

# DDS FM STEREO TUNER T-1100



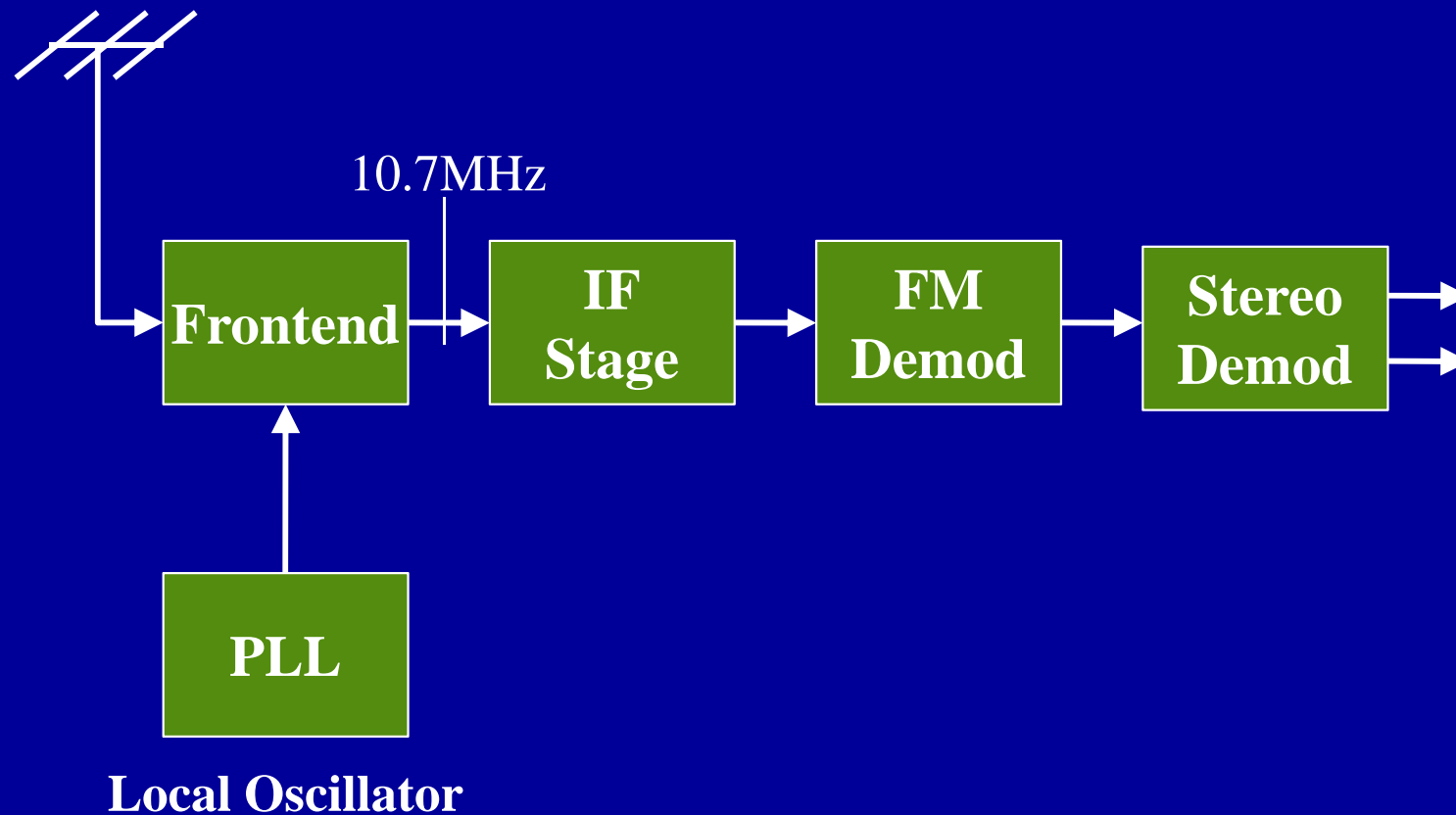
Accuphase Laboratory, Inc.

