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## IIO Linux kernel tools



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Linux® kernel provides some user space tools that can be used for testing the IIO subsystem.

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## 1 Article purpose

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The purpose of this article is to:

- briefly introduce the IIO user space tools that comes with the Linux<sup>®</sup> kernel
- provide a few examples using these tools



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## 2 Introduction

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These tools use IIO sysfs and character device directly without libiio (See IIO user space interface for further details).



### 3 Tools

The Linux<sup>®</sup> kernel provides the following IIO user space tools:

- **lsiio**: example application that provides a list of IIO devices and triggers.

```
root@stm32mp1:~# lsiio
Device 001: 48003000.adc:adc@100
Device 000: 48003000.adc:adc@0
Trigger 018: tim3_ch4
Trigger 007: tim1_ch3
...
```

- **iio\_event\_monitor**: example application that reads events from an IIO device and prints them.

See [How to get ADC analog watchdog events](#).

```
root@stm32mp1:~# iio_event_monitor /dev/iio:device0 &
Event: time: 1529352199639112110, type: voltage, channel: 0, evtype: thresh, direction:
either
Event: time: ...
```

- **iio\_generic\_buffer**: example application that reads data from buffer.
- **iio\_utils**: set of routines built-in above IIO tools, typically used to access sysfs files.



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## 4 Source code

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The Linux® kernel IIO tools source code can be found under tools/iio<sup>[1]</sup> directory:

- tools/iio/lsiio.c
- tools/iio/iio\_event\_monitor.c
- tools/iio/iio\_generic\_buffer.c
- tools/iio/iio\_utils.c



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## 5 Installation on your target

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The Linux<sup>®</sup> kernel IIO tools aren't embedded by default in OpenSTLinux distribution. They can be compiled independently and then installed on the target. See [How to build Linux kernel user space tools](#).



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## 6 References

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- tools/iio , Linux® IIO tools source code

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Industrial I/O Linux® subsystem

System File System (See <https://en.wikipedia.org/wiki/Sysfs> for more details)