

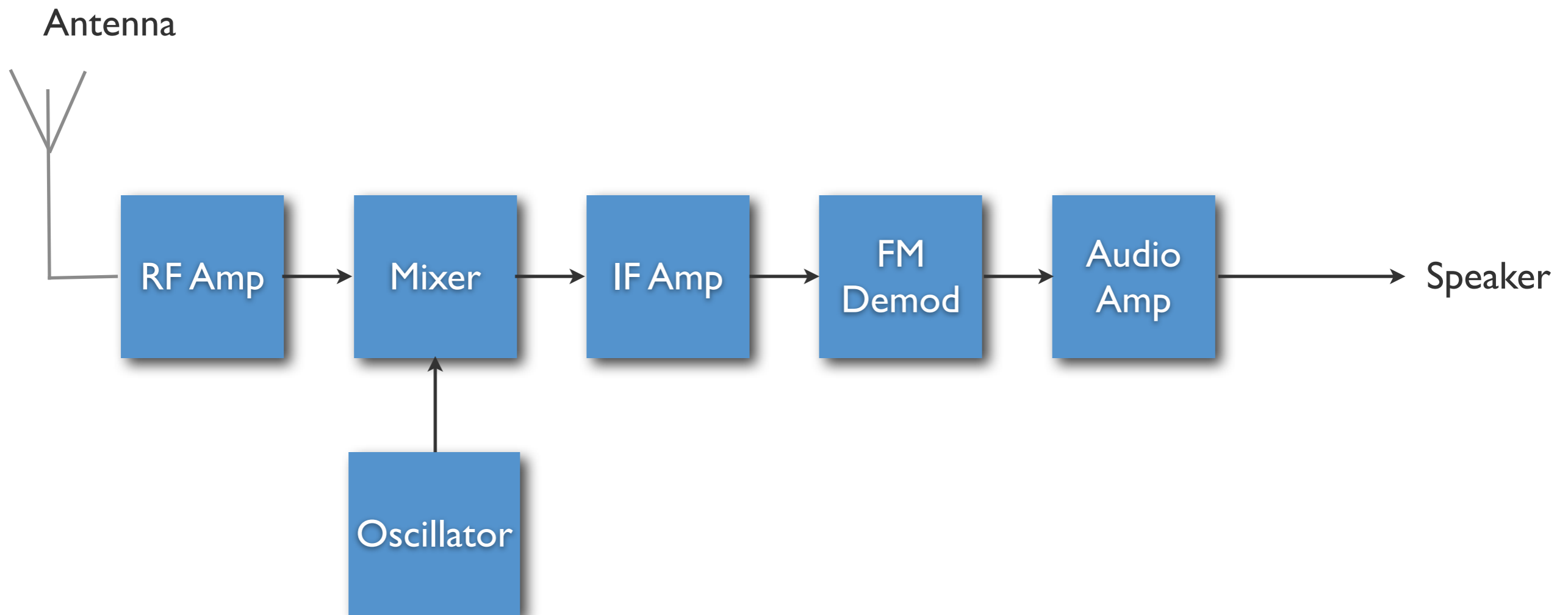
GNURadio

Sidhant Gupta

GNU**Radio** is an open-source toolkit for building, testing and deploying **software defined radios**

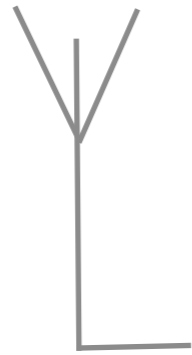
What is **Software Define Radio**?!

