

NEW PRODUCT

FC500M

Frequency Counter

500MHz input bandwidth

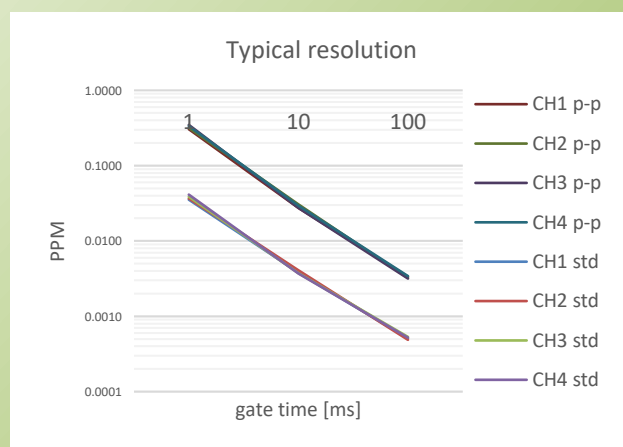


Key Features

- ❑ **Highly Cost Effective**
- ❑ **Zero-Dead-Time:** Gap-free, uninterrupted measurement
- ❑ **High Resolution:** 11 digits frequency measurement precision
- ❑ **Broad Input Bandwidth:** Equipped with 4 channels, 500MHz input bandwidth
- ❑ **Remote-Control Solution:** USB interface
- ❑ **High Throughput Rate:** up to 4K samples per second frequency measurement.
- ❑ **Comprehensive Statistical Functions:** Maximum, minimum, standard deviation, OADEV, timestamps, and more.
- ❑ **Easy calibration:** Support hardware trimming & software calibration
- ❑ **Compact Form :** 234(L) x 158(W) x 52(H) mm

Applications

- ❑ Capable of measuring all kinds of signal types, such as TTL, SINE WAVE, CMOS, LVCMOS, LVDS, LVPECL, etc.
- ❑ Crystal oscillator testing system, such as stability, aging, etc.
- ❑ High resolution time stamping
- ❑ General purpose



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Technical Specifications

Input Channel Characteristics

Input characteristics (nom)	
Channels	CH1, CH2, CH3 & CH4
Frequency range	DC – 500MHz
Input coupling	DC coupled
Input impedance	1M Ω or 50 Ω
Input range	\pm 5V
Sensitivity	150mV
Hysteresis window	30mV
Trigger level	Zero crossing
Connector	SMA

Measurement Characteristics

Frequency & period measurement	
Channels	CH1, CH2, CH3 & CH4
Resolution	11 digits/s or 100ps rms single shot resolution
Measurement technique	Interpolator, gap-free
Signal type	TTL, SINE WAVE, CMOS, LVCMOS, LVDS, LVPECL, etc.
Gate	Internal
Gate time	1 ms to 100 sec in 1 ms steps

Time base Characteristics

Time base characteristics (nom)	
Time base reference	Internal / external (manual selection is required)
Calibration	Software / Hardware Calibration

External time base input	
Impedance	50 Ω
Input range	10 MHz
Input level	0dBm to 18dBm

Time base output	
Impedance	50 Ω
Level	3.3V
Signal	LVCMOS

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.
ACTUAL PRODUCT MAY VARY DUE TO PRODUCT ENHANCEMENT.



Technical Specifications

Remote interface characteristics

Remote interfaces	
Interfaces	USB2.0 full speed
Throughput rate	Typ. 1000 samples / Channel
Data output format	ASCII or IEEE 754 double precision floating point
Connector	USB-B (rear panel)

General Characteristics

	Min	Typ.	Max	Unit
Environment				
Warm-up time		30		minutes
Storage Temperature	-40		+85	°C
Operating Temperature	0		+55	°C
Operating Humidity			+85	%R.H.

