Industrial PC Platform NY-series Industrial Box PC

NYB

CSM_NYB_DS_E_4_2

Powerful. Tough. Future-Proof.

Our NY industrial Box PC has been designed from first principles to be powerful, reliable and scalable, making it ideally suited to visualization, data handling, measuring and controlling. The latest insights in design simplification eliminates faults caused by complexity which, with other unique design features, maximizes uptime and reduces costs. The future will be IT driven: Omron's Industrial PC platform will make you part of it.

NYB1E, NYB27

NYB35, NYB2C

NYB35, NYB2C, NYB2A

Features

- No internal cables to cut faults, maximizes uptime
- Unique simplified thermal design to reduce downtime
- Powerful Intel® Core™ technology for optimized performance
- Industrial CPU's with long availability
- Three Ethernet ports to increase connectivity
- USB3.0 for fast data-transmission
- Optional NY Monitor Link interface for connectivity up to 100 m

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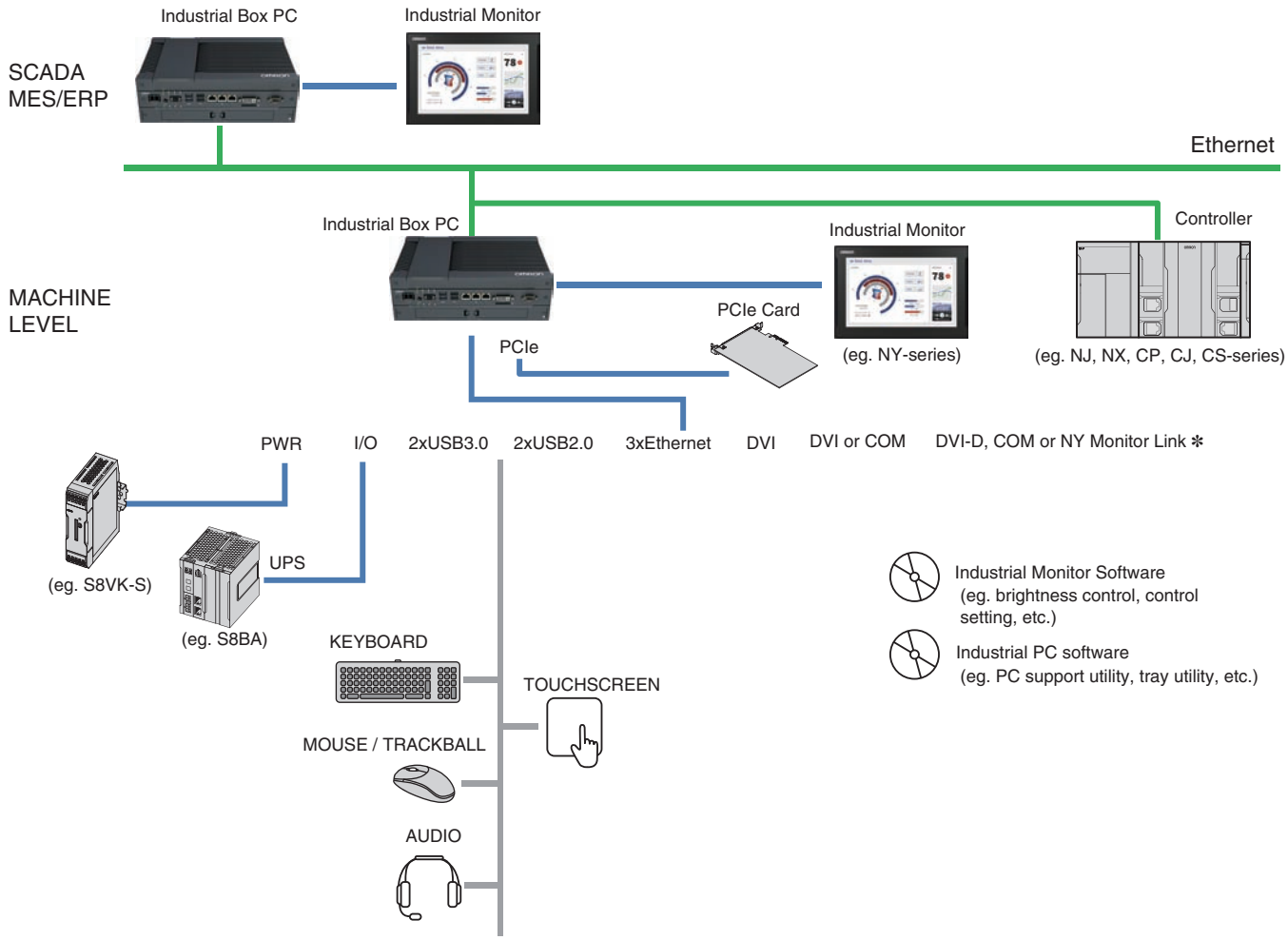
System Configuration



✻ NY Monitor Link option: Connect monitor up to 100 m via Ethernet cable.

Model Number Structure

The purpose of this model number legend is to provide understanding of the meaning of specifications from the model number.
Models are not available for all combinations of code numbers.

