Demodulators aka Downconversion Mixers

Antenna
Low-Noise Amplifier

VCO
2f₁

÷ 2

f₁

Demodulators

ADC
Digital Baseband Processor

In-Phase BB Path
Quadrature BB Path

LPF

Modulators aka Upconversion Mixers

Antenna
Power Amplifier

VCO

÷ 2

f₁

2f₁

Demodulators

ADC
Digital Baseband Processor

In-Phase BB Path
Quadrature BB Path

LPF

Modulators

VCO₁
2f₁

÷ 2

f₁

Modulators

Antenna
Low-Noise Amplifier 1

VCO₂
2f₂

÷ 2

f₂

Digital Baseband Processor

DAC
LPF

Adaptive Amplifier

DAC
LPF