt PoE 90W	UPoE 95W	802.3at 36W	Force 60W
2x 100/1000M SFP slots (with DDM)	G.8032 ERPSv2 Ring protection; 2 DI	2 DO

Management Interface	Diagnostic
Console/CLI, Web GUI, Telnet, SNMP	Syslog, VLAN mirroring, RMON, SNMP Trap

Network Protocols:

Spanning Tree: STP, RSTP, MSTP; **Ring Topology:** G.8032 ERPSv2, Chain; **VLAN:** Port-based, 802.1q tag-based, 802.1ad Q in Q; **IGMP** Snooping v1/v2/v3 & Querier; **QoS:** 802.1p, 8 queues per port, WRR/SPQ; **DHCP** Client, Server, Relay, Snooping, Option 82; 802.1ab **LLDP**; Multicast/Broadcast/Flooding **Storm Control**; Access Control: IP/ MAC-based/ 802.1x authentication; **Security**: HTTPs, SSH, Radius Client; NTP/SNTP;

Managed Industrial switch

✓ 8 PoE 30W | 60W | Passive	✓ 4 SFP/1G Uplink	✓ PoE ports: 4x 30W | 2x 60W | 2x Passive

The NSBox access Nodes are devised for the deployment of protected outdoor Video Surveillance systems. The Nodes provide trouble proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and power fluctuations. It is a perfect technology solution for time and money saving in any outdoor Video Surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, shopping mall, sports facilities, airports, railways, bridges, and highways.

The basic equipment of the NSBox-4044 includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

• Managed Industrial switch: uplink 4 SFP/1G, 8 TP/1G ports with PoE various power ;
• Power Supply 55VDC-360W or UPS NR-48VDC-360VA with mounting kit for batteries 7Ah x4;
• Climatic control system inside enclosure: thermostats, Fan Heater, Thermoelectric Cooler/ Assembly;
• Fibre-optic distribution frame (ODF), complete with SC/LC adapters, pigtails, patch cords, and a mounting kit;
• Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC.
  In order to include additional modules in assembling of Nodes needs to select Optional Accessories NSBon-xx.
  NSBox-xxxxR with UPS are delivered without preset Batteries, only mounting kit for Batteries 7 | 15 | 45Ah is included.

The basic NSBox-4044 models are: NSBox-4044 | NSBox-4044H | NSBox-4044R | NSBox-4044HR

NSBox-4044	Access Node: NSB-4040F3 enclosure with Fan, without Heater, with ODF; 55VDC-360W Power supply;
PX17F44F	WI-PMS312GF-I Switch: uplink 4 SFP/1G, 8 ports TP/1G PoE 802.3at/3bt/Passive; Reboot PD
NSBox-4044H	Access Node: NSB-4040H1F3 enclosure with Fan Heater; 55VDC-360W Power supply; WI-PMS312GF-I
PX17F44H	Switch: uplink 4 SFP/1G, 8 ports TP/1G PoE 802.3at/3bt/Passive for IP cameras; Reboot PDs
NSBox-4044R	Access Node: NSB-4040F3 enclosure with Fan, without Heater; UPS NR-48VDC-360VA with mounting kit for
RX17F44F	batteries 7Ah x4; WI-PMS312GF-I Switch: uplink 4 SFP/1G, 8 ports TP/1G PoE 802.3at/3bt/Passive; Reboot PD
NSBox-4044HR	Access Node: NSB-4040H1F3 enclosure with Fan Heater; UPS NR-48VDC-360VA with mounting kit for batteries
RX17F44H	7Ah x4; WI-PMS312GF-I Switch: uplink 4 SFP/1G, 8 ports TP/1G PoE 802.3at/3bt/Passive; Reboot PD

Technical Data

Input Voltage | Power consumption	: 100 - 240VAC | 500 W (no more)
Enclosure material (cabinet, door)	: Sheet steel, powder-coated, primed
Protection category IP/NEMA | IK Code	: IP66 / NEMA4 | IK08
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp. | with thermal insulation	: -40°C to +60°C | -50°C to +60°C
Dimensions (no cable glands)	: 400 x 400 x 230 mm
Shipping weight (approx.)	: 12 kg | 22 kg for R models (with batteries)
Fibre-optic distribution frame (ODF)	: complete with SC/LC adapters, pigtails, patch cords
Heater with thermostats (for H models)	: NSBon-18 option, Fan Heater
Uninterruptible Power Supply (for R models)	: NR-48VDC-360VA with mounting kit for batteries 7Ah x4
Hardware specification	**Managed Industrial switch WI-PMS312GF-I**
8x 10/100/1000T RJ45 with PoE various power	IEEE 802.3at / 802.3bt (PD Alive Check) / Passive PoE
4x 100/1000M SFP slots (with DDM)	Total PoE Budget 300W, PSE 30W/port, max 60W
Management Interface | Diagnostic	
Console/CLI, Web GUI, Telnet, SNMP, Syslog, RMON	
Network Protocols:	

Ring Topology: ERPS, EAPS; Spanning Tree: STP, RSTP, MSTP; **VLAN**: Port-based, 802.1q tag-based; **IGMP** v1/v2/v3 & MLDv1/2 Snooping; **QoS**: 802.1p, 8 queues per port, WRR/SP/WFQ; **DHCP** Snooping; Multicast/ Broadcast/Unicast **Storm Control; Security**: RADIUS, TACACS+, SSH, AAA, ACL; SNTP; Static Routing.

Managed Industrial switch

✓ PoE: 4x 30W | 2x 60W | 2x Passive   ✓ 4 SFP/1G Uplink   ✓ Polyester electrical enclosure IP66 | NEMA4 | IK10

The NSBox access Nodes are devised for the deployment of protected outdoor Video Surveillance systems. The Nodes provide trouble proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and power fluctuations. It is a perfect technology solution for time and money saving in any outdoor Video Surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, shopping mall, sports facilities, airports, railways, bridges, and highways.

Glass Reinforced Polyester enclosures, NSP-xxyy series are used for NSBox-p4044 access Nodes. The basic equipment includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

- Managed Industrial switch: uplink 4 SFP/1G, 8 TP/1G ports with PoE various power ;
- Power Supply 55VDC-360W or UPS NR-48VDC-360VA with mounting kit for batteries 7Ah x4;
- Climatic control system inside enclosure: thermostats, Fan Heater, Thermoelectric Cooler/ Assembly;
- Fibre-optic distribution frame (ODF), complete with SC/LC adapters, pigtails, patch cords, and a mounting kit;
- Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC.

In order to include additional modules in assembling of Nodes needs to select Optional Accessories NSBon-xx.

NSBox-xxxxR with UPS are delivered without preset Batteries, only mounting kit for Batteries 7 | 15 | 45Ah is included.

The basic NSBox-p4044 models are: NSBox-p4044H | NSBox-p4044HR

NSBox-p4044H	Access Node: NSP-4060H3F1 enclosure with Fan Heater, with ODF/12SC; 55VDC-360W Power supply;
GX17F46H	WI-PMS312GF-I switch: uplink 4 SFP/1G, 8 ports TP/1G PoE 802.3at/3bt/Passive; Reboot PD
NSBox-p4044HR	Access Node: NSP-4060H3F1 enclosure with Fan Heater, with ODF/12SC; UPS NR-48VDC-360VA with mounting kit
UX17F46H	for batteries 7Ah x4; WI-PMS312GF-I switch: uplink 4 SFP/1G, 8 ports TP/1G PoE 802.3at/3bt/Passive; Reboot PD

Technical Data

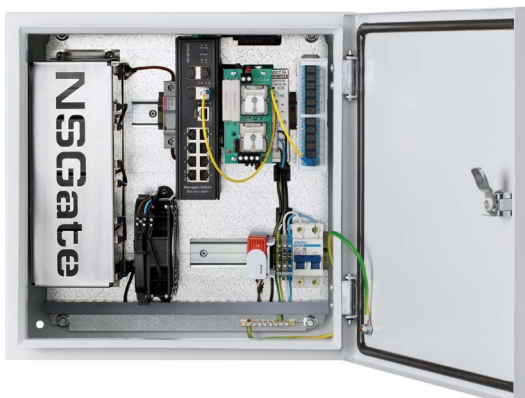|	
Input Voltage	Power consumption	: 100 - 240VAC	500 W (no more)
Enclosure material (cabinet, door)	: Glass Reinforced Polyester (GRP)
Protection category IP/NEMA	IK Code	: IP66 / NEMA4	IK10
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp.	with thermal insulation	: -40°C to +60°C	-50°C to +60°C
Dimensions (no cable glands)	: 400 x 600 x 230 mm
Shipping weight (approx.)	: 15 kg	25 kg for R models (with batteries)
Fibre-optic distribution frame (ODF)	: complete with SC/LC adapters, pigtails, patch cords
Heater with thermostats (for H models)	: NSBon-18 option, Fan Heater
Uninterruptible Power Supply (for R models)	: NR-48VDC-360VA with mounting kit for batteries 7Ah x4
Hardware specification	**Managed Industrial switch WI-PMS312GF-I**
8x 10/100/1000T RJ45 with PoE various power	IEEE 802.3at / 802.3bt (PD Alive Check) / Passive PoE
4x 100/1000M SFP slots (with DDM)	Total PoE Budget 300W, PSE 30W/port, max 60W
**Management Interface	Diagnostic**	
Console/CLI, Web GUI, Telnet, SNMP, Syslog, RMON	
Network Protocols:	

Ring Topology: ERPS, EAPS; Spanning Tree: STP, RSTP, MSTP; **VLAN**: Port-based, 802.1q tag-based; **IGMP** v1/v2/v3 & MLDv1/2 Snooping; **QoS**: 802.1p, 8 queues per port, WRR/SP/WFQ; **DHCP** Snooping; Multicast/ Broadcast/Unicast **Storm Control; Security**: RADIUS, TACACS+, SSH, AAA, ACL; SNTP; Static Routing.

Managed Industrial switch

| ✓ 8 ports PoE 30/60W | ✓ 2 SFP/1G + 2 TP/1G | ✓ PoE ports: 2x 60W + 6x 30W |

The NSBox access Nodes are devised for the deployment of protected outdoor Video Surveillance systems. The Nodes provide trouble proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and power fluctuations. It is a perfect technology solution for time and money saving in any outdoor Video Surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, shopping mall, sports facilities, airports, railways, bridges, and highways.

The basic equipment of the NSBox-4082 includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

• Managed Industrial switch: uplink 2 SFP/1G + 2 TP/1G, 8 ports TP/1G PoE (2x 60W + 6x 30W);
• Power Supply 55VDC-360W or UPS NR-48VDC-360VA with mounting kit for batteries 7Ah x4;
• Climatic control system inside enclosure: thermostats, Fan Heater, Thermoelectric Cooler/ Assembly;
• Fibre-optic distribution frame (ODF), complete with SC/LC adapters, pigtails, patch cords, and a mounting kit;
• Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC.