NYB □□ - □ □ □ □ □

Series name
NYB: NY- series Industrial Box PC

Processor
1E: Intel® Xeon® E3-1515M v5
6th generation CPU with Fan Unit for active cooling
27: Intel® Core™ i7-7820EQ
7th generation CPU with Fan Unit for active cooling
35: Intel® Core™ i5-7300U
7th generation CPU with fanless cooling
2C: Intel® Celeron® 3965U
7th generation CPU with fanless cooling
2A: Intel® Atom® x5-E3940

Main memory
1: 2 GB, non-ECC
2: 4 GB, non-ECC
3: 8 GB, non-ECC
4: 16 GB, non-ECC
5: 32 GB, non-ECC
C: 8 GB, ECC
D: 16 GB, ECC
E: 32 GB, ECC

Optional interface
0: No optional interface
1: RS-232C
2: DVI-D
6: NY Monitor Link
9: GigE LAN

Storage
0: No disk
5: 64 GB, CFast MLC
6: 128 GB, CFast MLC
7: 256 GB, CFast MLC
8: 32 GB, SSD SLC
9: 64 GB, SSD SLC
C: 320 GB, HDD
D: 500 GB, HDD
E: 1 TB, HDD
K: 128 GB, SSD MLC
L: 256 GB, SSD MLC
M: 500 GB, SSD MLC
P: 1 TB, SSD 3DTLC

Operating system
0: No operating system
3: Windows 10 IoT Enterprise 2016 LTSB - 64 bit
4: Windows 10 IoT Enterprise 2019 LTSC - 64 bit

Expansion slot
0: No PCIe slot
1: PCIe slot
2: PCIe slot + HW-RAID1

Ordering Information

NY-series Industrial PC Platform

Recommended models

The industrial Box PC has extended configuration possibilities to meet your requirements, below an overview of the most used and recommended models. Selecting one of the models below will bring the benefit of faster delivery times.
In case your preferred model is not listed below, please contact your Omron representative to discuss the possibilities.

Product name	Specifications						Model
	Operating system	CPU type	RAM memory	Storage size	Interface option	PCIe-slot	
Industrial Box PC	Windows 10 IoT Enterprise 2016 LTSB - 64 bit	Intel® Xeon® E3-1515M v5	8GB (non-ECC type)	128 GB SSD type (MLC)	RS-232C	Yes	**NYB1E-313K1**
			8GB (ECC type)			Yes	**NYB1E-C13K1**
		Intel® Core™ i5-7300U	8 GB (non-ECC type)	256 GB CFast type (MLC)	No	No	**NYB35-30370**
				128 GB SSD type (MLC)	RS-232C	Yes	**NYB35-313K1**
		Intel® Celeron™ 3965U	8 GB (non-ECC type)	256 GB CFast type (MLC)	No	No	**NYB2C-30370**
				128 GB SSD type (MLC)	RS-232C	Yes	**NYB2C-313K1**
	Windows 10 IoT Enterprise 2019 LTSC - 64bit	Intel® Atom® x5-E3940	4 GB (non-ECC type)	128 GB CFast type (MLC)	No	No	**NYB2A-20460**
			8 GB (non-ECC type)	256 GB CFast type (MLC)	No	No	**NYB2A-30470**
		Intel® Core™ i7-7820EQ	8 GB (non-ECC type)	128 GB SSD type (MLC)	No	No	**NYB27-30460**
				500 GB SSD type (MLC)	RS-232C	Yes	**NYB27-314M1**
				500 GB SSD type (MLC) Hard RAID	RS-232C	Yes	**NYB27-324M1**
				1 TB SSD type (3DTLC)	RS-232C	Yes	**NYB27-314P1**

Accessories

Optional Hardware

Product name	Specifications	Model
Mounting Brackets ✻1	Book mount	NY000-AB00 NY000-AB02 NY000-AB04 NY000-AB05
	Wall mount	NY000-AB01
SD Memory Cards	Card type: SD Card Capacity: 2 GB Format: FAT16	HMC-SD291
	Card type: SDHC Card Capacity: 4 GB Format: FAT32	HMC-SD491
	Card type: SDHC Card Capacity: 16 GB Format: FAT32	HMC-SD1A1
USB Flash Drives	Capacity: 2 GB	FZ-MEM2G
	Capacity: 8 GB	FZ-MEM8G
Storage Devices	Storage type: HDD, Capacity: 320 GB	NY000-AH00
	Storage type: HDD, Capacity: 500 GB	NY000-AH01
	Storage type: HDD, Capacity: 1 TB	NY000-AH02
	Storage type: SSD SLC, Capacity: 32 GB	NY000-AS00
	Storage type: SSD SLC (Apacer), Capacity: 64 GB	NY000-AS01
	Storage type: SSD SLC (Hagiwara), Capacity: 64 GB	NY000-AS03
	Storage type: SSD MLC (Innodisk), Capacity: 128 GB	NY000-AS04
	Storage type: SSD MLC, Capacity: 500 GB	NY000-AS05
	Storage type: SSD 3DTLC, Capacity: 1 TB	NY000-AS07
	Storage type: SSD MLC (Innodisk), Capacity: 256 GB	NY000-AS08
	Storage type: CFast MLC, Capacity: 64 GB	NY000-AT00
	Storage type: CFast MLC, Capacity: 128 GB	NY000-AT01
	Storage type: CFast MLC, Capacity: 256 GB	NY000-AT02
DVI Cables	Cable length: 2 m Supports DVI-D Minimum bend radius: 36 mm	NY000-AC00 2M
	Cable length: 5 m Supports DVI-D Minimum bend radius: 36 mm	NY000-AC00 5M
Industrial Monitor	• LCD touchscreen • Multi-touch functionality • Supply voltage: 24 VDC • 2 USB Type-A Connectors • Programmable brightness control • Standard and 100 m cable models are available.	NYM1□W-C10□□
Power Supply	• Output voltage: 24 VDC • Push-In Plus terminal blocks	S8VK-G□□□24
	• Output voltage: 24 VDC • EtherNet/IP, Modbus TCP-Compatible	S8VK-X□□□24A-EIP
	• Output voltage: 24 VDC • Compact	S8VK-S□□□24
	• Output voltage: 24 VDC • Three-phase 200-V Power Supplies	S8VK-WA□□□24
UPS ✻2	Output voltage during backup operation: 24 VDC ± 5%	S8BA
UPS Communication Cable	Cable length: 2 m Signals for • Signal output (BL, TR, BU, WB) • Remote ON/OFF input • UPS Stop Signal input (BS)	S8BW-C02