Power Supply				
Supply Voltage	10.8	12	13.2	V (DC)
Supply Current	--	--	2	A

Mechanical	
Dimensions	234 (L) x 158 (W) x 52 (H) mm
Weight	0.83 kg

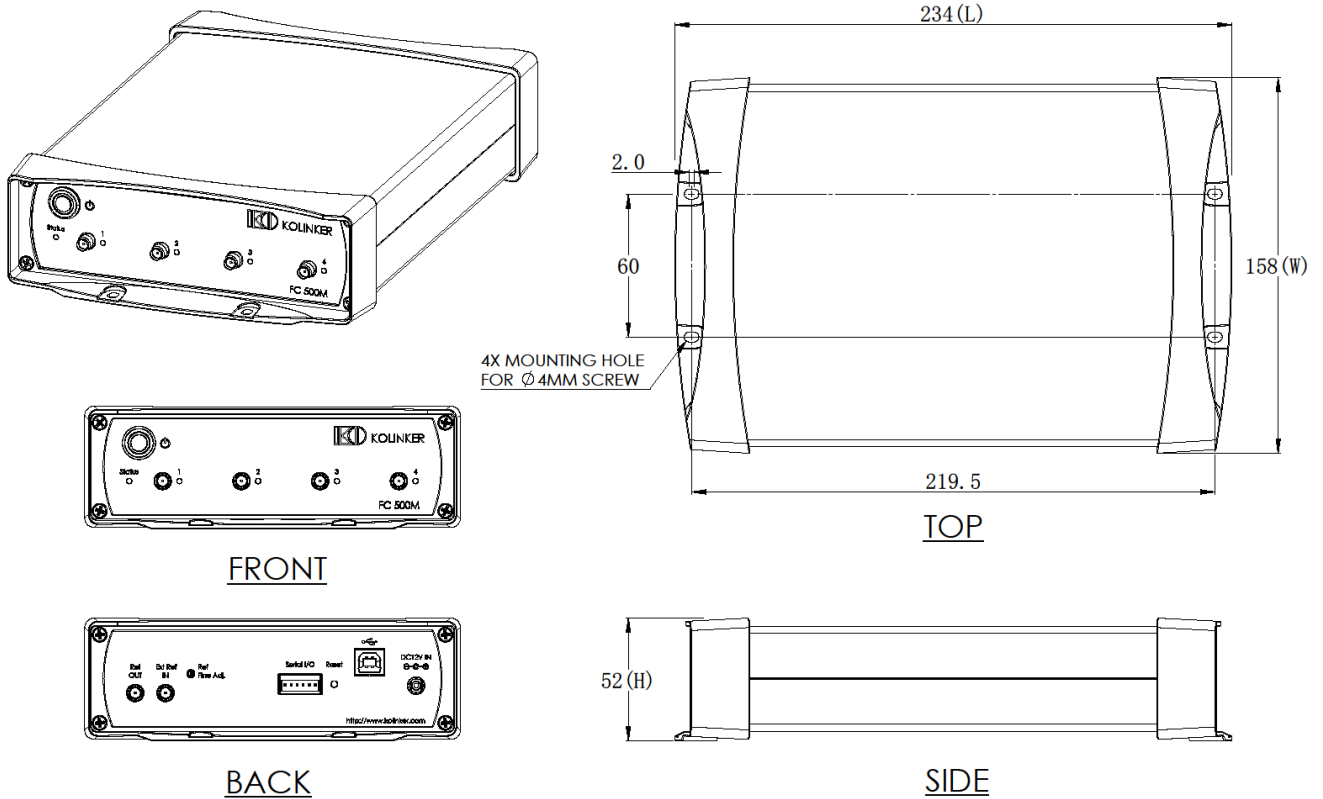
Time base options

Option model	STD	
Type	OCXO	
Aging		
24-hour	±3ppb	
1-year	±1ppm	
10-year	±3ppm	
Short-term stability:		
$\tau = 1s$	n/a	
$\tau = 10s$	n/a	
Ambient stability	±20ppb	
Range	-40°C to +85°C	
Warm-up	±50ppb in 5 minutes @ 25 °C ±1°C	

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Overview



Standard Package



A FC500M

B User Manual

C DC Power Supply

D Power Cord

E USB Flash Disk

F USB Cable

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