The basic NSBox-4082 models are: NSBox-4082 | NSBox-4082H | NSBox-4082R | NSBox-4082HR

NSBox-4082	Access Node: NSB-3838F1 enclosure with Fan, without Heater, with ODF; 55VDC-360W Power supply; NIS-3500-3226PGE Switch: uplink 2 SFP/1G + 2 TP/1G, 8 ports TP/1G PoE (2x60W + 6x30W); Reboot PD
PX08F38F	
NSBox-4082H	Access Node: NSB-3838H1F1 enclosure with Fan Heater; 55VDC-360W Power supply; NIS-3500-3226PGE Switch: uplink 2 SFP/1G + 2 TP/1G, 8 ports TP/1G PoE (2x 60W + 6x 30W) for IP cameras; Reboot PD
PX08F38H	
NSBox-4082R	Access Node: NSB-3838F1 enclosure with Fan, without Heater; UPS NR-48VDC-360VA with mounting kit for batteries 7Ah x4; NIS-3500-3226PGE Switch: uplink 2 SFP/1G + 2 TP/1G, 8 ports TP/1G PoE (2x60W + 6x30W)
RX08F38F	
NSBox-4082HR	Access Node: NSB-3838H1F1 enclosure with Fan Heater; UPS NR-48VDC-360VA with mounting kit for batteries 7Ah x4; NIS-3500-3226PGE Switch: uplink 2 SFP/1G + 2 TP/1G, 8 ports TP/1G PoE (2x 60W + 6x 30W)
RX08F38H	

Technical Data

Input Voltage	Power consumption	: 100 - 240VAC	500 W (no more)
Enclosure material (cabinet, door)	: Sheet steel, powder-coated, primed
Protection category IP/NEMA	IK Code	: IP66 / NEMA4	IK08
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp.	with thermal insulation	: -40°C to +60°C	-50°C to +60°C
Dimensions (no cable glands)	: 380 x 380 x 210 mm
Shipping weight (approx.)	: 12 kg	22 kg for R models (with batteries)
Fibre-optic distribution frame (ODF)	: complete with SC/LC adapters, pigtails, patch cords
Heater with thermostats (for H models)	: NSBon-18 option, Fan Heater
Uninterruptible Power Supply (for R models)	: NR-48VDC-360VA with mounting kit for batteries 7Ah x4
Hardware specification	**Managed Industrial switch NIS-3500-3226PGE**
8x 10/100/1000Base-T RJ45 PoE (2x 60W + 6x 30W)	IEEE 802.3at / 802.3af (PD Alive Check)
2x 10/100/1000Base-T RJ45	Total PoE Budget 240W, PSE 30W/port, max 60W
2x 100/1000M SFP slots (with DDM)	Switch Fabric 24Gbps, 8K MAC, Jumbo Frame 9Kb
**Management Interface	Diagnostic**	
Console/CLI, Web GUI, Telnet, SNMP	Syslog, VLAN mirroring, RMON, SNMP Trap	
Network Protocols :	

Spanning Tree: STP, RSTP, MSTP; **Ring Topology:** Chain, Dual Homing, Couple Ring; **VLAN:** Port-based, 802.1q tag-based, 802.1ad Q in Q; **IGMP** Snooping v1/v2/v3 & Querier; **QoS:** 802.1p, 8 queues per port, WRR/ SPQ; **DHCP** Client, Server, Relay, Snooping, Option 82; 802.1ab **LLDP**; Multicast/Broadcast/Flooding **Storm Control**; Access Control: IP/ MAC-based/ 802.1x authentication; **Security**: HTTPs, SSH, Radius Client; NTP/SNTP;
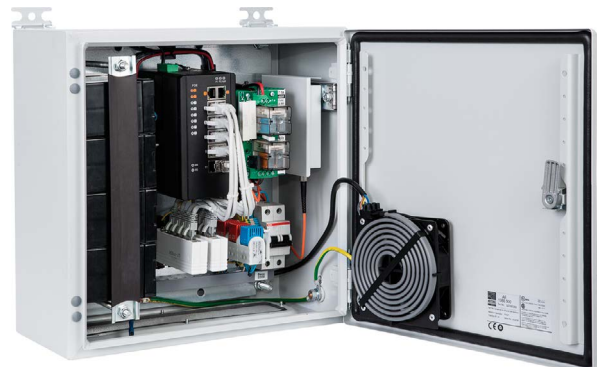
Managed Industrial switch

| ✓ 16 ports PoE 30W | ✓ 2 SFP/1G + 2 TP/1G Uplink | ✓ G.8032 ERPSv2 Ring protection | ✓ 2 DI | 2 DO |

The NSBox access Nodes are devised for the deployment of protected outdoor Video Surveillance systems. The Nodes provide trouble proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and power fluctuations. It is a perfect technology solution for time and money saving in any outdoor Video Surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, shopping mall, sports facilities, airports, railways, bridges, and highways.

The basic equipment of the NSBox-4161 includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

• Managed Industrial switch: uplink 2 SFP/1G + 2 TP/1G, 16 ports TP/1G PoE 30W, G.8032 ERPSv2, DI/DO;
• Power Supply 55VDC-500W or UPS NR-48VDC-500VA with mounting kit for batteries 7Ah x4;
• Climatic control system inside enclosure: thermostats, Fan Heater, Thermoelectric Cooler/ Assembly;
• Fibre-optic distribution frame (ODF), complete with SC/LC adapters, pigtails, patch cords, and a mounting kit;
• Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC.

The basic NSBox-4161 models are: NSBox-4161 | NSBox-4161H | NSBox-4161R | NSBox-4161HR

| NSBox-4161	Access Node: NSB-3860H2F1 enclosure with Fan, without Heater, with ODF; 55VDC-500W Power supply; NIS-3500-3426PGE Switch: uplink 2 SFP/1G + 2 TP/1G, 16 ports TP/1G PoE 30W; Reboot PD
PX01F36F	
NSBox-4161H	Access Node: NSB-3860H3F1 enclosure with Fan Heater, with ODF; 55VDC-500W Power supply; NIS-3500-3426PGE Switch: uplink 2 SFP/1G + 2 TP/1G, 16 ports TP/1G PoE 30W for IP cameras; Reboot PD
PX01F36H	
NSBox-4161R	Access Node: NSB-3860H2F1 enclosure with Fan, without Heater; UPS NR-48VDC-500VA with mounting kit for batteries 7Ah x4; NIS-3500-3426PGE Switch: uplink 2 SFP/1G + 2 TP/1G, 16 ports TP/1G PoE 30W
RX01F36F	
NSBox-4161HR	Access Node: NSB-3860H3F1 enclosure with Fan Heater; UPS NR-48VDC-500VA with mounting kit for batteries 7Ah x4; NIS-3500-3426PGE Switch: uplink 2 SFP/1G + 2 TP/1G, 16 ports TP/1G PoE 30W
RX01F36H	

Technical Data

Input Voltage	Power consumption	: 100 - 240VAC	500 W (no more)
Enclosure material (cabinet, door)	: Sheet steel, powder-coated, primed
Protection category IP/NEMA	IK Code	: IP66 / NEMA4	IK08
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp.	with thermal insulation	: -40°C to +60°C	-50°C to +60°C
Dimensions (no cable glands)	: 380 x 600 x 210 mm
Shipping weight (approx.)	: 16 kg	26 kg for R models (with batteries)
Fibre-optic distribution frame (ODF)	: complete with SC/LC adapters, pigtails, patch cords
Heater with thermostats (for H models)	: NSBon-18 option, Fan Heater
Uninterruptible Power Supply (for R models)	: NR-48VDC-500VA with mounting kit for batteries 7Ah x4

Hardware specification	Managed Industrial switch NIS-3500-3426PGE
16x 10/100/1000Base-T RJ45 PoE 30W	IEEE 802.3at / 802.3af (PD Alive Check)
2x 10/100/1000Base-T RJ45	Total PoE Budget 320W, PSE 30W/port, max 30W
2x 100/1000M SFP slots (with DDM)	G.8032 ERPSv2 Ring protection; 2 DI	2 DO

Management Interface	Diagnostic
Console/CLI, Web GUI, Telnet, SNMP	Syslog, VLAN mirroring, RMON, SNMP Trap

Network Protocols :

Spanning Tree: STP, RSTP, MSTP; **Ring Topology:** G.8032 ERPSv2, Chain; **VLAN:** Port-based, 802.1q tag-based, 802.1ad Q in Q; **IGMP** Snooping v1/v2/v3 & Querier; **QoS:** 802.1p, 8 queues per port, WRR/SPQ; **DHCP** Client, Server, Relay, Snooping, Option 82; 802.1ab **LLDP**; Multicast/Broadcast/Flooding **Storm Control**; Access Control: IP/ MAC-based/ 802.1x authentication; **Security**: HTTPs, SSH, Radius Client; NTP/SNTP;

ATEX compliant NSBox

✓ 4 ports PoE 36W	✓ For harsh environments	✓ Explosion-proof enclosures

The NSBox access Nodes are devised for the deployment of protected outdoor Video Surveillance systems. The Nodes provide trouble proof operation of connected video cameras with a secure power supply, reliable data transmission, and protection of sensitive equipment from surges caused by lightning and power fluctuations. It is a perfect technology solution for time and money saving in any outdoor Video Surveillance projects for a large-scale area ranging from construction sites, parking lots, hotels, parks, shopping mall, sports facilities, airports, railways, bridges, and highways.

The NSBox-2040E are assembled in explosion-proof enclosures of the NSE-xxx series made of coated aluminium alloy. The enclosures are ATEX compliant and have IP67 protection category. The basic equipment of the NSBox-2040E includes: wall mounting brackets, mounting plate with DIN-rails, terminal blocks, a two-pole circuit breaker, an electrical grounding bar, a fan with a thermostat, a set of cable glands. These modules can also be included in the assembly:

- Managed Industrial 4 ports PoE switch with the Power Supply 48VDC-150W or UPS;
- Climatic control system inside enclosure: thermostats, Fan Heater;
- Fibre-optic distribution frame (ODF), complete with SC/LC adapters, pigtails, patch cords, and a mounting kit;
- Lightning and surge protection for Ethernet PoE ports and power circuits 220VAC.

