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links

- <http://www.banggood.com/UDB1200-Programmable-DDS-Signal-Generator-Dual-TTL-Drive-IGBT-W>
- https://sigrok.org/wiki/MHINSTEK_UDB1xxxS
- <http://www.mhinstek.com/down/html/?88.html>

serial port

- <http://www.eevblog.com/forum/testgear/little-chinese-dds-functionsignal-generator-4-pin-header/>

info

Main Feature:

1. Produce a rich function waveform, can produce sine waves, duty cycle 1% to 99% square wave, triangle wave and two sawtooth.
2. Dual-channel reverse, and the duty cycle of CNC adjustable TTL output for easy debugging IGBT module.
3. All feature enables digital control, providing communication protocol can connect a PC to control.
4. Amplitude using potentiometers and NC combination, which can achieve full-scale output of CNC's 256 control.
5. External frequency measurement functions has a wide range, from 1Hz to 60MHz.
6. With a one-way ADC converter, convert the DC voltage from 0V to 5V, resolution up to 0.001V (1mV).
7. With a sweep function that can be set to scan the frequency range and scan time.

Signal output function:

Output waveforms: Sine wave, Square wave, Triangle wave, Sawtooth wave

Output amplitude: $\hat{A} \approx 9V_{p-p}$ (signal output ,no load)

Output impedance: $50\Omega \pm 10\%$

DC offset: $\hat{A} \pm 2.5V$ (no load)

Display: LCD1602

Frequency range:

Normal mode: 0.01Hz~2MHz(UDB1202S), 0.01Hz~5MHz(UDB1205S),

0.01Hz~10MHz(UDB1210S) Ultra-low frequency mode: 0Hz-1kHz

Frequency resolution:

Normal mode:: 0.01Hz(10mHz) Ultra-low frequency mode: 0.001Hz

Frequency stability: $\hat{A} \pm 1\% \cdot 10^{-6}$

Frequency accuracy: $\hat{A} \pm 5\% \cdot 10^{-6}$

Sine wave distortion: $\hat{A} \approx 0.8\%$ (reference frequency is 1kHz)

Triangle wave linearity: $\hat{\approx}$ \approx 98% (0.01Hz~10kHz)

Rise and fall time of square wave: $\hat{\approx}$ \approx 100ns

Square wave duty range: 1%~99%

2-Channel TTL output function:

Frequency range:

0.01Hz~2MHz(UDB1202S)

0.01Hz ~5MHz(UDB1205S)

0.01Hz ~10MHz(UDB1210S)

Two channel output phase: 180 $\hat{\text{A}}$ $^{\circ}$

Amplitude: >3Vp-p

Fan out coefficient: >20 TTL Load

COUNTER function:

Counter range: 0~4294967295

Frequency measurement range: 1Hz~60MHz

Input voltage range: 0.5Vp-p~20Vp-p

ADC function:

Voltage measuring range: 0-5V

Resolution: 0.001V (1mV)

Accuracy: $\hat{\text{A}}$ \pm 0.5% + 2 Character

SWEEP function:

Frequency range: fM1~fM2(frequency can be freely set)

Input voltage range: 0.5Vp-p~20Vp-p

Other functions:

Save and load parameter: 10 Location, M0~M9(M0:default load)

Power: DC 5V