A Typical FM Radio

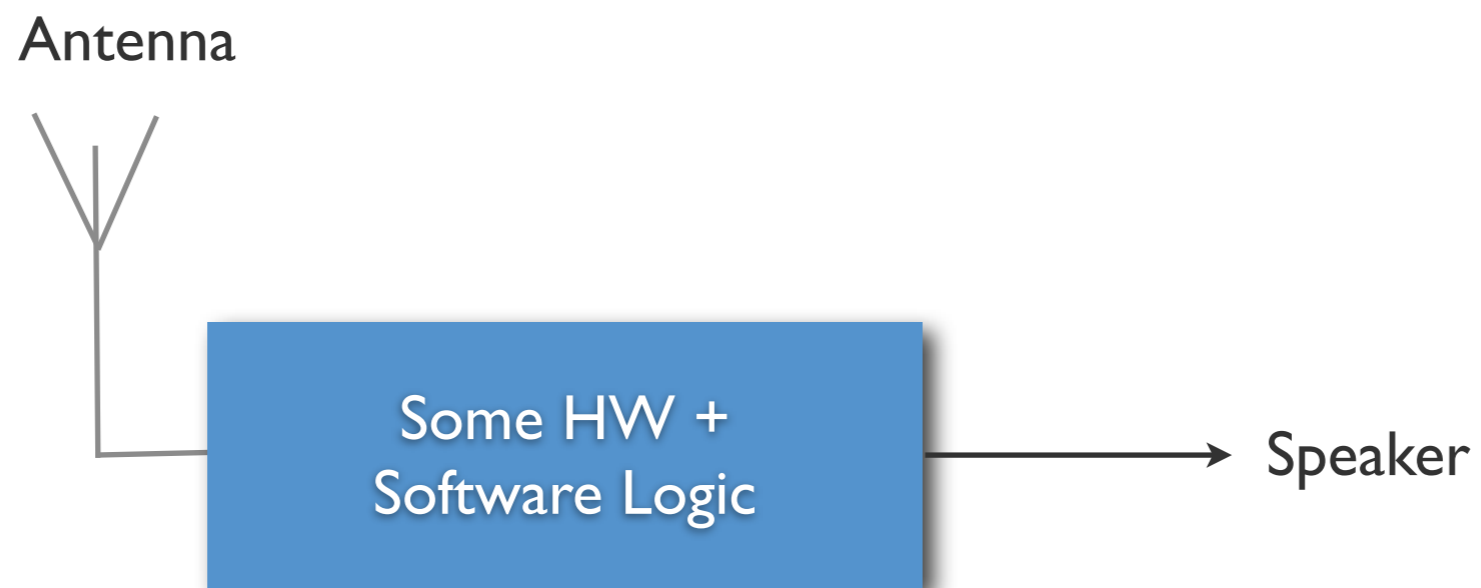


What if...

