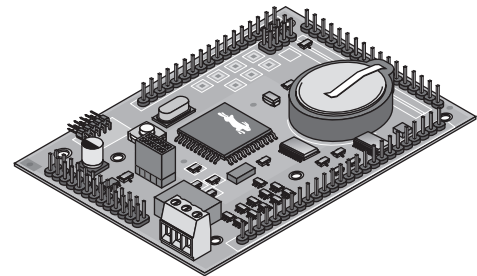


# RABBIT Single Board Computers



## LP3500 FOX

The LP3500 Fox is a low-power single-board computer designed to operate reliably virtually any place it is deployed, especially where power is limited, such as in portable, hand-held, battery-powered, and remote monitoring systems. The LP3500 features built-in analog and digital I/O and consumes less than 20 mA when fully operational and less than 100  $\mu$ A in power-save mode.



### Specifications:

Feature	LP3500	LP3510
Microprocessor	Low-EMI Rabbit 3000™ at up to 7.4 MHz	
Flash	512K (2 x 256K)	256K
SRAM	512K (2 x 256K)	128K
Backup Battery	Socketed 3 V lithium coin-type, 265 mA-h, supports RTC and SRAM	
Keypad/Display	Optional keypad/display module with 7 keys and 122 _ 32 graphic display, easy to use menuing software	
Digital Inputs	16 protected to $\pm$ 36 V DC	
Digital Outputs	10 total: 8 sink and 2 source 200 mA each, 36 V DC max.	
Relay	1 SPDT, 1 A, 30 V DC, bi-stable	None
Analog Inputs	Eight 11-bit single-ended or four 12-bit differential, 1MW input impedance, up to 200 samples/sec. Multiple software-controlled programmable gain voltage ranges from 0-1 V to 0-20 V. 4 channels can be set individually for 4-20mA with plug-in jumpers 1 channel has software-selectable power voltage monitoring option	None
Analog Outputs	Unfiltered PWM, 1 kW output impedance	None
Serial Ports	6 total: 1 RS-485 3 RS-232 (three 3-wire OR one 5-wire and one 3-wire 1 logic level serial interface for optional add-ons 1 3 V CMOS-compatible (programming))	
Serial Rate	Max. asynchronous baud rate = CLK/8	
Real-Time Clock	Yes	
Timers	Ten 8-bit timers (6 cascadable from the first) and one 10-bit timer with 2 match registers	
Watchdog/Supervisor	Yes	
Main Power	3-30 V DC, 20 mA max. @ 7.4 MHz, 100 $\mu$ A max. @ 2 kHz	
Backup Power	Used to reduce current in power-save mode, 2.7-3.3 V @ 100 $\mu$ A max	
Operating Temp	-40° to +70°C	
Humidity	5-95%, noncondensing	
I/O Connectors	Two 1 _ 17, 0.1" pitch headers	
Board Size	3.65" _ 2.60" _ 0.45" (93 x 66 x 11 mm)	

### Tool Kit

MOUSER STOCK NO.	Description	Price Each
<b>Mfr.   Mfr. Part No.</b>		
812-101-0529	Fox Tool Kit (board not included)	230.00

### Product Only

812-20-101-0525	512K/512K Analog inputs, Relay - RoHS	199.00
812-101-0526	256K/128K	149.00

### Programming/Development Tools

694-101-0666	Dynamic C Module	359.00
812-101-0545	Screw Terminal Adapter/Prototyping Board	99.00
694-101-0580	RabbitLink Card	129.00
694-101-0589	Rabbit Cloning Board	89.00
694-540-0070	RS-232-to-USB Converter Cable	39.00

### Expansion Boards

694-20-101-0467	8 Meg Serial Flash - RoHS	89.00
812-101-0282	Universal Relay Board	99.00

### Mounting/Display

812-101-0466	Keypad/Display Unit	99.00
694-20-101-0541	Panel-Mnt Keypad/Display Unit, 3.3 Volt - RoHS	99.00
694-20-101-0502	Panel-Mount Keypad/Display Unit, 5 Volt - RoHS	99.00
812-540-0069	Keypad/Display Unit Cable 5"	15.00
812-101-0431	Unibox Enclosure	15.00
812-101-0495	Baseplate	10.00

## SR9000 SMART START SYSTEM

The Smart Start is a modular and expandable embedded control system designed for demanding real-time control and data acquisition applications. Multiple I/O card options—including digital, A/D, D/A, and relays—allow users to closely match their specific I/O needs. The Smart Star CPU card comes in both Ethernet and non-Ethernet versions, and a cost-effective keypad/display is also available.

