

## 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, NYB17,  
NYB25, NYB1C



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
- Three Ethernet ports to increase connectivity
- USB3.0 for fast data-transmission
- Optional NY Monitor Link interface for connectivity up to 100 m
- Free choice of drive technology: HDD, SSD, CFAST and built-in SD card slot

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The product photographs and figures that are used in this document may vary somewhat from the actual products.

# System Configuration



\* NY Monitor Link option: Connect monitor up to 100 m via standard 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.



## 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 LTSC - 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™ i7-4700EQ                      | 8 GB (non-ECC type)             | 128 GB SSD type (MLC)   | RS-232C                 | Yes         | NYB17-313K1 |
|                     |  |   |                                 | 320 GB HDD type         | RS-232C                 | Yes         | NYB17-313C1 |
|                     |  |   |                                 | 64 GB SSD type (SLC)    | RS-232C                 | Yes         | NYB17-31391 |
|                     |  | 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                       | 4 GB (non-ECC type)             | 256 GB CFast type (MLC) | No                      | No          | NYB2C-20370 |
|                     |  |   |                                 | 128 GB SSD type (MLC)   | RS-232C                 | Yes         | NYB2C-213K1 |
|                     |  | Windows 10 IoT Enterprise 2019 LTSC - 64bit | Intel® Atom® x5-E3940 Processor | 4 GB (non-ECC type)     | 128 GB CFast type (MLC) | No          | No          |
| 8 GB (non-ECC type) | 256 GB CFast type (MLC)                      |   |                                 | No                      | No                      | NYB2A-30470 |             |

## Accessories

### Optional Hardware

| Product name                    | Specifications  | Model                                  |
|---------------------------------|---|--|
| Mounting Brackets *1            | Book mount  | NY000-AB00<br>NY000-AB02<br>NY000-AB04 |
|                                 | Wall mount  | NY000-AB01                             |
| SD Memory Cards                 | Card type: SD Card<br>Capacity: 2 GB<br>Format: FAT16   | HMC-SD291                              |
|                                 | Card type: SDHC Card<br>Capacity: 4 GB<br>Format: FAT32   | HMC-SD491                              |
| USB Flash Drives                | Capacity: 2 GB  | FZ-MEM2G                               |
|                                 | Capacity: 8 GB  | FZ-MEM8G                               |
| Storage Devices *2              | 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: CFast MLC, Capacity: 64 GB  | NY000-AT00                             |
|                                 | Storage type: CFast MLC, Capacity: 128 GB   | NY000-AT01                             |
| USB Type-A to USB Type-B Cables | Cable length: 2 m<br>USB 2.0<br>Minimum bend radius: 25 mm  | FH-VUAB 2M                             |
|                                 | Cable length: 5 m<br>USB 2.0<br>Minimum bend radius: 25 mm  | FH-VUAB 5M                             |
| DVI Cables                      | Cable length: 2 m<br>Supports DVI-D<br>Minimum bend radius: 36 mm   | NY000-AC00 2M                          |
|                                 | Cable length: 5 m<br>Supports DVI-D<br>Minimum bend radius: 36 mm   | NY000-AC00 5M                          |
| Industrial Monitor              | <ul style="list-style-type: none"> <li>LCD touchscreen</li> <li>Multi-touch functionality</li> <li>Supply voltage: 24 VDC</li> <li>Up to 1,280 x 800 pixels at 60 Hz</li> <li>2 USB Type-A Connectors</li> <li>Programmable brightness control</li> <li>Standard and 100 m cable models are available.</li> </ul> | NYM1□W-C10□□                           |
| Power Supply                    | <ul style="list-style-type: none"> <li>Output voltage: 24 VDC</li> <li>Push-In Plus terminal blocks</li> </ul>  | S8VK-S□□□24                            |
| UPS *3                          | Output voltage during backup operation: 24 VDC ± 5%   | S8BA                                   |
| UPS Communication Cable         | Cable length: 2 m<br>Signals for <ul style="list-style-type: none"> <li>Signal output (BL, TR, BU, WB)</li> <li>Remote ON/OFF input</li> <li>UPS Stop Signal input (BS)</li> </ul>  | 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, NYB17, NYB25, NYB1C, NY51□□

NY000-AB02: for NYB35-□1, NYB2C-□1

NY000-AB04: for NYB35-□0, NYB2C-□0

\*2. CFast Storage can be used only with the NYB35-□0, NYB2C-□0. Please contact your Omron representative to discuss the possibilities.

