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**OMRON®**

# NT631/NT31

## Operator Interface Terminals

MULTI-VENDOR CAPABILITY WITH POWERFUL  
SOFTWARE AND HIGH-SPEED COMMUNICATIONS



**Innovation  
in the Solution Age**

## Take Control of Your Process with Omron

Omron's new NT631 and NT31 operator interface touch screens are sleekly styled windows into your system, graphically conveying information to your operators. Pictures and graphs representing complex information are quickly created using the powerful setup software and large image libraries. The detailed screens and charts you design will increase operator efficiency, empower your operators and minimize errors.

At only 54 mm deep with large viewable areas, these powerful interfaces efficiently use panel space and minimize costs by replacing pilot lights, hardwired thumbwheels, gauges and push-buttons. The NT631 and NT31 streamline your operation using a 32-bit RISC chip for high-speed data processing and a high capacity flash memory unit for easy screen transfers among interfaces.

The high-speed data communications give your operators information quickly so systems can be efficiently updated and managed. They will be able to quickly identify and correct problems as they arise using the screens you designed with the NT631/NT31's user-friendly software.

### Program Transfer Module

This flash memory module eliminates the need for a PC when updating a remote site or downloading data to multiple units. The portable modules can store screen data from two fully loaded NT terminals, letting you quickly upload information from one interface and download it to another. This module can also be used to transfer NT operating system files from one NT to another. Use this feature to quickly configure several NTs for multi-vendor PLC communications.



### Embedded PLC Programming Capability

Make modifications to the PLC's program directly from the operator interface without using a handheld unit or PC. This embedded feature is ideal for fine-tuning and making changes in applications quickly.



### Multi-vendor Communications

Use the NT631 and NT31's multi-vendor capability to communicate directly with Allen-Bradley and GE Fanuc PLCs. These interfaces communicate with the Allen-Bradley SLC 500 family using the DFI protocol and use the SNP-X protocol to communicate with GE Fanuc's 90-20 and 90-30 PLC series.

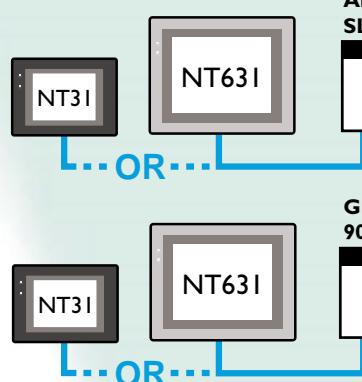
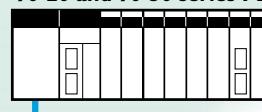
These interfaces use familiar addressing schemes. Quickly program the NT631 and NT31 using Allen-Bradley or GE Fanuc's PLC address formats.



#### Allen-Bradley SLC 5/02, 5/03, 5/04 and 5/05 PLCs.



#### GE Fanuc 90-20 and 90-30 series PLCs.



## Omron's Versatility On Display



NT631C-ST141-EV1

NT631C-ST151-EV1

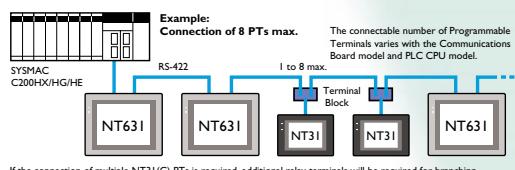
NT631-ST211-EV1

NT31-ST121-EV1

NT31C-ST141-EV1

Model	NT631C-ST141-EV1	NT631C-ST151-EV1	NT631-ST211-EV1	NT31-ST121-EV1	NT31C-ST141-EV1
Screen Size	11.3 inch diagonal	10.4 inch diagonal	10.4 inch diagonal	5.7 inch diagonal	5.7 inch diagonal
Technology	STN LCD	TFT LCD	Electroluminescent	Monochrome STN LCD	STN LCD
Color	8-color	8-color	2-color	2-color	8-color
Features	Omron's largest touchscreen	Bright, sharp and glare-resistant	High contrast and viewable from all angles	Backlight can flash to signal alarm conditions	Compact, cost effective color display
Touch Switch Density	768 touch switches	768 touch switches	768 touch switches	192 touch switches	192 touch switches

Note: All models available with black or ivory front bezel.



