



### Test System Application

For user's convenience Chroma supports various software and hardware for different control platforms.

- **Chroma 12061 TOOL** : It is a real-time display interface for value monitoring. It can log data and output in CSV format for analysis.

- **Chroma 12061 LINK** : It can send the data to PC directly in real time and save it to EXCEL or WORD format file as well as create the data pattern. Test engineers can use ActiveX components to control the 12061 using SCPI commands.

### KEY FEATURES

- 6½ digits resolution
- 11 types of measurement characteristics
  - DC voltage/current (1000V/3A max)
  - AC voltage/current (750V/3A max)
  - Resistance 2 or 4-wire ohms measurement
  - Period & frequency
  - Diode & continuity
  - Temperature (RTD)
- Various math functions
  - NULL
  - Max/Min/Avg
  - High/Low limit
  - Percentage/Ratio/ MX+B
  - dB/dBm
- DC voltage accuracy : 0.0015%
- AC voltage accuracy : 0.04%
- Optional Multi-point TC Scanner Card (10ch), multi-point scanner card (10/20ch)
- Measurement and data transmission up to 2000 readings/sec (4½)
- Up to 2000 readings memory storage
- Standard SCPI control
- Standard USB & GPIB interface, support USBTMC
- Software control support
  - Chroma 12061 software
  - LabView® Driver

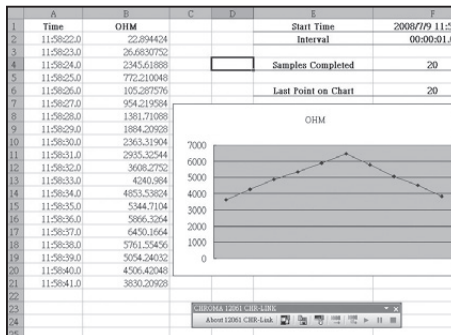
### Fast & High Performance

The 12061 6½ Digital Multimeter has assorted settings of resolution, integration time and ranges that allow users to optimize the configuration of measurement speed, resolution and accuracy when in individual measurement test mode.

The 12061 has built-in a high speed, low interference A/D converter with a maximum speed of 2000 rdgs/s it is the best solution for high speed measurement.

### Individual Application

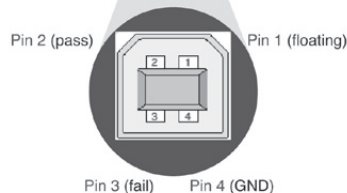
Chroma 12061 equipped with 11 types of measurement functions containing DC voltage/current, AC voltage/current, resistance 2/4-wire ohms, period, frequency, diode, continuity and temperature as well as diverse math functions of NULL, Max/Min/Avg, High/Low limit, High/Low limit, Percentage/Ratio/MX+B, dB/dBm and etc. Along with trigger and memory function, Chroma 12061 is the right tool for you to perform the basic measurement.



Application Softpanel - CHROMA 12061 LINK

### PASS/FAIL signal output

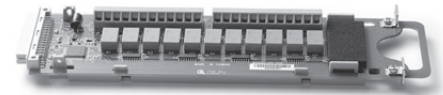
Chroma 12061 can provide PASS/FAIL signal to system by USB port (either communication or PASS/FAIL signal) with high/low limit set. USB type B female connect to system with signal (1 floating/ 2 PSS/ 3 FAIL/ 4 GND) in 2ms low and please disable USB interface. If result over the high/low limit, the beeper will alarm and signal output. (Beeper can be off)



