OP7200 eDisplay™

Operator Interfaces

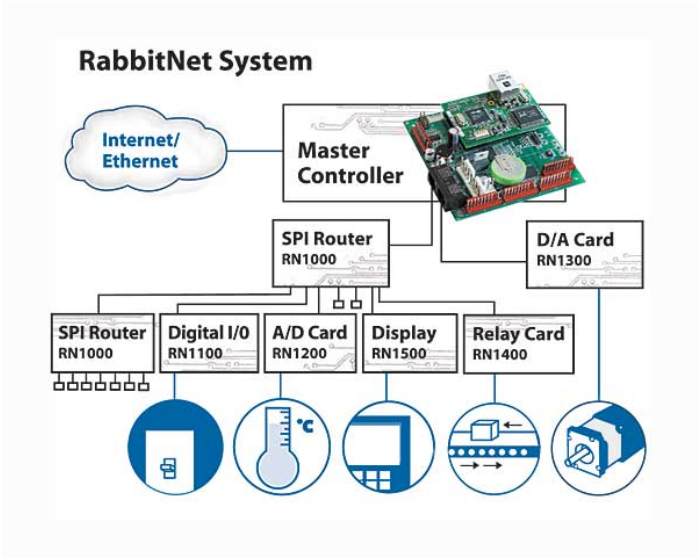
Models OP7200, OP7210

The OP7200 eDisplay is an intelligent operator interface that offers rugged I/O, built-in Ethernet connectivity, and optional A/D and touchscreen capabilities. The compact eDisplay is an ideal data acquisition and display device for OEM products and stand-alone systems such as factory floor controls. The unit's 10Base-T Ethernet facilitates remote diagnostics, control, and communication, including sending and receiving E-mails and alerts.

Features

- RabbitNet Expansion
- 1/4 VGA display (320 × 240 pixels)
- 8 A/D inputs
- 24-27 industrialized digital I/O
- 10Base-T Ethernet with RJ-45
- Meets NEMA 4 water resistance standards
- 4096 × 4096 analog touchscreen (optional)

RabbitNet



RabbitNet expansion ports enable a modular and expandable embedded control system whose configuration of expansion cards can be tailored to a large variety of demanding real-time control, display, and data-acquisition applications. A typical RabbitNet system consists of a master single-board computer and one or more peripheral cards. A high-performance Rabbit 3000®or Rabbit 2000® microprocessor on the master provides fast data processing. The master SBC also provides the DCIN and +5 V power for the peripheral cards.

Two eDisplay models incorporate 24-27 digital I/O plus an I/O expansion port, 4 serial ports, the Rabbit 2000 microprocessor at 22.1 MHz, and 256K of Flash / 128K of SRAM. Versions with 512K Flash/512K SRAM are available. When front-panel mounted, the unit meets NEMA 4 water-resistance standards making it suitable for use in harsh environments.

The eDisplay's digital I/O include up to 19 protected inputs and 8 high-current sourcing or sinking outputs. The OP7200 model features 8 analog input channels configurable as 11-bit single-ended or four 12-bit differential. The OP7210 is a lower-cost version without A/D and touch screen.

Both models come equipped with a 1/4 VGA display (320 × 240 pixels) with a 9-key keypad and programmable on/off white LED backlight. The OP7200 version also includes a 4096 × 4096 analog touch screen. Both versions provide easy-to-use menu-building software and have a programmable audible alarm for prompt notification and keypad/display feedback.

The RS-232 ports can be configured as a single 5-wire port or as two 3-wire ports while the 8 high-current outputs can be individually configured as sourcing, sinking, or tri-state via software. The analog inputs have 8 software-selectable gain voltage ranges from 0-1 V to 0-20 V. The eDisplay supports English and foreign language fonts, as well as graphic and bitmap images. Furthermore, its C programmability offers design engineers unlimited flexibility. A font converter program is supplied. Different fonts, languages, and sizes can be used simultaneously in combination with graphic images.

Programming the eDisplay

Programs are developed for the OP7200 using Z·World's industry-proven Dynamic C® software development system. An extensive library of drivers and demo programs is provided, along with royalty-free TCP/IP stack with source. Both OP7200 models can be programmed and debugged over Ethernet/Internet using appropriate accessory hardware. Demo programs include pop-up menuing, onscreen keypads, data transmission/reception over TCP/IP and serial, analog volt meter display, and many more.

OP72000 eDisplay Specifications		
Features	**OP7200**	**OP7210**
Microporcessor	Rabbit 2000T at 22.1 MHz	
Ethernet Port	10Base-T, RJ-45	
Flash	256K (standard)	
SRAM	128K (standard)	
Backup Battery	Socketed 3 V lithium coin-type, 265 mA·h, supports RTC and SRAM, connection for user-supplied external battery	
Keypad/Display	¼ VGA (320 x 240 pixels) with programmable on/off white LED backlight, 9-key tactile feedback keypad	
	4096 x 4096 analog touch screen	No Touch Screen
LEDs	4: Power On, Microprocessor Error, Ethernet Link Alive, Ethernet Activity	
Digital Inputs	19 protected to ±36 V DC	16 protected to ±36 V DC
Digital Outputs	8: individually configurable in software; sink up to 350 mA, source up to 250 mA, or tri-state; 40 V DC max.	
Analog Inputs	Eight 11-bit single ended or four 12-bit differential; 200 kΩ input impedance, 2.5k samples/sec. Eight software-controlled programmable gain/voltage ranges from 0-1 V to 0-20 V.	None
Serial Ports	4 CMOS-compatible • 1 RD-485 (or I/O expansion port) • 2 RS-232 (one 5-wire or two 3-wire) • One 5 V CMOS-compatible (programming)	
Serial Rate	Max. burst rate = CLK/32, Mac. Sustained rate = CLK/64	
Rate-Time Check	Yes	
Timers	Five 8-bit timers (4 cascadable from the first) and one 10-bit timer with 2 match registers	
Watchdog/Supervisor	Yes	
Power	9-40 V DC or 24 V AC, 4 W max.	
Operating Temp.	-10° to +65°C	
Humidity	20-70% non-condensing	
I/O Connectors	Screw terminals support max. 14 AWG/1.5 mm² (standard)	
Product Size	5.67" x 4.41" x 1.70" (144 x 112 x 43 mm)	
Display Area	3.0" x 2.2" (76 x 56 mm)	
Pricing **(qty. 1/100)** Part Number	$449 / 359 101-0535	$399 / 329 101-0536
Tool Kit Part Number	$200 U.S. 101-0543	$200 Int'l 101-0544