**Ethernet connectivity** - CPU card with or without Ethernet

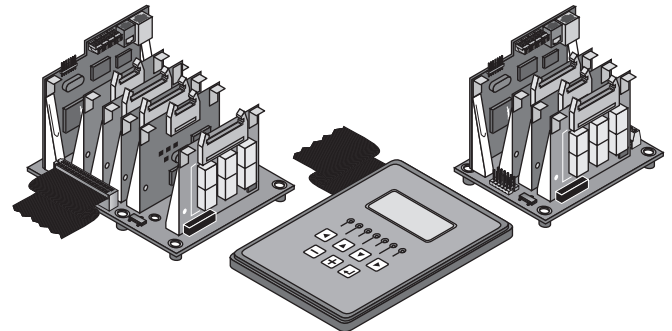
**Flexible functionality** - modular configuration to easily interchange or replace individual I/O cards

**Multiple I/O card options** - digital I/O, A/D, D/A, relay

**Expandable** - up to 168 I/O

**Cost-effective** - low cost per I/O

**Optional keyboard/display** - backlit 122 x 32 pixel graphic LCD with 7 user-relegendable keys, 7 LEDs



### Tool Kit

MOUSER STOCK NO.	Description	Price Each
<b>Mfr.   Mfr. Part No.</b>		
812-101-0427	Smart Start Tool Kit (board not included)	200.00

### Smart Start Backplane

812-20-101-0512	SR9010 7-slot - RoHS	99.00
812-101-0487	SR9050 3-slot	79.00

### Keyboard/Display Options

694-20-101-0601	Keypad/Display Unit, 3.3 Volt, No Case - RoHS	79.00
694-101-0465	Keypad/Display Unit, 5 Volt, No Case	79.00

### Product Options and Accessories

812-101-0504	Cable and Mounting Hardware	20.00
812-540-0069	Keypad/Display Unit Cable 5"	15.00
812-151-0127	Connector Adapter Board	40.00

### Smart Start CPU Card

812-101-0387	SR9100	99.00
812-101-0815	SR9100 512K SRAM	159.00
812-20-101-0486	SR9150 Ethernet - RoHS	159.00
812-20-101-0738	SR9150 Ethernet, 512K SRAM - RoHS	179.00
812-101-0506	SR9160	119.00
812-101-0775	SR9160 512K SRAM	179.00

### Programming/Development Tools

694-101-0580	RabbitLink Card	129.00
694-101-0589	Rabbit Cloning Board	89.00
694-540-0070	RS-232-to-USB Converter Cable	39.00

### Smart Start Digital I/O Cards

MOUSER STOCK NO.	Description	Price Each
<b>Mfr.   Mfr. Part No.</b>		
812-101-0389	16 inputs and 8 outputs, sinking	49.00
812-20-101-0437	16 inputs and 8 outputs, sourcing - RoHS	49.00
812-20-101-0390	8 inputs and 16 outputs, sinking - RoHS	49.00
812-101-0391	8 inputs and 8 outputs, sinking	49.00

### Smart Start A/D Cards

812-101-0392	Eleven 12-bit analog inputs (0-10V)	79.00
812-101-0423	Eleven 12-bit analog inputs ( $\pm$ 10V)	79.00
812-20-101-0444	Eleven 12-bit analog inputs (4-20mA) - RoHS	79.00

### Smart Start D/A Cards

812-101-0393	Eight 12-bit analog outputs (0-10V)	129.00
812-101-0394	Eight 12-bit analog outputs ( $\pm$ 10V)	149.00
812-20-101-0445	Eight 12-bit analog outputs (4-20mA) - RoHS	129.00

### Smart Start Relay Cards

812-101-0395	6 relays: 1SPDT, 5 SPST, including snubbers	79.00
812-20-101-0440	8 SPDT relays, no on-board snubbers - RoHS	79.00

### Smart Start Field Wiring Terminals

812-20-101-0515	Screw-type (A/D, D/A) - RoHS	19.00
812-101-0421	Pluggable (A/D, D/A)	29.00
812-101-0514	Screw-type (I/O, Relay 8)	19.00
812-101-0420	Pluggable (I/O, Relay 8)	39.00
812-101-0516	Screw-type (Relay 6)	19.00
812-101-0422	Pluggable (Relay 6)	29.00