

### Features

- LX800, 500 MHz CPU or Atom Z520, 1.33 GHz CPU
- Linux kernel 2.6 Inside
- Embedded Service: Web Server, Telnet Server, SSH Server
- 0/1/3/7 Slots for High Profile I/O Modules
- 2/4 USB and 1 VGA Ports
- Dual Ethernet Ports (10/100 M)
- 4/5 Serial Ports (RS-232/RS-485)
- Operating Temperature: -25 ~ +75°C



2  
3

Compact PAC

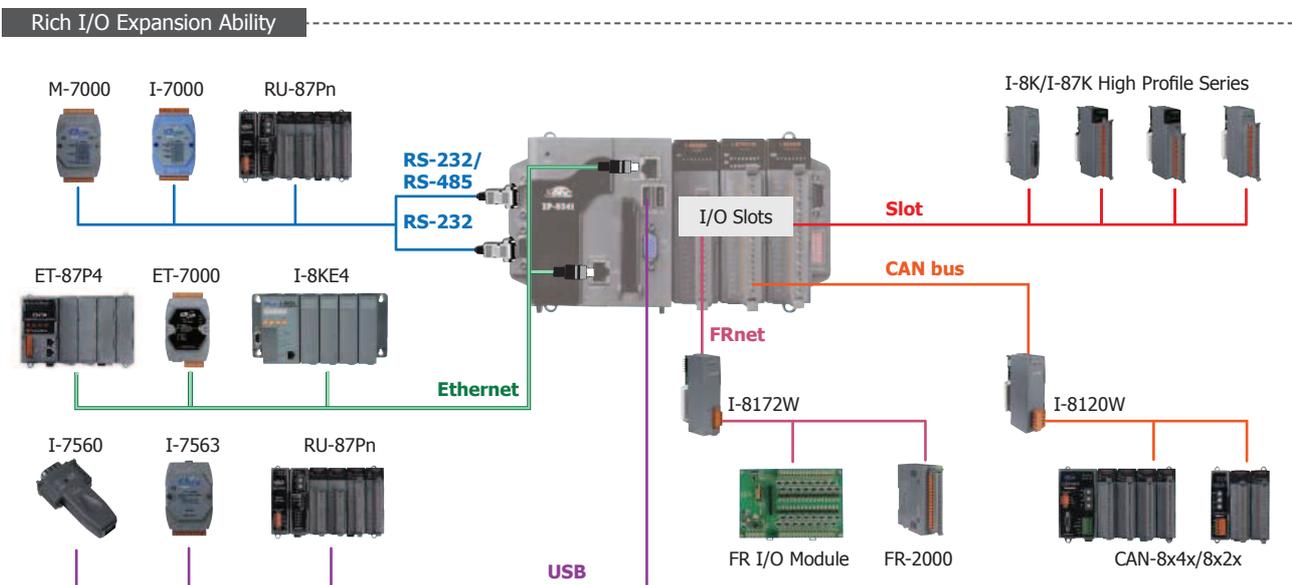
### Introduction

LP-8x81-Atom series is the new generation Linux-based PAC of LP-8x81. It is equipped with an Intel Atom Z520 Series CPU at 1.33GHz, while LP-8x81 is equipped with a LX800 CPU at 500 MHz. They provide various connectivity (VGA, USB, Ethernet, RS-232/485) and 0/1/3/7 I/O slots for high performance parallel I/O modules (high profile I-8K Series) and serial I/O modules (high profile I-87K series).



User's programs can be saved in external storage device, such as CF Card, USB device or RAM via Ethernet. LinPAC SDK is provided for users to develop LinPAC I/O applications rapidly and easily when I-7000/8000/87K series I/O modules are used in the LinPAC. Users can develop LinPAC applications using the GNU C Language. In the meanwhile, all kinds of servers and functions built-in make the LinPAC more powerful and users will be able to operate LinPAC to achieve their own project smoothly. With LP-8x81 Serial, users can achieve the redundancy function and it will make the whole control system safer.

