



### Specification

- Clock generator : 2 MHz

### Onboard signal

- Sine wave
- Frequency : 1 ~ 10 KHz
- Amplitude : 0 ~ 2 Vpp

### Noise generator

#### Pseudo random noise source

- Number of bits : 32-bit
- Output amplitude : 0 ~ 1V
- Noise bandwidth : 2 MHz

### Signal attenuator and adder

- Adjustable from 0 to the maximum of input value signal + noise adder stage

### Low pass filter

- 4th Order butterworth filter
- Cut-off frequency : 3.4 KHz

### Power meter and display

- Input signal amplitude : 0 ~ 2 Vpp
- Timer : 1 ~ 15 seconds
- Display : 2 digits seven segment

### Switch faults

- 4 switch faults are provided on board to study different effects on circuit

### Power supply

- GND, +5V, +12V, -12V

### Experiments

- To observe the effect of noise on various analog systems
- To calculate signal to noise ratio
- To calculate noise figure
- To calculate noise power and noise power spectral density
- To study the effects of low pass filter on noisy signal
- To study the effects of switch faults

Note: Specifications are subject to change.