### General Accessories

NT-ZJCMX2-EV2.1	NTST v2.1 NT Software w/Multi-vendor
C200H-CN229-EU	2m 9-9PIN PC to NT Programming Cable
NT-CNT121	NT to Printer Cable
NT-MF261	NT31/NT631 Program Transfer Module
S82K-03024	30W, 24VDC, 1.3 A Power Supply
S82K-05024	50W, 24VDC, 2.1 A Power Supply

### NT31 Accessories

NT30-KBA01	NT30/NT31 Chemical Resistant Cover
NT30-KBA04	NT30/NT31 Protective Screen Sheets
NT31-C-CFL01	NT31/NT31C Replacement Backlight
NT31C-CN510-EU	50cm 25-9PIN Cable, NT to Omron PLC
NT31C-CN320-EU	3m 25-9PIN Cable, NT to Omron PLC
NT31C-CN520-EU	5m 25-9PIN Cable, NT to Omron PLC
NT31C-CN511-EU	50cm 25-9PIN Cable, NT to AB PLC
NT31C-CN321-EU	3m 25-9PIN Cable, NT to AB PLC
NT31C-CN521-EU	5m 25-9PIN Cable, NT to AB PLC
NT31C-CN512-EU	50cm 25-9PIN Cable, NT to GE PLC
NT31C-CN322-EU	3m 25-9PIN Cable, NT to GE PLC
NT31C-CN522-EU	5m 25-9PIN Cable, NT to GE PLC

### NT631 Accessories

NT631C-CFL01	NT631C-ST141 Replacement Backlight
NT631C-CFL02	NT631C-ST151 Replacement Backlight
NT625-KBA01	NT631 Chemical Resistant Cover
NT610C-KBA04	NT631 Protective Screen Sheets
C200H-CN510-EU	50cm 9-9PIN Cable, NT to Omron PLC
C200H-CN320-EU	3m 9-9PIN Cable, NT to Omron PLC
C200H-CN520-EU	5m 9-9PIN Cable, NT to Omron PLC
NT631C-CN511-EU	50cm 9-9PIN Cable, NT to AB PLC
NT631C-CN321-EU	3m 9-9PIN Cable, NT to AB PLC
NT631C-CN521-EU	5m 9-9PIN Cable, NT to AB PLC
NT631C-CN512-EU	50cm 9-9PIN Cable, NT to GE PLC
NT631C-CN322-EU	3m 9-9PIN Cable, NT to GE PLC
NT631C-CN522-EU	5m 9-9PIN Cable, NT to GE PLC

### Operation Manuals

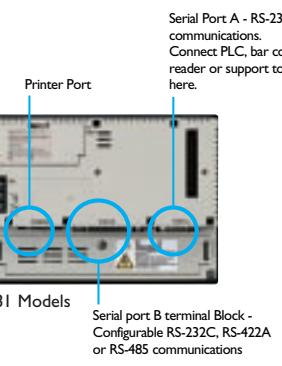
V043-EI-I	NT31 Operation Manual
V044-EI-I	NT631 Operation Manual
V045-EI-I	NTST v2.1 Operation Manual

# Enhanced Features for Improved Data Management

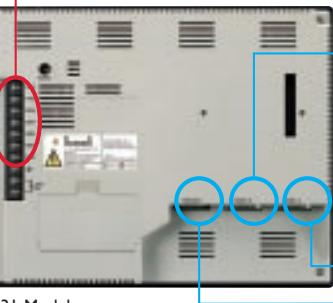
## Flexible Connectivity

**NT Link:** Create workstations close to the PLC's I/O points for precise, efficient control. Connect multiple NT631s and/or NT31s to one PLC using NT Link, Omron's fastest NT to PLC connection.

Perform downloads or connect a bar code reader to the interface without disconnecting the PLC. The new port design of the NT series features a dedicated printer port, a self-powered RS-232C port and a port that can be configured to RS-232C, RS-422 or RS-485 (NT631 also has an RS-422/485 terminal block). This design ensures an unused port even when a PLC and printer are connected to the interface. The free port is available for connecting to a bar code reader or downloading NT programs.