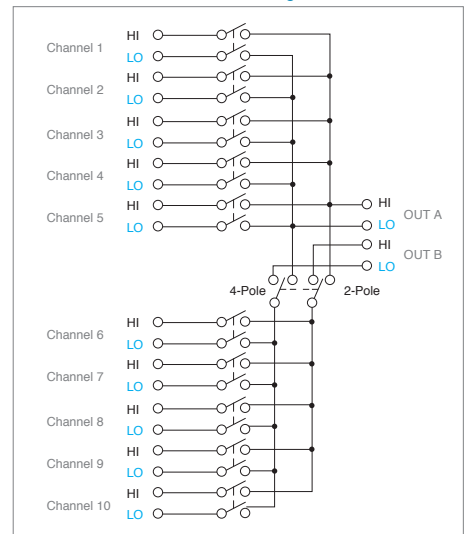
### Multi-Point Scanner Card (10CH/20CH)

Chroma 6½ Digital Multimeter supports Multi-point Scanner Card which is a scanning measurement tool not supported by most of the 6½ Digital Multimeters in the field.

Multi-point Scanner Card offers multiplexing ten two poles (ACV, ACI, DCV, DCI, Resistance, Period, Frequency) that can be installed to the extension card option directly on the rear panel.



### Scanner Card Configuration



### Multi-Point TC Scanner Card (10ch)

The multi-point temperature scanning card has multiple functions including 2-wire/4-wire resistance, AC/DC voltage/current, frequency, period and temperature measurements. As cold junction compensation is equipped for temperature measurement, it increases the measurement accuracy greatly. In addition, it can scan the temperature of 10 different channels that can be applied extensively to electronic devices and industrial studies for temperature measurement

### ORDERING INFORMATION

- 12061** : 6½ Digital Multimeter
- A120000** : Multi-point Scanner Card (10ch)
- A120001** : Thermal-measurement Adapter
- A120002** : Multi-point Scanner Card (20ch)
- A120003** : HV Probe (1000:1)
- A120004** : Multi-point TC Scanner Card (10ch)

## SPECIFICATIONS

Model 12061			
DC Voltage			
Range	Resolution	Input Resistance	1 year accuracy ± (reading%+range%) (23°C ± 5°C)
100.000mV	0.1µV	>10GΩ	0.0050 + 0.0035
1.000000V	1.0 µV		0.0040 + 0.0007
10.00000V	10 µV		0.0035 + 0.0005
100.0000V	100 µV	10MΩ	0.0045 + 0.0006
1000.000V	1mV		0.0045 + 0.0010
DC Current			
Range	Resolution	Shunt Resistance	1 year accuracy ± (reading%+range%) (23°C ± 5°C)
10.00000mA	10nA	5.1Ω	0.050 + 0.020
100.0000mA	100nA		0.050 + 0.005
1.000000A	1µA	0.1Ω	0.100 + 0.010
3.00000A	10µA		0.120 + 0.020
AC RMS Voltage			
Range	Resolution	Frequency (Hz)	1 year accuracy ± (reading%+range%) (23°C ± 5°C)
100.0000mV	0.1µV	3 ~ 5	1.00 + 0.04
		5 ~ 10	0.35 + 0.04
		10 ~ 20K	0.06 + 0.04
		20K ~ 50K	0.12 + 0.05
		50K ~ 100K	0.60 + 0.08
1.000000V ~ 750.000V	1.0µV ~ 1mV	100K ~ 300K	4.00 + 0.50
		3 ~ 5	1.00 + 0.03
		5 ~ 10	0.35 + 0.03
		10 ~ 20K	0.06 + 0.03
		20K ~ 50K	0.12 + 0.05
		50K ~ 100K	0.60 + 0.08
		100K ~ 300K	4.00 + 0.50
AC RMS Current			
Range	Resolution	Frequency (Hz)	1 year accuracy ± (reading%+range%) (23°C ± 5°C)
1.000000A	1µA	3 ~ 5	1.00 + 0.04
		5 ~ 10	0.30 + 0.04
		10 ~ 5K	0.10 + 0.04
3.000000A	1.0µA	3 ~ 5	1.10 + 0.06
		5 ~ 10	0.35 + 0.06
		10 ~ 5K	0.15 + 0.06
Resistance (4W Measurement)			
Range	Resolution	Test Current	1 year accuracy ± (reading%+range%) (23°C ± 5°C)
100.0000Ω	100µΩ	1mA	0.010 + 0.004
1.000000kΩ	1mΩ	1mA	0.010 + 0.001
10.00000kΩ	10mΩ	100µA	0.010 + 0.001
100.0000kΩ	100mΩ	10µA	0.010 + 0.001
1.000000MΩ	1Ω	5µA	0.010 + 0.001
10.00000MΩ	10Ω	500nA	0.040 + 0.001
100.0000MΩ	100Ω	500nA	0.800 + 0.010
Diode Test			
Range	Resolution	Test Current	1 year accuracy ± (reading%+range%) (23°C ± 5°C)
1.00000V	10 µV	1mA	0.010 + 0.020

