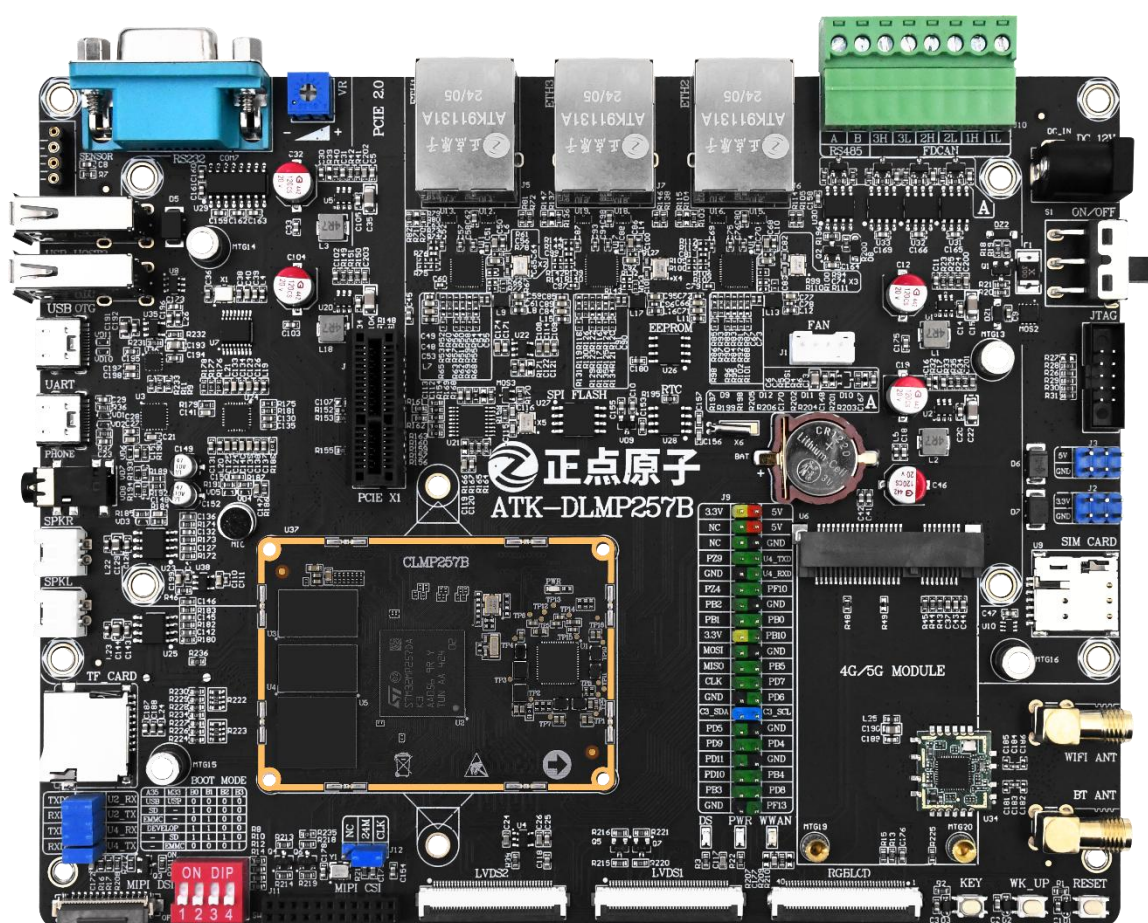


# ATK-DLMP257B

## Setup Self - Start Program Reference Document

V1.0



**1. Shopping:**TMALL: <https://zhengdianyuanzi.tmall.com>TAOBAO: <https://openedv.taobao.com>**2. Download**Address: <http://www.openedv.com/docs/index.html>**3. FAE**Website : [www.alientek.com](http://www.alientek.com)Forum : <http://www.openedv.com/forum.php>Videos : [www.yuanzige.com](http://www.yuanzige.com)

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## Revision History:

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V1.0	release officially	ALIENTEK	ALIENTEK	2025.04.01

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## Chapter 1. Setting up a self-starter

### 1.1 How do you set up a self-starter

We can write the boot program in the system file `/etc/profile`, and the boot will automatically execute it. Because `/etc/profile` is a file, the system startup is automatically executed and the file is executed just before the system is logged in, so we can write the startup to this file.