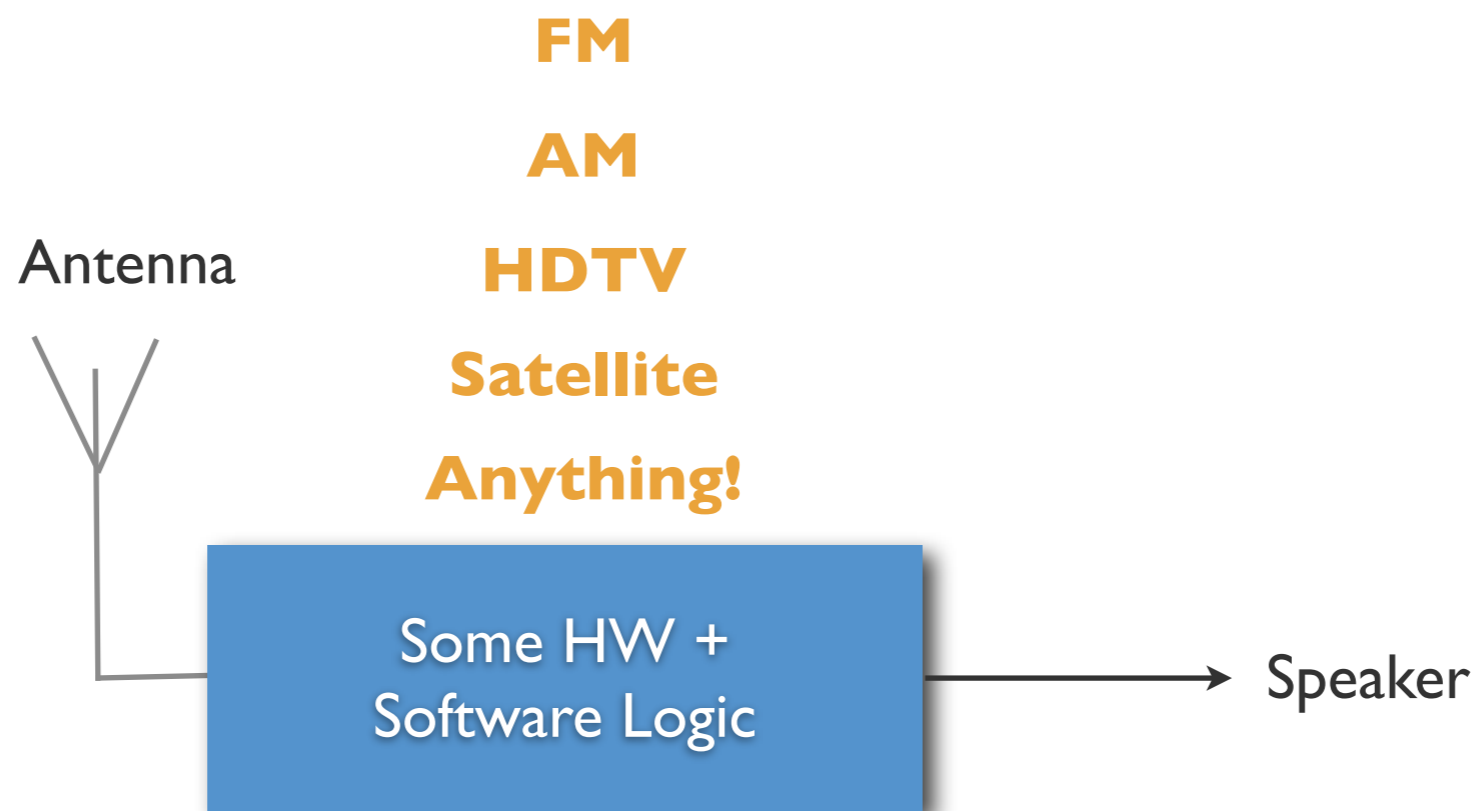
Antenna



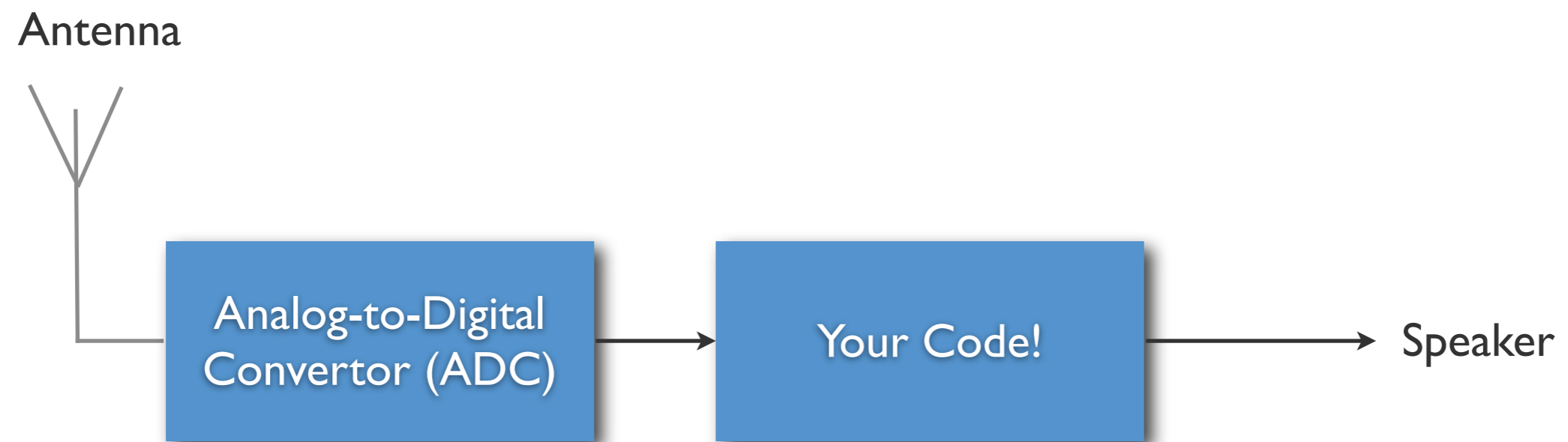
What if...



