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Data Sheet

August 13, 2026

KEITHLEY

Keithley 708 Single Slot Switching Matrix Mainframe

Keithley 708 Switching Matrix Mainframe Single Slot The Model 708 is the original single-slot programmable matrix mainframe in the 707/708 family (later 708A then 708B). It holds one plug-in matrix card for up to 96 crosspoints and daisy-chains up to four slave 708 units with one master for 480 crosspoints. GPIB control, 100 battery-backed matrix setups, programmable make-before-break/break-before-make by row, and acrosspoint display are specified. Cards include 7071, 7071-4, 7072, 7072-HV, 7073, 7074, 7075 and related types. The Model 708 is the original single-slot programmable matrix mainframe in the 707/708 family (later 708A then 708B). It holds one plug-in matrix card for up to 96 crosspoints and daisy-chains up to four slave 708 units with one master for 480 crosspoints. GPIB control, 100 battery-backed matrix setups, programmable make-before-break/break-before-make by row, and acrosspoint display are specified. Cards include 7071, 7071-4, 7072, 7072-HV, 7073, 7074, 7075 and related types. Small-scale semiconductor and general-purpose matrix switching; 4200-SCS GPIB external matrix (12-pin class); master/slave expansion without a six-slot 707; analog backplane row expansion between 708 mainframes.



MODEL

Keithley 708

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

708

LISTING

<https://aumictechlabs.com/products/708-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keithley 708 Single Slot Switching Matrix Mainframe is a compact signal routing platform for automated test and data acquisition systems. It accommodates a single interchangeable matrix card to build custom switching configurations, supporting up to 96 crosspoints (2-pole) with expansion to 480 via daisy-chaining. The 708B model controls an 8×12 matrix card and delivers significantly faster command-to-connect speed than earlier Series 700 mainframes, reducing test cycle times in high-speed measurement applications.

Technical Specifications

Switching Architecture Single slot for matrix card installation 8×12 matrix configuration (708B): 96 crosspoints Daisy-chain expansion: up to 480 crosspoints across multiple units Non-volatile memory stores hundreds of switching configurations for instant recall Digital I/O (14 bits) Open-drain architecture with configurable pull-up resistors Logic Low: 0.7V @ +850 µA max input Logic High: 2.1V @ +570 µA max input Source current: 960 µA max per bit Sink current: 5.0 mA max @ 0.7V (per bit); 600 mA max per channel Internal pull-up: 5V @ 65 mA External pull-up: up to 40V max Short-circuit protection to 25V DC Power & Relay Drive Power consumption (708B): 110 VA max Relay drive (708B): 30W max per slot (6V @ 5.0A)

Processing & Memory Embedded Test Script Processor (TSP) with TSP-Link interface Test Script Builder (TSB) IDE for script development and debugging

Key Features Command-to-connect speed optimized for rapid switching sequences TSP-Link integration with Keithley Series 2600A/2600B System SourceMeter instruments LXI Class C (v1.2) remote programming interface IEEE-488.1/488.2 GPIB compliance with optional USB-to-GPIB converter USB 2.0 Device (Type B) with USBTMC (Full and High Speed) 10/100 BaseT Ethernet with Auto-MDIX

Typical Applications High-speed automated test systems requiring rapid channel switching Precision signal routing in multi-channel measurement setups Semiconductor characterization integration via GPIB Production test environments demanding configuration reusability

Compatibility & Integration Compatible with plug-in cards designed for Keithley 707A and 708A mainframes Direct integration with Series 2600A/2600B System SourceMeter instruments Model 4200-SCS semiconductor characterization support via GPIB

Features & description

From manufacturer datasheet

Features

- Master/slave daisy-chain to four slaves

708 Characteristics / Specifications

PARAMETER	VALUE
Model	708
Manufacturer	Keithley Instruments
Instrument Type	Single slot switching matrix mainframe
Alias	708; 708A family predecessor
Slots	1 plug-in card per mainframe
Crosspoints per mainframe	up to 96
Master slave expansion	up to 4 slaves plus 1 master (480 crosspoints)
Setup memory	100 matrix setups, battery backup
Programmed settling	0 to 65 s in 1 ms increments
Display	crosspoint and IEEE-488 bus status
Trigger sources	external TTL (programmable edge, 600 ns min pulse); IEEE-488 TALK, GET, X; manual
Status output	Matrix Ready TTL, programmable polarity
Connect rules	make before break or break before make programmable by row
IEEE 488 functions	SH1, AH1, T6, TE0, L4, LE0, SR1, RL1, PP0, DC1, DT1, C0, E1
Multiline commands	DCL, LLO, SDC, GET, GTL, UNT, UNL, SPE, SPD
GET latency	less than 1 ms
Analog backplane	user cable for row expansion of 7071, 7071-4, 7073, 7074, 7075, 7076, 7077 between 708 frames
Example card 70	semiconductor 8×12 triax (low current, GP, C-V paths)
Example card 7071	dual 4×12, 3-pole, 38-pin mass terminated
Example card 7072 HV	1300 V semiconductor matrix
Digital I/O	16 inputs class with internal 10 kohm pull-up
Card installation	configurable front or rear
Related six slot	Model 707 / 707A / 707B
Successor	708A then 708B (TSP/LXI, same card family for B-supported cards)

PARAMETER	VALUE
Control	front panel crosspoint, Open, Digital I/O, factory default
Form	single-slot rack matrix host Notes Specs from Keithley Model 708/708A switching system instruction manuals. Confirm 708 versus 708A versus 708B before quoting TSP, LAN, or 7174A-only B-list cards. Crosspoint count depends on the installed card.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Model	708
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PARAMETER	VALUE
Display	crosspoint and IEEE-488 bus status
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Multiline commands	DCL, LLO, SDC, GET, GTL, UNT, UNL, SPE, SPD

Specifications

PARAMETER	VALUE
GET latency	less than 1 ms
Analog backplane	user cable for row expansion of 7071, 7071-4, 7073, 7074, 7075, 7076, 7077 between 708 frames
Example card 7071	8×12 general purpose, 3-pole

Specifications

PARAMETER	VALUE
Example card 7071 4	dual 4×12, 3-pole, 38-pin mass terminated
Example card 7072	semiconductor 8×12 triax (low current, GP, C-V paths)
Example card 7072 HV	1300 V semiconductor matrix

Specifications

PARAMETER	VALUE
Example card 7073	coaxial matrix to 30 MHz, BNC
Digital I/O	16 inputs class with internal 10 kohm pull-up
Card installation	configurable front or rear

Specifications

PARAMETER	VALUE
Related six slot	Model 707 / 707A / 707B
Successor	708A then 708B (TSP/LXI, same card family for B-supported cards)
Control	front panel crosspoint, Open, Digital I/O, factory default

Form: single-slot rack matrix host

Notes

Specs from Keithley Model 708/708A switching system instruction manuals. Confirm 708 versus 708A versus 708B before quoting TSP, LAN, or 7174A-only B-list cards. Crosspoint count depends on the installed card.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.