Note: Orders for NY000-AS02 are no longer accepted, as of November 30, 2018.

✻1. Select the required type:
NY000-AB00: for NYB1E, NYB27-□1, NYB27-□2
NY000-AB02: for NYB35-□1, NYB35-□2, NYB2C-□1
NY000-AB04: for NYB35-□0, NYB2C-□0, NYB2A-□0
NY000-AB05: for NYB27-□0

✻2. Revision number 04 or higher.

The revision number of the UPS can be retrieved from the serial number label on the product and the product packaging.

A3□	□□□□□□□□□□	□□	□
1	2	3	4

Item	Description
1	Product code
2	Product period and sequential number
3	Revision number
4	RoHS status

Spare Parts

The following spare parts for the Industrial Box PC are available.

Product name	Specifications	Model
Battery	One battery is supplied with the Industrial Box PC. The battery supplies power to the real-time clock. The battery is located inside the Industrial Box PC. Service life: 5 years at 25°C	CJ1W-BAT01✻
Fan Unit	The Fan Unit is available for the Industrial Box PC that has active cooling. Service life: 70,000 hours of continuous operation at 40°C with 15% to 65% relative humidity. Shelf life: 6 months This is the storage limitation with no power supplied.	NY000-AF00
Accessory Kit	Accessory Kit containing all accessories supplied with the Industrial Box PC. • Power connector • I/O connector • Drive bracket for drive installation • 4 mounting screws for drive installation • PCIe Card support for PCIe Card installation • PCIe Card clip for PCIe Card installation	NY000-AK00
	Power connectors (10 pcs) for Industrial Box PC and Industrial Panel PC	NY000-AK01

✻ Only for models with replaceable battery.

Installed Support Software

Item	Specifications
Industrial PC Support Utility	The Industrial PC Support Utility is a software utility to assist in diagnosing and resolving problems of the Industrial Box PC. It is pre-installed on the Industrial Box PC and the Industrial Panel PC.
Industrial PC Tray Utility	The Industrial PC Tray Utility is a software utility that provides information about the current state of the Industrial PC, its related devices, and associated software. It is pre-installed on the Industrial Box PC and the Industrial Panel PC.
Industrial PC System API	The Industrial PC System API allows programmers to create programs that can retrieve information or set an indicator status of the Industrial Box PC. The API makes use of the included IPC System Service to manage the hardware. It is pre-installed on the Industrial Box PC and the Industrial Panel PC.
Industrial Monitor Utility	For the optional OMRON Industrial Monitor. The Industrial Monitor Utility provides a user interface to control settings and display details of connected Industrial Monitors. It is pre-installed on the Industrial Box PC and the Industrial Panel PC.
Industrial Monitor Brightness Utility	For the optional OMRON Industrial Monitor. The Industrial Monitor Brightness Utility is a small software utility that allows you to control the brightness of the screen backlight of all connected Industrial Monitors. It is pre-installed on the Industrial Box PC and the Industrial Panel PC.
Industrial Monitor API	For the optional OMRON Industrial Monitor. The Industrial Monitor API allows programmers to create applications that can control the hardware features and retrieve information from connected Industrial Monitors. It is pre-installed on the Industrial Box PC and the Industrial Panel PC.
Industrial PC Rescue Disk Creator	The Industrial PC Rescue Disk Creator creates a USB Rescue Disk which can be used to back-up and restore the Omron IPC Operating System. It is pre-installed on the Industrial Box PC and the Industrial Panel PC.

Soft-NA

Product name	Specifications	Number of licenses	Media	Model
Soft-NA	The Soft-NA is software that displays information on FA manufacturing sites while providing safety, reliability, and maintainability as an industrial display on which operations can be performed as necessary. The Soft-NA runs on the following OS: Windows 10 Pro Version 1903 or later 64 bit	– (Media only)	DVD	NA-RTSM
		1 license	USB dongle	NA-RTLD01
		3 licenses		NA-RTLD03
		10 licenses		NA-RTLD10

System Requirements

Item		Requirement
OS		Windows 10 Pro Version 1903 or later 64 bit
Processor		Intel Atom® x5-E3940 equivalent or higher processor
RAM		4 GB or more
Free space in the hard drive necessary for installation		1 GB or more
Optical disk drive		DVD-ROM drive
Communication port	USB	USB2.0 Type-A x 2 ✻1
	LAN	Ethernet x 2 ✻1

✻1. Since one port is for project transfer, it is not required unless the corresponding path is used.
Note: Refer to NA-series catalog (Cat. No. V413) for the system configuration of Soft-NA.