### Applications



## Specifications

| Models                               | LP-8081   | LP-8381  | LP-8781            | LP-8181-Atom                   | LP-8381-Atom       | LP-8781-Atom       |
|--------------------------------------|---|--|--------------------|--------------------------------|--------------------|--------------------|
| <b>System Software</b>               |   |  |                    |                                |                    |                    |
| OS                                   | Linux kernel 2.6.18   |  |                    | Linux kernel 2.6.33            |                    |                    |
| Embedded Service                     | Web Server, Telnet Server, SSH Server   |  |                    |                                |                    |                    |
| SDK Provided                         | Standard LinPAC SDK for Linux by GNU C language   |  |                    |                                |                    |                    |
| Multilanguage Support                | No (Only for English)   |  |                    | Yes                            |                    |                    |
| <b>CPU Module</b>                    |   |  |                    |                                |                    |                    |
| CPU                                  | LX800, 500 MHz  |  |                    | Atom Z520, 1.33 GHz            |                    |                    |
| System Memory                        | 1 GB DDR SDRAM  |  |                    | 1 GB DDR2 SDRAM                |                    |                    |
| Dual Battery Backup SRAM             | 512 KB; data valid up to 5 years  |  |                    |                                |                    |                    |
| Flash                                | 4 GB as IDE Master  |  |                    | 8 GB as IDE Master             |                    |                    |
| EEPROM                               | 16 KB   |  |                    |                                |                    |                    |
| CF Card                              | 8 GB (support up to 32 GB)  |  |                    |                                |                    |                    |
| RTC (Real Time Clock)                | Provide second, minute, hour, date, day of week, month, year                                      |  |                    |                                |                    |                    |
| Programmable LED Indicator           | -   |  |                    | 2                              |                    |                    |
| 64-bit Hardware Serial Number        | Yes, for Software Copy Protection   |  |                    |                                |                    |                    |
| Dual Watchdog Timers                 | Yes   |  |                    |                                |                    |                    |
| Rotary Switch                        | Yes (0 ~ 9)   |  |                    |                                |                    |                    |
| DIP Switch                           | -   |  |                    | Yes (8 bits)                   |                    |                    |
| Audio                                | -   |  |                    | Microphone-In and Earphone-Out |                    |                    |
| <b>VGA &amp; Communication Ports</b> |   |  |                    |                                |                    |                    |
| VGA                                  | Yes, (resolution: 1024 x 768, 800 x 600)  |  |                    |                                |                    |                    |
| Ethernet                             | RJ-45 x 2, 10/100 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)                      |  |                    |                                |                    |                    |
| USB 2.0                              | 2   |  |                    | 4                              |                    |                    |
| COM 1                                | RS-232 (Rx/D, Tx/D and GND); non-isolated   | Internal communication with the high profile I-87K series modules in slots |                    |                                |                    |                    |
| COM 2                                | RS-232 (Rx/D, Tx/D and GND); non-isolated   |  |                    |                                |                    |                    |
| COM 3                                | RS-485 (Data+, Data-) with internal self-tuner ASIC; 3000 V <sub>bc</sub> isolated                |  |                    |                                |                    |                    |
| COM 4                                | RS-232/RS-485 (Rx/D, Tx/D, CTS, RTS and GND for RS-232, Data+ and Data- for RS-485); non-isolated |  |                    |                                |                    |                    |
| COM 5                                | RS-232 (Rx/D, Tx/D, CTS, RTS, DSR, DTR, CD, RI and GND); non-isolated                             |  |                    |                                |                    |                    |
| <b>I/O Expansion Slots</b>           |   |  |                    |                                |                    |                    |
| Slot Number                          | 0   | 3  | 7                  | 1                              | 3                  | 7                  |
| <b>Mechanical</b>                    |   |  |                    |                                |                    |                    |
| Dimensions (W x L x H)               | 137 x 132 x 125 mm  | 231 x 132 x 111 mm   | 355 x 132 x 111 mm | 169 x 132 x 125 mm             | 231 x 132 x 125 mm | 355 x 132 x 125 mm |
| Installation                         | DIN-Rail or Wall Mounting   |  |                    |                                |                    |                    |
| <b>Environmental</b>                 |   |  |                    |                                |                    |                    |
| Operating Temperature                | -25 ~ +75°C   |  |                    |                                |                    |                    |
| Storage Temperature                  | -30 ~ +80°C   |  |                    |                                |                    |                    |
| Ambient Relative Humidity            | 10 ~ 90% RH (non-condensing)  |  |                    |                                |                    |                    |
| <b>Power</b>                         |   |  |                    |                                |                    |                    |
| Input Range                          | +10 ~ +30 V <sub>bc</sub>   |  |                    |                                |                    |                    |
| Isolation                            | 1 kV  |  |                    |                                |                    |                    |
| Redundant Power Inputs               | Yes, with one power relay (1 A @ 24 V <sub>bc</sub> ) for alarm                                   |  |                    |                                |                    |                    |
| Capacity                             | 15 W  | 35 W   | 35 W               | 25 W                           | 35 W               | 35 W               |
| Consumption                          | 14.4 W  | 14.4 W   | 16.8 W             | 16.6 W                         | 16.8 W             | 18 W               |

## Ordering Information

|                        |  |
|------------------------|--|
| <b>LP-8081-EN CR</b>   | Standard LinPAC-8000 without I/O Slot (English Version of OS) (RoHS)           |
| <b>LP-8381-EN CR</b>   | Standard LinPAC-8000 with 3 I/O Slots (English Version of OS) (RoHS)           |
| <b>LP-8781-EN CR</b>   | Standard LinPAC-8000 with 7 I/O Slots (English Version of OS) (RoHS)           |
| <b>LP-8181-Atom CR</b> | Standard LinPAC-8000-Atom with 1 I/O Slot (Multilingual Version of OS) (RoHS)  |
| <b>LP-8381-Atom CR</b> | Standard LinPAC-8000-Atom with 3 I/O Slots (Multilingual Version of OS) (RoHS) |
| <b>LP-8781-Atom CR</b> | Standard LinPAC-8000-Atom with 7 I/O Slots (Multilingual Version of OS) (RoHS) |

## Accessories

|              |   |
|--------------|---|
| NS-208 CR    | 8-Port Unmanaged Industrial 10/100 Base-TX Ethernet Switch (RoHS)           |
| USB-2560 CR  | 4-Port Industrial USB 2.0 Hub (RoHS)  |
| DP-1200 CR   | 24 V <sub>bc</sub> /5.0 A, 120 W Power Supply with DIN-Rail Mounting (RoHS) |
| MDR-60-24 CR | 24 V <sub>bc</sub> /2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)  |