

# NX-G11

## Features

### Panel Computer

- Windows® Embedded Standard 2009
- High reliability
- Power consumption 27W/HDD/ fanless design
- High speed execution
- 12.1-inch type XGA touch panel
- Space-saving
- Customization flexible
- Various interfaces

### Features

#### Reliable Designed / Manufactured in Japan

The quality of the NX-G11 was thoroughly enhanced assuming use under rigorous environments and long-term operation. The NX-G11 was all domestically-produced from design to manufacture, epitomizing Japanese quality. Ensures the high reliability required by numerous clients all over the world.

#### Low Power Consumption

The NX-G11 is designed to consume 27 W of power, which is earth-conscious and contributes to cost reduction. While enhancing functions and performance compared with Koyo Electronics' older models, the NX-G11 realizes an energy-saving effect of about 40%.

#### Low Heat Generation

The HDD and cooling fans that require regular replacement have been eliminated. The NX-G11 requires no parts replacement due to deterioration or failure, and generates no waste, contributing to resource conservation. Moreover, the NX-G11 generates little low heat and no noise or vibrations. The NX-G11 has a high degree of freedom when it comes to embedding it into devices, and enables easy maintenance.

#### Conforming to the RoHS Directive

The NX-G11 conforms to the RoHS Directive owing to a safe design that thoroughly eliminates specific toxic substances, and uses lead-free solder. It helps with clearing authorization conditions when embedded devices are exported.

#### 12-second Startup Time, About 50% Faster

In addition to normal starts, a "high speed start" mode that reduces the startup time by about 50% is available. Operating system startup is completed in about 12 seconds after the power is turned on. This helps to shorten work time in situations where the system should be restarted as soon as possible such as restoring from trouble and consecutive restarts during maintenance. Owing to a faster data reading time on an account that there is no HDD, the normal startup time is about 24 seconds, which is faster than general panel computers.

#### Comfortable, Easy-to-see 12.1-inch Screen

The display device is a 12-inch TFT color LCD that emphasizes visualization and reliable touch operation. The XGA resolution (1,024 x 768 dot) and 260,000 display colors produce clear views with good visibility of characters and graphics. The NX-G11 can realize screen design with outstanding descriptive power and operability.



#### Equipped with 2009 Windows® Embedded Standard

The NX-G11 uses an embedded Windows OS that is compatible with Windows XP. Thus, you can make effective use of familiar working environment and existing software assets, whereby contributing to cost reduction. Moreover, the NX-G11 is equipped with proprietary embedded functions such as "Instant power off," to enhance usability and reliability.

#### Sophisticated Open Frame Structure

A slim body of 56 mm in depth and a sophisticated design that features no protrusion of connection cables on the back largely improves the degrees of freedom when it comes to embedding it in devices. The open frame structure makes uneven stylish installation possible.

#### Coordination with Peripheral Devices

You can use the optional application software "Visual Scope" for establishing the basis of your system architecture i.e., creation of the dedicated screens, data collection, and drivers for coordinating with peripheral devices.



The software provides a function for creating dedicated screens using Visual Basic and Excel, and a collection of components for data collection, enabling the creation of sophisticated operation screens. Moreover, the software is equipped with the communication driver that facilitates connections and communications with Koyo Electronics' peripheral devices such as PLCs and remote I/O boards. The NX-G11 enables coordination with a wide range of devices such as USB memory, USB HDD, and USB DVD-ROM. The high expandability largely contributes to enhanced productivity. Since the NX-G11 is equipped with VGA output for external display, it can operate like a computer that is connected to a USB mouse and a keyboard.

#### High Expandability

The NX-G11 is equipped with a USB port, Ethernet port, serial port, PC Card slot, and VGA output. With abundant interfaces equal to a general computer, the NX-G11 can create optimal systems for various applications. Moreover, the PCI slot can be expanded as an option.