General Specifications

Performance Specifications

Item			NYB1E-□1□□□ NYB1E-□2□□□	NYB27-□1□□□ NYB27-□2□□□	NYB35-□1□□□ NYB35-□2□□□	NYB2C-□1□□□	NYB27-□0□□□	NYB35-□0□□□	NYB2C-□0□□□	NYB2A-□0□□□
Main system	CPU	CPU type	Intel® Xeon® E3-1515M v5	Intel® Core™ i7-7820EQ	Intel® Core™ i5-7300U	Intel® Celeron® 3965U	Intel® Core™ i7-7820EQ	Intel® Core™ i5-7300U	Intel® Celeron® 3965U	Intel® Atom® x5-E3940
		Cores / Threads	4 / 8	4 / 8	2 / 4	2 / 2	4 / 8	2 / 4	2 / 2	4 / 4
		CPU base frequency	2.8 GHz	3.0 GHz	2.6 GHz	2.2 GHz	3.0 GHz	2.6 GHz	2.2 GHz	1.6 GHz
		Maximum turbo frequency	3.7 GHz	3.7 GHz	3.5 GHz	–	3.7 GHz	3.5 GHz	–	1.8 GHz
		Cache	8 MB	8 MB	3 MB	2 MB	8 MB	3 MB	2 MB	2 MB
		Cooling details	Requires active cooling (fan)		Passive cooling (fanless)		Requires active cooling (fan)	Passive cooling (fanless)		
		Intel CPU category	Industrial (100% operation minimal 10yr)							
	Memory	Memory size ✻1	8, 16 or 32 GB	8, 16 or 32 GB	4 or 8 GB	4 or 8 GB	8, 16 or 32 GB	8 or 16 GB	4 or 8 GB	2, 4 or 8 GB
		Memory type	DDR4 (ECC is available)	DDR4 (non ECC)						DDR3L (non ECC)
	Trusted platform module (TPM)		Available							
	Graphics controller		Intel® Iris™ Pro Graphics. Up to two independent screens.	Intel® HD Graphics. Up to two independent screens.						
			Intel® Iris™ Pro Graphics P580	Intel® HD Graphics 630	Intel® HD Graphics 620	Intel® HD Graphics 610	Intel® HD Graphics 630	Intel® HD Graphics 620	Intel® HD Graphics 610	Intel® HD Graphics 500
	Watchdog		Yes							
Operating system	Windows OS		Windows 10 IoT Enterprise 2016 LTSB - 64 bit	Windows 10 IoT Enterprise 2019 LTSC - 64 bit	Windows 10 IoT Enterprise 2016 LTSB - 64 bit		Windows 10 IoT Enterprise 2019 LTSC - 64 bit	Windows 10 IoT Enterprise 2016 LTSB - 64 bit		Windows 10 IoT Enterprise 2019 LTSC - 64 bit
Storage devices	Drives ✻1	Hard Disk Drive	• 320 GB, 500 GB, 1 TB Serial ATA 3.0	• 500 GB, 1 TB Serial ATA 3.0	• 320 GB Serial ATA 3.0		N/A			
		Solid State Drive – SLC type	• 64 GB Serial ATA 3.1		• 64 GB Serial ATA 3.1		N/A			
		Solid State Drive – MLC type	• 128 GB, 500 GB Serial ATA 3.1	• 128 GB, 256 GB, 500 GB Serial ATA 3.1	• 128 GB Serial ATA 3.1		• 64 GB, 128 GB, 256 GB Serial ATA 3.1, CFast			
		Solid State Drive – 3DTLC type	N/A	1 TB	N/A	N/A	N/A	N/A	N/A	N/A
	Drive bays (HDD/SSD) ✻2		2	2	2	2	CFast slot	CFast slot	CFast slot	CFast slot
	Hardware-RAID support		NYB1E-□2□□□ only	NYB27-□2□□□ only	NYB35-□2□□□ only	N/A	N/A	N/A	N/A	N/A
Connectors	Power connector		24 VDC							
	I/O connector		2 inputs (UPS signal and power OFF control) and 1 output (Industrial Box PC power state)							
	USB2.0 Type-A	Number of ports	2							
		Maximum current	500 mA							
		Maximum cable length	5 m							
	USB3.0 Type-A	Number of ports	2							
		Maximum current	900 mA							
		Maximum cable length	3 m							
	Ethernet connectors	Number of ports	3							
		Physical layer	10BASE-T, 100BASE-TX or 1000BASE-T							
	DVI-I connector	Video interface	Digital or analog		Digital only					
		Resolution	Up to 1,920 x 1,200 pixels at 60 Hz							
		Maximum DVI cable length	Dependent upon connected monitor type and resolution							