`vi /etc/profile`

Type echo "www.openedv.com" in the following position.

```

/dev/tty[A-z]*) resize >/dev/null;;
    esac
fi
fi
if [ -z "$EDITOR" ]; then
    EDITOR="vi" # needed for packages like cron, git-commit
fi
export PATH PS1 OPIEDIR QPEDIR QTDIR EDITOR TERM
echo "www.openedv.com"
I /etc/profile [Modified] 75/77 97%
```

Figure 1.1-1 Add print information to the boot

After saving the file, restart the development board, and print the information in the serial port terminal as follows, and print out [www.openedv.com](http://www.openedv.com)

```

[ 17.789258] bridge-0: Setup Bridge 0 ... done
ST OpenSTLinux - Weston - (A Yocto Project Based Distro) 5.0.3-snapshot ATK-DLMP257 t
tySTM0
ATK-DLMP257 login: root (automatic login)
[ 21.195187] sw0p3: Connected PHY YT8531 Gigabit Ethernet at 'stmmac-1:04' to port
[ 21.477728] sw0p2: Connected PHY YT8531 Gigabit Ethernet at 'stmmac-1:05' to port
[ 21.506894] sw0ep: edgx_tc_setup type:6
www.openedv.com
root@ATK-DLMP257:~# [ 22.599479] bridge: filtering via arp/ip/ip6tables is no longe
```

Figure 1.1-2 Self starting effect

## Chapter 2. Systemd Self-starting service

### 2.1 How to create a systemd self-start service

If you want to start a self-starter, you can also create new system services that will be executed automatically when the system starts up. This method is recommended if you need to self-start QT programs.

Let's start by creating a script to launch

```
vi auto_run_script.sh
```

Add the following to the script, the script content is to print information to the serial port.

```
#!/bin/bash
```

```
echo "Hello World!" > /dev/ttySTM0
```

```
root@ATK-DLMP257:~# ls
auto_run_script.sh  README-CHECK-GPU  shell
root@ATK-DLMP257:~# cat auto_run_script.sh
#!/bin/bash
echo "Hello World!"> /dev/ttySTM0
root@ATK-DLMP257:~#
```

Figure 2.1-1 auto\_run\_script.sh contents

Give the script executable permission to execute the following commands

```
chmod +x auto_run_script.sh
```

Let's go to /etc/systemd/system and create a bootable service called auto\_run\_script.service.

```
cd /etc/systemd/system
```

```
vi auto_run_script.service
```

Add the following to auto\_run\_script.service

```
[Unit]
```

```
Description=Run a Custom Script at Startup
```

```
After=default.target
```

```
[Service]
```

```
ExecStart=/home/root/auto_run_script.sh
```

```
[Install]
```

```
WantedBy=default.target
```

We then use the update systemd profile and establish the symlink relationship

```
systemctl daemon-reload
```

```
systemctl enable auto_run_script.service
```

```

root@ATK-DLMP257:~# chmod +x auto_run_script.sh
root@ATK-DLMP257:~# cd /etc/systemd/system
root@ATK-DLMP257:/etc/systemd/system# vi auto_run_script.service
root@ATK-DLMP257:/etc/systemd/system# cat auto_run_script.service
[Unit]
Description=Run a Custom Script at Startup
After=default.target

[Service]
ExecStart=/home/root/auto_run_script.sh

[Install]
WantedBy=default.target

root@ATK-DLMP257:/etc/systemd/system# systemctl daemon-reload
root@ATK-DLMP257:/etc/systemd/system# systemctl enable auto_run_script.service
Created symlink /etc/systemd/system/default.target.wants/auto_run_script.service -> /etc/systemd/system/auto_run_script.service.
root@ATK-DLMP257:/etc/systemd/system#

```

Figure 2.1-2 Update the configuration file and create a symbolic link

Then issue the restart command reboot

sync; reboot

When you restart, you see the description of the service printed and the script printed, indicating that the startup script has been executed.

```

[ 25.165022] br0: port 1(sw0p1) entered learning state
[ 25.165848] br0: port 1(sw0p1) entered forwarding state
[ 35.988082] vddio3: disabling
[ 35.988150] vddio4: disabling
[ 35.988503] vdda18adc: disabling
[ 35.991651] v3v3: disabling
"Hello World!"
root@ATK-DLMP257:~#

```

Figure 2.1-3 Information that the service has printed since it was started after the restart

If you want to run your own Qt program, you can refer to the following format, such as my Qt executable file named demo, you need to fill the path by yourself

```
./home/root/demo >/dev/null 2>&1 &
```