

# LP-8x21/9x21

## OS\_Image Update Guide

(v1.0)



Model: LP-8121



Model: LP-8421



Model: LP-8821



Model: LP-9221



Model: LP-9421



Model: LP-9821

## 1. 【Download LP-8x21/9x21 OS Image】

### ■ LP-8x21 Series

Please download the LP-8x21 OS Image(lp8k\_X.X.tgz) from below web link

[http://ftp.icpdas.com/pub/cd/linpac/napdos/lp-8x2x/os\\_image/](http://ftp.icpdas.com/pub/cd/linpac/napdos/lp-8x2x/os_image/)

### ■ LP-9x21 Series

Please download the LP-9x21 OS Image(lp9k\_X.X.tgz) from below web link

[http://ftp.icpdas.com/pub/cd/linpac/napdos/lp-9x2x/os\\_image/](http://ftp.icpdas.com/pub/cd/linpac/napdos/lp-9x2x/os_image/)

After decompressing the lp8k\_X.X.tgz or lp9k\_X.X.tgz, user can find six files. The detail information of six files, please refer to below description:

lp8k_X.X.tgz/lp9k_X.X.tgz	
File Name	Description
MLO	The boot loader files of U-Boot
u-boot.img	
uEnv.txt	
ulmage	The image of Linux kernel
rootfs.ubi	The root files of Linux OS
version	The release version of Linux OS and Linux kernel

#### Please note:

The flash and microSD disk have a finite number of program-erase cycles. Important information should always be backed up on other media or storage device for long-term safekeeping.

## 2. 【Preparation】

(1) Preparation tools as below :

- ✓ Power Supply: +10 to +30V<sub>DC</sub> (E.g., DP-665)

See [http://www.icpdas.com.tw/products/Accessories/power\\_supply/power\\_list.htm](http://www.icpdas.com.tw/products/Accessories/power_supply/power_list.htm) for a full list of the available accessories.

- ✓ USB card reader for microSD card × 1 (Fig. 1)
- ✓ microSD card × 1 (Fig. 2)



Fig.1 USB card reader



Fig.2 microSD card

### < Important notes regarding microSD cards >

1. Ensure that the microSD card is properly dismounted before unplugging it.
2. Do not power off or reboot the device while data is being written to or read from the microSD card.
3. The **first partition of microSD** card must be formatted with a **FAT16/FAT32** file system.
4. Scan and repair the microSD card if necessary.

(2) To insert the microSD card into the USB microSD card reader in Windows(or Linux) OS. User can copy the OS image files of LP-8x21/9x21 to **the first partition of SD card**, please refer to below figure:



Fig.3 Build LP-8x21/9x21 Rescue Disk in Windows OS

```

Disk /dev/sdc: 3980 MB, 3980394496 bytes
255 heads, 63 sectors/track, 483 cylinders, total 7774208 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0x00000000
  The device name of SD's first partition is "/dev/sdc1"
  Device Boot      Start         End      Blocks   Id  System
/dev/sdc1          *          2048     7774207    3886080   b   W95 FAT32
root@golden:~# mount /dev/sdc1 /mnt/Image/
root@golden:~# tar xvf /tmp/lp9k_1.1.tgz -C /mnt/Image/
MLO
rootfs.ubi  To decompress lp8k_X.X.tgz or lp9k_X.X.tgz to the mount directory of SD card.
u-boot.img
uEnv.txt
uImage
version
root@golden:~# ls /mnt/Image/
MLO rootfs.ubi u-boot.img uEnv.txt uImage version
root@golden:~#

```

Fig.4 Build LP-8x21/9x21 Rescue Disk in Linux OS

- (3) To **turn off the LP-8x21/9x21 power** and insert **microSD card** to the LP-8x21/LP-9x21.

### 3. 【Update Procedure】

#### < Important Notes >

1. Ensure that you perform a backup of any important files, before attempting to update the OS image.
2. DO NOT power off or reboot the controller while the OS image is being updated, as this may result in the OS image becoming corrupted, which may cause the controller to malfunction.

(1) **To turn on the LP-8x21/LP-9x21 power** and the Linux OS would be installed from microSD automatically. The recovery process may spend 4 ~ 5 minutes.

(2) If loading the Linux OS successfully, the LED “Run” of LP-8x21/9x21 would be turned on, please refer to below figure:

#### ■ LP-8x21



Fig.4 Loading LX-8x21 OS Image OK

#### ■ LP-9x21



Fig.4 Loading LX-9x81 OS Image OK

(3) After the recovery process completed, user can **turn off the power** of the LP-8x21/LP-9x21 and **remove the microSD card**.

(4) If user had removed the microSD card, user can **turn on the power** of the LP-8x21/LP-9x21.