Item			NYB1E-□1□□□ NYB1E-□2□□□	NYB27-□1□□□ NYB27-□2□□□	NYB35-□1□□□ NYB35-□2□□□	NYB2C-□1□□□	NYB27-□0□□□	NYB35-□0□□□	NYB2C-□0□□□	NYB2A-□0□□□
Optional connector (select one per system)	RS-232C		Standard DSUB9 connector (Non-Isolated)				N/A			
	DVI-D	Video interface	Digital only				N/A			
		Resolution	Up to 1,920 x 1,200 pixels at 60 Hz				N/A			
		Maximum DVI cable length	Dependent upon connected monitor type and resolution				N/A			
	NY Monitor Link	Video interface	Digital only							
		Resolution	1,280 x 800 pixels at 60 Hz							
		Connector type	RJ45							
		Cable shielding, type and max. length	S/FTP, Cat.6A, 100 m							
		USB data throughput	280 Mbps max.							
	GigE LAN	Physical layer	10BASE-T, 100BASE-TX or 1000BASE-T		–					
PCIe Card Slot	Configuration		X4 (4 lanes) up to Gen 3		X2 (2 lanes) up to Gen 3		N/A			
	Card height		Standard height cards, 4.20 inches (106.7 mm) ✻3				N/A			
	Card length		Half length cards, 6.6 inches (167.65 mm)				N/A			
Battery	Model		CJ1W-BAT01		Non replaceable battery		CJ1W-BAT01	Non replaceable battery		
	Service life		5 years at 25°C		10 years at 40°C ✻4		5 years at 25°C	10 years at 40°C ✻4		
Fan unit	Model		NY000-AF00		No fan unit		NY000-AF00	No fan unit		
	Service life		70,000 hours of continuous operation at 40°C with 15% to 65% relative humidity		–		70,000 hours of continuous operation at 40°C with 15% to 65% relative humidity	–		
LED			PWR, ERR, HDD, RUN							

✻1. Not all combinations are possible or standard available. Please contact your Omron representative to discuss the possibilities.
✻2. Depending on the model one or two drives are supported.
✻3. Low profile cards, 2.536 inches (64.4 mm) are not supported.
✻4. Battery service life highly depend on circumtance and is in normal operation 20yr longer

Electrical Specifications

Item	NYB1E-□□□□□	NYB27-□1□□□ NYB27-□2□□□	NYB25-□□□□□	NYB1C-□□□□□	NYB35-□1□□□ NYB35-□2□□□	NYB2C-□1□□□	NYB27-□0□□□	NYB35-□0□□□	NYB2C-□0□□□	NYB2A-□0□□□
CPU type	Intel® Xeon® E3-1515M v5	Intel® Core™ i7-7820EQ CPU	Intel® Core™ i7-4700EQ CPU	Intel® Celeron® 2980U CPU	Intel® Core™ i5-7300U	Intel® Celeron® 3965U	Intel® Core™ i7-7820EQ	Intel® Core™ i5-7300U	Intel® Celeron® 3965U	Intel® Atom® x5-E3940
Rated power supply voltage	24 VDC, non-isolated									
Allowable power supply voltage range	20.4 to 28.8 VDC									
Grounding method	Ground to less than 100 Ω									
Inrush current	At 24 VDC: 12 A / 6 ms max. for cold start at room temperature									
Overvoltage category	Meets IEC 61010-2-201: Category II									
EMC immunity level	IEC 61131-2: Zone B									
RTC accuracy	At ambient temperature of 55°C: -3.5 to +0.5 min error per month At ambient temperature of 25°C: -1.5 to +1.5 min error per month At ambient temperature of 0°C: -3 to +1 min error per month									
Power button life	100,000 operations									
Battery life	5 years at 25°C (for battery CJ1W-BAT01)				10 years at 40°C		5 years at 25°C (for battery CJ1W-BAT01)	10 years at 40°C		
Fan life	8 years of continuous operation at 40°C		–	–	–	–	8 years of continuous operation at 40°C	–	–	–
Power consumption ✻	–									
Maximum power consumption including drives and expansions	121 W	121 W	75 W	66 W	69 W	50 W	101 W	61 W	42 W	41 W
Maximum power consumption excluding drives and expansions	86 W	86 W	52 W	45 W	46 W	27 W	86 W	46 W	27 W	26 W
Drives	–									
HDD 320 GB	2 W						–			
HDD 500 GB	2 W						–			
HDD 1 TB	2 W						–			
SSD SLC 32 GB	2 W						–			
SSD SLC 64 GB	2 W						–			
SSD MLC 128 GB	2 W						–			
SSD MLC 500 GB	3 W		–							
SSD 3DTLC 1 TB	–	3 W	–							
CFast MLC 64 GB	–						1 W			
CFast MLC 128 GB	–						1 W			
CFast MLC 256 GB	–						1 W			
Expansions	–									
USB	14 W max. ((2 x 500 mA at 5 V) + (2 x 900 mA at 5 V))									
PCIe	15 W max.	15 W max.	5 W max.	5 W max.	5 W max.	5 W max.	–			

Note: Refer to the *Industrial Box PC User's Manual* (W553) for detail.
✻ The total power consumption is the sum of the power consumption of all items that are installed in your Industrial Box PC.

To guarantee S8BA UPS operation in combination with our IPC, the specified combination of UPS and power-supply must be used.