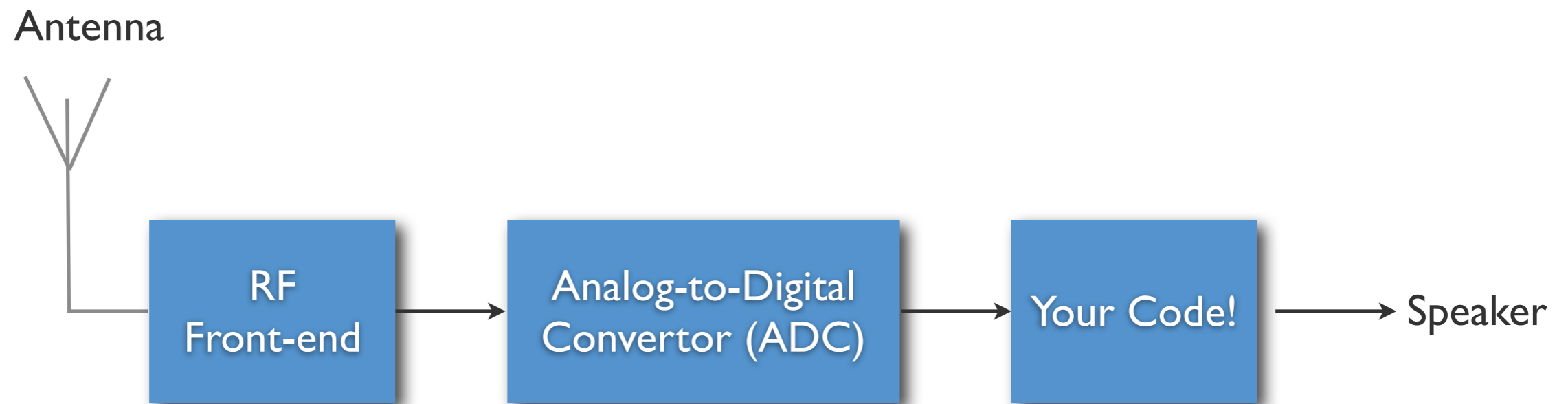
What if...