# Features

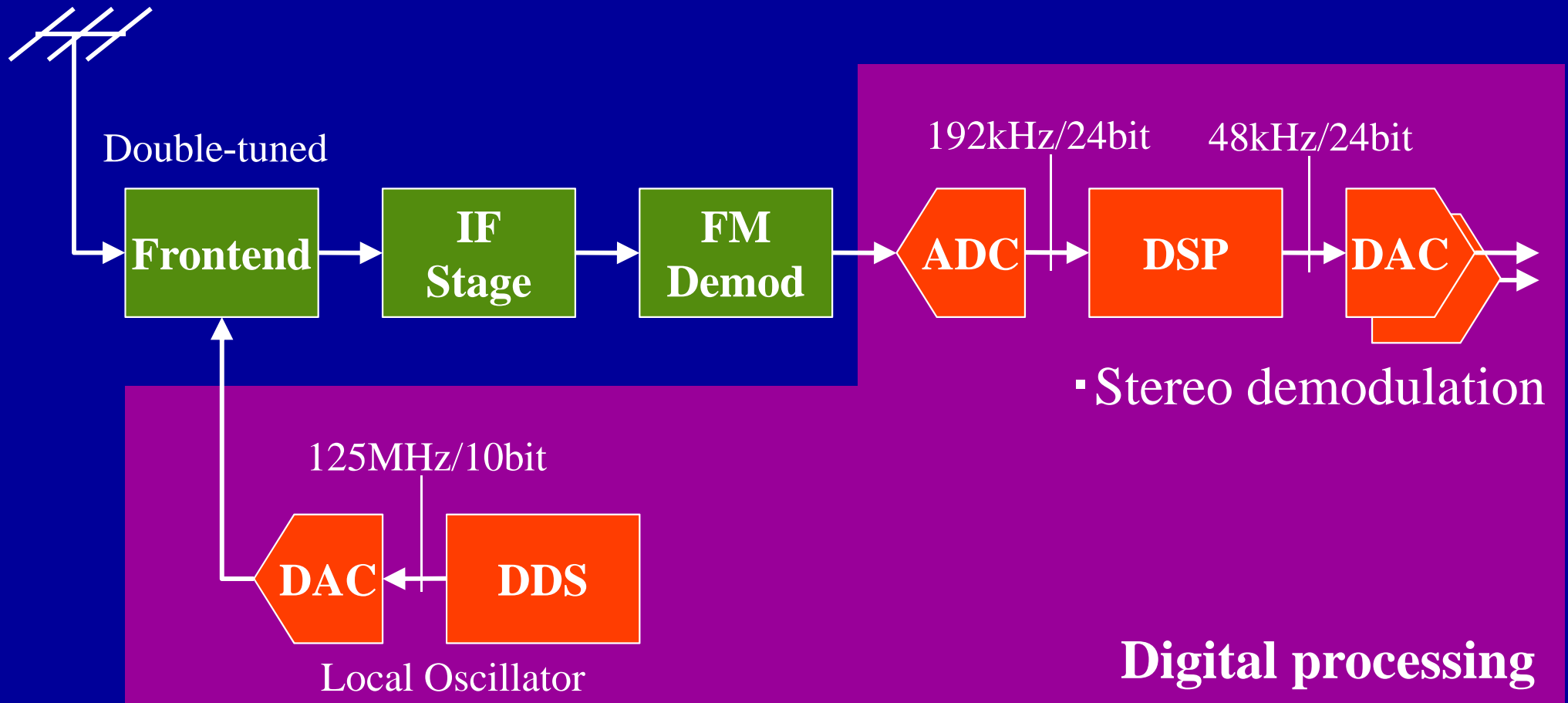
- ◆ High speed, high accuracy DDS on local oscillator
  - For low noise audio output
- ◆ Digitized from IF stage to audio stage using DSP
  - Variable bandwidth IF filtering
  - Multipath reduction function
  - Digital FM demodulation
  - Digital Stereo demodulation

# Block diagram of general Tuner

◆ All analog processing



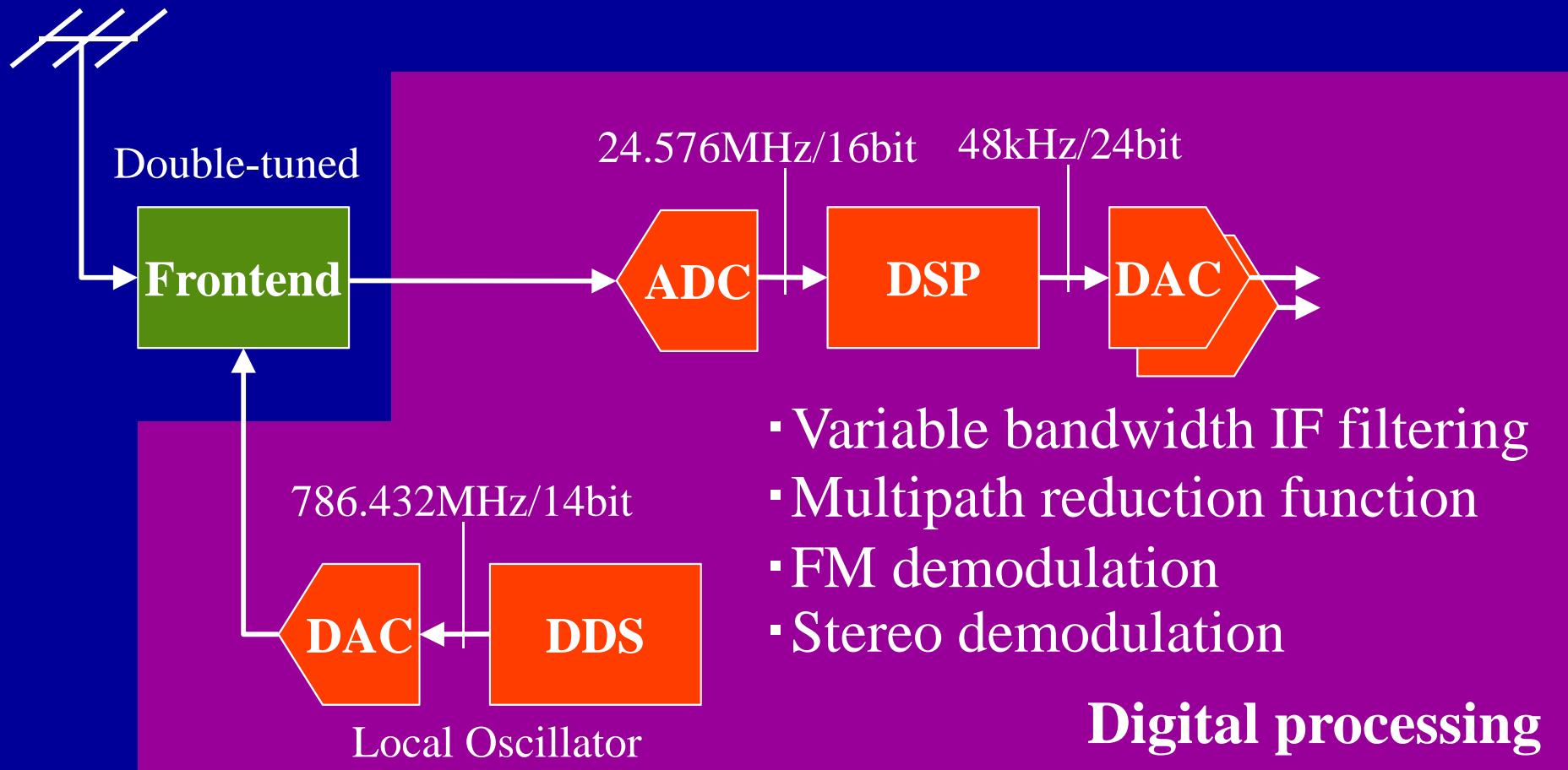
# Block Diagram of T-1000



DDS: Direct Digital Synthesis

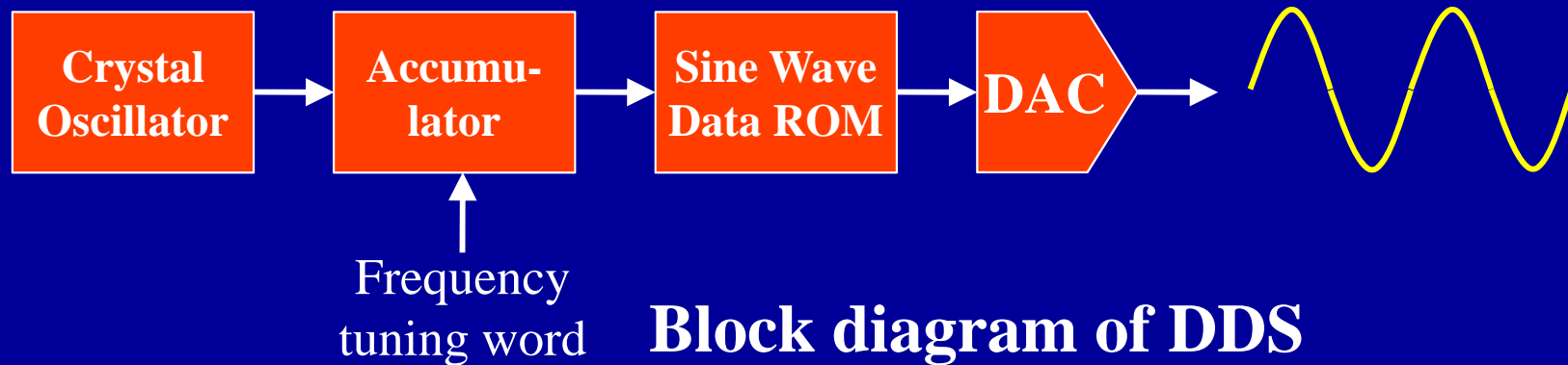
# Block Diagram of T-1100

## ◆ Almost digital processing



# DDS Local oscillator

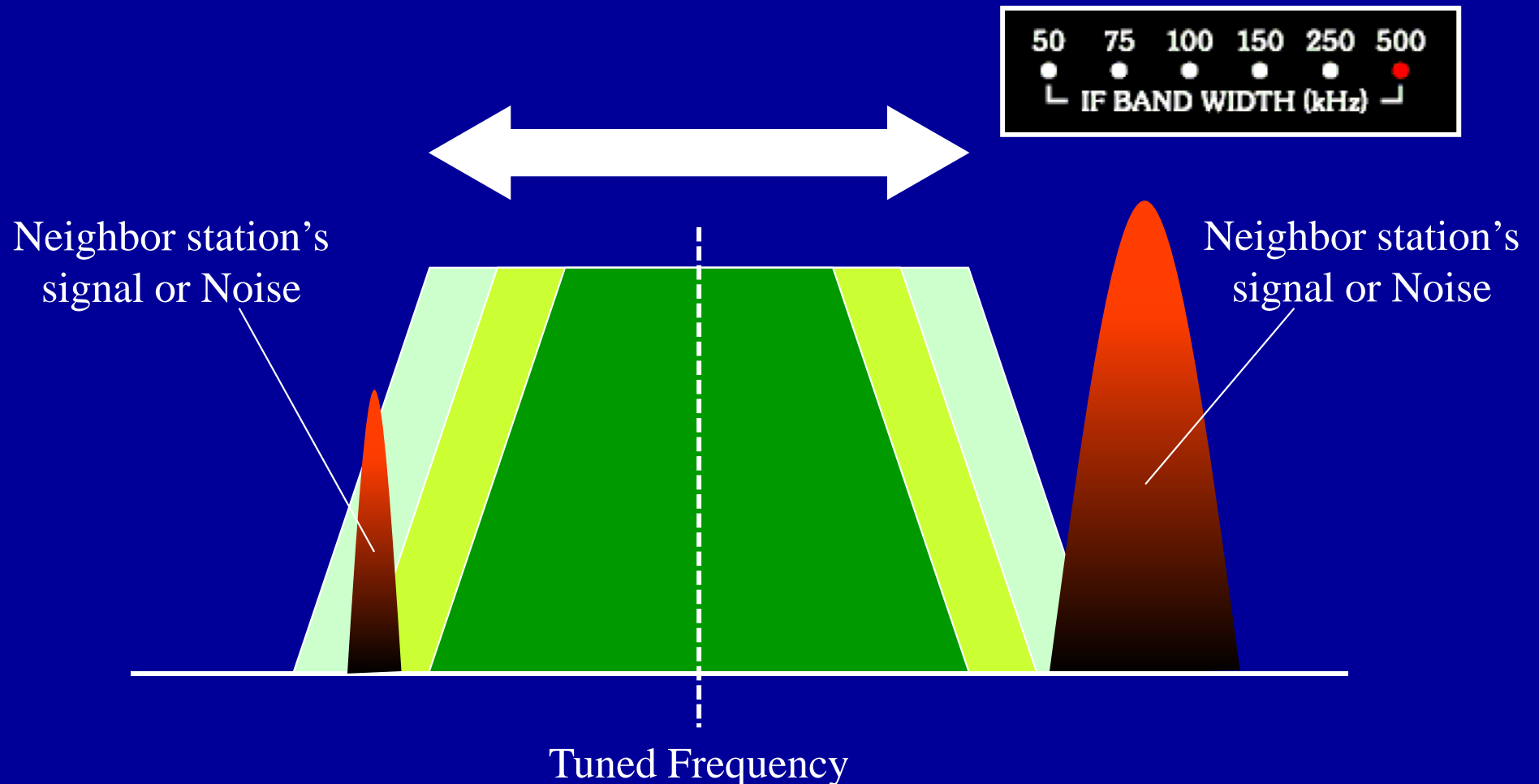
- ◆ The high purity signal is provided than PLL



- ◆ High speed high precision DDS than T-1000
  - T-1000:  $F_s=125\text{MHz}$ , 10bit
  - T-1100:  $F_s=786.432\text{MHz}$ , 14bit

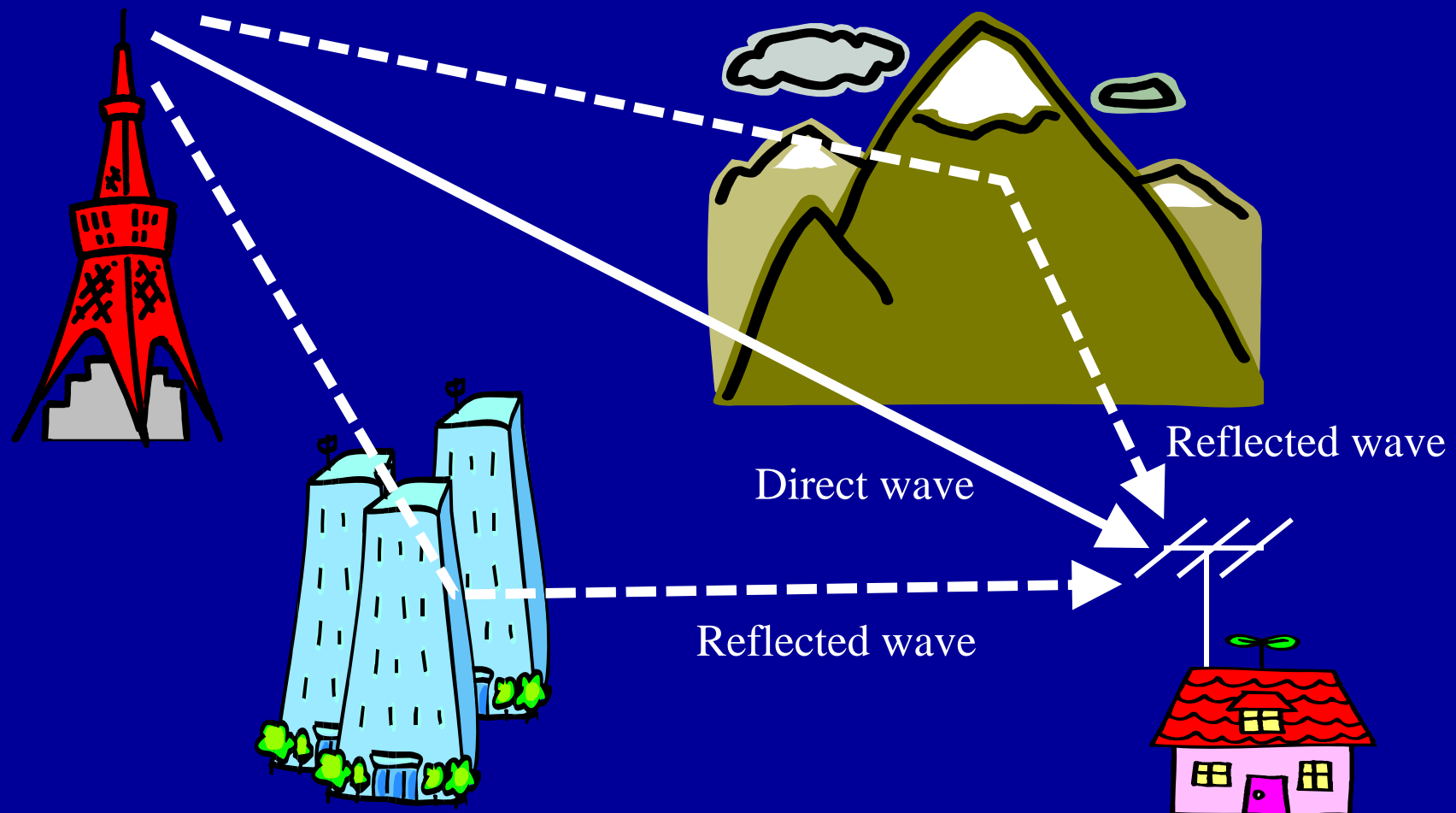
# Variable bandwidth IF filtering

◆ Great effect for Interference



# Multipath reduction function MPR

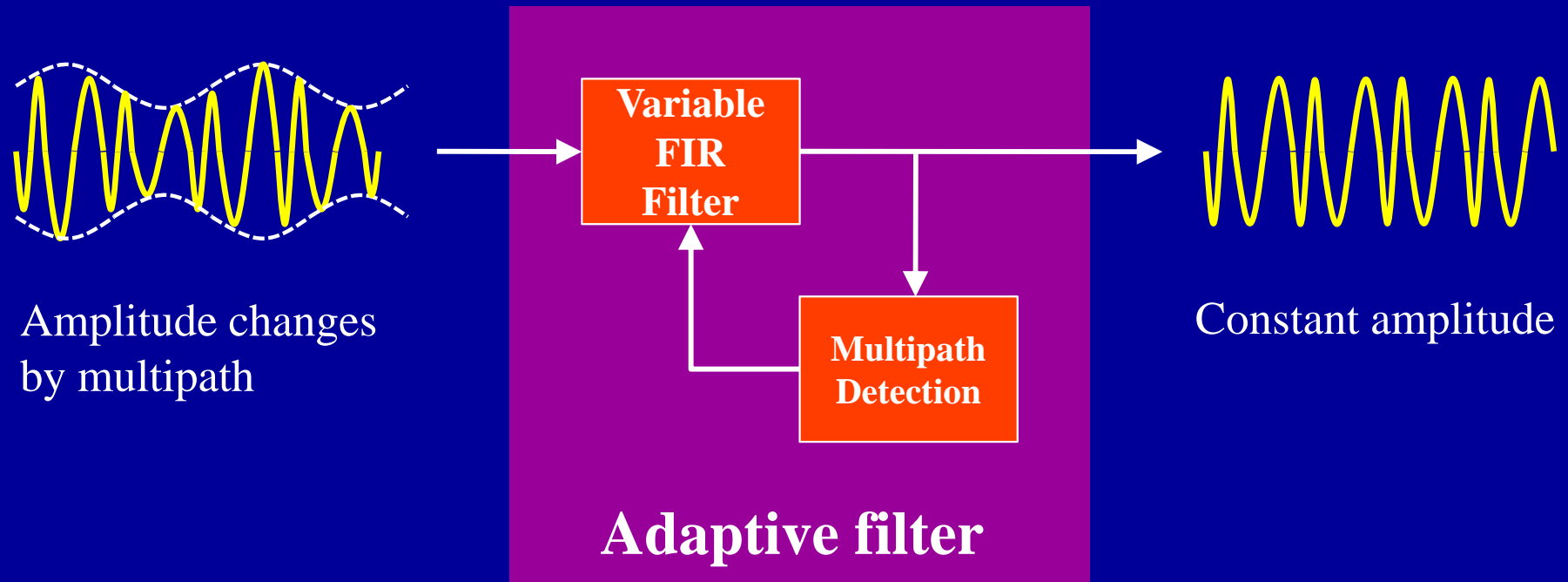
- ◆ MPR reduces the distortion by reflection waves





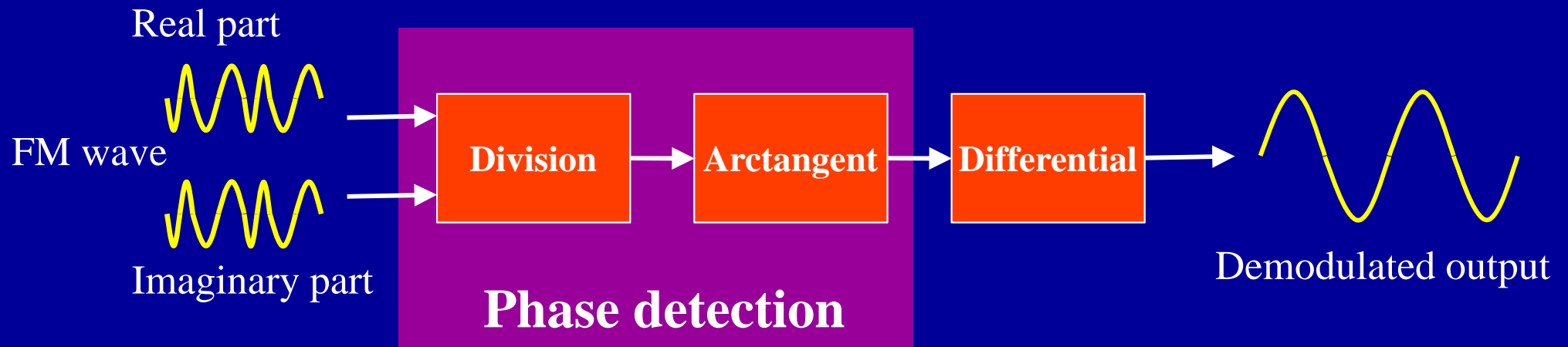
# MPR

◆ MPR employs Adaptive filter technology



# Digital FM demodulation

- ◆ FM demodulation by numerical processing
  - It realized a low distortion and low noise



# Digital Stereo demodulation DS-DC

- ◆ DS-DC: Direct Synthesis–Double Cancellation
  - Outstanding channel separation