# NX-G11

## Specifications

PLC HMI SENSOR ENCODER COUNTER INFORMATION 

HMI Lineup

Panel Computer

Programmable  
Touch Panel

HMI Software

NX-G11

### Model Number List

Items	Model Number	Contents
Body	NX-G11	Panel computer main body memory: 512MB CF card slot 1: 2GB (OS) CF card slot 2: 1GB
Embedded option (Before Shipment)*1	NX-ME02G	The memory of the NX-G11 is upgraded to 2 GB.
	NX-CF04G	CF card slot 2 of the NX-G11 is upgraded to 4 GB.
	NX-CF16G	CF card slot 2 of the NX-G11 is upgraded to 16 GB.
	NX-CS-VS00	Visual Scope is preinstalled in the NX-G11.
Option	NX-SHL1	Surface sheet (1 sheet)
	NX-PCI-1	PCI expansion 1-slot
	NX-PCI-3	PCI expansion 3-slot

\*1 Order the embedded option together with the main body. (The embedded option alone cannot be ordered.) When upgrading the memory to 2 GB, order the NX-G11 and the NX-ME02G.

### Interface

#### ① CF card slot for system (CF1)

##### CF card slot for data (CF2)

- An OS-installed CF card and CF card for data can be inserted.
- The normal slot has a cover.

#### ② PC Card slot (PC CARD)

- One Typell PCMCIA card and CardBus can be inserted.

#### ③ Reset switch (RESET)

- Restarts this device.

#### ④ Power supply LED (POWER)

- The LED indicates the power supply status of this device.
- Power ON: Orange, Power OFF: Out

#### ⑤ Battery LED ( )

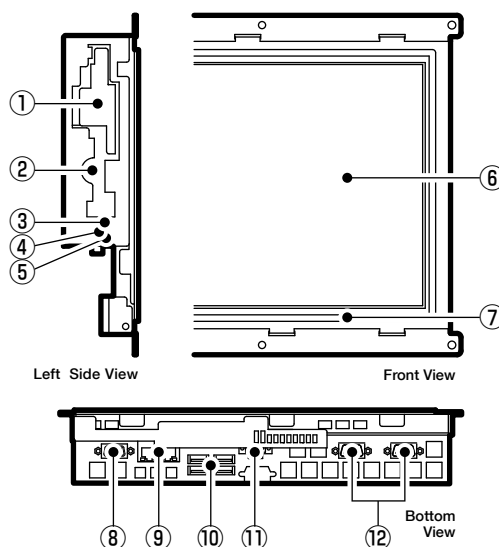
- The LED indicates the operating status of the UPS battery.
- The compatibility with UPS battery functions is undecided.

#### ⑥ Display

- LCD with touch panel

#### ⑦ Dustproof packing

- The packing prevents the intrusion of dust from the outside when this device is installed.



#### ⑧ Analog RGB output port (CRT)

- Connects the external analog monitor.
- Produces the same screen as an LCD screen.
- High-density D-sub 15-pin female connector

#### ⑨ LAN port (LAN1, 2)

- Connects Ethernet devices.
- Automatically changes 10BASE-T/100BASE-TX/1000BASE-T.
- RJ-45 Jack connector
- 2 channels

#### ⑩ USB port (USB1, 2, 3, 4)

- Connects USB devices. Supports USB 2.0.
- USB A type socket connector
- 4 channels.

#### ⑪ DC power connector (24 V DC GND F.G)

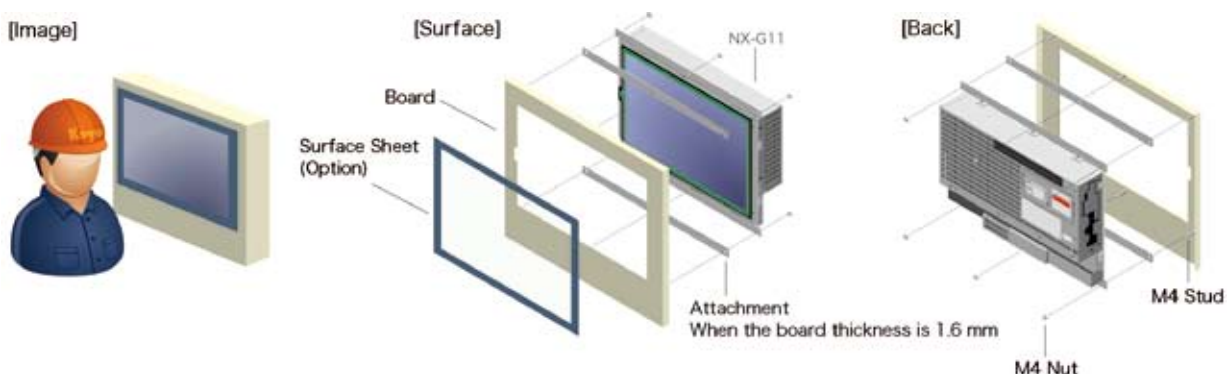
- Connects the 24 V DC power supply.