NT31 Models  
 Serial port A - RS-232C communications.  
 Connect PLC, bar code reader or support tool here.



NT631 Models  
 Serial Port B - RS-232C, RS-422 or RS-485 communications.  
 Connect PLC, bar code reader or support tool here.

## Bar Code Reader Connectivity

The self powered RS-232C port and improved firmware is designed to easily support a stationary or hand-held bar code reader.



## Data Entry

Numerical or textual data can be directly input to the interface using a pop-up keypad. When using thumbwheels, each digit can be set independently and the set value will be reported directly to the host. The upper and lower limits are user defined, preventing invalid input values.



## Data and Trend Display

Collect precise data and present it as an easy-to-understand graph. The pre-existing templates and drawing utilities from the tool bar ensure quick and easy setup. The NT series' wide sampling range (0.5 seconds to 109 minutes) is adjustable in 0.5-second intervals for extremely accurate readings. Display data in bar, line or trend graphs, showing different aspects of your process. The enhanced firmware of the NT series includes a new data logging function that enables you to view past sampling data without affecting current data.

## Quickly Correct Errors and Perform Diagnostics

The new firmware of the NT series displays errors in real time and in great detail. One touch gives an operator or maintenance engineer the necessary information to solve a problem and minimize down-time.

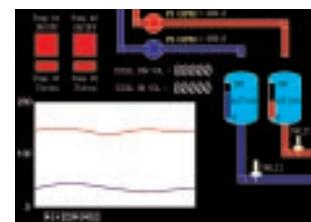
For quick de-bugging, the screen data can be checked without connecting the NT631/NT31 to the host PLC.

Perform diagnostics without stopping the operation. Errors and malfunctions are stored for future reference and trend definition. They can be displayed in chronological or frequency order and accessed any time.



## Increased Capacity in Memory Table

Display more details about your process using the NT631/NT31 series high capacity memory tables. Their capacity doubles conventional models' memory tables. The interfaces can display 50 bar graphs or a line graph with up to 256 lines, each representing a different aspect of your process in real time.



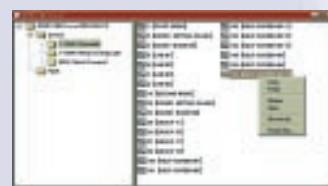
# NTST Version 2.1... Powerful Software that Lowers the Learning Curve

## Easy Editing and Drawing

Quickly create the graphics for the NT631/NT31 in an intuitive Windows® environment.

Produce the best image for your operation using the drawing, copying, pasting tools with drag-and-drop editing. The resulting graphics will simplify information, maximizing the interface's impact by reducing operator errors.

Omron uses a unique zoom function with a range of 100% to 800% to facilitate detailed image drawing or editing. For quick corrections, use the undo function to correct your last ten actions. The online help function provides detailed, easy-to-understand instructions or explanations about displayed information.

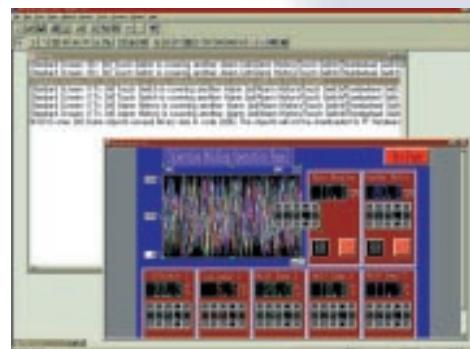
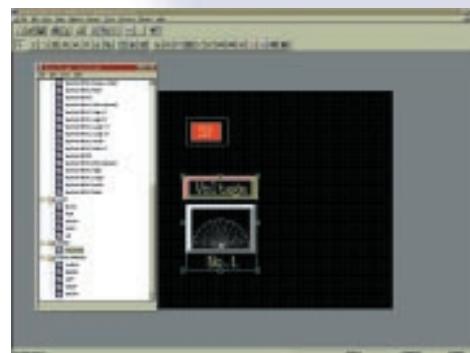


## Table and Screen Storage

The applications manager organizes your project in a convenient tree diagram. You can move, copy and paste screens and tables quickly, reducing programming time.

## Easy Symbol Registration

Combine the ease of drag-and-drop registration with a template library of 1,200 ISO7000 parts (on CD-ROM version). Registered and saved image data can be re-used in current and future projects.



