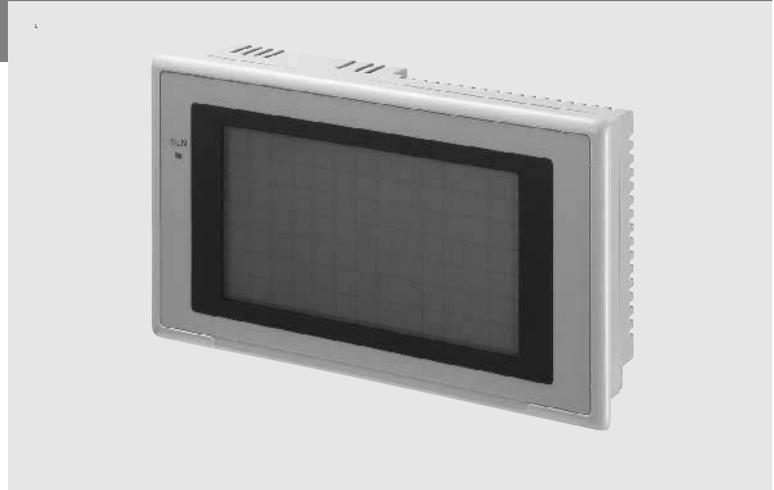


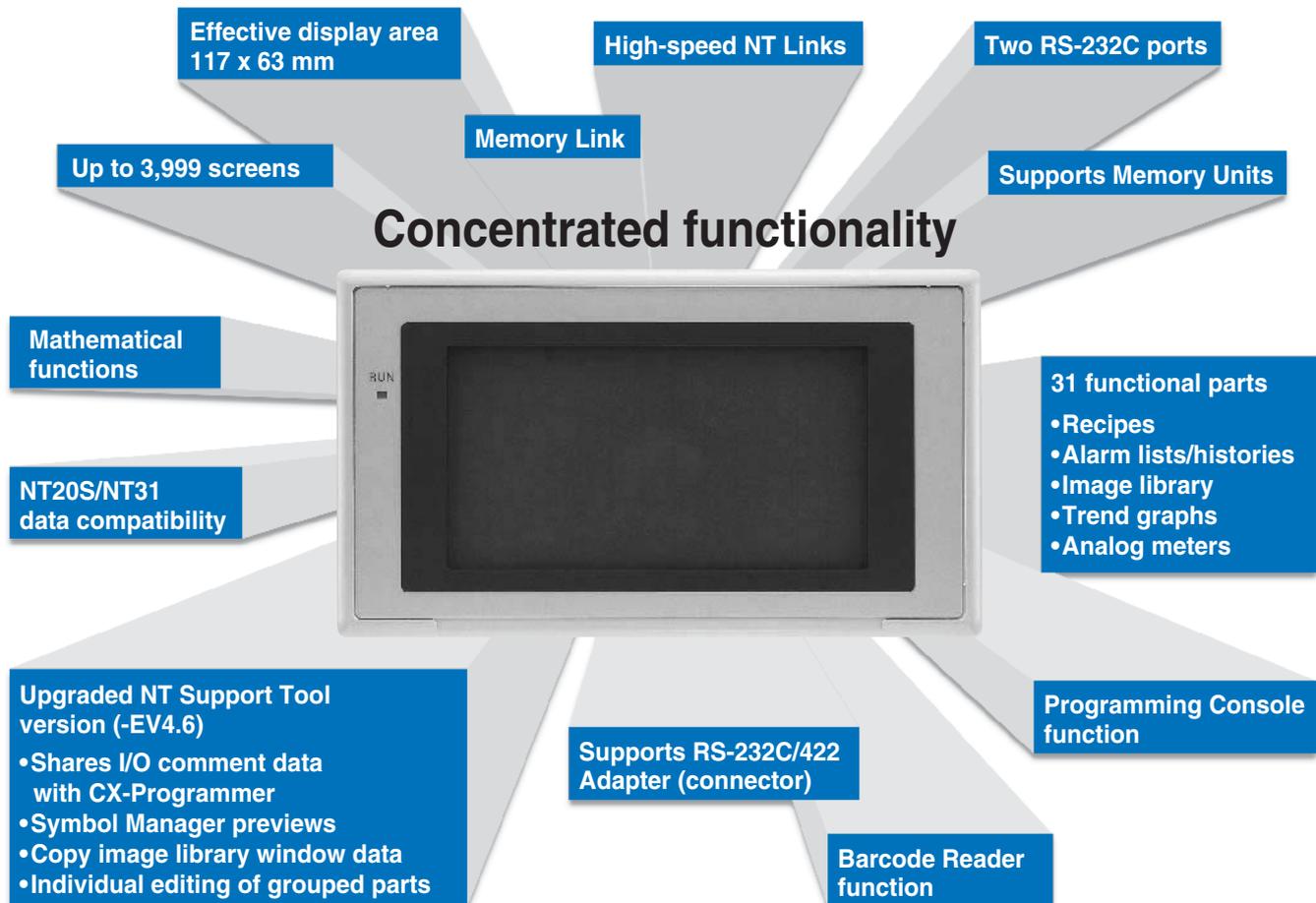
NT21S

# Small touch-screen HMI

Cost effective touch screen terminals to replace function key units and increase the flexibility and operation.