NSBox-2040E	Access Node: NSE-3242F1 explosion-proof enclosure with Fan, without Heater, with ODF; 48VDC-150W Power supply; NIS-3500-2204PGE Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W; Reboot PD
NSBox-2040HE	Access Node: NSE-3242H1F1 explosion-proof enclosure with Fan Heater, with ODF; 48VDC-150W Power supply; NIS-3500-2204PGE Switch: uplink 2 SFP/1G, 4 ports TP/1G PoE 36W for IP cameras; Reboot PD

Technical Data

Input Voltage | Power consumption	: 100 - 240VAC | 300 W (no more)
Enclosure material (cabinet, door)	: Coated aluminium alloy
Protection category IP | Explosion protection	: IP66 | 1Ex d | ATEX compliant
Enclosure mounts	: Wall or pole mount with NSBon-01 kit
Operating temp. | with thermal insulation	: -40°C to +60°C | -50°C to +60°C
Dimensions (no cable glands)	: 425 x 325 x 297 mm
Shipping weight (approx.)	: 35 kg
Fibre-optic distribution frame (ODF)	: complete with SC/LC adapters, pigtails, patch cords
Heater with thermostats (for H models)	: NSBon-18 option, Fan Heater
Uninterruptible Power Supply (for R models)	: CR-48VDC-155VA with mounting kit for batteries 2.2Ah x4
Hardware specification	**Managed Industrial switch NIS-3500-2204PGE**
4x 10/100/1000Base-T RJ45 PoE 30W	IEEE 802.3at / 802.3af (PD Alive Check)
2x 100/1000M SFP slots (with DDM)	Total PoE Budget 144W, PSE 30W/port, max 36W
	G.8032 ERPSv2 Ring protection;
Management Interface | Diagnostic	
Console/CLI, Web GUI, Telnet, SNMP | Syslog, VLAN mirroring, RMON, SNMP Trap	
Network Protocols:	

Spanning Tree: STP, RSTP, MSTP; **Ring Topology**: G.8032 ERPSv2, Chain; **VLAN**: Port-based, 802.1q tag-based, 802.1ad Q in Q; **IGMP** Snooping v1/v2/v3 & Querier; QoS: 802.1p, 8 queues per port, WRR/SPQ; **DHCP** Client, Server, Relay, Snooping, Option 82; 802.1ab LLDP; Multicast/Broadcast/Flooding **Storm Control**; Access Control: IP/ MAC-based/ 802.1x authentication; **Security**: HTTPs, SSH, Radius Client; NTP/SNTP;

compact FAN HEATER

✓ **Compact Design**
✓ **Long service life**

✓ **DIN rail mounting**
✓ **Low surface temperature**

The compact Fan Heater prevents the formation of condensation and provides an evenly distributed interior air temperature in electrical enclosures. It has clip for DIN Rail or Door mounting.

The heating element is made on the basis of a self-regulating heating cable. The temperature of the heating element does not exceed 65°C, which ensures maximum safety and energy efficiency. The original design of the cable fastening does not allow its individual turns to touch each other, which allows maintaining the maximum heat transfer.

The heater and fan are connected to the electrical circuit using two screw terminals. It is possible to separate the power circuits of the heater and the fan and use the fan together with the heater or separately in the cooling / ventilation modes of the enclosure.

The NSBon-18 is suitable for the most types of junction boxes and electrical enclosures.

Technical Data

Operating voltage:	220 - 240VAC	Surface temperature:	max. 65°C
Heating element:	self-regulating heating cable	Heating Capacity:	60-80W
Service life:	50,000 h at 25°C	Fitting position:	Variable
Axial fan:	Ball bearing	Connection:	2-pole clamp
Air flow:	46 CFM	Operating Temp.:	-40°C to +70°C
Mounting:	clip for 35mm DIN Rail	Protection category:	IP20
Dimensions:	50x120x150mm	Weight:	0.53kg

NSBon-18 modes of operation			Control module
H1V1	Heater and Fan contacts combined	Heater and Fan are switched on together when the temperature inside the cabinet is below 5°C.	Thermostat NC / 5°C x1
H1V2	Heater and Fan contacts are not combined	Heater and Fan are switched on together when the temperature inside the cabinet is below 5°C. Only Fan is switched on when the temperature inside the cabinet is above 50°C.	Thermostat NC / 5°C x2 + Thermostat NO / 50°C x1

Ordering Information

NSBon-18	FH75AC22	Compact Fan Heater for electrical enclosure. NSBox Heating. DIN Rail mounting
NSBon-18-1	FH75AW22	Compact Fan Heater for electrical enclosure. NSBox Heating. Wall/Door mounting

Thermoelectric Assemblies

✓ Installation in any position	✓ High reliability
✓ 24/48VDC or 220VAC Power supply	✓ Ecological cleanliness

Thermoelectric Coolers or Thermoelectric Assemblies are designed to remove heat around critical components within an electrical enclosure with IP66 / NEMA4 protection category. This is a thermoelectric module (thermoelectric air conditioner) using the Peltier effect. The thermoelectric modules create a temperature difference between the internal and ambient heat sinks. It makes internal air colder while heat is dissipating into the external environment. Fans help the transfer of heating from the heat sinks.

The main advantages of Thermoelectric Coolers over conventional compressor are:

• it can be controlled electronically;
• it is easily reversible when the current is reversed;
• it can work in harsh environments:
  • in high ambient temperatures or heavily polluted ambient air;
  • in application with vibrations or strong accelerations.

Thermoelectric Coolers should be used in regions with hot climates, to extend the service life of UPS batteries, when specific customer equipment is installed inside the cabinet.

Technical Data

Operating voltage:	24/ 48VDC; 220VAC	Protection category:	IP67
Cooling Capacity:	100-900W	Fitting position:	Variable
Operating Temp.:	-40°C to +70°C	Connection:	Terminal
Dimensions:	depends on the model	Axial Fan:	Ball bearing
Weight:	depends on the model	Fan Air:	110 CFM

Ordering Information

NSBon-37	Thermoelectric Coolers. Series Standard_DC, 24/48VDC. NSBox Cooling
NSBon-38	Thermoelectric Coolers. Series Standard_AC, 220VAC. NSBox Cooling
NSBon-40	Thermoelectric Coolers. Series Cover_AC, 220VAC. NSBox Cooling
NSBon-42	Thermoelectric Coolers. Series SandStorm_DC, 24VDC. NSBox Cooling

The basic kits of Thermoelectric Assemblies / Coolers

NSBon-37
Standard_DC Series

• Power supply 24/48 VDC
• Cooling/Heating function
• IP67 protection category
• Operat. temp. -40°C~ 70°C

An additional 24 V D C power supply is required inside the cabinet.

Model	Vendor code	Size	Weight	Nominal Power	Supply voltage	Height mm	Width mm	Depth mm
NSBon-37-1	FR-104-C	1	2,5 kg	100 W	24 VDC	195	132	155
NSBon-37-2	FR-208-C	2	5 kg	200 W	24(48) VDC	268	195	155
NSBon-37-3	FR-316-C	3	10 kg	400 W	24(48) VDC	390	269	155

NSBon-38
Standard_AC Series

• Power supply 90-305 VAC
• Cooling/Heating function
• IP67 protection category
• Operat. temp. -40°C~ 70°C

No need for additional power supply! This is the main advantage of AC Series, since the power supply takes up a lot of space and emits extra heat, which must be compensated.

Model	Vendor code	Size	Weight	Nominal Power	Supply voltage	Height mm	Width mm	Depth mm
NSBon-38-2	FR-208-AC	2	6 kg	200W	90…305 VAC	268	195	155
NSBon-38-4	FR-416-AC	4	14,5 kg	400W	90…305 VAC	480	264	159
NSBon-38-5	FR-536-AC	5	25 kg	900W	90…305 VAC	550	394	159

NSBon-40
Cover_AC Series

• Power supply 90-305VAC
• Cooling/Heating function
• IP67 protection category
• Operat. temp. -40°C~ 70°C

No need for additional power supply! This is the main advantage of AC Series, since the power supply takes up a lot of space and emits extra heat, which must be compensated.

Model	Vendor code	Size	Weight	Nominal Power	Supply voltage	Height mm	Width mm	Depth mm
NSBon-40	TC-100-AC	0	3,5 kg	100W	90…305 VAC	210	135	142

THERMOELECTRIC ASSEMBLIES for harsh environments

| ✓ Sandstorm protection | ✓ 24VDC | 220VAC Power supply |
| ✓ For harsh environments | ✓ Without exterior (external) fans |

Thermoelectric Coolers or Thermoelectric Assemblies are designed to remove heat around critical components within an enclosure with IP66 protection category. This is a thermoelectric air conditioner using the Peltier effect. The main advantages of Thermoelectric Coolers over conventional compressor are:

• it can be controlled electronically;
• it is easily reversible when the current is reversed;
• it can work in harsh environments;

Thermoelectric Assembly NSBon-42 is fundamentally different from standard air-to-air coolers. Based on the calculations, a special design of ambient heat sink was created, which made it possible to remove exterior (external) fans.

External fans are the weakest link in any air-to-air cooler. They are constantly exposed to extreme ambient conditions and often fail for this reason, after that the cooling process of the internal heat sink stops.

The NSBon-42 design is 100% protected against sand, dust and water. Even a sandstorm will not disable the NSBon-42 cooler itself and equipment that it cools.

Technical Data

Operating voltage: 24 VDC; 220 VAC	Sand, dust and water protection is 100%
Cooling Capacity: 200 W	Without external fans outside
Operating Temp.: -40°C to +70°C	Connection: Terminal
Dimensions: 500x214x208 mm	Fitting position: Variable
Weight: depends on the model	Protection category: IP66 / NEMA4

Ordering Information

NSBon-42	Thermoelectric Assembly. Series SandStorm_DC_200W, 24VDC, IP67. NSBox Cooling

vandal-proof filter fan Kit

✓ Vandal-proof design	✓ High reliability	✓ Magnetic mount of filters

Electrical and electronic equipment mounted inside a cabinet generate heat that raises the temperature internal air. Over time, the ever increasing heat can cause sensitive devices to malfunctions. Additionally, heat accumulation can cause circuit breakers to trip which can result in system shut down. Fan filter units are used for enclosure climate control to dissipate heat from within the enclosure to prevent the premature failure of the equipment inside it. It helps to increase an operational reliability and a service life for electrical and electronic systems.

Filter fans will cool enclosures to a level slightly above the ambient temperature outside the cabinet. To cool enclosure contents, the fans draw filtered ambient air into the cabinet. At the same time, the heated air within the cabinet is blown out an exhaust. The exhaust is also filtered which creates airflow resistance and a slightly higher pressure inside the enclosure.

NSBon-19 vandal-proof Kit is designed for mounting in electrical enclosures in order to bring outside air into the enclosure from the bottom and force the hot air out of the top of the other side. The units are made in a vandal-proof housing with the possibility of quick filter replacement. The NSBon-19 Kit includes two housing, two fans both intake and exhaust, two filters. The Kit is suitable for all types of panels and electrical enclosures.