\*3. 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.<br>The battery is located inside the Industrial Box PC.<br>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.<br>Service life: 70,000 hours of continuous operation at 40°C with 15% to 65% relative humidity.<br>Shelf life: 6 months<br>This is the storage limitation with no power supplied.   | NY000-AF00  |
| Accessory Kit | Accessory Kit containing all accessories supplied with the Industrial Box PC. <ul style="list-style-type: none"> <li>• Power connector</li> <li>• I/O connector</li> <li>• Drive bracket for drive installation</li> <li>• 4 mounting screws for drive installation</li> <li>• PCIe Card support for PCIe Card installation</li> <li>• PCIe Card clip for PCIe Card installation</li> </ul> | NY000-AK00  |

\*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.<br>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.<br>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.<br>The API makes use of the included IPC System Service to manage the hardware.<br>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.<br>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.<br>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.<br>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.<br>The Soft-NA runs on the following OS:<br>Windows 10 Pro Version 1903 or later 64 bit | –<br>(Media only)  | DVD        | NA-RTSM  |
|              |  | 1 license          | USB dongle | NA-RTL01 |
|              |  | 3 licenses         |            | NA-RTL03 |
|              |  | 10 licenses        |            | NA-RTL10 |

### 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-<br>□□□□□  | NYB17-<br>□□□□□  | NYB25-<br>□□□□□<br>*4                              | NYB1C-<br>□□□□□<br>*4            | NYB35-<br>□1□□□                              | NYB2C-<br>□1□□□                 | NYB35-<br>□0□□□                              | NYB2C-<br>□0□□□                        | NYB2A-<br>□0□□□                              |  |
|--|-------------------------------|--|--|--|--|----------------------------------|--|---------------------------------|--|--|--|--|
| Main system                                | CPU                           | CPU type   | Intel® Xeon® E3-1515M v5   | Intel® Core™ i7-4700EQ   | Intel® Core™ i5-4300U                              | Intel® Celeron® Processor 2980U  | Intel® Core™ i5-7300U                        | Intel® Celeron® Processor 3965U | Intel® Core™ i5-7300U                        | Intel® Celeron® Processor 3965U        | Intel® Atom® Processor x5-E3940              |  |
|  |                               | Cores / Threads                                      | 4 / 8  | 4 / 8  | 2 / 4  | 2 / 2                            | 2 / 4  | 2 / 2                           | 2 / 4  | 2 / 2                                  | 4 / 4  |  |
|  |                               | CPU base frequency                                   | 2.8 GHz  | 2.4 GHz  | 1.9 GHz  | 1.6 GHz                          | 2.6 GHz                                      | 2.2 GHz                         | 2.6 GHz                                      | 2.2 GHz                                | 1.6 GHz                                      |  |
|  |                               | Maximum turbo frequency                              | 3.7 GHz  | 3.4 GHz  | 2.9 GHz  | –                                | 3.5 GHz                                      | –                               | 3.5 GHz                                      | –                                      | 1.8 GHz                                      |  |
|  |                               | Cache  | 8 MB   | 6 MB   | 3 MB   | 2 MB                             | 3 MB   | 2 MB                            | 3 MB   | 2 MB                                   | 2 MB   |  |
|  |                               | Cooling details                                      | Requires active cooling (fan)  |  |  | Passive cooling (fanless)        |  |                                 |  |  |  |  |
|  | Memory                        | Memory size *1                                       | 8, 16 or 32 GB   | 4, 8 or 16 GB  | 2, 4 or 8 GB                                       | 2, 4 or 8 GB                     | 4 or 8 GB                                    | 4 or 8 GB                       | 8 or 16 GB                                   | 4 or 8 GB                              | 2, 4 or 8 GB                                 |  |
|  |                               | Memory type  | DDR4 (ECC is available)  | DDR3L (non ECC)  |  |                                  | DDR4 (non ECC)                               |                                 | 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 4600  | Intel® HD Graphics 4400  | Intel® HD Graphics                                 | Intel® HD Graphics 620           | Intel® HD Graphics 610                       | Intel® HD Graphics 620          | Intel® HD Graphics 610                       | Intel® HD Graphics 500                 |  |  |
| Watchdog                                   |                               | Yes  |  |  |  |                                  |  |                                 |  |  |  |  |
| Operating system                           | Windows OS                    |  | Windows 10 IoT Enterprise 2016 LTSC - 64 bit   | Windows Embedded Standard 7 - 32 bit<br>Windows Embedded Standard 7 - 64 bit<br>Windows 10 IoT Enterprise 2016 LTSC - 64 bit |  |                                  | Windows 10 IoT Enterprise 2016 LTSC - 64 bit |                                 | Windows 10 IoT Enterprise 2016 LTSC - 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  |  | • 320 GB Serial ATA 3.0          |  | • 320 GB Serial ATA 3.0         |  | N/A                                    |  |  |
|  |                               | Solid State Drive                                    | SLC type   | • 64 GB Serial ATA 3.1   |  | • 32 GB and 64 GB Serial ATA 3.1 |  | • 64 GB Serial ATA 3.1          |  | N/A                                    |  |  |
|  |                               |  | MLC type   | • 128 GB, 500 GB Serial ATA 3.1  |  | • 128 GB Serial ATA 3.1          |  |                                 |  | • 64 GB, 128 GB, 256 GB Serial ATA 3.1 |  |  |
|  | Drive bays (HDD/SSD) *2       |  | 2  | 2  | 2  | 1                                | 2  | 2                               | CFast slot                                   | CFast slot                             | CFast slot                                   |  |
| 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 |  |  |  |                                  |  |                                 |  |  |  |  |
| 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   |  |  |                                  |  |                                 |  |  |  |  |
| GigE LAN                                   | Physical layer                | 10BASE-T, 100BASE-TX or 1000BASE-T                   |  |  | –  |                                  |  |                                 |  |  |  |  |

