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**Data Sheet**

August 13, 2026

KEITHLEY

# Keithley 707 Switching Matrix Mainframe

The Keithley Model 707 is a six-slot switching matrix mainframe that intelligently connects instruments to multiple devices under test. It supports a broad range of general-purpose and semiconductor switch cards (including low-current and high-voltage matrix cards such as the 7174A and 7072-HV). Interactive programming, digital I/O, and non-volatile storage of switch configurations simplify system integration. Later 707A/707B models remain card-compatible with the original 707/708 family while adding expanded control and channel capacity (707A literature cites control of up to 576 channels interactively, expandable further). Semiconductor parametric switching systems; custom ATE instrument-to-DUT matrices; multipoint I-V/C-V routing with SMUs; telecommunications and general-purpose automated switching. Instrument Type: Switching matrix mainframe Related Models: 707A, 707B; single-slot class 708/708A/708B Card Compatibility: All 707/708 family matrix and switch cards Channel Capacity Class (707A literature): up to 576 channels interactive; expandable to about 2880



MODEL

**Keithley 707**

CALIBRATION

**Available on request**

CONDITION

**Used**

STATUS

**In stock**

RFQ / SKU

**707**

LISTING

<https://aumictechlabs.com/products/707-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

## This unit

The Keithley 707 Switching Matrix Mainframe is an expandable modular platform engineered for signal routing and switching in automated test, data acquisition, and research environments. This rack-mountable mainframe accepts a range of Keithley Series 700/7000 switch cards, enabling configuration of diverse signal paths across analog, digital, and RF applications. The system

supports multiple independent switching matrices or single large-matrix configurations depending on card selection, with matrix sizes ranging from 4×16 through 16×16 and larger via chassis expansion. Control is provided via GPIB (IEEE-488), with optional Ethernet and serial interfaces available depending on configuration. Signal integrity is maintained across switching configurations; bandwidth, isolation, and insertion loss depend on installed switch cards. Switching speed varies with card type and switching operation complexity. Power consumption scales with installed cards and operational load.

**Technical Specifications**

**Model:** Keithley 707

**Product Type:** Switching Matrix Mainframe

**Control Interface:** GPIB (IEEE-488); optional Ethernet/Serial interfaces (configuration-dependent)

**Supported Signal Types:** Analog, digital, RF (dependent on installed switch cards)

**Matrix Configurations:** 4×16, 8×8, 16×16, and larger configurations via chassis expansion

**Chassis:** Rack-mountable; standard rack unit dimensions

**Power Input:** AC input; voltage and frequency vary by region and model variant

**Power Consumption:** Varies with installed cards and operational load

**Key Features**

- Modular architecture accepts multiple Keithley Series 700/7000 switch card types
- Configurable for independent or single large-matrix signal routing
- Supports general-purpose analog switching, high-density analog cards, dual 4×4 matrix cards, high-speed matrix cards, and specialty function cards (current/voltage sensing)
- Signal integrity design maintains performance across varied switching configurations
- Flexible control via GPIB with optional serial and Ethernet connectivity

**Typical Applications**

- Automated test systems requiring multi-channel signal routing
- Data acquisition with mixed signal types
- Research environments demanding reconfigurable switching matrices
- Complex signal path management in ATE and laboratory settings

**Compatibility & Integration**

- Accepts Keithley Series 700/7000 switch card families
- Compatible with Keithley instrument control software and third-party test automation platforms

