

TINALab II specification

SYNTHESIZED FUNCTION GENERATOR

WAVEFORM OUTPUT	
Amplitude	$\pm 10V, \pm 5V$ (into 50 Ohm)
Nominal Impedance	50 Ohm
Protection	Short circuit protection to ground and any used power supply on the front panel
Waveform	Square, Ramp, Triangle, DC, Arbitrary
Bandwidth	50MHz
Frequency range	
Sine	4MHz
Square, Triangle	500kHz
Arbitrary	depends on waveform
Synch Output (indicates 0V crossing)	5V CMOS level

D/A CONVERTER	
Resolution	10 [12] bits (<0.1% of full scale), monotonic
Update Rate	40 MSPS

WAVEFORM MEMORY	
Type	Fast static RAM
Capacity	Min. 65,536 * 16bits

DIGITAL OUTPUTS

# of Lines	16
Connection	all 16 bits wired to a shrouded male connector 8 least significant bits wired to 2mm sockets
Compatibility	5V tolerant devices (5V TTL/CMOS, 3.3V LVCMOS)

ANALOG INPUTS

# of Channels	2
Input Configurations	Single ended
Full Scale Input Range	$\pm 80V$
Overvoltage	$\pm 400V$
Nominal Impedance	1 MOhm / 25pF

A/D CONVERSION	
Resolution	10 [12] bit (no missing codes)
Sample Rate (non-repetitive signal)	20 MSPS/channel
Equivalent Sample Rate (repetitive signal)	4 GSPS/channel

SYSTEM CHARACTERISTIC	
Bandwidth (-3dB)	dc .. 50MHz DC-coupled 2Hz .. 50MHz AC-coupled

FRAME MEMORY / CHANNEL	
Type	Fast static RAM
Capacity	min. 65536 * 16 bit
Input mode	Digitized analog and/or digital

VERTICAL MEASUREMENT RANGES	
Scale Factor	5mV/div .. 20 V/div
Attenuation Factors	X1, X2, X5

HORIZONTAL MEASURE RANGES	
Scale Factor	10 s/div .. 2us/div
Scale Factor (repetitive signal)	10 s/div .. 10ns/div
Attenuation Factors	X1, X2, X5

TRIGGER SOURCE	
Analog	Channels A, B, external
Digital	8 * 16 bits trigger pattern

TRIGGER RESPONSE (WAVEFORM GENERATING)	
Free Run	[Internal] trigger then go
Single	One waveform then stop
Continuous	One waveform then wait for a trigger

DIGITAL INPUT

# of Lines	16
Connection	all 16 bits wired to a shrouded male connector 8 least significant bits wired to 2mm sockets
Compatibility	3.3V CMOS/TTL, 5V CMOS/TTL
Overvoltage Protection	min. $\pm 15V$

INTERFACE

RS-232	115200 baud, full-duplex, 8, N, 1
USB 1.1	full speed

DC POWER SUPPLY

Fixed DC output	
+5V	0.4A
-5V	0.1A
Variable DC output	
+15V	0.1A
-15V	0.2A

EXTERNAL POWER SUPPLY

Type	switching, external
Input	100 .. 240VAC, 47 .. 63Hz
Output	+5V/3A, +15V/0.8A, -15V/0.8A

GENERAL

Weight	ca. 1kg
Color	Light gray
Dimensions (W x H x D)	291 x 75 x 199 mm