

# Vorne



## 2100 Series Alphanumeric Displays



2140SB  
Two Line  
Serial Input  
Buffered Display

2180SB  
Four Line  
Serial Input  
Buffered Display

2140PC  
Two Line  
Serial/Parallel  
Message Display

2180PC  
Four Line  
Serial/Parallel  
Message Display

### The 2100 Series—A Powerful High Visibility Panel Display

Whether you're looking for a highly visible machine status display, an easy to read operator interface, or a powerful PLC message unit the 2100 Series provides exceptional value. Designed exclusively for the industrial market, the 2100 Series offers a wealth of features, and truly excels when viewing distance and visual appeal are important. Unlike LCDs, the large character, light emissive vacuum fluorescent display provides easy reading at distances up to 20 feet. And the optical quality Lexan® lens, together with the rugged E-coat steel enclosure, deliver an unmistakable look of quality to your panel design.

Need to get your display application up fast? Our Windows® based setup software is intuitive, easy-to-use, and free of charge. In fact, you can download it from our web site any time and try it for yourself! And should you desire technical assistance, you'll be pleased to find that it's available directly from our experienced staff of engineers.

The 2100 Series—a great choice for your next panel display application. Call for a free-of-charge, 30 day trial unit and take the opportunity to work with more than great products. Take the opportunity to experience first hand, Vorne's outstanding service and support!

### Standard Features

- Preferred vacuum fluorescent technology
- Optical quality Lexan® lens
- Full duplex RS-232 or RS-422/RS-485 com port
- Integrated RS-232 to RS-422 converter
- Versatile 18 input parallel port (2100PC)
- Optically isolated I/O ports
- Multidrop capable with 255 addresses
- Four international character sets
- Independent processing of multiple tasks
- Up to 16 real time variables (2100PC)
- Nine baud rates ranging from 300 to 76.8K
- 128K byte Flash memory (2100PC)
- 1,024 message capacity (2100PC)
- Powerful scripting language
- Vertical and horizontal scrolling
- VT102 terminal emulation
- Three programmable front panel keys
- Programmable SPDT annunciation relay
- High efficiency switching power supply
- Durable E-coat steel enclosure
- Free Windows® programming software
- Free technical support

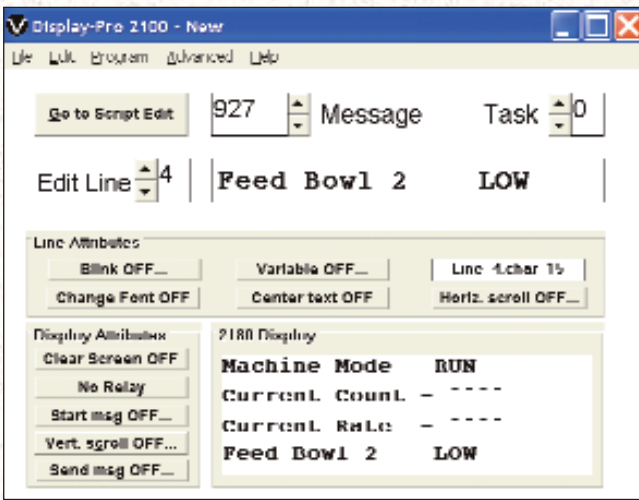
### Pricing

- 2140SB units—\$714 each
- 2180SB units—\$894 each
- 2140PC units—\$836 each
- 2180PC units—\$1,026 each



Vorne Industries, Inc.

1445 Industrial Drive Itasca, IL 60143-1849 • (630) 875-3600 • FAX (630) 875-3609 • www.vorne.com



A programmable display is only as good as the software used to program it. Vorne Display-Pro® programming software for the 2100PC is Windows® based and features Quick Edit a very simple "point and click" message design environment. Quick Edit is a highly intuitive way to edit text messages with scrolling, blinking, variable data and relay operation attributes. The more advanced Script Edit unleashes the full power of the 2100PC with 16 bit integer math, flow control, I/O processing and task management features. And of course the software is yours free of charge.

### Serial Buffered Displays

Easy to use and cost effective, the 2100SB is the best choice whenever information is available in a serial RS-232, RS-422 or RS-485 format. The large capacity RAM buffer can store up to 256 characters, enabling very flexible message formatting.

### Plug and Play Terminal Emulation

Choose VT102 terminal emulation mode for your simplest applications. Sending data to the display is as easy as writing to a printer!

### Comprehensive Command Set

An easy-to-use ASCII based command set taps into the full power of the 2100SB. Intuitive commands handle text display, cursor control, scrolling, blinking, message timing, looping, relay operation and much more.

### Powerful Multi-Tasking

Our unique multi-tasking environment allows independent processing of up to four simultaneous tasks. Control over the display, relay output and front panel keys is user defined—not factory imposed.

### A Low Cost Remote Display

A few key presses and your 2100SB unit can be automatically configured as a slave for any 2100PC canned message display.

### Canned Message Displays

Easily interfaced to PLCs and PCs the 2100PC display has all the features of the 2100SB plus an 18 bit parallel input port and storage for over 1,000 pre-programmed messages.