Item		NYB1E / NYB27	NYB35 / NYB2C / NYB27-□0 / NYB2A
Minimum power requirements	**Power supply**	240 W	120 W
	UPS	240 W	120 W

Components and functions

The intent behind our IPC platform is to empower engineers to become unstoppable in developing machines and factories that are better, faster and safer by giving them the freedom and flexibility to explore the opportunities provided by modern IT. In line with Omron's traditional quality standards, the Industrial Box PC is designed to meet the demands of industrial users for maximum robustness and reliability.
All maintenance sensitive products (HDD/SDD, fan, battery, and PCIe Card) can be easily reached from the outside of the system. No need to open the electronics compartment, less risk on failure.

Optional connection
RS-232C, DVI-D, NY Monitor Link or GigE LAN.
NY Monitor Link allows high speed video and data communication over 100 m via Ethernet cable.

DVI-D video
Digital, up to 1,920 x 1,200 pixels at 60 Hz
(Intel® Core™ i7: DVI-I (Digital or analog))

3x High speed Ethernet
10BASE-T, 100BASE-TX or 1000BASE-T

2x USB2.0
500 mA maximum current
Maximum cable length: 5 m

2x USB3.0
900 mA maximum current
Maximum cable length: 3 m

Indication LEDs

Robust Mechanics
Full metal housing with black industrial coating

Industrial Design
Winner of the 2016 Red Dot design award✻ for excellent industrial design

1x PCIe slot
Half Length Cards 6.6 inches
Standard Height Cards 4.2 inches
Easy PCIe mounting drawer

Intel® Xeon®, Intel® Core™ i7: X4 (4 lanes)
Other CPUs: X1 (1 lane)

1x SD Memory Card slot
SDHC type (SD 2.0 specification)
Up to 32 GB capacity

1x CFast Card slot

Storage
2.5 inch Solid State Drive (SSD) or Hard Disk Drive (HDD), 7 mm height

I/O (UPS connection)
Input:
Power sequence signal
Output:
SPST-NO contact configuration
24 VDC at 2 A switching capacity (resistive load)

Power switch

24 VDC Power
24 VDC non isolated
Lockable power connector

Note: Not all combinations are possible or standard available. Please contact your Omron representative to discuss the possibilities.
✻ The Red Dot design award has been presented by the Design Zentrum Nordrhein Westfalen since 1955. It is one of the best-respected design competitions in the world, along with the iF award (Germany) and IDEA (the United States).

Environmental Specifications

Item		Specifications
Operation environment	Ambient operating temperature ✻1	0 to 55°C
	Ambient storage temperature ✻1	-20 to 70°C
	Ambient operating humidity ✻1	10% to 90% with no condensation
	Ambient storage humidity ✻1	10% to 90% with no condensation
	Operating atmosphere	No corrosive gases
	Altitude	2,000 m max.
	Noise resistance (during operation)	Conforms to IEC61000-4-4, 2kV (power lines)
	Vibration resistance (during operation)	Conforms to IEC 60068-2-6. For a product with an SSD: 5 to 8.4 Hz with 3.5 mm single amplitude and 8.4 to 150 Hz with 9.8 m/s² for 10 times each in X, Y and Z directions. For a product with a HDD the vibration resistance depends on the mounting orientation ✻2.
	Shock resistance (during operation)	Conforms to IEC 60068-2-27. 147 m/s², 3 times in each X, Y and Z directions
	Installation method	Book mount, Wall mount
	Pollution degree	2 or less: Meets IEC 61010-2-201.
Applicable standards ✻3		EU Directives: EMC Directive 2014/30/EU (EN 61131-2) and RoHS Directive KC Registration, RCM, cULus, EAC

✻1. The allowed ambient operating temperature and ambient humidity depend on product type, CPU type, mounting orientation, and storage device type.
✻2. Vibration resistance depends on the Industrial Box PC's mounting orientation and storage device type:

Mounting orientation	SSD or CFast Card	HDD
Book	9.8 m/s²	2.5 m/s²
Wall		4.9 m/s²

✻3. Refer to the OMRON website (www.ia.omron.com) or contact your OMRON representative for the most recent applicable standards for each model.

