



# EP-2500 Processor

## Installation and Specifications:

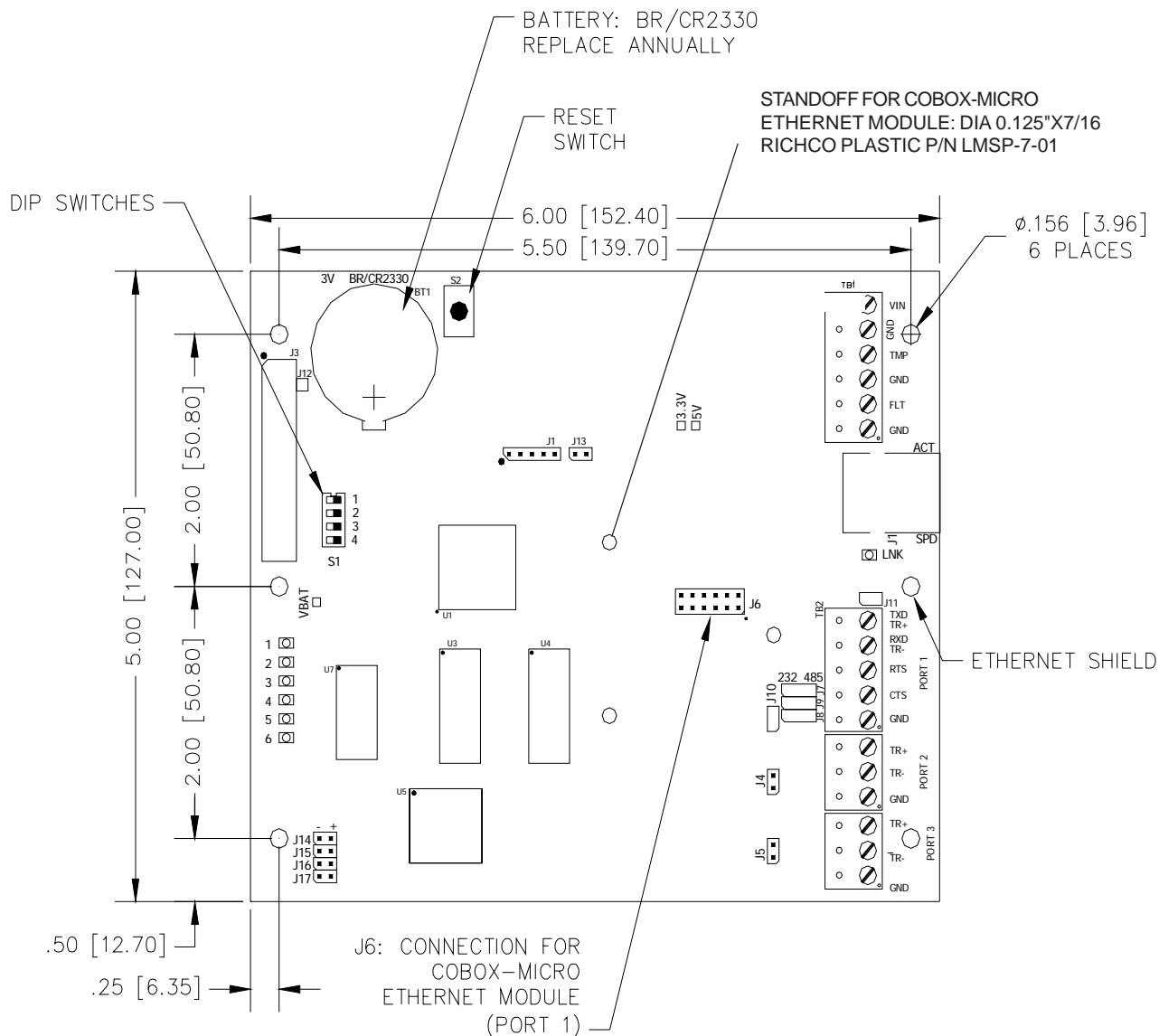
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### 1. General:

The EP-2500 processor provides the real time processing for the I/O interfaces connected to it. The data base for the subsystem configuration and card holders are stored in flash memory. The event log buffer is stored in battery backed memory. Configuration data and event/status reports are communicated to the host via on-board 10-Base-T/100Base-TX Ethernet port or port 1.

Port 1 may be set up as RS-232, 2-wire RS-485 or an optional 10base-T/100Base-TX using a Lantronix CoBox-Micro interface daughter board.

I/O devices are connected via ports 2 and 3 using 2-wire RS-485.



Information subject to change without notice.

## 2. Setting Up the EP-2500 Hardware:

The EP-2500 processor is configured with a number of jumpers and a set of 4 switches. These jumpers/switches setup the port interface, end of line termination, and operating mode configuration. Please refer to the below tables.