| Item           |                    | NYB1E-<br>□□□□□  | NYB17-<br>□□□□□ | NYB25-<br>□□□□□<br>*4   | NYB1C-<br>□□□□□<br>*4 | NYB35-<br>□1□□□          | NYB2C-<br>□1□□□ | NYB35-<br>□0□□□ | NYB2C-<br>□0□□□ | NYB2A-<br>□0□□□ |  |
|----------------|--------------------|--|-----------------|-------------------------|-----------------------|--------------------------|-----------------|-----------------|-----------------|-----------------|--|
| PCIe Card Slot | Configuration      | X4 (4 lanes) up to Gen 3   |                 | X1 (1 lane) up to Gen 2 |                       | 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  |                 |                 |                 |                 |  |
|                | Service life       | 5 years at 25°C  |                 |                         |                       | 10 years at 40°C         |                 |                 |                 |                 |  |
| Fan unit       | Model              | NY000-AF00   |                 | No fan unit             |                       |                          |                 |                 |                 |                 |  |
|                | Service life       | 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. Not recommended for new projects.

## Electrical Specifications

| Item  | NYB1E-<br>□□□□□   | NYB17-<br>□□□□□            | NYB25-<br>□□□□□            | NYB1C-<br>□□□□□           | NYB35-<br>□1□□□       | NYB2C-<br>□1□□□                 | NYB35-<br>□0□□□       | NYB2C-<br>□0□□□                 | NYB2A-<br>□0□□□                 |  |
|---|---|----------------------------|----------------------------|---------------------------|-----------------------|---------------------------------|-----------------------|---------------------------------|---------------------------------|--|
| CPU type  | Intel® Xeon® E3-1515M v5  | Intel® Core™ i7-4700EQ CPU | Intel® Core™ i7-4700EQ CPU | Intel® Celeron® 2980U CPU | Intel® Core™ i5-7300U | Intel® Celeron® Processor 3965U | Intel® Core™ i5-7300U | Intel® Celeron® Processor 3965U | Intel® Atom® Processor 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<br>At ambient temperature of 25°C: -1.5 to +1.5 min error per month<br>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      |                                 |                       |                                 |                                 |  |
| Fan life  | 8 years of continuous operation at 40°C   |                            | -                          | -                         | -                     | -                               | -                     | -                               | -                               |  |
| Power consumption *                                       | -   |                            |                            |                           |                       |                                 |                       |                                 |                                 |  |
| Maximum power consumption including drives and expansions | 121 W   | 114 W                      | 75 W                       | 66 W                      | 69 W                  | 50 W                            | 61 W                  | 42 W                            | 41 W                            |  |
| Maximum power consumption excluding drives and expansions | 86 W  | 81 W                       | 52 W                       | 45 W                      | 46 W                  | 27 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   |                            |                            |                           |                       |                                 |                       |                                 | -                               |  |