### Massive Memory

No batteries here! All of your messages are securely stored in 128K bytes of Flash memory. And with 1,024 message slots available, running out of message space is a thing of the past. Want flexibility? Messages can be directed to the entire display, a single line, a portion of a line, or even out the com port to another display or device.

### Multiple Options For Message Call-Up

The 2100PC provides a full range of options for message call-up. Trigger messages with the parallel or serial port. Load up to 16 variables for subsequent messages. Use strobed or unstrobed parallel operation with signed or unsigned BCD or binary data formats. It's all available!

### Sophisticated Scripting Language

The unique and powerful scripting capability of the 2100PC allows extremely flexible operation—including emulation of other devices or protocols. Scripts can also be used to capture key presses or even send selected messages to other displays (such as our model M1000 large alphanumeric display or our 87 Series large digital displays).

### Standard Features

#### Preferred VFD Technology

VFD technology is simply unmatched for its outstanding viewability. Combined with the optical quality Lexan® lens, the result is a display that delivers exceptional readability with a rugged industrial construction. The eye pleasing blue-green vacuum fluorescent display provides superior brightness, wide viewing angle, excellent contrast and long life.

#### Two Display Formats To Choose From

Select your display with a two line or four line display format. Each line features twenty crisp, high visibility dot matrix characters; and both display models fit in the exact same panel cutout. Two line displays feature 11mm (.43") characters. Four line displays feature 9mm (.35") characters.

#### International Character Sets

Each 2100 Series display has four complete character sets: English/European, Slavic, Cyrillic and Katakana (Japanese). Each message can independently access any combination of the four character sets.

#### Simple Packet Protocol

A simple and concise serial protocol (called the Simple Packet Protocol) provides all of the controls necessary to send text scripts, commands, and calls for pre-programmed messages to a 2100 Series display.

#### Universal Addressing

It's easy to establish networks of 2100 Series displays with 255 individual and 8 group addresses. And the built in RS-232 to RS-422 data converter helps make wiring your display network a snap.

#### Optically Isolated I/O Ports

All units have a fully isolated serial communication port that is compatible with RS-232, RS-422 or RS-485 communication. 2100PC units have an additional optically isolated 18 bit parallel port, compatible with 3.5 to 30 VDC sink or source signals.

#### Annunciation Relay

A single pole double throw "form C" relay can be used to call attention to your most important messages (please note that the relay is provided for annunciation purposes only, and is not designed or intended for control applications).

### High Efficiency Power Supply

Choose either the 120 VAC or 24 VDC power supply option. All models incorporate field proven high efficiency switching power supplies, with a typical operating power of only 20 WA.

### Enclosure and Dimensions

The rugged steel enclosure comes standard with a panel gasket and a durable, corrosion resistant E-coat finish. Four 10/32 steel mounting studs securely fasten the display to your panel.

Panel Cutout: 3.75" H x 11.25" W  
Front Panel: 4.5" H x 12.0" W  
Enclosure Depth: 4.9"

### Viewing Distance

| Model | Number of Characters | Recommended Viewing | Maximum Viewing |
|-------|----------------------|---------------------|-----------------|
| 2140  | 40 (2x20)            | Up to 20'           | 25'             |
| 2180  | 80 (4x20)            | Up to 15'           | 20'             |

### How to Order

#### Ordering Options

##### 21XX A - B

XX - Number of Characters

40 = Two Line 40 Character Display  
80 = Four Line 80 Character Display

##### A - Display Series

SB = Serial Buffered Display  
PC = Parallel Canned Message Display

##### B - Operating Voltage

120 = 120 VAC Power Supply  
24 = 24 VDC Power Supply

### Models and Pricing

The following prices are for single unit quantities. Volume discounts are available for purchases of 10 units or more.

|            |    |           |         |
|------------|----|-----------|---------|
| 2140SB-120 | or | 2140SB-24 | \$714   |
| 2180SB-120 | or | 2180SB-24 | \$894   |
| 2140PC-120 | or | 2140PC-24 | \$836   |
| 2180PC-120 | or | 2180PC-24 | \$1,026 |

### Programming Cables

A DB-9 Male to DB-9 Female straight through cable connects 9 pin PC serial ports to 2100 Series displays. Also available is a DB-25 Female to DB-9 Male adapter.

|         |                         |      |
|---------|-------------------------|------|
| 93-0105 | DB-9M to DB-9F cable    | \$15 |
| 93-0106 | DB-25F to DB-9M adapter | \$15 |

### Vorne Display-Pro® 2100 Software

|         |                  |      |
|---------|------------------|------|
| VDP2100 | VDP2100 Software | FREE |
|---------|------------------|------|

### FREE Trial Units

All 2100 Series display models are available for a FREE 30 day trial. We know of no better way to show you the quality of our products and support than to have you experience it for yourself.

### For More Information

Call us toll free at 1-888-DISPLAYS (1-888-347-7529) and we will be happy to discuss your application, or send you more information.



2140 Series Two Line Display

# Call Today!

## 1-888-DISPLAYS

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Visit us at [www.vorne.com](http://www.vorne.com)