## Features



Connectable PLCs for Direct Access

Communications method	C200H	C200HS	C200HX/HG/HE(-Z)	C1000H/C2000H	CS1/CJ1	CV/CVM1 V1	CQM1H	CPM1(A)	SRM1	Computer/SBC
Host link (RS-232C)	CU	CU/CPU (Note 1)	CU/CPU (Note 4)	CU	CU/CPU	CU/CPU	CPU (Note 2)	CPU (Note 5)	CPU	---
1:1 NT Link	---	CPU (Note 1)	CPU (Note 4)	---	---	CPU	CPU (Note 3)	CPU (Note 5)	CPU	---
Memory Link (NTH protocol)	---	---	---	---	---	---	---	---	---	CPU

CPU: Connected to built-in CPU Unit port, CU: Connected to Communications Unit.

- Note:**
1. The built-in port can be used on the following CPU Unit: C200HS-CPU2□/3□.
  2. The built-in port can be used on the following CPU Unit: CQM1H-CPU21/4□.
  3. The built-in port can be used on the following CPU Unit: CQM1H-CPU4□.
  4. Connection is also possible to a Communications Board. Refer to the communications methods for individual models for details.
  5. A CPM1-CIF01 RS-232C Adapter must be purchased separately

Specifications

General Specifications

Item	Specification
Power supply voltage	24 V DC
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 <sup>2</sup> 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	Fixed displays	A total of 65,535 per screen With overlapping screens, the total is 524,280 per screen
	Fixed character strings	(Graphics: Continuous straight lines, rectangles, circles, polygons, arcs, sectors)
	Graphics	
	Marks	
	Numeral displays	256 positions per screen, max. 10-digit display (2 words)
	Character string displays	256 positions per screen max. 1,024 display elements for overlapping screens
	Graph displays	50 positions per screen, capable of displaying signs and percentages
	Analog meters	50 positions per screen, capable of displaying signs and percentages
	Trend graphs	One frame per screen, 50 items per frame (8 items max. for data logging)
	Broken line graphs	One frame per screen, 256 items per frame, 260 points per item
	Lamps	256 positions per screen
	Image library images	256 positions per screen
	Touch switches	256 positions per screen, max. 256 meshes
	Numeral settings	256 positions per screen (numerical keypad)
	Thumbwheel settings	26 positions per screen
Character string settings	256 positions per screen	
Temporary inputs	One position per screen	
Alarm lists/histories	Four groups per screen	
Screen types	Recipes	One position per screen
	Normal screens	Display screens registered as normal
	Overlapping screens	A maximum of eight screens can be displayed overlapping each other
	Windows	Up to three window screens can be displayed
	Display history screens	Order of occurrence (1,024 screens max.), order of frequency (255 times max.)
Screen attributes	System startup screen	Displayed when powering ON (or resetting) the PT, and when switching to RUN mode
	Programming console screen	Emulates PLC programming Console functions, capable of being called from RUN mode.
Number of screens	Max. number of registered screens	3,999
	Screen number	0: No display 1 to 3999: User registered screens (normal, overlapping, windows) 9000: System startup screen 9001: Display history screens, order of occurrence 9002: Display history screens, order of frequency 9020: Programming console screen 9021 to 9023, 9030: Reserved 9999: Return to previous screen designation
Screen registration method	By transferring screen data from the NT Support Tool to the PT via serial communications By mounting the Memory Unit and downloading (automatic/manual transfer) data to the PT	
Saving screen data	Flash memory (PT internal image memory)	

Programmable Terminals

Display Specifications

Item		Specification
Display Panel	Display device	Monochrome STN LCD
	Number of dots (resolution)	260 dots horizontally x 140 dots vertically
	Effective display area	117 mm horizontally x 63 mm vertically
	Viewing angle	Left/right direction: 30°, up/down: 30°
	Display color	Black & white (with blue mode)
	Service life	50,000 hours min. (until contrast reduced to 50%)
Backlight (white cold cathode tube)	Automatic turn-OFF	Can be set to turn OFF in 1 to 255 min or to remain ON with screen saver
	Service life	50,000 hours min. (at room temperature, until brightness is reduced to 50%)
	Replacement	Non-replaceable

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.

External Interface Specifications

Communication method	Serial port A	Serial port B
NT support Tool	Supported	Not Supported
PLC	Host Link	Supported
	1:1 NT Link	Supported
	1:N NT Links	Supported
	NT Link, PT Programming Console function	Supported
SBC/personal computer	Memory Links	Supported
Barcode Reader	Supported	Not Supported

NT21 Standard Models

Product	Specification	Model number	
NT21 Programmable Terminal	Monochrome STN	Frame color: beige NT21-ST121E	
		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-S200T
			Cable length: 5 m XW2Z-S500T
		PT: 9-pin PLC: 25-pin	Cable length: 2 m XW2Z-S200S
			Cable length: 5 m XW2Z-S500S
		PT: 9-pin PLC: Mini-peripheral	Cable length: 2 m XW2Z-S200T-2
		Cable length: 5 m XW2Z-S500T-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-MF161
	RS-232C/422A Adapter		NS-AL002
	Connector Kit		XM2S-0911-S003

Dimensions