The main advantages of NSBon-19 vandal-proof Kit:
• vandal-proof original design;
• very easy replacement of dirty filters;
• magnetic mount is used for filters;

Technical Data

Operating voltage: 240VAC-50/60Hz	Protection category: IP55
Power consumption: 2x 14W	Operating Temp.: -10 to +70°C
Enclosure material: coated sheet steel	Connection: 2-pole clamp
Surface Colour: RAL 7035	Axial fan: Ball bearing
Dimensions: 197 x 174 x 40 mm	Air flow: 80 m³/h

Applications

| Industrial, server, electrical, and electronic cabinets |

Ordering Information

| NSBon-19 | FAC22F80 | Vandal-proof filter fan Kit for electrical enclosure | 2x case+fan+filter |

compact LIGHTING KIT

✓ **The most compact design**	✓ **One or two LED lamps**
✓ **On/Off by circuit breaker**	✓ **Magnetic mounting**

The indoor lighting kit NSBon-06 is suitable for most types of junction boxes and enclosures. The kit allows the installation of electrical works (replacement of an Ethernet switch, power supply, batteries) on the installed facility at any time of the day.

The system is equipped with a separate circuit breaker. For safe work, you should turn off the mains power of the enclosure and all equipment.

By default, the lamps are installed in the niches of the top and bottom walls of the cabinet. If necessary, it can be moved to another location.

The kit consists of the following components:
• One or two LED lamps in metal frame with a reflector
• Magnets for mounting the lamp to a metal surface
• Circuit breaker and set of wires

Technical Data

Operating voltage:	180 - 260VAC	Lamp type:	LED
Power consumption:	2x 5W	Luminosity:	2x 430Lm
Light color:	daylight	Fitting position:	Variable
Color temperature:	6,500K	Connection:	2-pole clamp
Service life:	50,000 h at 25°C	Length of wires:	430mm + 780mm
Circuit breaker mounting:	DIN rail 35mm	Protection category: IP20	
Lamp Mounting:	Magnet fixing	Operating Temp.:	-40°C to +70°C
Lamp Dimensions:	230 x 18 x 15 mm	Weight:	0.23kg

Ordering Information

NSBon-06	LBM2AC22	Indoor lighting kit for enclosure. Two LED lamps with circuit breaker. NSBox Lighting
NSBon-06-1	LBM1AC22	Indoor lighting kit for enclosure. One LED lamp with circuit breaker. NSBox Lighting
NSBon-06-2	LBM0AC22	Indoor lighting kit for enclosure. One LED lamp w/o circuit breaker. NSBox Lighting

Lightning and Surge protection of Ethernet ports
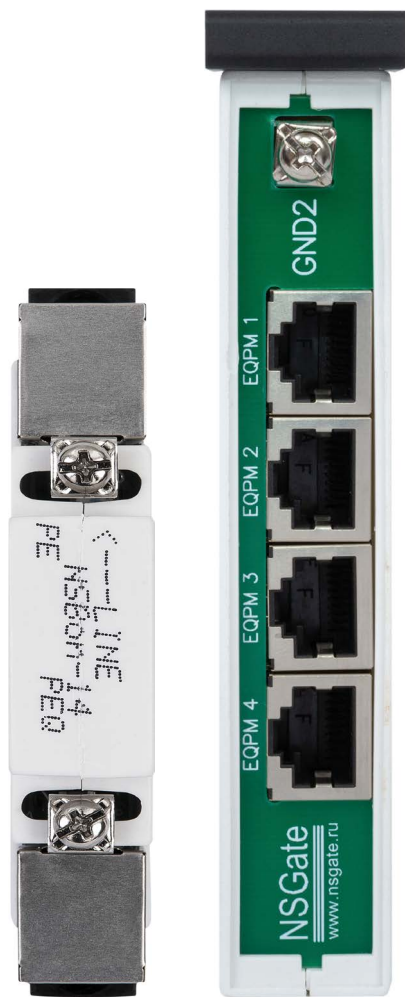
✓ Up to 4 ports 10/100/1000Base-T	✓ DIN rail mounting
✓ PoE 802.3af /3at /3bt/ 60W/ 95W	✓ Compact design

NSBon-15 and NSBon-14 are surge protectors keeping any IP devices with Ethernet 10/100/1000Base-T interface safe from lightning strike and other forms of electrical interference such as power surges and spikes over networking cables. The devices support PoE transmission in accordance with IEEE 802.3af/3at/3bt recommendations, regardless of the transmission method, as well as passive PoE.

The NSBon-15 has eight shielded RJ45 Jacks for connecting four equipment ports. The NSBon-14 has two shielded RJ45 Jack for connecting one equipment port. These protectors utilize Gas Discharge Tubes (GDT) for each wire in RJ45 connector in order to protect all eight wires of networking cable including PoE. The "Line" sockets and the "Equipment" sockets of each port are located on different sides of the case opposite each other. There are also two contacts on the case, GND1 for connection directly to the potential equalization bus (PE) and GND2 for connection to a ground point inside the enclosure.

The GND1 contact is electrically connected to the shields of sockets "Line". The GND2 contact is electrically connected to the shields of sockets "Equipment". Contacts GND1 and GND2 are galvanically isolated from each other.

NSBon-15 and NSBon-14 are designed for DIN rail mounting and deployed beside PoE switches, inside junction boxes or electrical cabinets.

Technical Data

Maximum Operation DC Voltage: 60VDC	Up to 4 ports 10/100/1000Base-T + PoE
Impulse Discharge Current (8/20us) line-ground: 5 kA	Input/ Output Connections: RJ45 shielded jacks
Impulse Discharge Current (8/20us) line-line: 1 kA	Mounting: clip for 35mm DIN Rail
DC Breakdown Voltage line-ground: 90 V	Operating Temp.: -40°C to +70°C
DC Breakdown Voltage line-line: 75 V	Dimensions: 115x56x25mm (NSBon-15)
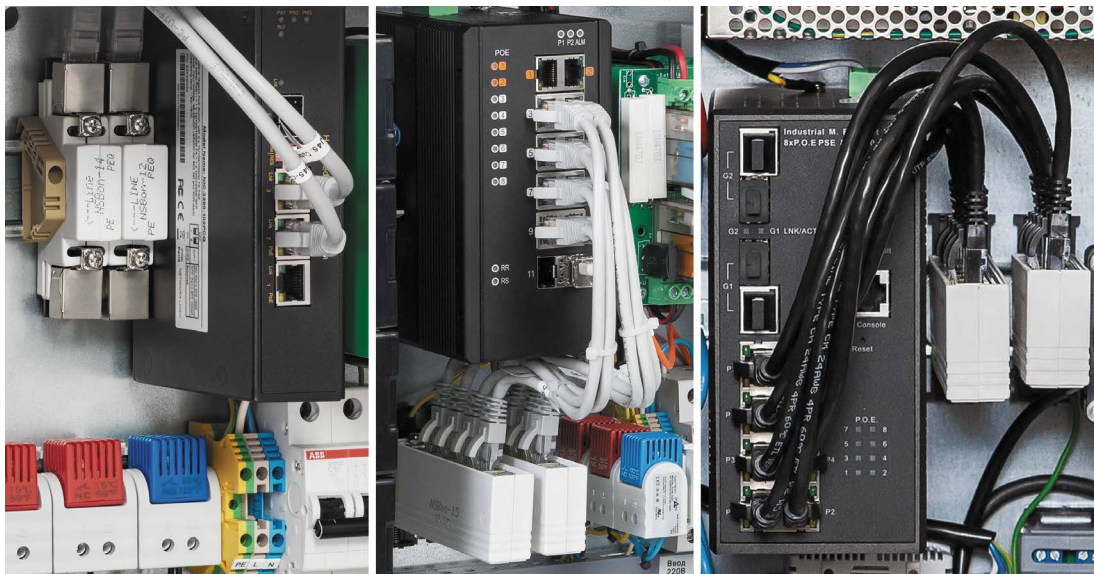
Ordering Information

NSBon-14	Lightning and Surge protection of 4x 10/100/1000Base-T Ethernet ports + PoE 802.3af/3at/3bt
NSBon-15	Lightning and Surge protection of 1x 10/100/1000Base-T Ethernet port + PoE 802.3af/3at/3bt

Lightning and Surge protection of Ethernet ports

✓ Compact design	✓ Gigabit Ethernet 10/100/1000-BaseT
✓ Waterproof RJ45 connectors	✓ PoE 802.3af /3at /3bt/ 60W/ 95W

NSBon-29/NSP-121PGi is a surge protector keeping any IP devices with Ethernet 10/100/1000Base-T interface safe from lightning strike and other forms of electrical interference such as power surges and spikes over networking cables. The devices support PoE transmission in accordance with IEEE 802.3af/3at/3bt recommendations, regardless of the transmission method, as well as passive PoE. It protect all eight wires of networking cable including PoE.

NSBon-29 is classified as harden-graded surge protector operating between -40°C and 85°C under harsh weather conditions and plug-and-play surge protector defending the surge up to 16KV. It has IP67/IK10 rated metal enclosure to protect outdoor IP devices such as IP cameras and wireless APs. The device should be installed immediately adjacent to outdoor IP cameras.

Technical Data

Maximum Operation DC Voltage: 60VDC	1 port 10/100/1000Base-T + PoE IEEE 802.3af/3at/3bt
Impulse Discharge Current (8/20us) line-ground: 8 kA	Mounting: Wall and pole-mounted options
Impulse Discharge Current (8/20us) line-line: 1 kA	Operating Humidity: 5% ~ 95% non-condensing
Common Mode Protection Level (10/700us): 20KV	Operating Temperature: -40°C to +85°C
Differential Mode Protection Level (10/700us): 4KV	Weatherproof Housing IP67/IK10, Waterproof RJ45 connectors
Response Time: 5ns	Dimensions: 32x50x186 mm; Weight: 0.27 kg

to NSBon-15

Ordering Information

NSBon-29	Lightning and surge protection of 1x 10/100/1000Base-T Ethernet port + PoE 802.3af/3at/3bt, Weatherprof

Active PoE to Passive PoE converter

✓ Gigabit Ethernet 10/100/1000-BaseT	✓ RJ45 Male Input 802.3af/at PoE 48-56VDC
✓ Perfect for outdoor use inside a NSBox	✓ RJ45 Female Output Passive PoE 24VDC

The NSBon-47 is a compact and cost effective Active PoE (48VDC) to Passive PoE (24VDC) converter. The input can accept any PoE that meets IEEE802.3af/at/bt standards from regular switches or injectors. The output is 24VDC Passive PoE up to 24W. Incorporating a compact, in-line design, they are perfect for outdoor use inside a weatherproof electrical enclosure.

NSBon-47 can be connected to any PoE port of Industrial switch located inside outdoor access Node NSBox by RJ45 male connector. It is compatible with auto-sensing and is recognized by PoE switch as a 802.3at/af PD device.

On the other side of the converter there is an RJ45 Female connector for connecting various devices powered 24VDC Passive PoE ranging from video camera, access point, and router (Ubiquiti UniFi, airMAX etc.). Pins 4,5 and 7,8 of the RJ45 Female connector are used for powering in PoE mode B. Maximum output power is 24W. NSBon-47 compatible with all 24VDC Passive PoE devices.

