

General Specifications	
Item	Specification
Power supply voltage	24 VDC ±15%
Power consumption	7 W max.
Noise resistance	Conforms to IEC61000-4-4. Power supply line: 2 kV
Vibration resistance	10 to 57 Hz with 0.075-mm single amplitude, 57 to 150 Hz with 9.8 m/s ² acceleration, for a total of 60 min in X, Y, and Z directions
Shock resistance	Peak acceleration 15 G, 3 times each in X, Y, and Z directions
Ambient operating temperature	0 to 50°C (with no icing)
Storage temperature	-20 to +70°C (with no icing)
Ambient operating humidity	35% to 85% (with no condensation)(0 to 40°C) 35% to 55% (with no condensation)(40 to 50°C)
Dimensions	190 x 110 x 53.5 mm (W x H x D) (thickness inside panel: 49.0 mm)
Enclosure ratings	Front panel operating section: Equivalent to IP65F, NEMA 4.*
Weight	0.6 kg max.

*Usage may not be possible in places where the unit would be exposed to oil for long periods.

Display Capacity	
Item	Specification
Display elements	Character displays
	Fixed character data
	Graphics
	Marks
	Numerical displays
	Character string displays
	Graph displays
	Analog meters
	Trend graphs
	Broken line graphs
	Lamps
	Image library images
	Touch switches
	Numerical settings *1
	Thumbwheel settings
	Character string settings
Screen types	Temporary inputs
	Alarm lists/histories
	Recipes
	Normal screens
	Overlapping screens
	Windows
	Display history screens
Screen attributes	System startup screen
	Programming Console screen
Screen registration method	
Number of screens	Max. number of registered screens
	Screen number
Saving screen data	

OMRON Corporation
FA Systems Division H.Q.
66 Matsumoto
Mishima-city, Shizuoka 411-8511
Japan
Tel: (81)559-77-9181/Fax: (81)559-77-9045

Regional Headquarters
OMRON EUROPE B.V.
Wegalaan 67-69, NL-2132 JD Hoofddorp
The Netherlands
Tel: (31)2356-81-300/Fax: (31)2356-81-388
OMRON ELECTRONICS LLC
1 East Commerce Drive, Schaumburg, IL 60173
U.S.A.
Tel: (1)847-843-7900/Fax: (1)847-843-8568
OMRON ASIA PACIFIC PTE. LTD.
83 Clemenceau Avenue,
#11-01, UE Square,
Singapore 239920
Tel: (65)835-3011/Fax: (65)835-2711

Display Specifications	
Item	Specification
Display panel	Display device
	Number of dots (resolution)
	Effective display area
	Viewing angle
	Display color
	Service life
Backlight (white cold cathode tube)	Automatic turn-OFF
	Service life
Panel Specifications	
Touch panel	Number of switches
	Input
	Threshold force for operation
	Life expectancy

Panel Specifications		
	Item	Specification
Touch panel	Number of switches	91 (13 horizontally x 7 vertically)
	Input	Pressure-sensitive
	Threshold force for operation	1 N max.
	Life expectancy	1 million operations min.

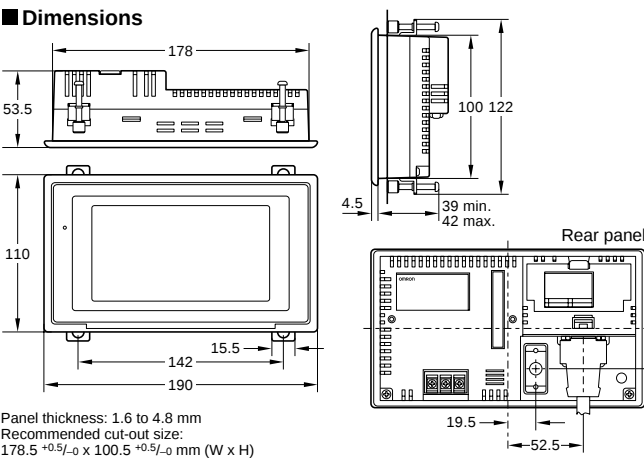
*Connection via RS-422A/485 is possible using the NS-AL002 RS-232C/422A Adapter (connector), which can be connected only to serial port B. (RS-485 connections must use 1:N NT Links.)

NT Support Tool		Supported	Not supported	
PLC	Host Link		Supported	Supported
	1:1 NT Link		Supported	Supported
	1:N NT Links		Supported	Supported
	NT Link, PT Programming Console function		Supported	Supported
SBC/personal computer		Memory Links	Supported	Supported
Bar Code Reader			Supported	Not supported

*Connection via RS-422A/485 is possible using the NS-AL002 RS-232C/422A Adapter (connector) which can be connected only to serial port B. (RS-485 connections must use 1:N NT Links.)

■ NT21 Standard Models

Product	Specifications		Model number	
NT21 Programmable Terminal	Monochrome STN	Frame color: beige	NT21-ST121-E	
		Frame color: black	NT21-ST121B-E	
Support Tool	Windows 95, 98, Me, NT, or 2000	CD-ROM	NT-ZJCAT1-EV4	
Cables	For screen transfer		XW2Z-S002	
	For PLC connection	PT: 9-pin PLC: 9-pin	Cable length: 2 m	XW2Z-200T
		PT: 9-pin PLC: 25-pin	Cable length: 5 m	XW2Z-500T
			Cable length: 2 m	XW2Z-200S
		PT: 9-pin PLC: 25-pin	Cable length: 5 m	XW2Z-500S
			Cable length: 2 m	XW2Z-200T-2
		PT: 9-pin PLC: Mini-peripheral	Cable length: 5 m	XW2Z-500T-2
Options	Reflection Protective Sheets	Display area only (5 sheets)	NT20M-KBA04	
	Chemical-resistive Cover	Silicon cover	NT20S-KBA01	
	Battery	For alarm lists/histories	C500-BAT08	
	Memory Unit	For screen and system data transfer	NT-MF101	
	RS-232C/422A Adapter		NS-AL002	
	Connector Kit		XM2S-0911-S003	

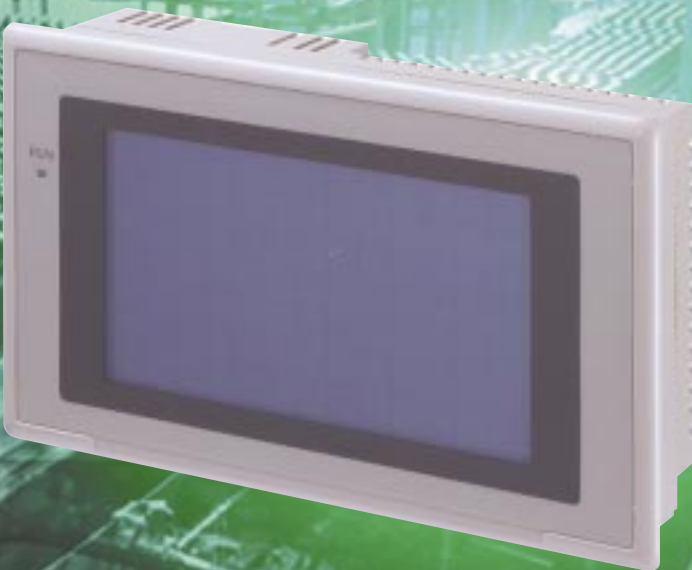


Authorized Distributor:

Programmable Terminals

NT21

Small and Smart

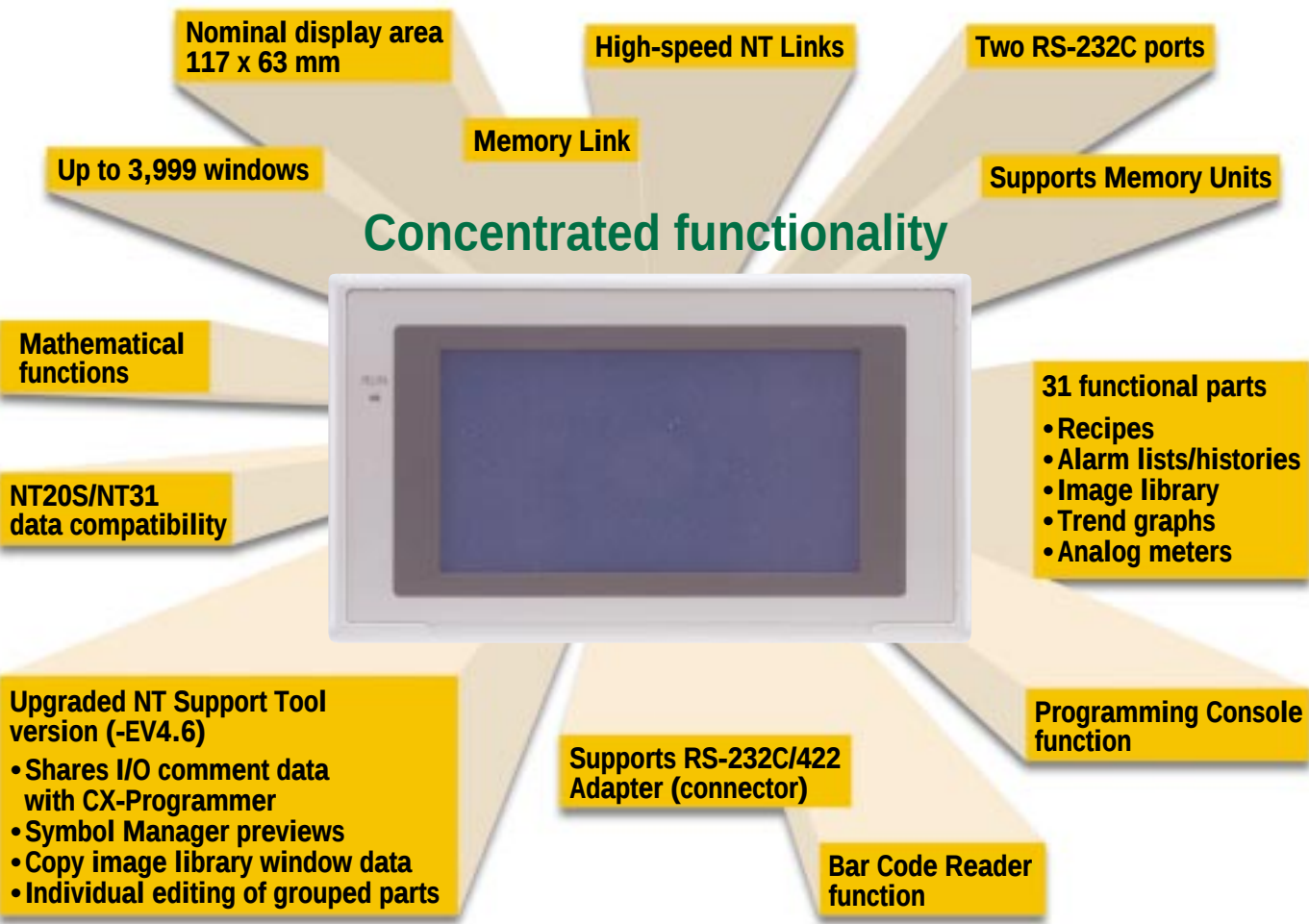


PT
Programmable Terminal

Small and Smart

Compact Size, High Performance

Superb functionality with a compact screen size



Versatile I/O and Large-capacity Screen Memory in a Space-saving Size

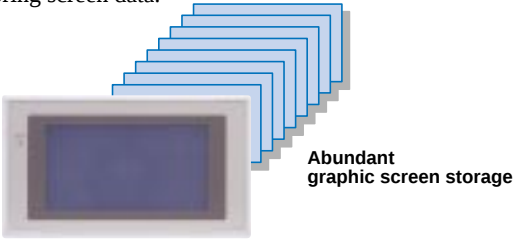
Small Size, Large Screen

The LCD screen is larger than the OMRON NT20S (increased from 256 x 128 dots to 260 x 140 dots), but the external dimensions and panel cut-out size are the same.



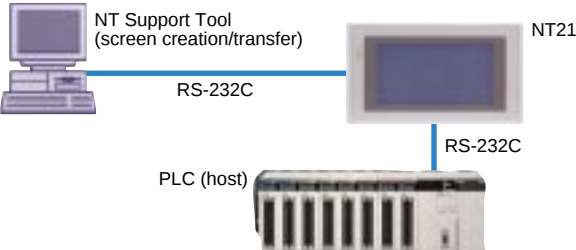
Plenty of Capacity for Saving Graphic Screens

With 512 Kbytes of memory capacity, there is more than ample space for storing screen data.



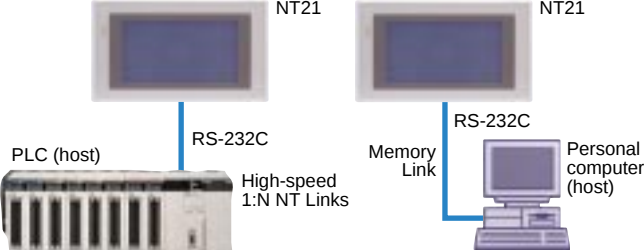
Two RS-232C Ports

Two RS-232C ports in the NT21 (compared with one in the NT20S) enable simultaneous connection of a PLC, Bar Code Reader, and NT Support Tool (connectable to serial port A only).



Versatile Communications

In addition to the Host Link and 1:1 NT Link communications, the NT21 supports high-speed 1:N NT Links and Memory Link communications.



