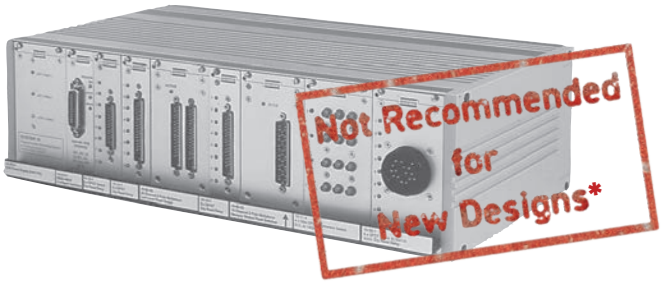
GPIB System 10 Chassis

10-930A/934A

- Compact Free Standing Chassis Which May be Rack Mounted
- Available in 3U and 6U Versions
- Choice of Module Access at Front or Rear of Chassis
- Use With Any System 10 Module
- Includes Complete Pre-Wired System Backplane
- Special Model Versions Available
- DIN 41494 (IEC 297) Compatible



Full Width Single Height Chassis With Front Access, Type 10-930A-001

Double Height Chassis: Front View, All Switching Modules Plug In At Rear, Type 10-934-002

***Please contact Pickering for alternative PXI/LXI/USB solutions**

System 10 Chassis come in a variety of sizes and are suitable for both bench top and rack mounting, with either front or rear access versions to suit all cabling needs. Any combination of switching modules may be loaded into a chassis.

Switching System Chassis may be bench top or rack mounted (using built in rack mount brackets). The chassis is supplied complete with pre-wired internal backplane/s and module guides to match the configuration required, unused slots have blanking panels inserted.

If you may later need to add a System 20 module please look at the System 10/20 case datasheet, types 20-935A/936A.

Front or Rear Access

All chassis types are available with a choice of front or rear switching module loading:

Front Access Chassis are generally popular for smaller systems where the unit will be used on a bench top, the switching modules plug into the front of the chassis.

Rear Access Chassis are usually more convenient for larger systems where a complete test or data acquisition system is being assembled into a cabinet. The switching modules plug into the rear of the chassis, keeping all wiring inside the cabinet, leaving the front panel uncluttered. This chassis version has a simple front panel with power indicator as shown in picture to right.

Serviceability

All Pickering Interfaces chassis types are passive, they contain no active components. Therefore virtually all maintenance and servicing can be done by simple module swapping, without having to remove the chassis.

Enclosure Range Overview

The following chassis types are available, with a choice of front and rear access versions (full order codes are contained overleaf):

- Full Width Single Height Chassis. Type 10-930A.
- Full Width Double Height Chassis. Type 10-934A.

Expansion Modules

If the number of modules you require does not fit within a standard chassis or if you wish to split the switching system into two or more chassis (e.g. to keep high voltage modules away from low voltage types) then there are 2 options:

1. Simply treat each chassis as a separate system, each with it's own 10-921-001 interface module - This is the preferred option.
2. Use 10-925 expansion modules. Here the chassis with the 10-921-001 interface module acts as the master with all other chassis acting as slaves. Each case must contain it's own power supply unit plus expansion module/s. Expansion modules must be used in pairs, the expansion cable linking them can be ordered to the length required.

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Single Height Chassis: Front View, All Switching Modules Plug In At Rear, Type 10-930A-002

Single Height Chassis: Front Access Version, Type 10-930A-001

Power Supplies

Front Access chassis require power supply, usually type 10-910A-001, while rear access usually require type 10-910A-002. On both versions power enters at the rear of the chassis on an IEC connector.

Earth & Shielding Details

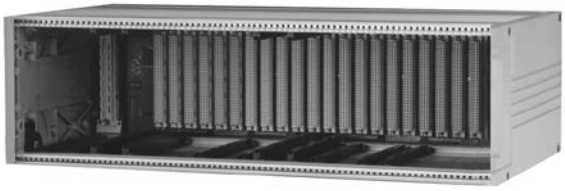
The whole chassis (all external surfaces) is earthed to the a.c. power ground. All plug-in modules earth by means of 2 or 4 earth bonding screws on their front panel.

For shielding purposes most switching modules have a shield connection point to be used with user constructed cable assemblies. In addition most modules have supplementary RFI screening, especially RF/Microwave types.

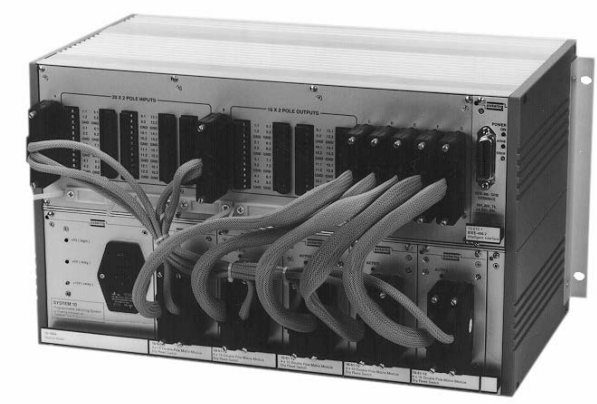
An earthing stud (M8) mounted on a 6HP panel suitable for a central earthing point is available, type 10-942-903.

