

The Unitronics V350-35-B1/V350-J-B1 offers the following features:

I/O configurations can include up to 512 I/Os via Expansion Modules.

Available by separate order: Ethernet, additional RS232/RS485, CANbus, Profibus Slave.

You can find additional information, such as wiring diagrams, in the product's installation guide located on the Unitronics' Setup CD and in the Technical Library at [www.unitronics.com](http://www.unitronics.com).

## Technical Specifications

---

### **Power Supply**

Input voltage	12VDC or 24VDC
Permissible range	10.2VDC to 28.8VDC with less than 10% ripple
Max. current consumption	See Note 1 220mA@12VDC 110mA@24VDC

### **Notes:**

1. To calculate the actual power consumption, subtract the current for each unused element from the maximum current consumption value according to the values below:

	<b>Backlight</b>	<b>Ethernet card</b>
12V	40mA	70mA
24V	20mA	35mA

### **Graphic Display Screen**

LCD Type	TFT, LCD display
Illumination backlight	White LED, software-controlled
Display resolution	320x240 pixels
Viewing area	3.5"
Colors	65,536 (16-bit)
Touchscreen	Resistive, analog
'Touch' indication	Via buzzer
Screen brightness control	Via software (Store value to SI 9)
Virtual Keypad	Displays virtual keyboard when the application requires data entry

### **Keypad**

Number of keys	5 programmable function keys
Key type	Metal dome, sealed membrane switch
Slides	Slides may be installed in the operating panel faceplate to custom-label the keys. Refer to <i>V350 Keypad Slides.pdf</i> Two sets of slides are supplied with the controller: one set of arrow keys, and one blank set

**Program**

Memory size	Application Logic – 1Mb, Images – 6Mb, Fonts – 512 Kb		
Operand type	Quantity	Symbol	Value
Memory Bits	8192	MB	Bit (coil)
Memory Integers	4096	MI	16-bit signed/unsigned
Long Integers	512	ML	32-bit signed/unsigned
Double Word	256	DW	32-bit unsigned
Memory Floats	64	MF	32-bit signed/unsigned
Fast Bits	1023	XB	Fast Bits (coil)-not retained
Fast Integers	512	XI	16 bit signed/unsigned (fast, not retained)
Fast Long Integers	256	XL	32 bit signed/unsigned (fast, not retained)
Fast Double Word	64	XDW	32 bit unsigned (fast, not retained)
Timers	384	T	Res. 10 ms; max 99h, 59 min, 59.99 s
Counters	32	C	32 bit
Data Tables	120K dynamic data (recipe parameters, datalogs, etc.) 192K fixed data (read-only data, ingredient names, etc) Expandable via SD card. See Removable Memory below		
HMI displays	Up to 1024		
Program scan time	15µs per 1kb of typical application		

**Removable Memory**

Micro SD card	Compatible with standard SD and SDHC; up to 32GB store datalogs, Alarms, Trends, Data Tables, backup Ladder, HMI, and OS. See Note 2
---------------	---

**Notes:**

2. User must format via Unitronics SD tools utility.

**Communication Ports**

Port 1	1 channel, RS232/RS485. See Note 3
Galvanic isolation	No
Baud rate	300 to 115200 bps
RS232	
Input voltage	±20VDC
Cable length	15m maximum (50')
RS485	
Input voltage	-7 to +12VDC
Cable type	Shielded twisted pair, in compliance with EIA 485
Cable length	1200m maximum (4000')
Nodes	Up to 32
Port 2 (optional)	See Note 4
CANbus (optional)	See Note 4

**Notes:**

3. This model is supplied with a serial port: RS232/RS485 (Port 1). The standard is set to either RS232 or RS485 according to jumper settings. Refer to the product's Installation Guide.
4. The user may order and install one or both of the following modules:
  - An additional port (Port 2). Available port types: RS232/RS485 isolated/non-isolated, Ethernet
  - A CANbus port
 Port module documentation is available on the Unitronics website.

**I/O Expansion**

	I/Os may be added. Configurations vary according to module. Supports digital, high-speed, analog, weight and temperature measurement I/Os.
Local	Via I/O Expansion Port. Integrate up to 8 I/O Expansion Modules comprising up to 128 additional I/Os. Adapter required (P.N. EX-A2X).
Remote	Via CANbus port. Connect up to 60 adapters to a distance of 1000 meters from controller; and up to 8 I/O expansion modules to each adapter (up to a total of 512 I/Os). Adapter required (P.N. EX-RC1).

**Miscellaneous**

Clock (RTC)	Real-time clock functions (date and time)
Battery back-up	7 years typical at 25°C, battery back-up for RTC and system data, including variable data
Battery replacement	Yes. Coin-type 3V, lithium battery, CR2450

**Dimensions**

Size	V350	109x114.1x68mm (4.29x4.49x2.67"). See Note 5
	V350-J	109x114.1x66mm (4.92x4.49x2.59"). See Note 5
Weight		261.2 (9.21 oz)

**Notes:**

- For exact dimensions, refer to the product's Installation Guide.

**Environment**

Operational temperature	0 to 50°C (32 to 122°F)
Storage temperature	-20 to 60°C (-4 to 140°F)
Relative Humidity (RH)	10% to 95% (non-condensing)
Mounting method	Panel mounted (IP65/66/NEMA4X) DIN-rail mounted (IP20/NEMA1)

The information in this document reflects products at the date of printing. Unitronics reserves the right, subject to all applicable laws, at any time, at its sole discretion, and without notice, to discontinue or change the features, designs, materials and other specifications of its products, and to either permanently or temporarily withdraw any of the forgoing from the market.

All information in this document is provided "as is" without warranty of any kind, either expressed or implied, including but not limited to any implied warranties of merchantability, fitness for a particular purpose, or non-infringement. Unitronics assumes no responsibility for errors or omissions in the information presented in this document. In no event shall Unitronics be liable for any special, incidental, indirect or consequential damages of any kind, or any damages whatsoever arising out of or in connection with the use or performance of this information.

The tradenames, trademarks, logos and service marks presented in this document, including their design, are the property of Unitronics (1989) (R<sup>G</sup>) Ltd. or other third parties and you are not permitted to use them without the prior written consent of Unitronics or such third party as may own them.

DTS-V350-B1 07/13