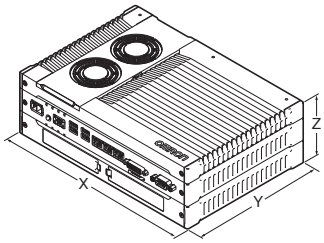
Storage Device Specifications

Item	Specifications												
Model	NY000-AS00	NY000-AS01	NY000-AS03	NY000-AS04	NY000-AS05	NY000-AS07	NY000-AS08	NY000-AH00	NY000-AH01	NY000-AH02	NY000-AT00	NY000-AT01	NY000-AT02
Capacity	32 GB	64 GB	64 GB	128 GB	500 GB	1 TB	256 GB	320 GB	500 GB	1 TB	64 GB	128 GB	256 GB
Type	SSD (SLC)		SSD (SLC)	SSD (MLC)	SSD (MLC)	SSD (3DTLC)	SSD (MLC)	HDD	HDD	HDD	CFast (MLC)	CFast (MLC)	CFast (MLC)
S.M.A.R.T. support	Yes												
Rotation speed	–	–	–	–	–	–	–	5,400 r/min			–	–	–
Interface	Serial ATA 3.1							Serial ATA 3.0			Serial ATA 3.1		
Sustained standard read speed	Up to 160 MB/s	Up to 160 MB/s	Up to 500 MB/s	Up to 530 MB/s	Up to 415 MB/s	Up to 550 MB/s	Up to 530 MB/s	–	–	–	Up to 530 MB/s	Up to 530 MB/s	Up to 530 MB/s
Sustained standard write speed	Up to 145 MB/s	Up to 150 MB/s	Up to 370 MB/s	Up to 190 MB/s	Up to 200 MB/s	Up to 340 MB/s	Up to 210 MB/s	–	–	–	Up to 100 MB/s	Up to 190 MB/s	Up to 210 MB/s
Operating temperature	0 to 70°C							5 to 55°C	5 to 55°C	0 to 60°C	-40 to 85°C		
Operating humidity	10% to 95% (with no condensation)		10% to 85% (with no condensation)	10% to 95% (with no condensation)				8% to 90% (with no condensation)			10% to 95% (with no condensation)		
Storage temperature	-40 to 100°C		-45 to 90°C	-55 to 95°C				-40 to 65°C			-55 to 95°C		
Storage humidity	10% to 95% (with no condensation)							8% to 90% (with no condensation)		5% to 95% (with no condensation)	10% to 95% (with no condensation)		
Life	1,500 TB written	3,000 TB written	1900 TB written	208 TB written	154 TB written	1000 TB written	416 TB written	Approximately 5 years or 20,000 powered-ON hours (whichever comes first) under the following conditions: • 25°C at 101.3 kPa • Less than 333 powered-ON hours/month ✻1 • Less than 20% operation while powered-ON ✻2 • Less than 1.30 x 106 seeks/month		Average Annualized Failure Rate (AFR): 0.50% Under the following conditions: • Case Temperature 40°C • Power on Hours (POH) ≤ 3120	125 TB written	208 TB written	417 TB written

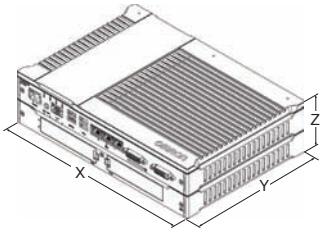
Note: Orders for NY000-AS02 are no longer accepted, as of November 30, 2018.
✻1. Powered-ON hours include sleep and standby modes.
✻2. Operation includes seeking, writing, and reading functions.

Dimensions

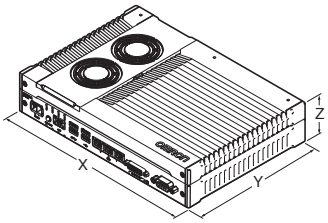
NYB1E-□□□□□
NYB27-□1□□□
NYB27-□2□□□



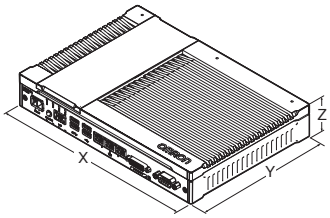
NYB35-□1□□□
NYB35-□2□□□
NYB2C-□1□□□



NYB27-□0□□□



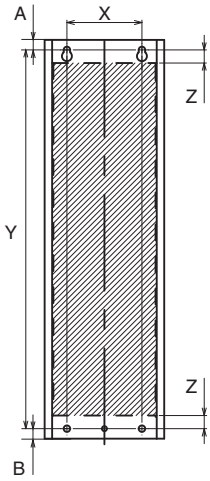
NYB35-□0□□□
NYB2C-□0□□□
NYB2A-□0□□□

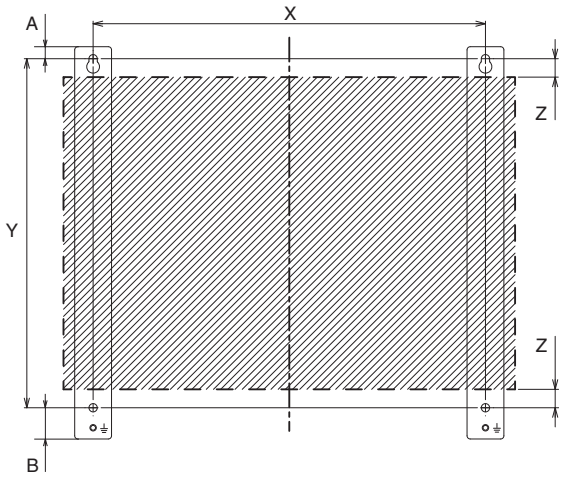


Item	Specifications			
	Box			
	NYB1E-□□□□□ **NYB27-□1□□□** **NYB27-□2□□□**	**NYB35-□1□□□** **NYB35-□2□□□** **NYB2C-□1□□□**	**NYB27-□0□□□**	**NYB35-□0□□□** **NYB2C-□0□□□** **NYB2A-□0□□□**
Dimensions	Width X = 282 mm Depth Y = 195 mm. Y = 200 mm including the DVI connectors. Height Z = 88.75 mm	Width X = 282 mm Depth Y = 195 mm. Y = 200 mm including the DVI connectors. Height Z = 73 mm	Width X = 282 mm Depth Y = 195 mm. Y = 200 mm including the DVI connectors. Height Z = 56 mm	Width X = 282 mm Depth Y = 195 mm. Y = 200 mm including the DVI connectors. Height Z = 41 mm
Weight	3.8 kg	3.0 kg	2.6 kg	2.1 kg