| 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 / NYB17 | NYB25 / NYB1C / NYB35 / NYB2C / 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 standard 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.<br>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/s <sup>2</sup> for 10 times each in X, Y and Z directions.<br>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.<br>147 m/s <sup>2</sup> , 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/s <sup>2</sup> | 2.5 m/s <sup>2</sup> |
| Wall                 |                      | 4.9 m/s <sup>2</sup> |

\*3. Refer to the OMRON website ([www.ia.omron.com](http://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-AH00  | NY000-AH01 | NY000-AH02   | NY000-AT00                        | NY000-AT01                        | NY000-AT02     |
| Capacity                       | 32 GB                             | 64 GB            | 64 GB                             | 128 GB                            | 500 GB         | 320 GB  | 500 GB     | 1 TB   | 64 GB                             | 128 GB                            | 256 GB         |
| Type                           | SSD (SLC)                         |                  | SSD (SLC)                         | SSD (MLC)                         | 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 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 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                       | -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 | Approximately 5 years or 20,000 powered-ON hours (whichever comes first) under the following conditions:<br>• 25°C at 101.3 kPa<br>• Less than 333 powered-ON hours/month *1<br>• Less than 20% operation while powered-ON *2<br>• Less than 1.30 x 10 <sup>6</sup> seeks/month |            | Average Annualized Failure Rate (AFR): 0.50% Under the following conditions:<br>• Case Temperature 40°C<br>• 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-□□□□□  
 NYB17-□□□□□  
 NYB25-□□□□□  
 NYB1C-□□□□□



NYB35-□□□□□  
 NYB2C-□□□□□



| Item       | Specifications   |   |   |
|------------|--|---|---|
|            | Box  |   |   |
|            | XYB1E-□□□□□<br>NYB17-□□□□□<br>NYB25-□□□□□<br>NYB1C-□□□□□   | NYB35-□1□□□<br>NYB2C-□1□□□  | NYB35-□0□□□<br>NYB2C-□0□□□<br>NYB2A-□0□□□   |
| Dimensions | Width X = 282 mm<br>Depth Y = 195 mm.<br>Y = 200 mm including the DVI connectors.<br>Height Z = 88.75 mm | Width X = 282 mm<br>Depth Y = 195 mm.<br>Y = 200 mm including the DVI connectors.<br>Height Z = 73 mm | Width X = 282 mm<br>Depth Y = 195 mm.<br>Y = 200 mm including the DVI connectors.<br>Height Z = 41 mm |
| Weight     | 3.8 kg   | 3.0 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 | Drill Specifications |                 |                 | Product Dimensions |                |
|---|--------------|----------------------|-----------------|-----------------|--------------------|----------------|
|   |              | Hole Distance X      | Hole Distance Y | Hole Distance A | Bracket Width      | Bracket Height |
| NYB1E<br>NYB25<br>NYB17<br>NYB1C          | Book mount   | 60 mm                | 303 mm          | 11 mm           | 96 mm              | 319 mm         |
|   | Wall mount   | 245 mm               | 218 mm          | 12 mm           | 23 mm              | 245 mm         |
| NYB35-□1□□□<br>NYB2C-□1□□□                | Book mount   | 50 mm                | 303 mm          | 11 mm           | 80 mm              | 319 mm         |
|   | Wall mount   | 245 mm               | 218 mm          | 12 mm           | 23 mm              | 245 mm         |
| NYB35-□0□□□<br>NYB2C-□0□□□<br>NYB2A-□0□□□ | Book mount   | n.a.                 | 298 mm          | 11 mm           | 47 mm              | 319 mm         |
|   | Wall mount   | 245 mm               | 218 mm          | 12 mm           | 23 mm              | 245 mm         |