Continuity Test			
Range	Resolution	Shunt Resistance	1 year accuracy ± (reading%+range%) (23°C ± 5°C)
1000.00Ω	100mΩ	1mA	0.010 + 0.030
Frequency and Period			
Range	Frequency (Hz)	1 year accuracy ± (reading%+range%) (23°C ± 5°C)	
100mV ~ 750V	3 ~ 5	0.1	
	5 ~ 10	0.05	
	10 ~ 40	0.03	
	40 ~ 300K	0.01	
Measurement Characteristics			
Math Functions	NULL, min / max / average, dBm, dB, MX+B, RATIO, %, limit test (with TTL output)		
Measurement Noise Rejection 60Hz(50Hz)	DC CMRR: 140 dB; AC CMRR: 70 dB		
Integration Time & Normal Mode Rejection NMRR	10 plc/167 ms (200 ms) : 60 dB 1 plc/16.7 ms (20 ms) : 60 dB		
DC Voltage	Input bias current : 25°C < 30pA Input protection : 1000V		
DC Current	Input protection: External 3 A 250V fuse		
AC Voltage	Input impedance: 1 MΩ parallel with 100 pF Input protection: 750Vrms all ranges		
AC Current	Input protection: External 3 A 250V fuse		
Resistance	Maximum lead resistance (4-wire): 10% of range per lead for 100Ω and 1kΩ ranges. 1kΩ per lead on all other ranges. Input protection: 1000 V all ranges		
Continuity/Diode	With audible tone Continuity threshold: Selectable from 1Ω to 1000Ω		
Temperature	RTD: 2-wire, 3-wire and 4-wire measurement Temperature Conversion: IEC751, Callendar-Van Dusen		
External Control			
Samples/Trigger	1 ~ 50,000		
Trigger Delay	0 ~ 3600 sec.		
Memory	2000 readings		
Standard Complier	SCPI (IEEE-488.2), Agilent 34401		
Interface	USB, GPIB		
General			
Power Consumption	25VA max.		
Power Requirements	100 V/120 V/220 V/240 V, 45 Hz ~ 440 Hz		
Dimensions (HxWxD)	88.6 x 213.6 x 346.9 mm		
Operating Temperature	0°C to 50°C		
Weight	Approx. 4.36 kgs		
Multi-point TC Scanner Card A120004			
Maximum AC Voltage	110V rms or 155V peak, 100kHz, 1A switched, 30VA (resistive load)		
Maximum DC Voltage	110V, 1A switched, 30VA (resistive load)		
Connector Type	Screw terminal, #22 AWG wire size		
Common Mode Voltage	200V peak btw any terminal and earth		
Max. Voltage btw Any Two Terminals	160V peak		
Thermocouple	K type (-200°C ~ 1372° ) ± 1.5°C (Other type refer to the detailed specifications)		

Video & Color  
Flat Panel Display  
Lighting  
LED/ Optical Devices  
Photovoltaic test & Automation  
Automated Optical Inspection  
Power Electronics  
Battery Test & Automation  
Passive Component  
Electrical Safety  
Semiconductor/ IC  
Measurement  
General Purpose  
Intelligent Manufacturing System  
Turnkey Test & Automation