

# S726

## Driver Adding Guide

Issue 1.0



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**Notice**

This document provides guide for users to use S726.

This document is intended for system engineers (SEs), development engineers, and test engineers.

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# About This Document

## Scope

This document is applicable to the S726 series.




## Audience

This document is intended for [system engineers \(SEs\)](#), [development engineers](#), and [test engineers](#).

## Change History

Issue	Change	Changed By
1.0	Initial draft	Jian Hou

## Conventions

Symbol	Indication
	Indicates danger or warning. This information must be followed. Otherwise, a catastrophic module or user device failure or bodily injury may occur.
	Indicates caution. This symbol alerts the user to important points about using the module. If these points are not followed, the module or user device may fail.
	Indicates instructions or tips. This symbol provides advices or suggestions that may be useful when using the module.

# 1 Overview

Android uses **defconfig** to configure the driver. This document takes the ADC driver as an example to describe how to add a new driver.

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## 2 How to Add Drivers

**Step 1:** Prepare driver files including the Kconfig, Makefile, and .c file, and put them in the corresponding directory. Place the driver files together with those of the same driver type. (The directory is generally distinguished according to the type of driver.)

For example, add driver files to `\bsp\kernel\kernel4.14\drivers\nwy`.

1. Add a **Makefile** file to the directory.

The example of the file content is as follows. According to the value of the macro in the brackets, the file can determine whether to compile the driver into the kernel, module, or neither of the kernel and module.

```
obj-$(CONFIG_NWY_ADC_TEMP) += nwy_adc.o
```

2. Add a **Kconfig** file to the directory.

You can add your own control macro by referring to the format of the existing macro. Note that the macro in the **Kconfig** file is one less `CONFIG_` than the **Makefile** file. **tristate** means that the driver can be configured as **y**, **m**, and **n**, which respectively indicates that the driver is compiled into the kernel, module, or neither. The example is as follows:

```
config NWY_ADC_TEMP
    tristate "ADC read driver"
    help
        if need adc function, say y.
```

3. Add a .c file to the directory.

名称	修改日期	类型	大小
Kconfig	2022/3/18 21:59	文件	
Makefile	2022/3/18 21:59	文件	
nwy_adc.c	2022/3/18 21:59	C 文件	

**Step 2:** Modify the Kconfig and Makefile files in the `\bsp\kernel\kernel4.14\drivers` directory:

- **Kconfig:**

```
source "drivers/trusty/Kconfig"
source "drivers/nwy/Kconfig"
endmenu
```

- **Makefile:**

```
obj-$(CONFIG_PARPORT) += parport/  
obj-$(CONFIG_NVM) += lightnvm/  
obj-y += base/ block/ misc/ mfd/ nfc/ nwy/  
obj-$(CONFIG_LIBNVDIMM) += nvdimmm/
```

**Step 3:** Modify **S726\_sprd\_sharkl3\_defconfig** under the **bsp\kernel\kernel4.14\arch\arm64\configs** directory. For example:

```
CONFIG_NWY_ADC_TEMP=y
```

**Step 4:** Checking the whether the driver is added.

After compilation, check whether **bsp\out\S726\obj\kernel.config** contains the extra CONFIG item. For example, **CONFIG\_NWY\_ADC\_TEMP=y**.