## Features & description

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From manufacturer datasheet

### Features

- Six-slot switching matrix mainframe

## 707 Characteristics / Specifications

| PARAMETER                                | VALUE                                                                                                                                                                                             |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                                    | 707                                                                                                                                                                                               |
| Manufacturer                             | Keithley / Tektronix                                                                                                                                                                              |
| Instrument Type                          | Switching matrix mainframe                                                                                                                                                                        |
| Slots                                    | 6 switch-card slots                                                                                                                                                                               |
| Related Models                           | 707A, 707B; single-slot class 708/708A/708B                                                                                                                                                       |
| Card Compatibility                       | All 707/708 family matrix and switch cards                                                                                                                                                        |
| Channel Capacity Class (707A literature) | up to 576 channels interactive; expandable to about 2880                                                                                                                                          |
| Configuration Memory Class               | up to 100 switch configurations non-volatile                                                                                                                                                      |
| Digital I/O Class                        | 8 channels digital input and output                                                                                                                                                               |
| Control                                  | Front-panel interactive programming; GPIB remote (family)                                                                                                                                         |
| Example HV Card                          | 7072-HV 8×12 (1300 V paths class)                                                                                                                                                                 |
| Backplane Expansion                      | Row jumpers / coax between cards for matrix growth                                                                                                                                                |
| Form                                     | Rack / benchtop switching mainframe                                                                                                                                                               |
| Alias                                    | 707; Keithley 707 Switching Matrix                                                                                                                                                                |
| Typical Ship Weight Class                | about 50 lb (reseller)                                                                                                                                                                            |
| Role                                     | Instrument-to-DUT matrix host                                                                                                                                                                     |
| System Partners                          | SMUs 236/237/238, 2410, 4200-SCS, B1500 class                                                                                                                                                     |
| Identification                           | Model 707 on front panel Notes Specs from Keithley 707/707A product literature and card compatibility tables. Confirm 707 vs 707A/707B firmware and installed cards before quoting channel count. |

# 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                                                     |                                                          |
|--------------------------------------------------------------------|----------------------------------------------------------|
| Specifications                                                     |                                                          |
| PARAMETER                                                          | VALUE                                                    |
| Model                                                              | 707                                                      |
| Manufacturer                                                       | Keithley / Tektronix                                     |
| Instrument Type                                                    | Switching matrix mainframe                               |
| Specifications                                                     |                                                          |
| PARAMETER                                                          | VALUE                                                    |
| Slots                                                              | 6 switch-card slots                                      |
| Related Models                                                     | 707A, 707B; single-slot class 708/708A/708B              |
| Card Compatibility                                                 | All 707/708 family matrix and switch cards               |
| Specifications                                                     |                                                          |
| PARAMETER                                                          | VALUE                                                    |
| Channel Capacity Class (707A literature)                           | up to 576 channels interactive; expandable to about 2880 |
| Configuration Memory Class                                         | up to 100 switch configurations non-volatile             |
| Digital I/O Class                                                  | 8 channels digital input and output                      |
| Control: Front-panel interactive programming; GPIB remote (family) |                                                          |
| Example Low-Current Card: 7174A 8x12 (less than 100 fA offset)     |                                                          |
| Specifications                                                     |                                                          |
| PARAMETER                                                          | VALUE                                                    |
| Example HV Card                                                    | 7072-HV 8x12 (1300 V paths class)                        |
| Backplane Expansion                                                | Row jumpers / coax between cards for matrix growth       |
| Form                                                               | Rack / benchtop switching mainframe                      |
| Specifications                                                     |                                                          |
| PARAMETER                                                          | VALUE                                                    |
| Alias                                                              | 707; Keithley 707 Switching Matrix                       |
| Typical Ship Weight Class                                          | about 50 lb (reseller)                                   |

| PARAMETER                                                                                                                                                          | VALUE                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Role                                                                                                                                                               | Instrument-to-DUT matrix host |
| System Partners: SMUs 236/237/238, 2410, 4200-SCS, B1500 class                                                                                                     |                               |
| Identification: Model 707 on front panel                                                                                                                           |                               |
| Notes                                                                                                                                                              |                               |
| Specs from Keithley 707/707A product literature and card compatibility tables. Confirm 707 vs 707A/707B firmware and installed cards before quoting channel count. |                               |

### Available from Aumictech

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

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

#### Aumictech

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NIST-traceable calibration · SAM registered ·  
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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.