#### ⑫ Serial port (COM1, 2)

- Connects RS-232C-compatible devices.
- D-sub 9-pin male connector
- 2 channels

### How to Install Thin Devices

The NX-G11 miniaturizes the device with a thin 56 mm depth. The connectors can be connected downward on the back so as not to protrude from the main body. The NX-G11 not only prevents wasted space to the rear but also above and below, and to the left and right, which helps to miniaturize of controllers. The NX-G11 is of open frame type that can be attached from the back of the device. It can be installed on a typical control panel as shown in the figure below. With an optional surface sheet being pasted to the operation side, the NX-G11 has a flat, slimmed-down appearance.



# NX-G11

## Specifications

### General Specifications

	Items	Contents
Power Supply	Supply Voltage	24 V DC
	Voltage Allowable Range	19.2 V DC to 28.8 V DC
	Power Consumption	50 W or less PCI expansion: 60 W or less
Use Ambient Temperature		0 to 50°C (The ambient temperature on the board is 0 to 55°C.)
Use Ambient Humidity		25 to 85% RH (No condensation)
Storage Ambient Temperature		-10 to 70°C
Storage Ambient Humidity		10 to 85% RH (No condensation)
Pollution Degree		Pollution degree 2
Surrounding Atmosphere in Place of Use		No corrosive gases
Vibration Resistance		10 to 57 Hz: Double amplitude, 0.3 mm (p-p), 5 min, 10 times each for XYZ 57 to 150 Hz: Acceleration, 19.6 m/s <sup>2</sup> , 3 min, 10 times each for XYZ
Impact Resistance		294 m/s <sup>2</sup> (30 G) 11 ms, 5 times each for XYZ
Noise Resistance		1500 Vp-p
Electrostatic Discharge Resistance		Contact discharge: Level 3 (±6kV) Aerial discharge: Level 3 (±8kV)
Grounding		D-class grounding (SG-FG short-circuit)
Dimensions (mm)		306 W x 261 H x 56 D
Panel Cutout Dimensions (mm)		266 W x 203 H
Installation Structure		Open frame rear mount
Cooling System		Natural air-cooling
Weight		3.4 kg
Conformity Standards		UL508, CE
RoHS Directive		Compliant

### Performance Specifications

	Items	Contents
CPU		Intel® Atom™ N270 1.6GHz
L2 Cache		512 KB
Chip Set		Intel® 945GSE
Memory		512 MB DDR2 SDRAM
OS		Windows® Embedded Standard 2009
Display	Display Device	TFT color LCD
	Size	12.1-inch
	Resolution	1,024 x 768 (XGA)
	Display Color	262,144 colors
	Backlight	Cold-cathode tube
	Software Control	Cold-cathode tube brightness control: 16 stages, backlight ON/OFF
Operating Part	Operation Device	Touch panel
	System	Analog resistance film system
	Resolution	1,024 x 1,024
Interface	Serial	2 port RS-232C D-sub 9-pin
	Ethernet	2 port 10BASE-T/100BASE-TX/1000BASE-T RJ45
	USB	4 port USB2.0 TYPE A connector
	PC Card	1-slot PCMCIA/CardBus Type II
	CF Card	2-slot IDE connection Type II Slot 1: Equipped with 2 GB CF card as standard feature (For operating system) Slot 2: Equipped with 1 GB CF card as standard feature
	VGA Output	1 port, analog RGB, high-density D-sub 15-pin
	PCI Expansion (Option)	1-slot: 3.3 V: 2 A 5 V: 2.5 A 12 V: 1 A 3-slot:

