

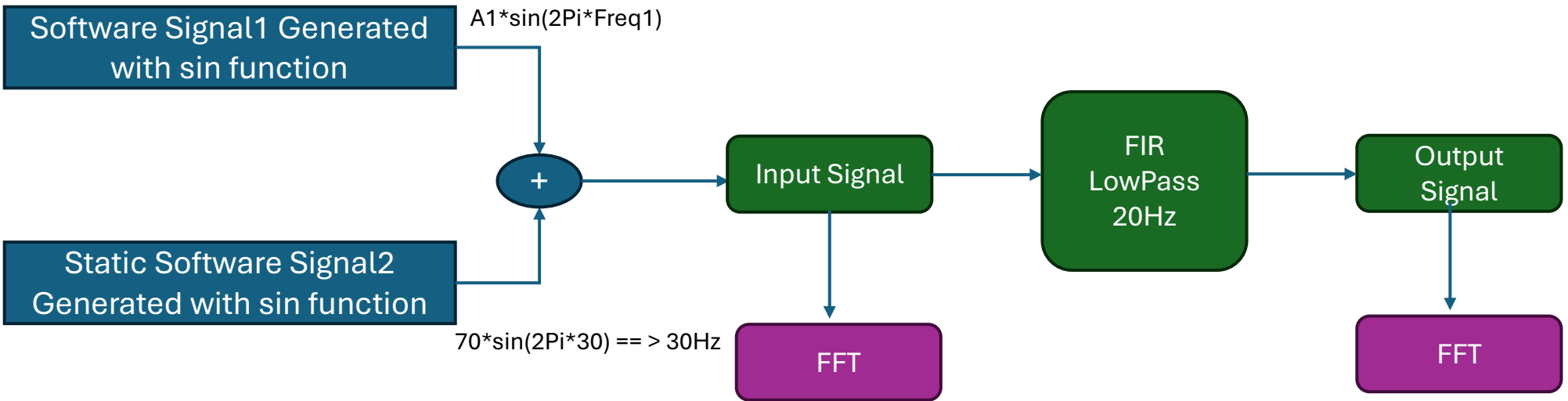
FIR- FFT Project

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2024

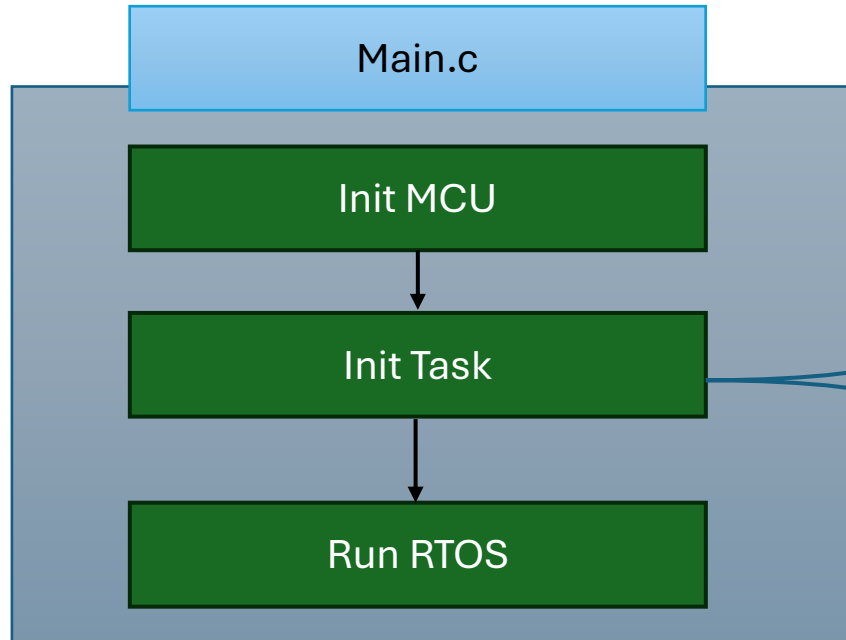
Project Description

Sampling Time =4ms



Software Description

Sampling Time =4ms

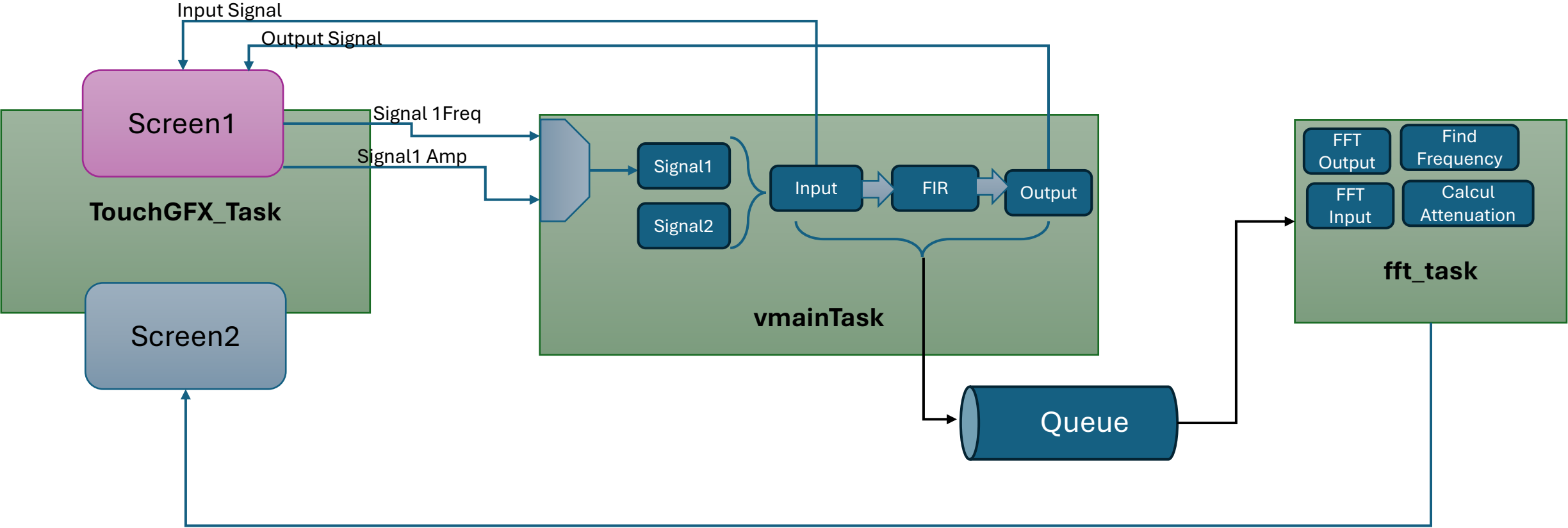


Configure 3 Tasks :

- **TouchGFX_Task** : managing the ScreenView
- **vmainTask** : generate input Signal& apply fir
filtre
- **fft task** : produce fft for both input & output

Software Description

Sampling Time =250Hz



FIR Octave Script

```
close all;
clear all;
clc;

pkg load signal

%FIR1
fs=250;
fc=20; %20Hz
wc=fc/(fs/2); % normalized frequency

b=fir1(80,wc); % Low pass filter

figure;
stem(b);

freqz(b,1,2^12,fs); %frequency response of filter
[H,f]=freqz(b,1,2^12,fs);
figure;
plot(f,abs(H));
xlabel('Frequency Hz');
ylabel('Freq Response');
box off; grid on; axis tight;
```