### Jumpers:

JUMPERS	SET AT	DESCRIPTION
J2	N/A	FACTORY USE ONLY
J3	N/A	FACTORY USE ONLY
J4	OFF	PORT 2 RS-485 EOL TERMINATOR IS OFF
	ON	PORT 2 RS-485 EOL TERMINATOR IS ON
J5	OFF	PORT 3 RS-485 EOL TERMINATOR IS OFF
	ON	PORT 3 RS-485 EOL TERMINATOR IS ON
J6	N/A	LANTRONIX COBOX-MICRO CONNECTION - PORT 1
J7, J8, J9	232	PORT 1 IS RS-232
	485	PORT 1 IS RS-485
J10	OFF	PORT 1 RS-485 EOL TERMINATOR IS OFF
	ON	PORT 1 RS-485 EOL TERMINATOR IS ON
J11	N/A	FACTORY USE ONLY
J12	N/A	FACTORY USE ONLY
J13	N/A	FACTORY USE ONLY
J14	N/A	REMOTE STATUS LED # 1, SEE NOTE 1
J15	N/A	REMOTE STATUS LED # 2, SEE NOTE 1
J16	N/A	REMOTE STATUS LED # 3, SEE NOTE 1
J17	N/A	REMOTE STATUS LED # 4, SEE NOTE 1
NOTE 1:	Observe POLARITY connection to LED. External current limiting is not required.	

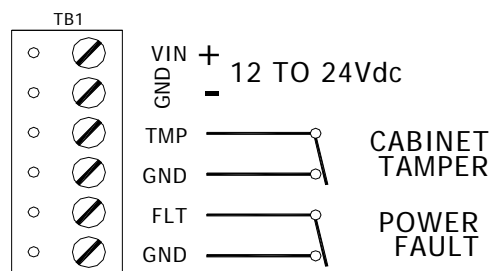
### DIP Switches:

Set DIP switches as required. S1 is the switches listed below. S2 resets the EP-2500.

S4	S3	S2	S1	SELECTION
OFF	OFF	OFF	OFF	NORMAL OPERATING MODE
OFF	OFF	OFF	ON	CONFIGURATION THROUGH PORT 1
OFF	OFF	ON	OFF	CONFIGURATION THROUGH ETHERNET PORT
OFF	OFF	ON	ON	USE DEFAULT TCP/IP ADDRESS:192.168.0.251
				ALL OTHER SETTINGS UNDEFINED

## 3. Supplying Power to the EP-2500 Interface:

The processor accepts 12 to 24Vdc for power. Locate power source as close to the unit as possible. Connect power with minimum of 18AWG wires. Inputs TMP and FLT are used for monitoring cabinet tamper and power failure with normally closed contacts. These two inputs are for contact closure monitoring only, and do not use EOL resistor(s). If these inputs are not used, install a short piece of wire at the input to indicate safe condition.

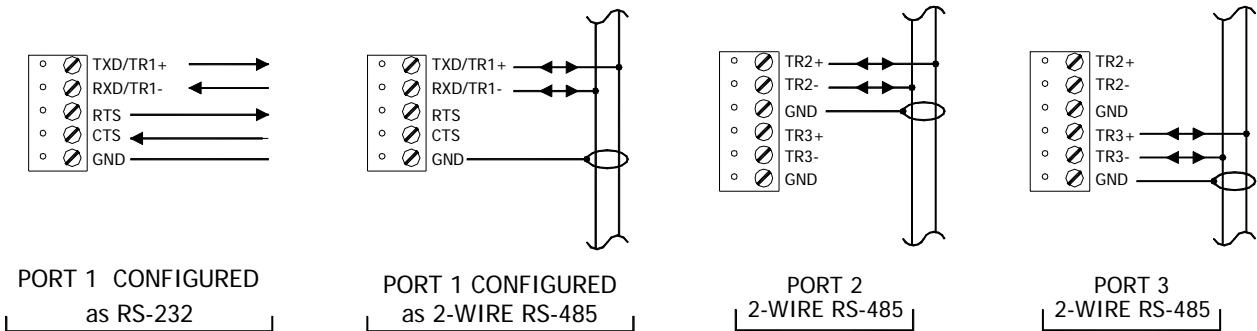


**Observe POLARITY on VIN!**

#### 4. Communication Wiring:

The EP-2500 processor communicates to the host via: on-board Ethernet 10Base-T/100Base100-TX port or on port 1. Port 1 may be configured as RS-232, 2-wire RS-485 or optional Lantronix Ethernet 10baseT/100Base-TX CoBox-Micro interface. RS-232 interface is for direct one to one connection to a host computer port, or a modem.

Ports 2 and 3 utilize 2-wire RS-485 interface only. The interface allows multi-drop communication on a single bus of up to 4,000 feet (1,200 m). Use twisted pair (minimum 24 AWG) with shield for the communication with 120 ohm impedance. Install termination jumpers only at the end of line unit.