Technical Data

Input PoE Voltage: 48-56VDC (802.3af/at/bt)	Data Rate: 10/100/1000-BaseT Gigabit Ethernet
Output PoE Voltage: 24VDC Passive PoE	Ethernet Cable Compatibility: CAT5/ 5e, CAT6/ 6a
PoE IN Mode A EndSpan: 1/2 and 3/6 Pin assignment	Operating Temperature: 0°C to +50°C
PoE IN Mode B MidSpan: 4/5(+), 7/8(-) Pin assignment	Dimensions (L x W x H): 100 x 22 x 22 mm
PoE OUT Mode B MidSpan: 4/5(+), 7/8(-) Pin assignment	Maximum Output Power: 24W

Applications

Passive PoE Wireless devices and Video cameras
Ubiquiti UniFi and airMAX 24V Passive PoE devices

Ordering Information

NSBon-47	PP24V24W	Active to Passive PoE Converter, Input 802.3af/at/bt PoE | Output 24V Passive PoE
NSBon-47d	PP24V24D	Active to Passive PoE Converter, Input 802.3af/at/bt PoE | Output 24V Passive PoE, DIN-rail mount

Power Booster 24-56VDC

✓ 24-56VDC Input | 48-55VDC Output ✓ Adjustable output voltage	✓ DIN Rail or Wall mounting ✓ Compact design

The Industrial Power Booster is a power device which boosts 24VDC up to 55VDC to power up your PD for up to 72W. It is designed for environments where 48VDC power is not available. With all industrial graded components, this industrial power booster will guarantee a steady voltage output to your PD in a harsh environment. It's perfect to use in security, communication, traffic and many other critical industrial environments.

NSBon-48 Power Boosters are used with some 24 VDC powered NSBox-xxx for 48 VDC powered industrial PoE switches and another devices installed into these NSBox-xxx. Therefore NSBon-48 allows to avoid problems with different power requirements into electrical enclosure and helps to save space and solution cost.

NSBon-48 has a very compact housing, an overload current protection and surge protection diodes on power input. The regulator knob allows to adjust the output voltage accurately in 48..55 VDC range.

Technical Data

Input DC Voltage: 24-56 VDC	4-pin terminal block for input and output Voltage
Output DC Voltage: 48-55VDC	Housing: IP30, DIN-rail or Wall mounting
Maximum Booster power: 72W	Operating Temperature: -40°C to +75°C
Overload current protection	Dimensions: 59 x 49 x 36 mm

Ordering Information

NSBon-48	Power Booster 24-56VDC, 72W

Solar charge controller

✓ Compact design	✓ Advanced 4-stage PWM charging	✓ Reliable remote video surveillance

NSBox-SUN access node is used to deploy protected autonomous or semi-autonomous outdoor applications in the area with no 24/7 electricity available and solar panels can be installed. Off-grid solar systems work by generating electricity from solar panels and using it to charge a battery via a charger controller. NSBox-SUN contains a charger controller that supports 18-40V solar panels up to 350W and maintains the proper charge of the battery to prevent overcharging and over-discharging. Battery capacity can be up to 200 Ah.

The NSBon-51 charge controller is housed in small and rugged DIN rail or mounting panel mountable housing. The controller has three pairs of contacts for connecting the solar panel, battery and load. The front panel contains status LEDs and an integrated temperature sensor. Compensation -56 mV for each degree from 25C, reduces voltage with increasing temperature and vice versa. With temperature compensation charging, charging parameters are automatically adjusted.

NSBon-51 monitors the state of the battery, controls the process of connecting and disconnecting the load, uses an upgraded 4-stage PWM charging algorithm. All this allows the battery to be used in optimal mode, thus extending the battery's service life.

The main protective functions of the controller:

- Overcharge protection,
- Over-discharge protection,
- Protections for short circuit,
- Battery protection against undervoltage,
- Battery protection from discharge through the solar panel at night.

This device is working exclusively with solar panels. It is not recommended to connect wind turbines. The controller provides protection for input and output contacts against overload, overvoltage, short circuit, reverse polarity and operates over a wide industrial temperature range -40°C to +60°C.

Technical Data

Rated Voltage: 24V	Charging method: Advanced 4-stage PWM
Maximum PV Volts: 44V	Protected: overcharge, over-discharge, short
Rated PV Input: 20A	circuit, reverse polarity, battery undervoltage
Rated Load: 20A	Operating Temp.: -40 to +60°C (-22 to 140°F)
Maximum array short circuit current: 25A	Temp Compensation: -56 mV/°C
Regulation voltage Sealed battery: 28,2V	Wire size: 5.2 mm2 / AWG #10
Load disconnect: 23V	Dimensions: 152 x 55 x 34 mm
LVD reconnect: 25,2V	Weight (unpacked): 230 g

Applications

Remote Power Systems | Solar Lighting | Solar Power Applications
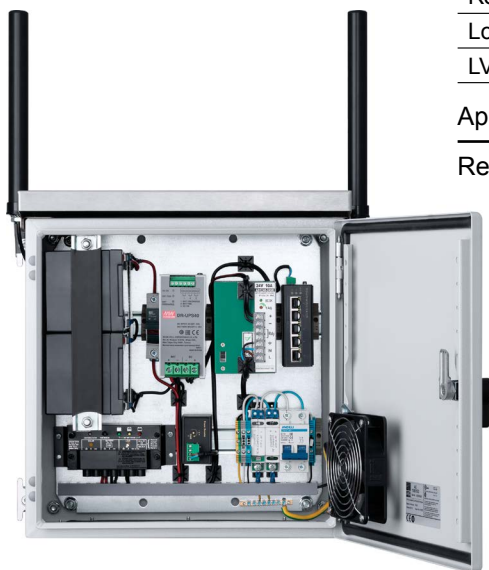
Ordering Information

NSBon-51	SS20L24V	Solar charge controller 20A	24V	PWM, Relay, mounting installation kit

Industrial 4G LTE Cellular Router

✓ FDD LTE/ TDD LTE/ WCDMA/ GSM	✓ Compact Design	✓ DIN rail mounting

NSBon-61, compact, lightweight and cost-effective Industrial 4G LTE Cellular Routers, are built in 2-port fast Ethernet connection as well as support 2G/3G/4G mobile networks for wired and wireless communication in harsh environments. Equipped with RS232 serial port and digital input/output interfaces, the NSBon-61 are simple to configure and collect real-time data transmission quickly for Industrial IoT, outdoor video surveillance systems and M2M applications. The router is also compliant with IEEE 802.11b/g/n Wi-Fi connectivity.

Featuring VPN Tunnels, Firewall, TR069, and SNMP Trap, NSBon-61 enhance highly secure authentication, encryption and management to protect your data efficiently between public and private networking. Supporting -40~+75°C wide-temperature operation and flexible input voltage range of 8-48VDC for diverse environments and various applications.

Features :

- Compact and lightweight design with 2-port Ethernet interfaces
- Multi-band connectivity with FDD LTE/ TDD LTE/ WCDMA/ GSM/ LTE Cat 4
- Provide IEEE 802.11b/g/n Wi-Fi standards
- Built-in micro SIM connector, RS232 serial port, and DI/DO interfaces
- Integrated detachable antenna against radio interference
- LED indicators for connection and data transmission status
- Industrial rated from -40 to +75°C for use in harsh environments
- IPv6/IPv4 dual stack and all applications are IPv6 ready
- Enhance security and encryption for authentication and transmission

Cellular Standards and Interfaces	Management Interface
FDD LTE/ TDD LTE/ WCDMA/ GSM	Console/CLI, Web GUI, Telnet, SSH v2, SNMP, TR069, HTTP/HTTPS
LTE Cat4: 150Mbps (DL), 50Mbps (UL)	
1 Micro SIM card slot	**LED status indicators**
2 SMA connectors for LTE antenna	Power / Ethernet / RSSI LTE / Function
Hardware Interfaces	**General Features**
1 10/100Base-TX RJ45 LAN port	Housing: IP30, DIN Rail / Wall mounting
1 10/100Base-TX RJ45 WAN port	Dimensions : 91 x 74 x 28 mm
2 RP-SMA connectors for Wi-Fi antenna	Weight: 250 g
1 SMA connector for GPS antenna	Power Input : 8 ~ 48VDC
1 RS232 (TXD/RXD/GND)	Power Consumption : 7W
1 DI / 1 DO (Non-Isolated)	Operating Temp.: -40°C ~ +75°C
WPS / Reset Button	Humidity: 0 ~ 95% (non-condensing)
Network Protocols	**Routing/Firewall**
IPv4, IPv6, IPv4/IPv6 dual stack, DHCP server and client, PPPoE, Static IP, SNTP, GPS sync time, DNS Proxy, VRRP, OSPF, MQTT Broker, BGP, DDNS, QoS, UPnP	NAT, Virtual Server, DMZ, VLAN, MAC Filter, URL Filter, IP Filter, Static Routing, RIP-1, RIP-2
Alarm: VPN/WAN Disconnect, SNMP Trap, DI/DO, SMS, E-mail, TR069	VPN: OpenVPN, GRE, PPTP, L2TP, IPSec (3DES, AES128, AES196, AES256, MD5, SHA-1, SHA256)

NSBon-61	LTP0M330	Industrial 4G LTE Cellular Router: 1 WAN, 1 LAN, 1 RS232, DI/DO, 1 micro SIM Slot

Industrial 4G LTE Cellular Router

✓ FDD LTE/ TDD LTE/ WCDMA/ GSM	✓ Compact Design	✓ DIN rail mounting

NSBon-63 4G LTE Cellular Router is highly reliable and secure wireless communications gateway designed for industrial networking. It supports multi-band connectivity including FDD/TDD LTE, WCDMA and GSM for a wide range of applications, such as Industrial IoT, outdoor video surveillance systems and vertical M2M markets. To enhance reliability, NSBon-63 is equipped with dual SIM that supports failover and roaming over to ensure uninterrupted connectivity for mission-critical communications.

With flexible LAN/WAN Ethernet options, NSBon-63 allow you to customize your professional applications in diverse environments. It also provides enterprise-grade software features, such as QoS, DMZ, VLAN, OSPF, BGP, RIP-1/2, DDNS, and etc. Featuring VPN Tunnels, Firewall, TR069, and SNMP Trap, NSBon-63 enhance highly secure authentication, encryption and management to protect your data efficiently between public and private networking. The device are administrated via web GUI, Telnet, SSH v2 and HTTP/HTTPS.