Function Support Equivalent to That of a Mid-size Operator Interface

Recipe Function

Parts tables on the PT screen can be used to set multiple word data in records, which can then be written to the PLC by a simple PT touch panel operation. For example, the setting parameters for separate models can be edited on the PT, then written to or read from the PLC.

No.	Cake	Cream	Sugar	Egg
1	Cheese	1000	300	20
2	Almond	300	200	10
3	Pound	1000	200	10
4	Carrot	800	150	10
5	Apple	500	300	5
Write		Read	◀	▶

Alarm List/History(*)

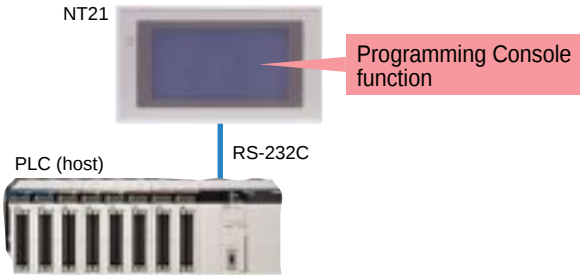
An alarm message can be displayed in response to PLC bit status, and the content and time of the message can be stored as an alarm history.

Alarm History		Menu
order of occurrence		Reset
Cur. Time	01/09/17 17:24:08	
Battery Error	01/09/17 14:20	▲
Sensor Error	01/09/14 16:15	▲
Feed Error	01/09/12 10:05	▼
Pump Error	01/09/11 11:48	▼

*C500-BAT08 Battery (sold separately) required.

Programming Console Function

The NT21 is equipped with many of the same functions as the SYSMAC PLC Programming Console.



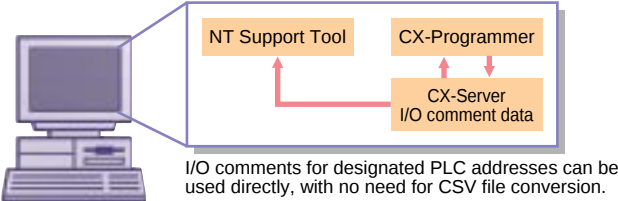
Mathematical Functions

Up to 256 math equations can be stored in the PT processing table to allow automatic PT processing, and the results can be written to the numeral memory table or other destinations. This makes it possible to perform scaling and other mathematical operations automatically in the PT.

Upgraded NT Support Tool Version (-EV4.6)

Enhanced Editing Functions

I/O comments in the I/O tables of the CX-Programmer can be used directly.



•Symbol Manager previews are supported. This function makes it possible to preview symbols (parts created from graphics data).



•Parts can be copied by drag & drop operations of image, library, or mark data.

•The properties of grouped parts can be edited without having to ungroup them.

•Because NT20S and NT31 screen data is compatible with the NT21, existing software assets can be utilized to greatly reduce the number of design steps.

Note: Some data revisions may be required due to size differences.

Highly Reliable Hardware

Long, Maintenance-Free Life (50,000 h)

Conforms to International Standards

The NT21 conforms to the EC Directives, as well as UL, cULus (Class 1 Div2), and C-Tick. The front panel has an enclosure rating equivalent to IP65F.

System and screen data can be stored in NT21 Flash Memory.

Comparison with the NT20S

Model	NT21	NT20S (Previous model)
Basic functions	Dimensions	190 (W) x 110 (H) x 53.5 (D) mm
	Resolution	260 x 140 dots (5.2 inches)
	Effective display area	117 x 63 mm
	Display color	Black & white (with blue mode)
	Panel cut-out size (W x H)	178.5 x 100.5 mm
	Max. number of registered screens	3999
	Screen data capacity	512KB
	Bit memory table	Supported (1,000 entries)
Display elements	Windows	Supported (3)
	Rectangles, polygons, arcs, sectors	Supported
	Painting out	Supported
	Image/library displays	256 positions per screen
	Analog meters	50 positions per screen
	Trend graphs	1 position per screen
	Broken line graphs	1 position per screen
	Alarm lists/histories	4 positions per screen
Additional functions	Recipes	1 position per screen
	Interlocks	Supported
	Mathematical Function	Math equations: Max. 256 (arithmetic functions, logic operations, bit manipulations, comparison operations)
	Programming Console function	(Executes functions equivalent to C200H-PR027 and CS1 Programming Consoles.)
	High-quality font	Supported
	Memory Unit	Supported
	Backlight service life	50,000 hours min.
	Communications	Via RS-232C communications
Communications	Memory Links	Supported
	Bar Code Reader connection	Supported
	RS-232C ports	2 ports