

U62 Series

High Accuracy, Speed & Performance Universal/Frequency Counter

Interface:

STD. USB & LAN / OPT. GPIB
(Conform to USBTMC & IEEE-488.2)

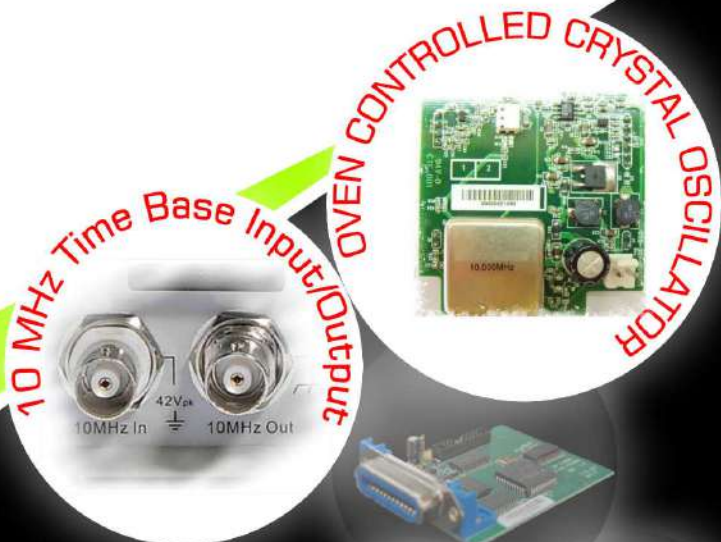


U6200A 6 GHz Universal Counter - 3 Channels -

- **CH 1/2 Capacity:** 1 mHz ~ 400 MHz (Standard)
- **CH 3 Capacity I:** 375 MHz ~ 6 GHz (Standard)
- **Freq. Resolution:** 12 Digits with 1s Gate Time
- **High Accuracy Timing Resolution:** 40ps
- **Measurement Functions:**
 - Frequency & Ratio
 - Time Interval
 - Period
 - Pulse Width
 - Rise/Fall Time
 - Phase
 - Duty Cycle
 - Totalize
 - Peak Voltage (100 Hz ~ 300 MHz)
- **Time Base Reference Stability:** < 1 ppm
- **Time Base:** 10 MHz Input/Output
- **Display:** Multi-Parameter of Results
- **Webserver:** Support
- **Free Software:** PT-TOOL & PT-LINK
- **Dimension & Weight:** (for Rack)
214.6(W) x 88.6(H) x 346.9(D) mm, 3130 g
- **Optional Accessories:**
 - U6200-opt04: Rear Panel Input Module (CH1/2)
 - U6200-opt05: Rear Panel Input Module CH1/2/3)
 - M3500-opt04: GPIB Card(Note: The Accessories have to be assembled in Picotest.)

U6220A 400 MHz Frequency Counter - Single Channel -

- **CH 1 Capacity:** 1 mHz ~ 400 MHz (Standard)
- **Freq. Resolution:** 12 Digits with 1s Gate Time
- **High Accuracy Timing Resolution:** 40ps
- **Measurement Functions:**
 - Frequency
 - Period
 - Totalize
 - Peak Voltage (100 Hz ~ 300 MHz)
- **Time Base Reference Stability:** < 1 ppm
- **Time Base:** 10 MHz Input/Output
- **Display:** Multi-Parameter of Results
- **Webserver:** Support
- **Free Software:** PT-TOOL & PT-LINK
- **Dimension & Weight:** (for Rack)
214.6(W) x 88.6(H) x 346.9(D) mm, 2887 g
- **Optional Accessories:**
 - M3500-opt04: GPIB Card(Note: The Accessory has to be assembled in Picotest.)



CH1/2 Input Specifications

DC Coupled:	1 mHz ~ 400 MHz
AC Coupled:	200 KHz ~ 400 MHz (50 Ω) 30 Hz ~ 400 MHz (1 MΩ)
FM Tolerance:	25%

Voltage Range & Sensitivity

1 mHz ~ 225 MHz:	20 mVrms ~ ± Vac + (Medium & High) 25 mVrms ~ ± 5 Vac + dc (Low)
225 MHz ~ 400 MHz:	30 mVrms ~ ± 5 Vac + dc

CH1/2 Input Characteristics

Impedance:	1 MΩ ~ 50 MΩ		
ATT x 1, 1MΩ Capacitance:	24 pF	ATT x 10, 1MΩ Capacitance:	15 pF
Coupling:	AC/DC		
Low-Pass Filter:	100 KHz (or Disabled) -20 dB at > 1 MHz	Internal Noise:	200 μVrms (Typical)
Input Sensitivity:	Selectable btw. Low, Medium (Default) or High Medium (Approx. 1.35 x High Sensitivity) Low (Approx. 1.7 x High Sensitivity)		

Voltage Range & Sensitivity (Single-Shot Pulse)

Pulse Width 1.5 ~ 10 ns:	80 mVpp ~ 10 Vpp
Pulse Width > 10 ns:	50 mVpp ~ 10 Vpp

Damage Level

(DC) 400 MHz, 50 Ω:	12 Vrms
0 ~ 3.5 KHz, 1 MΩ:	350 Vdc + ac pk
3.5 KHz ~ 100 KHz, 1 MΩ:	350 Vdc + ac pk linearly derated to 12 Vrms
100 KHz ~ 400 MHz, 1 MΩ:	12 Vrms