Features:
- Highly reliable and secure for mission-critical cellular communications
- Multi-band connectivity with FDD LTE/ TDD LTE/ WCDMA/ GSM/ LTE Cat 4
- Built-in dual SIM for network redundancy and DI/DO interfaces
- Integrated dual detachable antenna against radio interference
- LED indicators for connection and data transmission status
- IPv6/IPv4 dual stack and all applications are IPv6 ready
- Enhance security and encryption for authentication and transmission

Cellular Standards and Interfaces	Management Interface
FDD LTE/ TDD LTE/ WCDMA/ GSM	Console/CLI, Web GUI, Telnet, SSH v2, SNMP, TR069, HTTP/HTTPS
LTE Cat4: 150Mbps (DL), 50Mbps (UL)	
2 SIM card slots	**LED status indicators**
2 SMA connectors for LTE antenna	SYS/ VPN/ SIM1/ SIM2/ Ethernet/ RSSI LTE
Hardware Interfaces	**General Features**
3 10/100Base-TX RJ45 LAN port	Housing: IP40, DIN Rail / Wall mounting
1 10/100Base-TX RJ45 WAN port	Dimensions (HxWxD): 110x60x106 mm
1 RS232 Console (9-pin Sub-D)	Weight: 450 g
1 RS232 (TXD/RXD/GND)	Power Input : 10 ~ 32VDC
1 RS485 (D+/D-)	Power Consumption : 7W
2 DI / 1 DO (Non-Isolated)	Operating Temp.: -20°C ~ +70°C
1 SMA connector for GPS antenna (opt)	Humidity: 0 ~ 95% (non-condensing)
Reset Button	EMC: CE, FCC, EAC
Network Protocols	**Routing/Firewall**
IPv4, IPv6, IPv4/IPv6 dual stack, DHCP server and client, PPPoE, Static IP, SNTP, GPS sync time, DNS Proxy, VRRP, OSPF, MQTT Broker, BGP, DDNS, QoS, UPnP	NAT, Virtual Server, DMZ, VLAN, MAC Filter, URL Filter, IP Filter, Static Routing, RIP-1, RIP-2
Alarm: VPN/WAN Disconnect, SNMP Trap, DI/DO, SMS, E-mail, TR069	VPN: OpenVPN, GRE, PPTP, L2TP, IPSec (3DES, AES128, AES196, AES256, MD5, SHA-1, SHA256)

NSBon-63	LTP0M301	Industrial 4G LTE Cellular Router: 1 WAN, 3 LAN, 2 RS232, DI/DO, 2 SIM Card Slots

Industrial network components

Managed Industrial Switches

IGMP, STP, RSTP, MSTP, DHCP 82, LACP, QoS, VLAN, G.8032 ERPSv2

Telnet, CLI, Web, SNMP, RMON, Syslog, SSH, Radius

✓ 10 Gbps Uplink ports | DI / DO
✓ 802.3at Standard 36W | Force 60W
✓ 802.3bt PoE 90W | UPoE(PoH) 95W

Switches with PoE

NIS-3500-3426PGE	16 10/100/1000T PoE 30W + 2 SFP/1G + 2 TP/1G; ERPS, DI/DO
NIS-3500-3416PGX	16 10/100/1000T PoE 30W + 4 1G/10G SFP; ERPS, Modbus
NIS-3500-2408PGX	8 10/100/1000T PoE 30W + 4 1G/10G SFP; ERPS, Modbus
NIS-3500-3226PGE	8 10/100/1000T PoE (2x 60W + 6x 30W) + 2 SFP/1G + 2 TP/1G
NIS-3500-3412PGE	8 10/100/1000T PoE 36W + 4 SFP/1G
WI-PMS312GF-I	8 10/100/1000T PoE 802.3af/at/bt/Passive + 4 SFP/1G
NIS-3500-3208PC	8 10/100Base-TX PoE 30W + 2 SFP/1G
NIS-3500-3204PGE	4 10/100/1000T 802.3bt PoE + 2 SFP/1G + 1 TP/1G; ERPS, DI/DO
NIS-3500-2204PGE	4 10/100/1000T PoE 36W + 2 SFP/1G; G.8032 ERPSv2

Switches without PoE

NIS-3500-2412GE	8 10/100/1000Base-T + 12 SFP (8 100M/1G SFP + 4 SFP/1G)
NIS-3500-2408GE	8 10/100/1000Base-T + 4 SFP/1G
NIS-3500-2206GE	6 10/100/1000Base-T + 2 SFP/1G

Unmanaged Industrial Switches

✓ Ultra PoE 95W
✓ Voltage Booster 24-56VDC

Switches with PoE

WI-PS310GF-I	8 10/100/1000T PoE 30W + 2 TP/SFP Combo
NIS-3200-464PSG	4 10/100/1000T PoE (4x 60W or 2x 95W + 2x 30W) + 2 SFP/1G + 2 TP/1G
NIS-3200-205PSG (B)	4 10/100/1000T PoE 30W + 1 SFP/1G + 1 TP/SFP Combo, (24-56VDC Booster)
WI-PS306GF-I	4 10/100/1000T PoE 30W + 2 SFP/1G
NIS-3200-115PSG	4 10/100/1000T PoE 30W + 1 TP/1G, Reboot PD; no fiber optical ports
NIS-3200-122PSG	2 10/100/1000T PoE 802.3bt + 2 SFP/1G, Reboot PD
NIS-3200-132PSGB	2 10/100/1000T PoE 30W + 1 TP/1G, 24-56VDC Booster
NIS-3200-232PSGB	2 10/100/1000T PoE 30W + 1 SFP/1G + 1 TP/1G, 24-56VDC Booster

Switches without PoE

NIS-3200-005T / 008T / 008G	5 10/100Base-TX / 8 10/100Base-TX / 8 10/100/1000Base-T
NIS-3200-205GS	4 10/100/1000T + 1 SFP/1G + 1 TP/SFP Combo
NIS-3200-206GS	6 10/100/1000T + 2 SFP/1G

Industrial Media Converters Series NIC-3200

✓ High-Power PoE 60W

NIC-3200 Series with PoE

NIC-3200-161PCG	1 SFP/1G + 1 TP/1G High-Power PoE 60W
NIC-3200-101PCG	1 SFP/1G + 1 TP/1G PoE 30W

NIC-3200 Series without PoE

NIC-3200-101C	1 10/100Base-TX + 1 SFP/100M
NIC-3200-101CG	1 10/100/1000Base-T + 1 SFP/1G

| Managed PoE Switches | Operating Temp.: -40 to +75°C; DIN rail or Wall mounting |

NIS-3500-3426PGE
16 10/100/1000T PoE 30W + 2 SFP/1G + 2 TP/1G, G.8032 ERPSv2

- 20-port Gigabit switch; IEEE 802.3at/3af (PD Alive Check), 16 ports PoE 30W
- IGMP snooping; STP, RSTP, MSTP, G.8032 ERPSv2, BPDU Guard; LACP
- QoS, CoS, DSCP, VLAN (MAC/Protocol-based, PVE, 802.1Q tag, QinQ)
- Telnet, CLI, Web, SNMP, RADIUS, TACACS+, ACL, DHCP option 82
- 2 DI / 2 DO; Total PoE Budget: 320W; Dimensions: 152x107x84mm

| ✓ 16 ports PoE | ✓ G.8032 ERPSv2 | ✓ 2 DI / 2 DO |

NIS-3500-3416PGX | NIS-3500-2408PGX
16 10/100/1000T PoE 30W + 4 1G/10G SFP

8 10/100/1000T PoE 30W + 4 1G/10G SFP

- 20/12-port Gigabit switch; IEEE 802.3at/3af, 16/8 ports PoE 30W
- IGMP snooping; STP, RSTP, MSTP, G.8032 ERPS, DHCP option 82; LACP
- QoS, CoS, DSCP, VLAN (Port-based, 802.1Q tag, QinQ), Syslog
- Telnet, CLI, Web, SNMP, RMON, RADIUS, TACACS+, SSL, SSH
- Total PoE Budget: 240W; Dimensions: 145x118x93 mm

| ✓ 8/16 ports PoE | ✓ 10 Gbps Uplink ports | ✓ ERPS, Modbus |

NIS-3500-3226PGE
8 10/100/1000T PoE (2x 60W + 6x 30W) + 2 SFP/1G + 2 TP/1G

- 12-port Gigabit switch; IEEE 802.3at/3af (PD Alive Check), 8 ports PoE 30W
- IGMP snooping; STP, RSTP, MSTP, G.8032 ERPS, DHCP option 82; LACP
- QoS, CoS, DSCP, VLAN (Port-based, 802.1Q tag, QinQ), Syslog
- Telnet, CLI, Web, SNMP, RMON, RADIUS, TACACS+, SSL, SSH
- Total PoE Budget: 240W; Dimensions: 145x118x72 mm

| ✓ 8 ports PoE | ✓ > High-Power PoE 60W | ✓ Reboot PD |

NIS-3500-3412PGE
8 10/100/1000T PoE 36W + 4 SFP/1G, G.8032 ERPSv2

- 12-port Gigabit switch; IEEE 802.3at/3af (PD Alive Check), 8 ports PoE 36W
- IGMP snooping; STP, RSTP, MSTP, G.8032 ERPSv2, BPDU Guard; LACP
- QoS, CoS, DSCP, VLAN (MAC/Protocol-based, PVE, 802.1Q tag, QinQ)
- Telnet, CLI, Web, SNMP, RADIUS, TACACS+, ACL, DHCP option 82
- 2 DI / 2 DO; Total PoE Budget: 240W; Dimensions: 152x107x77mm

| ✓ 8 ports PoE | ✓ G.8032 ERPSv2 | ✓ 2 DI / 2 DO |

WI-PMS312GF-I
8 10/100/1000T PoE 802.3af/at/bt/Passive + 4 SFP/1G

- 12-port Gigabit switch; IEEE 802.3bt/at/3af (PD Alive Check), 8 ports PoE 30W
- IGMP snooping; STP, RSTP, MSTP, G.8032 ERPS, DHCP option 82; LACP
- QoS, CoS, DSCP, VLAN (Port-based, 802.1Q tag, QinQ), Syslog
- Telnet, CLI, Web, SNMP, RMON, RADIUS, TACACS+, SSL, SSH
- Total PoE Budget: 300W; Dimensions: 188x130x50 mm

| ✓ 8 ports PoE | ✓ High-Power PoE 60W | ✓ Reboot PD |

NIS-3500-3204PGE
4 10/100/1000T 802.3bt PoE + 2 SFP/1G + 1 TP/1G, G.8032 ERPSv2

- IEEE 802.3af/802.3at/802.3bt (PD Alive Check), 4 ports PoE up to 95W
- 802.3bt PoE 90W | UPoE(PoH) 95W | 802.3at Standard 36W | Force 60W
- IGMP snooping; STP, RSTP, MSTP, G.8032 ERPSv2, BPDU Guard; LACP
- QoS, CoS, DSCP, VLAN (MAC/Protocol-based, PVE, 802.1Q tag, QinQ)
- Telnet, CLI, Web, SNMP, SSHv1/v2, TLS, SSL, ACL, DHCP option 82
- 2 DI / 2 DO; Total PoE Budget: 240W; Dimensions: 152x107x72 mm

| ✓ 4 ports 802.3bt PoE | ✓ G.8032 ERPSv2 | ✓ 2 DI / 2 DO |

NIS-3500-2204PGE
4 10/100/1000T PoE 36W + 2 SFP/1G, G.8032 ERPSv2

- 6-port Gigabit switch; IEEE 802.3at/3af (PD Alive Check), 4 ports PoE 30W
- IGMP snooping; STP, RSTP, MSTP, G.8032 ERPSv2, BPDU Guard; LACP
- QoS, CoS, DSCP, VLAN (MAC/Protocol-based, PVE, 802.1Q tag, QinQ)
- Telnet, CLI, Web, SNMP, RADIUS, TACACS+, ACL, DHCP option 82
- Total PoE Budget: 144W; Dimensions: 135x88x50 mm

| ✓ 4 ports PoE | ✓ G.8032 ERPSv2 | ✓ Reboot PD |

WI-PS310GF-I
8 10/100/1000T PoE 30W + 2 TP/SFP Combo

- 10-port Gigabit switch; IEEE 802.3at/3af, 8 ports PoE 30W
- 8K MAC, 4Mbit buffer, Switch fabric 21 Gbps, Jumbo Frame 10Kb
- POE Pin Assignment: 1/2(+), 3/6(-). Mode A EndSpan PoE
- Total PoE Budget: 240W; Dimensions: 166x127,5x63 mm