Bracket Specifications

The metal mounting brackets mount your Industrial Box PC and they are the connection for the functional ground.
Use metal screws with a diameter of 4 mm or 5 mm to mount the brackets.
Mounting screw locations for book mount and wall mount orientation:





(Unit: mm)

Model	Bracket type	Bracket ID	Drill Specifications			Product Dimensions			
			Hole Distance X	Hole Distance Y	Distance Z	Bracket Width	Bracket Height	Top to hole A	Top to hole B
All	**Wall mount**	**NY000-AB01**	245 mm	218 mm	12 mm	23 mm	245 mm	7.5 mm	19.5 mm
NYB1E **NYB27-□1□□□** **NYB27-□2□□□**	**Book mount**	**NY000-AB00**	60 mm	303 mm	11 mm	96 mm	319 mm	8 mm	8 mm
NYB35-□1□□□ **NYB35-□2□□□** **NYB2C-□1□□□**	**Book mount**	**NY000-AB02**	50 mm	303 mm	11 mm	80 mm	319 mm	8 mm	8 mm
NYB35-□0□□□ **NYB2C-□0□□□**	**Book mount**	**NY000-AB04**	N/A	298 mm	11 mm	47 mm	339 mm	8 mm	28 mm
NYB27-□0□□□	**Book mount**	**NY000-AB05**	25 mm	303 mm	11 mm	63 mm	339 mm	8 mm	28 mm

Recommended Related Products

Industrial Monitor
NY-series

The Industrial Monitor is of key importance at the interface between operator and system. The Industrial Monitor is efficient, effective and highly visible with an attractive design.

Industrial Panel PC
NY-series

The Industrial Panel PC intelligently combines the functionality of the Industrial Box PC and Industrial Monitor. No cables are used between the two components, which ensures optimal signal distribution and reliable operation in industrial environments.

UPS
S8BA-series

The OMRON S8BA UPS protects the Industrial Box PC from power failures, voltage variations and instantaneous voltage drops.

Related Manuals

The following manuals are related. Use these manuals for reference.

Manual name	Cat. No.	Model numbers	Application	Description
Industrial Box PC User's Manual	W553	NYB1E-□1□□□ NYB27-□□□□□ NYB35-□□□□□ NYB2C-□□□□□	Learning all basic information about the Industrial Box PC. This includes introductory information with features, hardware overview, software overview, specifications, mounting, wiring, connecting, operating and maintaining the Industrial Box PC.	An introduction to the Industrial Box PC is provided along with the following information: • Overview • Hardware • Software • Specifications • Installation • Operating Procedures • Maintenance
NY-Series Industrial Box-PC without OS User's Manual	W586	NYB1E-□1□□□ NYB27-□□□□□ NYB35-□□0□□ NYB2C-□□0□□	Learning about the Omron Industrial PC functionality without an installed Operating System	An introduction to the Industrial Box PC is provided along with the following information: • Overview • Hardware • Software • Specifications • Installation • Operating Procedures • Maintenance
Industrial Monitor User's Manual	W554	NYM19W-C1□□□ NYM15W-C10□□ NYM12W-C10□□	Learning all basic information about the Industrial Monitor. This includes introductory information with features, hardware overview, specifications, mounting, wiring, connecting, operating and maintaining the Industrial Monitor.	An introduction to the Industrial Monitor is provided along with the following information: • Overview • Hardware • Software • Specifications • Installation • Operating Procedures • Maintenance
Industrial Panel PC User's Manual	W555	NYP35-□□□□□-15WC100□ NYP35-□□□□□-12WC100□ NYP2C-□□□□□-15WC100□ NYP2C-□□□□□-12WC100□ NYP35-□0□□□-19WC1□0□ NYP2C-□0□□□-19WC1□0□	Learning all basic information about the Industrial Panel PC. This includes introductory information with features, hardware overview, software overview, specifications, mounting, wiring, connecting, operating and maintaining the Industrial Panel PC.	An introduction to the Industrial Panel PC is provided along with the following information: • Overview • Hardware • Software • Specifications • Installation • Operating Procedures • Maintenance
NY-Series Industrial Panel-PC without OS User's Manual	W587	NYP35-□□0□□-15WC100□ NYP35-□□0□□-12WC100□ NYP2C-□□0□□-15WC100□ NYP2C-□□0□□-12WC100□ NYP35-□0□□□-19WC1□0□ NYP2C-□0□□□-19WC1□0□	Learning about the Omron Industrial PC functionality without an installed Operating System	An introduction to the Industrial Panel PC is provided along with the following information: • Overview • Hardware • Software • Specifications • Installation • Operating Procedures • Maintenance
UPS S8BA User's Manual	U702	S8BA	Learning the information that is necessary to use the Uninterruptible Power Supply (UPS) Unit.	An introduction to the UPS is provided along with the following information: • Overview • Preparation • Installation and Connection • Check and Start Operation • Maintenance and Inspection • Shutdown Processing • I/O Signal Functions • Troubleshooting
NY-series Operating Systems and Software Utilities Manual	W616	NYB□□-□□□ NYP□□-□□□	Learning all software related information about the Industrial Box PC. This includes introductory information, installation, operating procedures and maintenance. Mainly software information is provided.	An introduction to the Box PC is provided along with the following information: • Overview • Software • Specifications • Installation • Operating Procedures • Maintenance

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