System 20 Modules

System 20 modules may be used within a System 10 chassis, this will require use of chassis type 20-935A/936A, please refer to separate data sheet.



Inside View of 10-930A-001 System 10 Chassis



Customised 6U Chassis: Rear Access Model with Special Screw Terminal Connector Block and Custom Cable Assembly

System 10 Backplane

The System 10 backplane provides all modules with power and communication. Each slot has a DIN 41612 64-pin connector. All slots are arranged on a 0.6 Inch pitch.

There are 22 free slots in the full width 3U chassis and 50 slots in a full width 6U chassis.

Maximum number of modules per switching system is approximately 20, the backplane is divided into the following areas:-

Power Supplies

- 5V Logic
- 5V, 12V Relays

System Digital Bus is the internal bus used to communicate with all System 10 modules. It has a “Master/Slave” configuration with the GPIB/RS-232 interface module being the master.

The Analogue Bus Is used by multiplexer modules to carry analogue signals. 10 poles, each pole separately screened, plus “settled” line. Chassis with System 20 capability are usually fitted with an additional 24-pole analogue bus.

Backplane Connector Type DIN 41612 type A/C (64-pin), rated for 500 insertions.

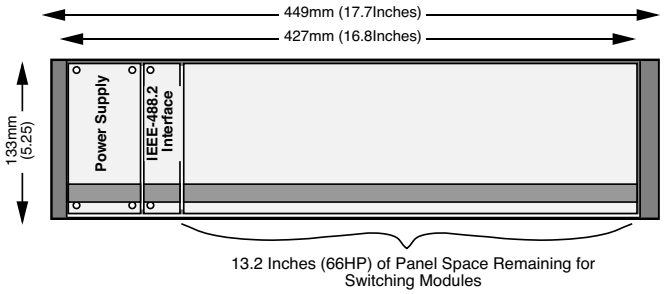
Built In Rack Mounting Ears

The chassis has built-in rack mounting ears (see picture). These allow the chassis to be either used on a bench top or in a cabinet with the ears pulled out.

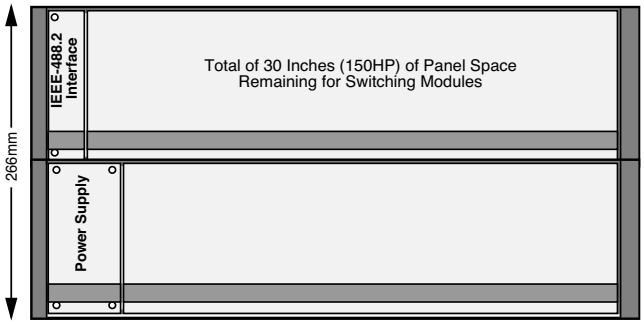
Rear View of 10-930A-001 Chassis

Chassis Schematic Diagrams

The diagrams below illustrate all chassis variants showing how much switching module space is available for each type. These will allow the most suitable chassis type to be selected. If your application exactly fills a chassis it may be worth looking at the next size up, so that unforeseen requirements needing additional modules can easily be added at a later date.



Full Width Single Height Chassis 10-930A-001 (Front Access) and 10-930A-002 (Rear Access)



Full Width Double Height Chassis 10-934A-001 (Front Access) and 10-934A-002 (Rear Access)

Product Order Codes

3U Full Width Chassis, Front Access	10-930A-001
3U Full Width Chassis, Rear Access	10-930A-002
6U Full Width Chassis, Front Access	10-934A-001
6U Full Width Chassis, Rear Access	10-934A-002

Additional Product Order Codes

System 10/20 Expansion Module	10-925-001
Expansion Cable Assembly (2m Length)	10-953-020

Other cable lengths may be specified e.g. -010 (1m), -005 (0.5m) (Expansion Modules must be used in pairs).

PCB Card Guide	10-941-001
Plug-In Module Card Guide	10-941-002
3HP Blanking Panel (3U)	10-942-003
6HP Blanking Panel (3U)	10-942-006
12HP Blanking Panel (3U)	10-942-012
21HP Blanking Panel (3U)	10-942-021
Earthing Stud (M8) 6HP Panel (3U)	10-942-903

Other chassis sizes & options are available, please contact factory if you require further information. All switching systems are shipped with blanking panels installed in unused slots.

Mechanical Characteristics

All chassis conform to DIN 41494 Part 5, IEC 297 Sec 2 (see diagram on above) for further dimensional data please contact Pickering Interfaces.

- Chassis Colour: Light Grey
- Chassis Weight: Depends upon chassis size and number and type of modules being used, please contact factory to discuss.
- Chassis Width: 449mm (without rack mount brackets)
- Chassis Height: 3U (133mm)
  6U (266mm)
- Chassis Depth: 250mm

For rear access chassis types allow extra space for switching module protruding connectors (possibly up to 100mm).

Environmental Specification

- Operating Temperature 0°C to 50°C.
- Storage Temperature -20°C to 75°C.
- Humidity 95% Non Condensing.
- Cooling Requirements Natural Convection, No Internal Fan.