✓ **8 ports PoE**

NIS-3200-464PSG
4 10/100/1000T PoE (4x60W or 2x95W + 2x30W) + 2 SFP/1G + 2 TP/1G

- 8-port Gigabit switch; IEEE 802.3at/3af, 4 ports PoE 30/60/95W
- 4K MAC address, Jumbo Frame 9Kb, Switch fabric 16Gbps
- POE Pin Assignment: 1/2(+), 3/6(-); 4/5(+), 7/8(-).
- Total PoE Budget: 240W; Dimensions: 170x132x40 mm

✓ **4 ports PoE**   ✓ **Ultra PoE 95W**

NIS-3200-205PSG
4 10/100/1000T PoE 30W + 1 SFP/1G + 1 TP/SFP Combo

NIS-3200-205PSGB   **24-56VDC Booster**
4 10/100/1000T PoE 30W + 1 SFP/1G + 1 TP/SFP Combo

- 6-port Gigabit switch; IEEE 802.3at/3af, 4 ports PoE 30W
- Total PoE Budget: 120W; Dimensions: 142x105x43 mm

✓ **4 ports PoE**   ✓ **Built-in Voltage Booster 24-56VDC**

WI-PS306GF-I
4 10/100/1000T PoE 30W + 2 SFP/1G

- 6-port Gigabit switch; IEEE 802.3at/3af, 4 ports PoE 30W
- 8K MAC, 4Mbit buffer, Switch fabric 12 Gbps
- POE Pin Assignment: 1/2(+), 3/6(-). Mode A EndSpan PoE
- Total PoE Budget: 120W; Dimensions: 150x115x41 mm

✓ **4 ports PoE**

NIS-3200-115PSG
4 10/100/1000T PoE 30W + 1 TP/1G, reboot PD

- 5-port Gigabit switch; IEEE 802.3at/3af, 4 ports PoE 30W
- 8K MAC, 4Mbit buffer, Switch fabric 10 Gbps
- POE Pin Assignment: 1/2(+), 3/6(-). Mode A EndSpan PoE
- Total PoE Budget: 120W; Dimensions: 101x65x36 mm

✓ **4 ports PoE**   ✓ **Reboot PD**

NIS-3200-122PSG
2 10/100/1000T PoE 802.3bt + 2 SFP/1G, reboot PD

- 4-ports Gigabit switch; IEEE 802.3at/3af, 2 ports 802.3bt PoE
- 1K MAC, 0,5Mbit buffer, Switch fabric 8 Gbps
- POE Pin Assignment: 1/2(+), 3/6(-). Mode A EndSpan PoE
- Total PoE Budget: 120W; Dimensions: 101x65x36 mm

✓ **2 ports 802.3bt PoE**   ✓ **Reboot PD**

NIC-3200-161PCG
1 SFP/1G + 1 TP/1G High-Power PoE 60W

NIC-3200-101PCG
1 SFP/1G + 1 TP/1G PoE 30W

- NIC-3200-161PCG dimensions: 104x82x32 mm; PSE 60W
- NIC-3200-101PCG dimensions: 59x36x50 mm; PSE 30W

NSBon-48
Power Booster 24-56VDC, 72W

- 24-56VDC Input | 48-55VDC Output | Booster power 72W
- Overload current protection; Dimensions: 59x36x50 mm

Weatherproof Ethernet Extenders with PoE

NRP-172PRi — High-Power PoE Extender
3 Ethernet TP/1G + PoE 72W/60W/30W, Booster, 1 PD/2 PSE

- It is possible to cascade 4 devices into a chain up to 500 m
- Compensation of voltage drop in the chain (built-in Booster)
- 1 port PD IN up to 72W + 2 ports PSE OUT 60W/30W (54VDC or 24VDC)
- Housing: IP67/IK10, Wall mounting, Waterproof RJ45 connectors
- Operating Temperature: -40°C to +65°C; Dimensions: 167x73x40mm

✓ **Built-in Voltage Booster**   ✓ **Weatherproof Housing**

NRP-161PRi | NRP-162PRi — High-Power PoE Extender
2-3 Ethernet 10/100/1000T + PoE 72W/60W/30W, 1 PD/ 1-2 PSE

- NRP-161PRi: 1 PD IN up to 72W + 1 PSE OUT 70W/60W/30W
- NRP-162PRi: 1 PD IN up to 72W + 2 PSE OUT 70W/60W/30W
- Housing IP67/IK10, Wall mounting, Waterproof RJ45 connectors
- Dimensions NRP-161PRi: 157x56x40mm, Weight: 0.3kg
- Dimensions NRP-162PRi: 167x73x40mm, Weight: 0.36kg
- Operating Temperature: -40°C to +65°C

✓ **Waterproof RJ45 connectors**   ✓ **Weatherproof Housing**

VDSL2 Ethernet Extender

qBRIDGE-307i
VDSL2 Ethernet Extender: 1 LAN, CO/CPE, profile 17a/30a

- Selectable CO or CPE mode | Band plan (Symmetric or Asymmetric)
- Selectable 30a or 17a VDSL2 Profile | target SNR margin (6dB or 9dB)
- 100/100 Mbps bandwidth within 300M | 10/10 Mbps bandwidth for 1 Km
- Housing: IP30 Protection, DIN rail mounting
- Operating Temp.: -20°C to +65°C; Dimensions: 96x74x23 mm

PoE Injectors

NIP-191PG — Ultra PoE Injector 90-95W
1 10/100/1000T Ultra PoE Injector 95W, External 48-56VDC

- 95 watts of maximum power with an input voltage of 56VDC
- POE Pin Assignment: 1/2(+), 3/6(-) & 4/5(+), 7/8(-)
- Reverse polarity / Over voltage / Overload protections
- Housing: IP30 Protection, DIN Rail or Wall mounting
- Operating Temp.: -40 to +75°C; Dimensions: 104x82x32 mm

✓ **Gigabit Ethernet**   ✓ **95W_60W_30W PoE**

NIP-171PG / NIP-171PGB — High-Power PoE Injector 72W
1 10/100/1000Base-T, External PS 48-56VDC / 24-56VDC Booster

NIP-111PG / NIP-111PGB — PoE Injector 30W
1 10/100/1000Base-T, External PS 48-56VDC / 24-56VDC Booster

- POE Pin Assignment: 1/2(+), 3/6(-) & 4/5(+), 7/8(-)
- Housing: IP30 Protection, DIN Rail or Wall mounting
- Operating Temp.: -40 to +75°C; Dimensions: 104x82x32 mm

✓ **Gigabit Ethernet**   ✓ **72W_30W PoE**

NIP-404PG — 4 ports PoE Injector 30W
4 10/100/1000Base-T, External PS 48-56VDC

- 4x 30 watts of maximum power with an input voltage of 56VDC
- POE Pin Assignment: 1/2(+), 3/6(-)
- Operating Temp.: 0 to +50°C; Dimensions: 94x62x20 mm

✓ **Gigabit Ethernet**   ✓ **4 ports 30W PoE**

NRP-172PRi

✓ **Built-in Voltage Booster**	✓ **Weatherproof Housing**

PoE Extender PoE-Extender NRP-172PRiPoE Extender NRP-172PRi is devised to extend connection distances from PSE to PD another 100 m via Cat5e or Cat6 cable. The transmission is carried out at a distance of 200 to 500 meters or more by cascading these extenders to a daisy chain. The built-in booster compensates for the voltage drop (48VDC) on the twisted pair in case of cascading. Similar repeaters of other manufacturers do not have this characteristic, so the use of more than two such repeaters in the chain is impossible. Device doesn't need any additional power supply, because it uses a transit PoE from the input cable, while its power consumption does not exceed 3 watts. NRP-172PRi works with any PSE or PD devices.

The advantages of NRP-172PRi over other existing analogues:

• Support for Gigabit Ethernet 10/100/1000-BaseT;
• Voltage drop compensation on twisted pair (built-in Voltage Booster);
• The rugged weatherproof housing with waterproof RJ45 connectors.

The devices are easy to install and operate in Plug & Play mode. The housing has three waterproof RJ45 connectors for one input port and two output ports. The input port is connected to the PSE equipment (PoE Injector or PoE Switch) and the output ports to the equipment PD (IP Cameras, IP Access Controls, and Wireless Access Points) or to the next extender during cascading multiple PoE extenders.

