



Caddo4210 Function / Arbitrary Waveform Generator is based on Direct Digital Synthesis (DDS) techniques to create a stable, accurate output signal for clean, low distortion sine wave up to 10MHz. It also gives user square wave with fast rise and fall time up to 4MHz and linear ramp wave up to 150 KHz.

The Waveform Creator Software allows user to easily create, edit, and download complex waveforms using the wave editor.

Front-panel operation is a straight forward and user friendly. The knob or numerical keypad can be used to adjust frequency, amplitude, offset, and other parameters. Internal Modulation makes it easy to modulate waveforms without the need for a separate modulation source. Burst mode operation allows for a user-selected number of cycles per period of time.

Linear sweep is also built in, with sweep rates selectable from 1ms to 100 sec.

### Features

**Based on Direct Digital Synthesis (DDS) technique to create a stable, accurate output signal for clean, low distortion sine wave & square wave with fast rise & fall time**

**10MHz Sine & 4MHz Square waveform**

**Pulse, Ramp, Triangle, Noise, and DC waveforms**

**More than 25 Arbitrary Waveforms**

**10bits 100MSa/s, 4K points Arbitrary waves**

**AM, FM, and FSK modulation types**

**Sweep and Burst operation**

**10mVpp to 20Vpp amplitude range**

**Permanent 5 storage & recall for control panel setting**

**Waveform Creator Software for custom waveform generation**

**Connect via Serial**

### Technical Specification

Waveforms	Max. Frequency	Resolution
Sine	10MHz	1mHz
Square	4MHz	1mHz
Pulse	4MHz	1mHz
Ramp	150KHz	1mHz
Arbitrary	2MHz	1mHz

### Technical Specification

#### Output

Source Impedance	: 50 Ω
Amplitude Range	: 10 mVpp to 20 Vpp (OC) 5 mVpp to 10 Vpp (50Ω)
Amplitude Accuracy	: ± 2% (sine output)
Maximum Offset	: ± 5 VDC
Amplitude Flatness	: < 5MHz 0.1dB (±1%) 5 MHz to 10 MHz 0.2dB (±2%)
Accuracy	: Within 1 Year: 20ppm

#### Sine Wave

Amplitude	: 10mVpp to 20Vpp (Open Circuit)
Phase Noise	: 10KHzOffset – 120dBc/Hz, typical
Harmonic Distortion	: <0.2% (1mHz to 500kHz) <1% (500kHz to 3MHz) <3% (3MHz to 10MHz)

#### Square Wave

Rise / Fall Time	: <20 ns (10% to 90%)
Asymmetry(below 50% Duty Cycle)	: 1% of the period + 20ns
Overshoot	: <5%

#### Triangle Wave

Amplitude	: 10mVpp to 20Vpp (OC)
Linearity	: better than 1%

#### Pulse Wave

Rise / Fall Time	: <20 ns (10% to 90%)
Asymmetry(below 50% Duty Cycle)	: 1% of the period + 20ns
Overshoot	: <5%
Duty Cycle	: 5% to 95%

#### Ramp Wave

Amplitude	: 10mVpp to 20Vpp (OC)
Linearity	: better than 1%

#### Arbitrary Waveforms

Sample Rate	: 100MSa/s
Waveform Length	: 4K points
Vertical Resolution	: 10bit (including sign)

#### Modulation and Sweeps

##### AM

Carrier Waveforms	: Sine, Square, Ramp, Arb
Source	: Internal
Internal modulation	: Sine, Square, Ramp, Triangular, Noise, Arb (2mHz to 20KHz)
Depth	: 0 to 100%

##### FM

Carrier Waveforms	: Sine, Square, Ramp, Arb
Source	: Internal
Internal modulation	: Sine, Square, Ramp, Triangle, Noise, Arb (2mHz to 20KHz)
Deviation	: DC to 10MHz

##### FSK

Carrier Waveform	: Sine, Square, Ramp, Arb
Source	: Internal

##### SWEEP

Carrier Waveforms	: Sine, Square, Ramp, Arbitrary
Type	: Linear
Direction	: Up or Down
Sweep Time	: 1ms to 100s ±0.1%
Source	: Internal

##### BURST

: Variable Cycle and Time

**Interface** : RS232 for downloading arbitrary signal from Waveform Creator Software to Instrument.

**Display** : 128 X 64 Dot Graphics LCD

**Software** : Waveform Creator software, allows user to easily create, edit, and download user define waveform using waveform editor. Also one can capture the waveform using DSO & send it to the instrument for output through PC.

**Power** : 100 to 240 VAC, 50 / 60 Hz, Less than 35 VA

**Weight** : 3 Kg approx.