## Recommended Related Products

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**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□□□<br>NYB17-□1□□□<br>NYB25-□1□□□<br>NYB1C-□1□□□<br>NYB35-□□□□□<br>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: <ul style="list-style-type: none"> <li>• Overview</li> <li>• Hardware</li> <li>• Software</li> <li>• Specifications</li> <li>• Installation</li> <li>• Operating Procedures</li> <li>• Maintenance</li> </ul>   |
| NY-Series Industrial Box-PC without OS User's Manual   | W586     | NYB1E-□1□□□<br>NYB17-□10□□<br>NYB25-□10□□<br>NYB1C-□10□□<br>NYB35-□□0□□<br>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: <ul style="list-style-type: none"> <li>• Overview</li> <li>• Hardware</li> <li>• Software</li> <li>• Specifications</li> <li>• Installation</li> <li>• Operating Procedures</li> <li>• Maintenance</li> </ul>   |
| Industrial Monitor User's Manual                       | W554     | NYM19W-C1□□□<br>NYM15W-C10□□<br>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: <ul style="list-style-type: none"> <li>• Overview</li> <li>• Hardware</li> <li>• Software</li> <li>• Specifications</li> <li>• Installation</li> <li>• Operating Procedures</li> <li>• Maintenance</li> </ul>  |
| Industrial Panel PC User's Manual                      | W555     | NYP17-□1□□□-15WC100□<br>NYP17-□1□□□-12WC100□<br>NYP25-□1□□□-15WC100□<br>NYP25-□1□□□-12WC100□<br>NYP1C-□1□□□-15WC100□<br>NYP1C-□1□□□-12WC100□<br>NYP35-□□□□□-15WC100□<br>NYP35-□□□□□-12WC100□<br>NYP2C-□□□□□-15WC100□<br>NYP2C-□□□□□-12WC100□<br>NYP35-□0□□□-19WC1□0□<br>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: <ul style="list-style-type: none"> <li>• Overview</li> <li>• Hardware</li> <li>• Software</li> <li>• Specifications</li> <li>• Installation</li> <li>• Operating Procedures</li> <li>• Maintenance</li> </ul>   |
| NY-Series Industrial Panel-PC without OS User's Manual | W587     | NYP17-□10□□-15WC100□<br>NYP17-□10□□-12WC100□<br>NYP25-□10□□-15WC100□<br>NYP25-□10□□-12WC100□<br>NYP1C-□10□□-15WC100□<br>NYP1C-□10□□-12WC100□<br>NYP35-□□0□□-15WC100□<br>NYP35-□□0□□-12WC100□<br>NYP2C-□□0□□-15WC100□<br>NYP2C-□□0□□-12WC100□<br>NYP35-□0□□□-19WC1□0□<br>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: <ul style="list-style-type: none"> <li>• Overview</li> <li>• Hardware</li> <li>• Software</li> <li>• Specifications</li> <li>• Installation</li> <li>• Operating Procedures</li> <li>• Maintenance</li> </ul>   |
| 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: <ul style="list-style-type: none"> <li>• Overview</li> <li>• Preparation</li> <li>• Installation and Connection</li> <li>• Check and Start Operation</li> <li>• Maintenance and Inspection</li> <li>• Shutdown Processing</li> <li>• I/O Signal Functions</li> <li>• Troubleshooting</li> </ul> |