Technical Data

3 ports Ethernet 10/100/1000Base-T with supporting High-Power PoE 72W/60W
Switch Fabric 6Gbps, Jumbo Frame 10Kb, 4K MAC, 1Mb buffer
Complies with IEEE 802.3at/bt, PoE PSE	PoE PD	PoE auto detection
It is possible to cascade 4 devices into a chain up to 500 m
Compensation of voltage drop in the chain (built-in Booster)
1 port PD IN up to 72W + 2 ports PSE OUT 60W/30W (54VDC or 24VDC)
POE Pin Assignment: 1/2(+), 3/6(-) and 4/5(+), 7/8(-)
Power Consumption: 3W; no additional power supply required
Housing IP67/IK10, wall mounting, waterproof RJ45 connectors
Operating Temperature: -40°C ~ 65°C; Dimensions: 167x73x40 mm
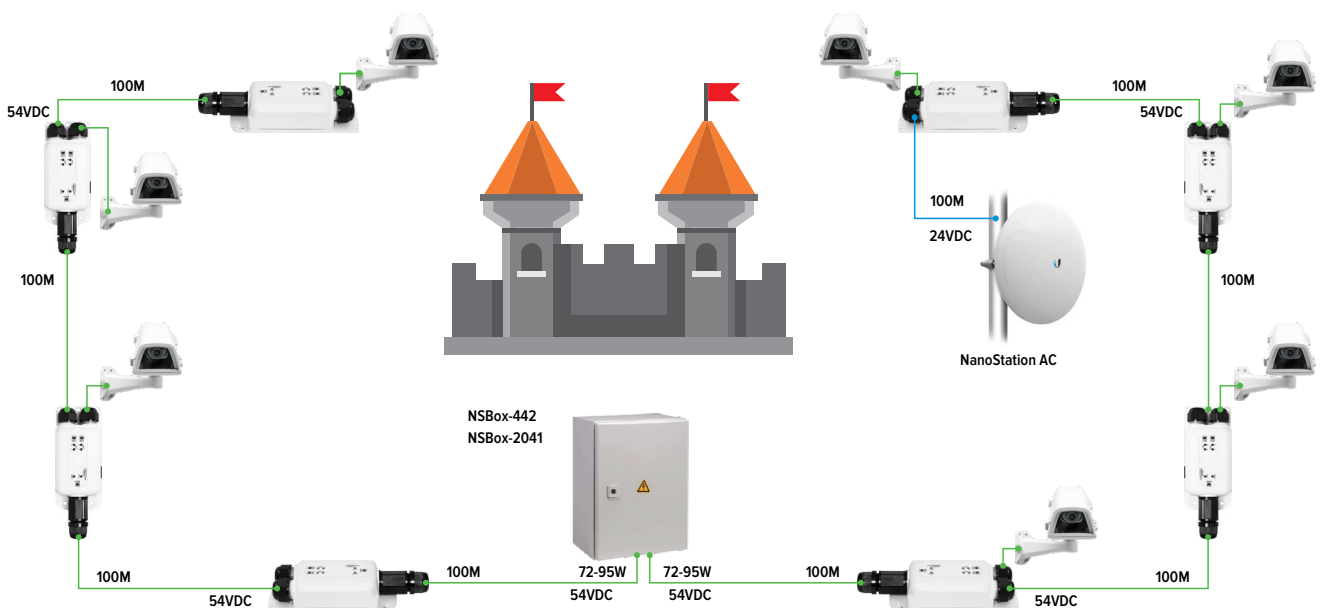
Ordering Information

NRP-172PRi	Extender: 3 Ethernet 10/100/1000T High-Power PoE 72W, built-in Booster, 1PD	2PSE

Industrial network components

SFP module is a replaceable, compact transceiver, installed in various telecommunication equipment. Industrial SFP modules are designed to operate in a wide range of operating temperatures from -40 to + 85°C and are used in conjunction with industrial switches and media converters. Modules can work either one or two fibers.

- Single-fiber SFP (Bi-Di, WDM) modules can have an optical connector type SC or LC.
- Dual Fiber SFP modules typically have an LC type optical connector.
- SFP modules can be ordered with DMI (Diagnostic monitoring interface) support.
- In this case, the index name D is added to the name of the model (SFG-L04-DI).

Models	Vendor code	Wavelength (nm)	TX Power (dBm)	RX Sens. (dBm)	MM or SM LC or SC	Distance (km)	DMI
155 Mbps [dual fiber] LC							
SF-MM2-I	NM3115-02-I	1310	-12 to -19	-30	MM, LC	2	–
SF-S01-I	NI3115-10-I	1310	-8 to -15	-31	SM, LC	10	–
155 Mbps [single fiber/ Bi-Di/ WDM] LC / SC							
SF-W0M/A-I SF-W0M/B-I	NC3115-M2-I NC5515-M2-I	Tx-1310/ Rx-1550 Tx-1550/ Rx-1310	-8 to -15	-30	MM, SC (50/125µm)	2	–
SF-W02/A-I SF-W02/B-I	NC3115-20-I NC5515-20-I	Tx-1310/ Rx-1550 Tx-1550/ Rx-1310	-8 to -14	-34	SM, SC	20	–
SF-W02/AL-I SF-W02/BL-I	NK3115-20-I NK5515-20-I	Tx-1310/ Rx-1550 Tx-1550/ Rx-1310	-8 to -14	-34	SM, LC	20	–
1.25 Gbps [dual fiber] LC							
SFG-MM2-I	NM3112-02-I	1310	-10 to -14	-22	MM, LC	2	–
SFG-SXMM-DI	NM8512-M5-DI	850	-10 to -14	-22	MM, LC	0,5	+
SFG-L01-I	NI3112-10-I	1310	-3 to -9	-20	SM, LC	10	–
SFG-L01-DI	NI3112-10-DI	1310	-3 to -9	-20	SM, LC	10	+
SFG-L04-DI	NI3112-40-DI	1310	3 to -1	-22	SM, LC	40	+
1.25 Gbps [single fiber/ Bi-Di/ WDM] LC / SC							
SFG-W0M/A-I SFG-W0M/B-I	NC3112-M5-I NC5512-M5-I	Tx-1310/ Rx-1550 Tx-1550/ Rx-1310	-4 to -10	-17	MM, SC (50/125µm)	0,5	–
SFG-WL3/A-DI SFG-WL3/B-DI	NC3112-03-DI NC5512-03-DI	Tx-1310/ Rx-1550 Tx-1550/ Rx-1310	-3 to -10	-17	SM, SC	3	+
SFG-W01/U-DI SFG-W01/D-DI	NK3112-10-DI NK4912-10-DI	Tx-1310/ Rx-1490 Tx-1490/ Rx-1310	-3 to -9	-22	SM, LC	10	+
SFG-W02/A-DI SFG-W02/B-DI	NC3112-20-DI NC5512-20-DI	Tx-1310/ Rx-1550 Tx-1550/ Rx-1310	-3 to -8	-22	SM, SC	20	+
SFG-W04/A-DI SFG-W04/B-DI	NC3112-40-DI NC5512-40-DI	Tx-1310/ Rx-1550 Tx-1550/ Rx-1310	3 to -2	-23	SM, SC	40	+
10 Gbps SFP+ [dual fiber] and [single fiber/ Bi-Di/ WDM] LC							
SFG10-L01-I	NS3110-10-I	1310	0.5 to -8	-14.4	SM, LC	10	+
SFG10-W01/A-I SFG10-W01/B-I	NK2710-10-I NK3310-10-I	Tx-1270/ Rx-1330 Tx-1330/ Rx-1270	0 to -5	-14	SM, LC	10	+
SFP modules RJ45 / Copper SFP							
SFT-C11-I	NT1112-X1-I	SFP 10/100/1000Base-T RJ45 100m (-40°C ~ +85°C) Industrial					

NSBox comparison table

How many PoE video cameras can be connected to NSBox				Added option	Dimensions of the cabinet	Power supply / UPS	Pmax. on PoE ports	Total PoE Budget	Uplink
2–4 PoE	4 PoE	8 PoE	16 PoE						
NSBox with Unmanaged PoE Switches									
NSBox-123					300x300x210	48VDC-100W	30 W	120 W	1 TP/1G 4G | LTE
NSBox-123L				4G | LTE	300x300x210	48VDC-100W			
NSBox-124R				UPS	380x380x210	UPS 24VDC-240VA 2x 15Ah	30 W	120 W	1 TP/1G 1 TP | SUN SUN | LTE
NSBox-124S-30				SUN	380x380x210	UPS 24VDC-240VA 2x 15Ah			
NSBox-124SL-30				SUN | LTE	380x380x210	UPS 24VDC-240VA 2x 15Ah			
NSBox-p124S-30				SUN | GRP	400x400x200	UPS 24VDC-240VA 2x 15Ah	30 W	120 W	1 TP | SUN
	NSBox-242				300x400x210	48VDC-150W	30 W	120 W	2 Gigabit SFP
	NSBox-242H			Heater	300x400x210	48VDC-150W			
	NSBox-242R			UPS	380x380x210	UPS 48VDC-155VA 4x 7Ah			
	NSBox-p242			GRP	300x400x200	48VDC-150W	30 W	120 W	2 Gigabit SFP
	NSBox-p242R			UPS | GRP	400x400x200	UPS 48VDC-155VA 4x 7Ah			
	NSBox-442				380x380x210	55VDC-360W	60 W 95 W	240 W	4 Gigabit 2 SFP + 2 TP
	NSBox-442R			UPS	380x380x210	UPS 48VDC-360VA 4x 7Ah			
		NSBox-282			300x400x210	48VDC-240W	30 W	240 W	2 Gigabit SFP/TP Combo
		NSBox-282H		Heater	300x400x210	48VDC-240W			
		NSBox-282R		UPS	380x380x210	UPS 48VDC-240VA 4x 7Ah			
NSBox with Managed PoE Switches L2/ L2+									
	NSBox-2040				300x400x210	48VDC-150W	36 W	144 W	2 Gigabit SFP
	NSBox-2040R			UPS	380x380x210	UPS 48VDC-155VA 4x 2.2Ah			
	NSBox-p2040			GRP	300x400x200	48VDC-150W	36 W	144 W	2 Gigabit SFP
	NSBox-p2040R			UPS | GRP	400x400x200	UPS 48VDC-155VA 4x 2.2Ah			
	NSBox-2041				300x400x210	55VDC-360W	95 W 802.3bt	240 W	3 Gigabit 2 SFP + 1 TP
	NSBox-2041R			UPS	380x380x210	UPS 48VDC-360VA 4x 7Ah			
		NSBox-4044			400x400x230	55VDC-360W	30 W	300 W	4 Gigabit SFP
		NSBox-4044R		UPS	400x400x230	UPS 48VDC-360VA 4x 7Ah			
		NSBox-p4044H		GRP	400x600x230	55VDC-360W	30 W	300 W	4 Gigabit SFP
		NSBox-p4044HR		UPS | GRP	400x600x230	UPS 48VDC-360VA 4x 7Ah			
		NSBox-4080			380x380x210	48VDC-360W	30 W	240 W	4 Gigabit SFP
		NSBox-4080R		UPS	380x380x210	UPS 48VDC-360VA 4x 7Ah			
		NSBox-4082			380x380x210	55VDC-360W	60 W	240 W	4 Gigabit 2 SFP + 2 TP
		NSBox-4082R		UPS	380x380x210	UPS 48VDC-360VA 4x 7Ah			
			NSBox-4161		380x600x210	55VDC-500W	30 W	320 W	4 Gigabit 2 SFP + 2 TP
			NSBox-4161R	UPS	380x600x210	UPS 48VDC-500VA 4x 7Ah			

*

BASIC: DIN Rails; Cable glands; Circuit breaker; Terminal blocks
HEATING: Fan Heater 75W 220 or 115VAC; Thermostats NC/NO
FIBER: ODF with 4/8 FC adapters, pigtails, patch cords
IZOLUX: Thermal insulation of foamed polyethylene

Additional features:

IP66 protection; ODF with adapters: FIBER*
Operating Temp.: -40 to +60°C, -50 to +60°C with IZOLUX*
Surge protection for power circuits 110-220VAC: NSBon-09/10/11
Surge protection for Ethernet ports: NSBon-14/15

NSBox-xxxx C E H L N R   **R** - installed UPS   **L** - installed 4G LTE Router   **H** - installed Heater
   N - installed NVR   **C** - installed Thermoelectric Cooler   **E** - explosion proof enclosure

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