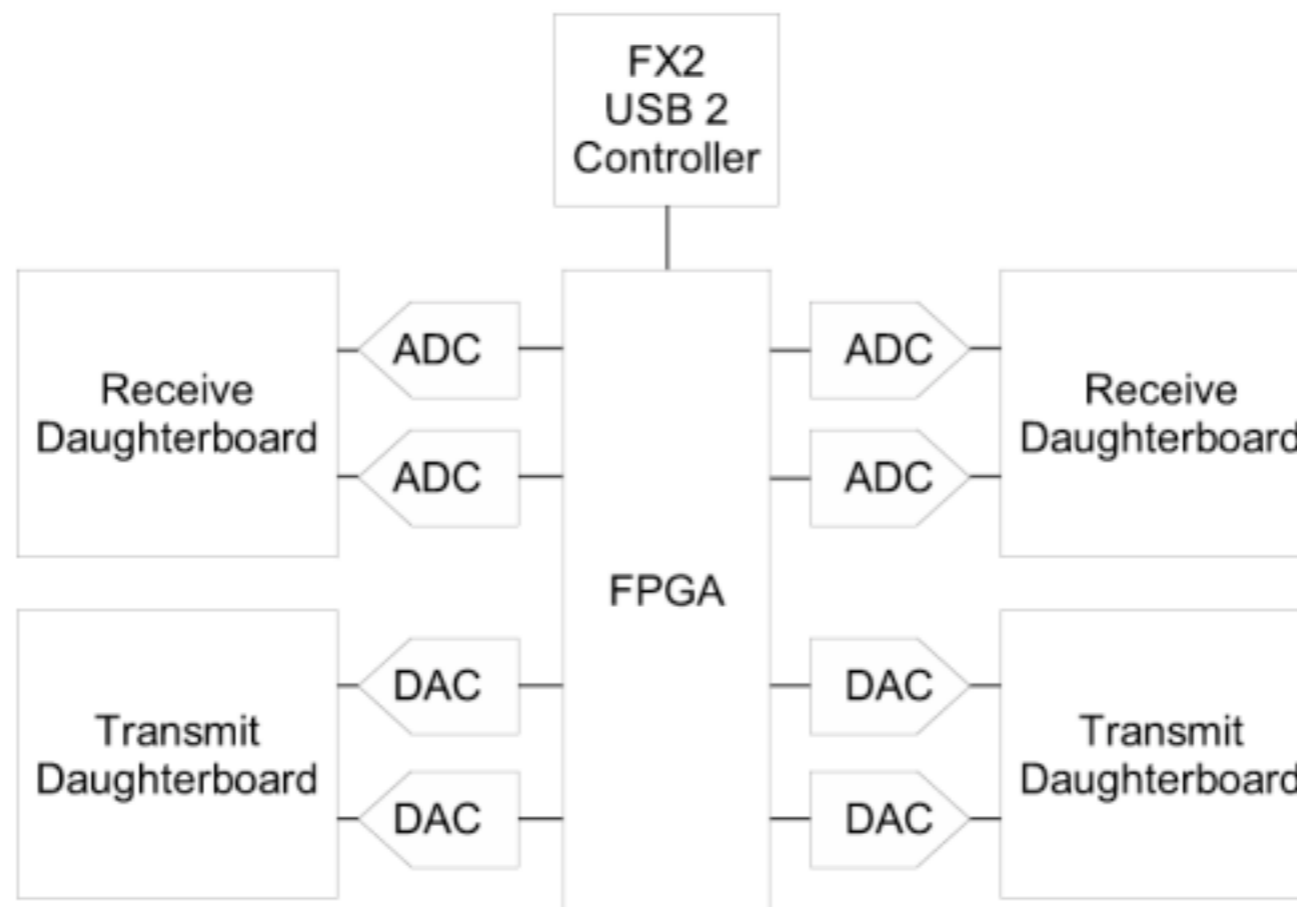
Software Defined Radio



Software Defined Radio



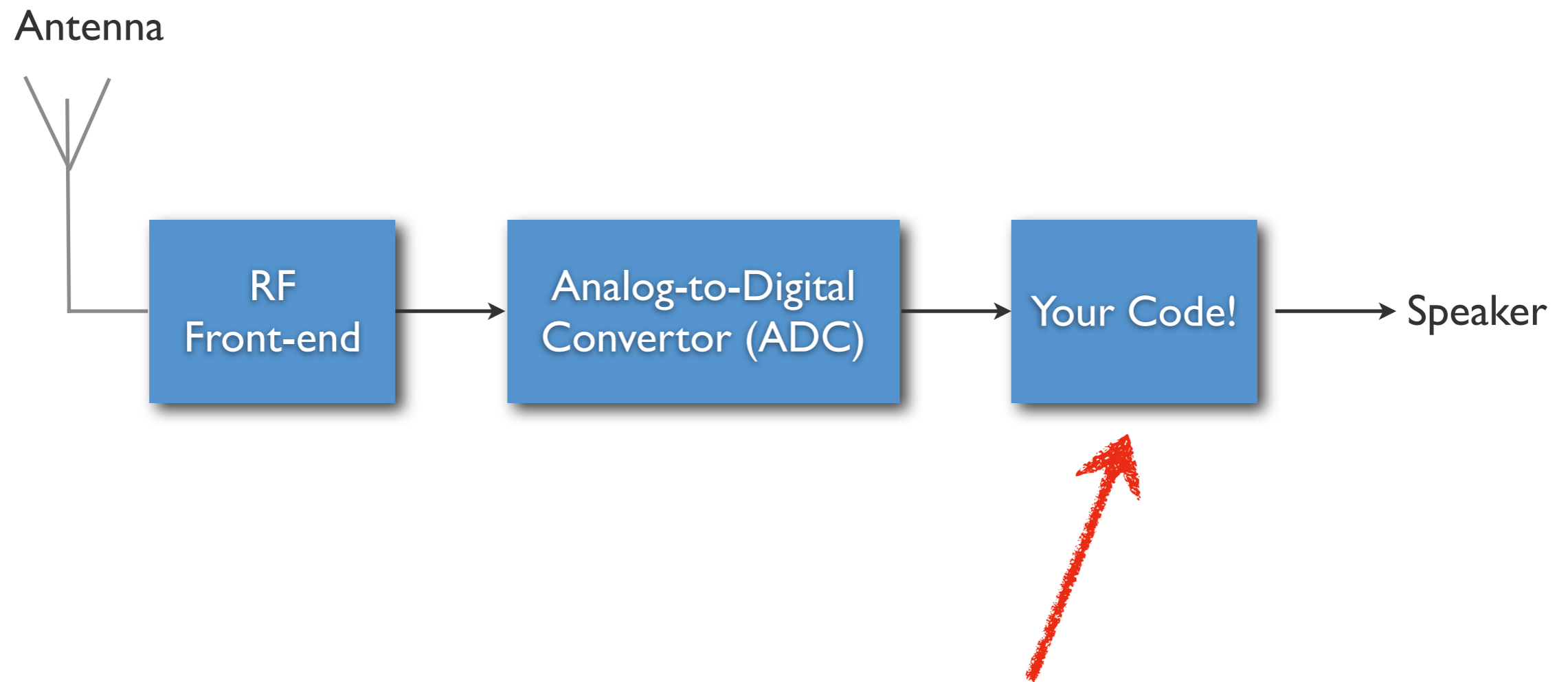
USRP



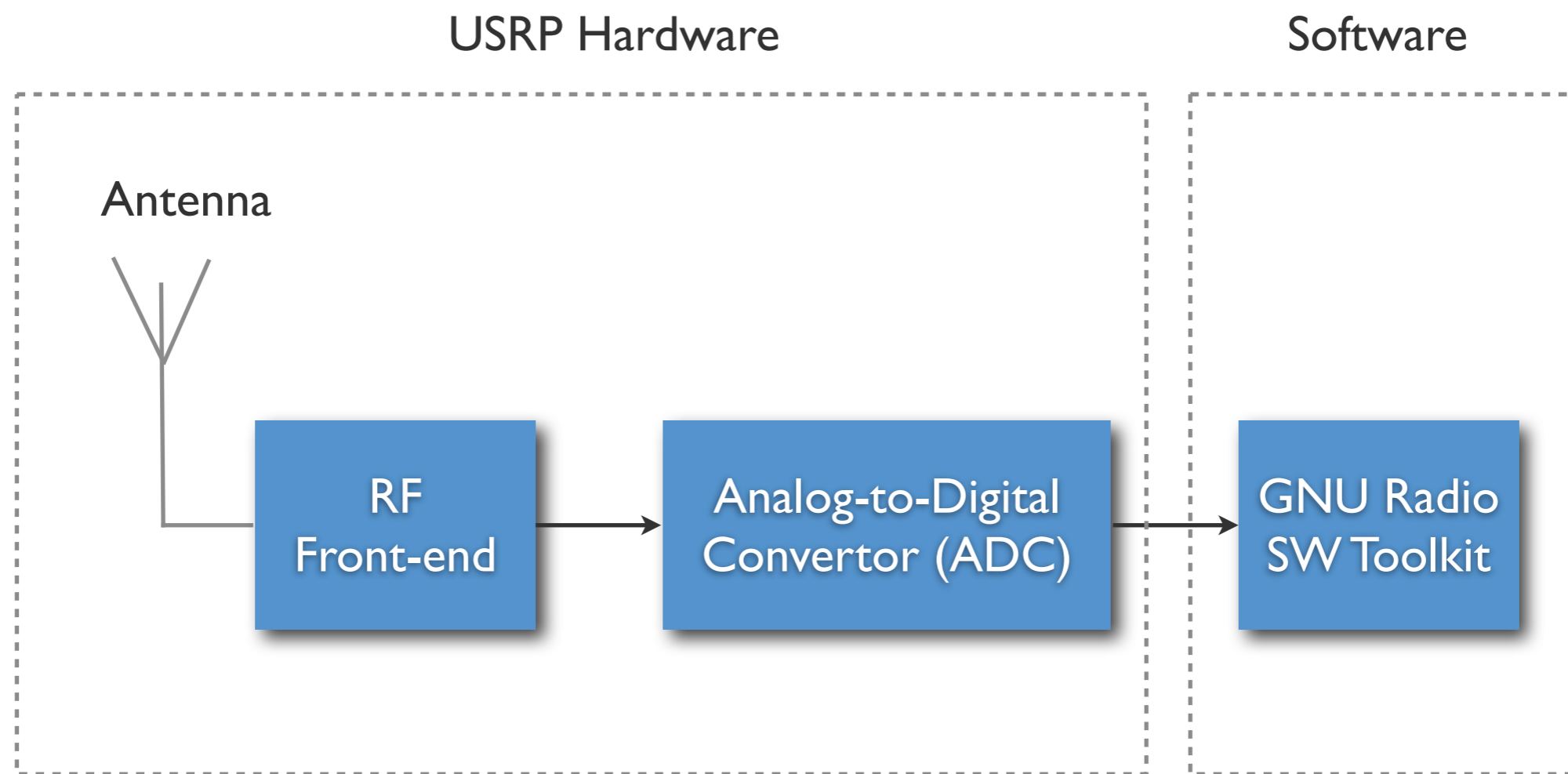
USRP

- Has **four 64 MS/s** 12 bit ADCs
- Has **four 128 MS/s** 14 bit D to A converters
- Communicates using USB 2.0