## Complete Screen Error

### Tracking

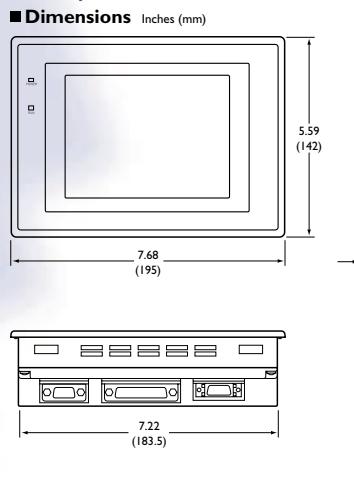
Save time trouble shooting by using the error log. The log can display errors occurring in real time; store and sort them based on user defined parameters. An operator or maintenance engineer can view the location of an error by double clicking on a particular error message. The interface will display the particular screen where the error is occurring.

# Ordering Information

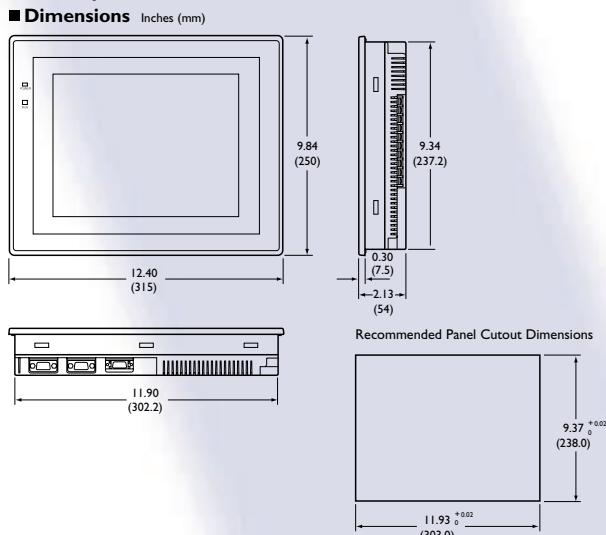
## Specifications

Model	NT31-ST121□-EVI	NT31C-ST141□-EVI	NT631C-ST141□-EVI	NT631C-ST151□-EVI	NT631-ST211□-EVI
<b>Display Panel:</b>					
Type	5.7" Monochrome STN LCD	5.7" 8-color STN LCD	11.3" 8-color STN LCD	10.4" 8-color TFT LCD	10.4" Electroluminescent
Resolution	320 x 240 pixels		640 x 480 pixels		
Interface	Touch screen		Touch screen		
Touch Cells	192 per screen		768 per screen		
<b>Memory:</b>					
Type	Flash EPROM		Flash EPROM		
Size	1MB		1MB		
Max Screens	3999 screens		3999 screens		
<b>Voltage Rating</b>					
Max Power Usage	15 W		18 W		30 W
<b>Communication</b>					
Port A	Host link/NT link		Host link/NT link		
Port B	9 pin RS-232C		9 pin RS-232C		
Overall dimensions	196 x 142 x 54 mm (7.72 x 5.59 x 2.13 in.)		315 x 250 x 54 mm (12.40 x 9.84 x 2.13 in.)		
Footprint	184 x 131 mm		308 x 238 mm		
(w x h)	7.72 x 5.16 in		11.93 x 9.37 in		
Weight	2.2 lbs		5.5 lbs		
<b>Features:</b>					
Flash memory module		Flash memory module			
Replaceable backlight		Replaceable backlight			
Chemical resistant cover		Chemical resistant cover			
Protective sheet		Protective sheet			
Multi-vendor drivers		Multi-vendor drivers			
Pro-27 Emulator		Pro-27 Emulator			
Real-time Clock		Real-time Clock			
Printer Port		Printer port			
<b>Ratings</b>					
NEMA 4		NEMA 4			
<b>Approvals</b>					
UL/CSA/CE		UL/CSA/CE			

### NT31C/NT31



### NT631C/NT631



Allen-Bradley is a registered trademark of Allen-Bradley/Rockwell Automation, Rockwell International Corporation.  
G.E. is a registered trademark of the General Electric Company.

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