This guide provides specifications for Unitronics’ color touchscreen controllers V570-57-T20B & V570-57-T20B-J. You can find additional documentation on the Unitronics’ Setup CD and in the Technical Library at www.unitronics.com.

Technical Specifications

Power Supply
- Input voltage: 12 or 24VDC
- Permissible range: 10.2-28.8VDC with less than 10% ripple
- Max. current consumption: 540mA@12VDC, 270mA@24VDC

Battery
- Back-up: 7 years typical at 25°C, battery back-up for RTC and system data, including variable data.
- Replaceable: Yes, without opening the controller.

Graphic Display Screen
- LCD Type: TFT
- Illumination backlight: White LED
- Display resolution, pixels: 320x240 (QVGA)
- Viewing area: 5.7"
- Colors: 65,536 (16-bit)
- Touchscreen: Resistive, analog
- ‘Touch’ indication: Via buzzer
- Screen brightness: Via software (Store value to SI 9).
- Keypad: Displays virtual keyboard when the application requires data entry.

Notes:
1. Note that the LCD screen may have a single pixel that is permanently either black or white.

Program
- Memory size
  - Application Logic – 2MB, Images – 12MB, Fonts – 1MB
- Operand type
  - Memory Bits: Quantity 8192, Symbol MB, Value Bit (coil)
  - Memory Integers: Quantity 4096, Symbol MI, Value 16-bit
  - Long Integers: Quantity 512, Symbol ML, Value 32-bit
  - Double Word: Quantity 256, Symbol DW, Value 32-bit unsigned
  - Memory Floats: Quantity 64, Symbol MF, Value 32-bit
  - Timers: Quantity 384, Symbol T, Value 32-bit
  - Counters: Quantity 32, Symbol C, Value 16-bit

Data Tables: 120K dynamic RAM data (recipe parameters, datalogs, etc.)
HMI displays: Up to 256K Flash data
Program scan time: 9 μsec per 1K of typical application
Removable Memory
SD card
Compatible with fast SD cards; store dataloggs, Alarms, Trends, Data Tables, backup Ladder, HMI, and OS. See Note 2

Notes:
2. User must format via Unitronics SD tools utility.

Communication

<table>
<thead>
<tr>
<th>Serial ports</th>
<th>2. See Note 3&amp;4</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS232</td>
<td></td>
</tr>
<tr>
<td>Galvanic isolation</td>
<td>Yes</td>
</tr>
<tr>
<td>Voltage limits</td>
<td>±20VDC absolute maximum</td>
</tr>
<tr>
<td>Baud rate range</td>
<td>300 to 115200 bps</td>
</tr>
<tr>
<td>Cable length</td>
<td>Up to 15m (50')</td>
</tr>
<tr>
<td>RS485</td>
<td></td>
</tr>
<tr>
<td>Galvanic isolation</td>
<td>Yes</td>
</tr>
<tr>
<td>Voltage limits</td>
<td>–7 to +12VDC differential maximum</td>
</tr>
<tr>
<td>Baud rate range</td>
<td>300 to 115200 bps</td>
</tr>
<tr>
<td>Nodes</td>
<td>Up to 32</td>
</tr>
<tr>
<td>Cable type</td>
<td>Shielded twisted pair, in compliance with EIA RS485</td>
</tr>
<tr>
<td>Cable length</td>
<td>1200m maximum (4000')</td>
</tr>
</tbody>
</table>

USB
See Note 4

Port type
Mini-B

Galvanic isolation
No

Specification
USB 2.0 compliant; full speed

Baud rate range
300 to 115200 bps

Cable
USB 2.0 compliant; up to 3m

CANbus port
1. See Note 5

<table>
<thead>
<tr>
<th>Nodes</th>
<th>CANopen</th>
<th>Unitronics’ CANbus protocols</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>127</td>
<td>60</td>
</tr>
</tbody>
</table>

Power requirements
24VDC (±4%), 40mA max. per unit

Galvanic isolation
Yes, between CANbus and controller

Cable length/baud rate
25 m 1 Mbit/s
100 m 500 Kbit/s
250 m 250 Kbit/s
500 m 125 Kbit/s
500 m 100 Kbit/s
1000 m* 50 Kbit/s
1000 m* 20 Kbit/s

* If you require cable lengths over 500 meters, contact technical support.

Optional port
User may install a single Ethernet port, or an RS232/RS485 port. Available by separate order.

Notes:
3. The standard for each port is set to either RS232/RS485 according to DIP switch settings. Refer to the Installation Guide.
4. The USB port may be used for programming, OS download, and PC access. Note that COM port 1 function is suspended when this port is physically connected to a PC.
5. V570-57-T20B & V570-57-T20B-J supports both 12 and 24VDC CANbus power supply, (±4%), 40mA maximum per unit. Note that if 12 VDC is used, the maximum cable length is 150 meters.
I/Os

Number of I/Os and types vary according to module. Supports up to 1024 digital, high-speed, and analog I/Os.

Snap-in I/O modules  
Plugs into rear port to create self-contained PLC with up to 62 I/Os.

Expansion modules  
Local adapter (P.N. EX-A2X), via I/O Expansion Port. Integrate up to 8 I/O Expansion Modules comprising up to 128 additional I/Os.
Remote adapter (P.N. EX-RC1), via CANbus port. Connect up to 60 adapters; connect up to 8 I/O expansion modules to each adapter.

Exp. port isolation  
Galvanic

Dimensions

Size  
197X146.6X68.5mm (7.75'' X 5.77'' X2.7''). See Note 6
Weight  
750 gm (26.4 oz)

Notes:
6. For exact dimensions, refer to the product’s Installation Guide.

Mounting

Panel-mounting  
Via brackets

Environment

Inside cabinet  
IP20 / NEMA1 (case)
Panel mounted  
V570-57-T20B  V570-57-T20B-J
IP65/NEMA4X (front panel)  IP65/66/NEMA4X (front panel)
Operational temperature  
0 to 50ºC (32 to 122ºF)
Storage temperature  
-20 to 60ºC (-4 to 140ºF)
Relative Humidity (RH)  
5% to 95% (non-condensing)

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