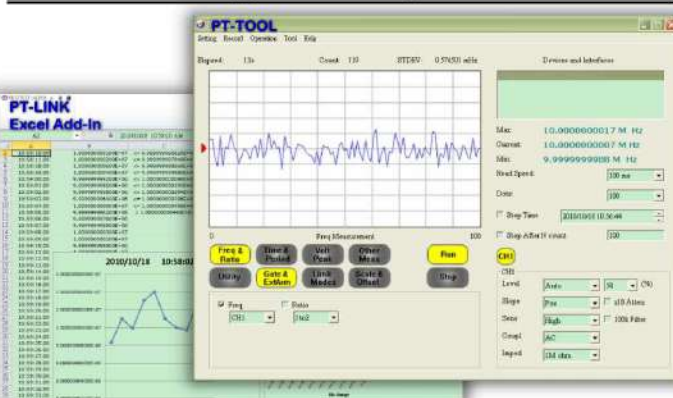
CH3 Input Specifications & Characteristics

Frequency Range:	375 MHz ~ 6 GHz / NS
Impedance:	50Ω / NS
Coupling:	AC / NS
VSWR:	< 2.5:1 / NS
Damage Level:	+25 dBm, DC ± 12 V / NS

Internal Time Base Stability

	Standard (0°C ~ 50°C)	High Stability OCXO (U6200-opt01)
Temperature Stability, 25°C	< ± 1 x 10 ⁻⁶	Phase Out
(Aging Rate)		
Per Day:	---	
Per Month:	< ± 0.2 x 10 ⁻⁶	
Per Year:	± 2 ppm	
Turn-On Stability vs. Time (30 minutes)	---	
Calibration:	Electronic	

Remote Control Application through The Free Software



Measurement Specifications

Frequency & Period CH1/2:	1 mHz ~ 400 MHz (2.5 ns ~ 1000 s)
Standard CH3:	375 MHz ~ 6 GHz (0.166 ns ~ 2.6 ns) / NS
Frequency Ratio:	CH1/CH2, CH1/CH3, CH2/CH1, CH3/CH1 Measurement is specified over the full signal range of each input. / NS
Results Range:	10 ⁻¹⁰ ~ 10 ¹¹ / NS
Time Interval:	Measurement is specified over the full signal ranges of CH 1 & 2. The width of the pulse must be greater than 1 ns, frequency range to 300 MHz. / NS
Results Range:	-0.5 ns to 10 ⁵ s / NS
Resolution:	40 ps / NS
RMS Resolution:	120 ps / NS
Pulse Width Time:	Measurement is specified over the full signal ranges of CH 1. The width of the pulse must be greater than 1 ns, frequency range to 300 MHz. / NS
Results Range:	1.5 ns to 10 ⁵ s / NS
Resolution:	40 ps / NS
RMS Resolution:	120 ps / NS
Rise/Fall Time:	Measurement is specified over the full signal ranges of CH 1. The width of the pulse must be greater than 1 ns, frequency range to 300 MHz. / NS
Results Range:	2 ns to 10 ⁵ s / NS
Resolution:	40 ps / NS
RMS Resolution:	120 ps / NS
Phase:	Measurement is specified over the full signal ranges of each input. The width of the pulse must be greater than 1 ns, frequency range to 300 MHz. / NS
Results Range:	-180° ~ +360° / NS
Resolution:	40 ps / NS
RMS Resolution:	120 ps / NS
Duty Cycle:	Measurement is specified over the full signal ranges of CH 1. The width of the pulse must be greater than 1 ns, frequency range to 300 MHz. / NS
Pulse Selection:	Positive or Negative / NS
Results Range:	0 ~ 1 / NS
Resolution:	40 ps / NS
RMS Resolution:	120 ps / NS
Totalize:	Measurement is specified over the full signal ranges of CH 1. The width of the pulse must be greater than 1 ns, frequency range to 400 MHz. / NS
Results Range:	0 ~ 10 ¹⁵ / NS
Resolution:	1 count / NS
Results Range:	-5.1 V ~ +5.1 V / NS
Resolution:	2.5 mV / NS
Peak Voltage:	DC Signals: --- 15 mV + 2 % of V Peak-To-Peak Amplitude Greater than 200 mV
DC ATT x 10:	--- 150 mV + 2 % of V Peak-To-Peak Amplitude Greater than 1 V
1 Vp-p 50 Ω, ATT OFF:	100 Hz ~ 10 KHz 15 mV + 2 % of V 10 KHz ~ 5 MHz 15 mV + 4 % of V 5 MHz ~ 80 MHz 15 mV + 7 % of V 80 MHz ~ 300 MHz 15 mV + 15 % of V Peak-To-Peak Amplitude Greater than 200 mV

General Specifications

Item	Description	Item	Description
Power Supply	A. 100V/240V ± 10 % B. 100V/120V ± 10 %	Warm-Up Time	1 Hours
Power Cord Freq.	A. 50 Hz/60 Hz ± 10 % B. 400 Hz ± 10 %	Language	SCPI-1993, IEEE-488.2
Power Consumption	Max. 80VA (30W Typical)	Dimension	214.6(W) x 88.6(H) x 346.9(D) mm
Operating Environment	0 ~ 55°C	Weight	3130 g / 2887 g
Storage Environment	-40°C ~ 70°C	Safety	IEC61010-1 EN61010-1
Operating Altitude	Up to 2000 m	EMC	EN61326
Operating Humidity	Max. Relative Humidity 80 % for Temp. up to 31°C Decreasing Linearly to 50 % Relative Humidity at 40°C	Interface	STD. USB / LAN OPT. GPIB
		Warranty	1 Year
		Certificate	CE
		Recycle Level	

1. NS means the function is "Not Supported" by U6220A.

For more information, please refer to the user's manual.

The specifications are subject to change without notice due to design improvements.