#### 5. Memory Backup Battery:

The event log buffer is backed up by a 3V lithium battery. This battery should be replaced annually.

#### 6. Status LEDs:

##### Initialization:

LED 1	LED 2	LED 3	LED 4	LED 5	LED 6	DESCRIPTION
ON	OFF	OFF	OFF	OFF	OFF	BASIC PROCESSOR INITIALIZATION
ON	ON	OFF	OFF	OFF	OFF	INTERNAL SRAM TEST
ON	OFF	ON	OFF	OFF	OFF	EXTERNAL FLASH TEST
ON	ON	ON	OFF	OFF	OFF	EXTERNAL SDRAM, FIRST CHIP TEST
ON	OFF	OFF	ON	OFF	OFF	EXTERNAL SDRAM, SECOND CHIP TEST
ON	ON	OFF	ON	OFF	OFF	EXTERNAL SRAM TEST
ON	OFF	ON	ON	OFF	OFF	EXTERNAL EEPROM TEST
ON	ON	ON	ON	OFF	OFF	EXTERNAL RTC TEST
ON	OFF	OFF	OFF	ON	OFF	BACKUP BATTERY ABD RESET CIRCUIT TEST
ON	ON	OFF	OFF	ON	OFF	UART TEST
ON	OFF	ON	OFF	ON	OFF	ETHERNET INTERFACE, MII

##### Run Time:

LED	DESCRIPTION
1	OFF-LINE / ON-LINE AND BATTERY STATUS OFF-LINE = 20% ON, ON-LINE = 80% ON DOUBLE FLASH IF BATTERY IS LOW
2	PRIMARY HOST COMMUNICATION ACTIVITY (ETHERNET OR PORT 1)
3	PORT 2 COMMUNICATION ACTIVITY
4	PORT 3 COMMUNICATION ACTIVITY
5	ON = WRITING TO FLASH MEMORY - <b>DO NOT REMOVE POWER WHEN ON</b>
6	TBD
SPD	ON-BOARD ETHERNET SPEED: OFF = 10MBS, ON = 100MBS
ACT	OFF = NO ON-BOARD ETHERNET ACTIVITY, ON = ON-BOARD ETHERNET ACTIVITY (YELLOW LED)
LNK	OFF = ON LINK, ON = GOOD LINK (GREEN LED)

Information subject to change without notice.

## 7. Specifications:

\*\* The processor is for use in low voltage, class 2 circuits only.

Primary power:	12 to 24Vdc $\pm$ 10%, 300mA maximum 12Vdc @ 240mA (325mA with CoBox-Micro) nominal 24Vdc @ 135mA (175mA with CoBox-Micro) nominal
Memory and Clock Backup:	3Volt Lithium, type BR2325,BR2330,CR2330
Ports:	
Port 1	RS-232 or 2-wire RS-485: 9,600 to 115,200 bps, async
Port 2 & 3	2-wire RS-485: 2,400 to 38,400 bps, async
Inputs:	2 non-supervised, dedicated for cabinet tamper and power fault monitoring
Cable requirements:	
Power:	1 twisted pair, 18 AWG
RS-485:	24AWG, 4,000ft (1,200m) maximum, twisted pair with shield. 120 Ohm
RS-232:	24AWG, 25ft (7.6m) maximum
Ethernet:	Cat 5
Alarm input:	1 twisted pair, 30 ohms maximum
Environmental:	
Temperature:	0 to 70°C, operating -55 to +85°C, storage
Humidity:	0 to 95% RHNC
Mechanical:	
Dimension:	5 in. (127mm) W x 6 in. (152.4mm) L x 1 in. (25mm) H
Weight:	4.1 oz ( 115 gm) nominal
Lantronix NIC support:	Standoff size - Diameter .125 inch x 7/16 inch long Richco Plastics part number LMSP-7-01, 3 pieces (Not supplied)

Specification subject to change without notice.

### Warranty

Mercury Security Corporation warrants the product is free from defects in material and workmanship under normal use and service with proper maintenance for one year from the date of factory shipment. Mercury Security Corporation assumes no responsibility for products damaged by improper handling or installation. This warranty is limited to the repair or replacement of the defective unit.

There are no expressed warranties other than set forth herein. Mercury Security Corporation does not make, nor intends, nor does it authorize any agent or representative to make any other warranties, or implied warranties, and expressly excludes and disclaims all implied warranties of merchantability or fitness for a particular purpose.

Returned units are repaired or replaced from a stock of reconditioned units. Returns must be accompanied by a return authorization number (RMA) obtained from customer service, and prepaid postage and insurance.

### Liability

The Interface should only be used to control exits from areas where an alternative method for exit is available. This product is not intended for, nor is rated for operation in life-critical control applications. Mercury Security Corporation is not liable under any circumstances for loss or damage caused by or partially caused by the misapplication or malfunction of the product. Mercury Security Corporation's liability does not extend beyond the purchase price of the product.