- Can process **16 MHz wide band** of spectrum
- Can range between **0 and 5.9 GHz**

Where does GNURadio fit in?

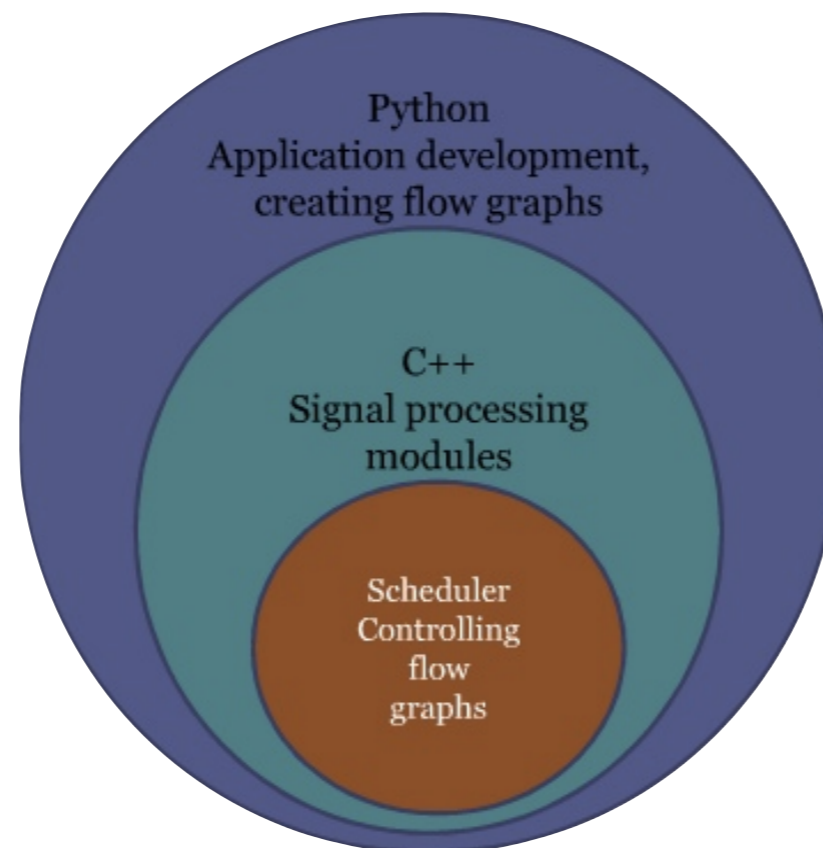


GNU Radio Block Schematic



GNU Radio

- **Signal Processing** Modules (FFT, Filters etc.)
- **3 Tier** architecture
- Python for **scheduling and GUI**
- **C++** for **core signal** processing modules



Enough of the boring details, Lets look at
a few **Live Demos!**

Download GNURadio

[http://www.cs.washington.edu/homes/
sidhant/UbiCompLinux.zip](http://www.cs.washington.edu/homes/sidhant/UbiCompLinux.zip)