Tracewell Systems

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Data Sheets

Tracewell S24 for VME

5 & 7-Slot Benchtop/Portable VME System

Description

The Tracewell S24 for VME is a unique test and development platform for VMEbus applications. The system features compact size and accessibility in a versatile bench-top system that is ideal for software and board-level development, manufacturing and test. Small size and simple, reliable operation make Tracewell S24 for VME perfect for use in the field or the lab.

Tracewell S24 for VME, although very compact, is a fully featured VME platform providing space for up to 7 VME boards. Its small size and weight allow it to be operated just about anywhere. A rigid steel cardcage and formed aluminum housing add strength without excessive weight. The flush front cardcage and open back provide unrestricted access for probes and cabling. Cooling is provided by a 93 cfm fan that pressurizes a plenum area below the cardcage for better airflow distribution. A 250W power supply provides ample power and includes power factor correction and wide-range AC input. A 5 or 7-slot backplane is available supporting 32 and 64-bit protocol, auto-configuration, and feature SMD/press-fit assembly for speed and reliability. Other standard conveniences include side mounting for peripherals and pull-down feet to improve working angle. Options include a front storage bay for (2) 3.5" devices, handles, and a removable rear cover.

The Tracewell S24 for VME provides flexibility and performance for both new and existing VMEbus requirements.

Features

- Compact bench-top design; <14" overall height
- Flush vertical subrack for improved access
- 95 cfm fan provides pressurized cooling
- Ample 250W power supply with PFC
- Auto-configuring backplane, 32/64 bit compatible
- Rear of backplane is fully accessible for probing and I/O
- Convenient carrying handle and rear cover option
- Storage bay for (2) 3.5" devices optional
- Rugged steel and aluminum construction

ISO 9001 certified

Specifications

Physical

Construction:	***Sheet aluminum***, 5052-H32 alloy; housing and power supply cover (0.080") optional rear cover (0.062"), ***Sheet steel***, ASTM A366; front rear upper and lower card-cages (0.060") ***Aluminum extrusion***, 6101-T6 alloy; cardcage front and mid profiles ***Cardguide, snap-in***, 0.062" pcb thickness, white nylon, UL 94V-2 flame rated material
Cardcage:	Front loading, 6U x 160mm, 7 slots maximum, IEEE 1101.1
Dimensions:	8.92"D (227 mm), 8.63" W (219 mm), 13.58" H (345 mm)
Weight:	10.1 lbs. (4.59 kg)
Finish:	Textured paint, light gray per Sherwin Williams F63TXA9008; all exterior surfaces; aluminum is brushed gold chromate per MIL-STD 5541, steel is light gray paint over primer
Rear cover:	Optional rear cover protects backplane and wiring during transport or non-use; attaches using (2) thumbscrews
Carry handle:	Optional handle kit provides (2) handles that easily attach to the top of the unit

Backplane

Option code B1:	7 slot, J1/J2 monolithic, 96 pin DIN
Option code B2:	5 slot, J1/J2 monolithic, 96 pin DIN; installed left-justified in front cardcage with (2) slot filler panel in slots 6 - 7
Bus structure:	VME 32/64 bit
Assembly:	SMT/press-fit assembly
Layer count:	8 layers
Control:	Active automatic bus-grant and IACK jumpering, active termination
PCB construction:	FR4 epoxy-glass laminate, multilayer, all-stripline, SMOBC, silkscreen on two sides, 1oz. copper signal and power planes minimum, UL94V-0, 0.125" (3.18mm) pcb thickness
Impedance:	50 Ohms nominal on all signal lines, non-loaded pcb
Termination:	Active onboard, electrically inboard; Thevinin equivalent to 194 Ohms at 2.94V
Decoupling:	High frequency decoupling at each slot (0.1F SMD ceramic); Bulk distributed low frequency (100F SMD Tantalum)
Rear shrouds:	J1 first slot, J2 first and last slots; includes latches
Rear tails:	13mm extended tails on J1 first slot, J2 all slots
DC distribution:	Power bolts +5, +/-12VDC and return (70A rating)
Compliance:	VITA Rev. C.1

Power

General:	250W, AC input with PFC
Total output:	250W, maximum all output combined
Input:	90 – 264VAC, universal input
Frequency:	47 – 440 Hz
Efficiency:	75% typical
Power factor:	0.99 with PFC
Input current:	8A at 90VAC; 3A at 230VAC
Inrush current:	20A maximum at 230VAC
Hold-up time:	20 ms minimum after removal of power at full load
ACFAIL:	Logic low signal asserted to backplane after removal of AC
DC outputs:	+5.0V/35A, +12V/10A, -12V/6A
Output adjustment:	+5V main output adjustable +/-5%
Ripple/Noise:	Less than 1% peak-to-peak or 100mV, whichever is greater
Load requirement:	3A on +5V main output
Remote sense:	All outputs, 500mV maximum compensation
Inhibit:	Global DC inhibit available (not wired)
Cooling:	Internal 30cfm fan

Cooling

Airflow:	Front/bottom intake, top exhaust, pressurized
Fan:	95 cfm, tube-axial, 12VDC

Storage

Option code S1:	Front accessible storage bay supports (2) 3.5" x 1" devices; requires backplane option code B2; replaces (2) slot filler panel
General:	Standard mounting holes provided in left side wall of chassis for attaching either 5.25" or 3.5" device
Storage bay (S1):	Optional storage for (2) 3.5" x 1"devices; includes power harness: (2) 4-pin IDC, AMP 1-480424-0 or equivalent; (1) 4-pin IE (mini), AMP 171822-4 or equivalent; utilizes system airflow; assembly is front removable, tool accessible

Control and Input

Switches:	Front panel: AC on/off (rocker); backplane reset
Reset control:	200mS debounced reset to backplane; asserted by front panel reset switch or VME module
SYSFAIL:	Signal driven only by backplane VME modules; front panel LED is only a status indicator
Indicators:	Front panel SYSRESET, SYSFAIL (red), power-on (green) LED indicators
Power input:	Rear panel AC (IEC320) with fuse drawer, line cord provided
Circuit protection:	Rear panel single pole fuse drawer, 10A delay 1.25" x 0.25" fuse, spare provided

Environmental

Temperature:	0 – 50^{O}C operating; -20 – 70^{O}C non-operating
Shock/Vibration:	Basic transportation per ASTM 0775
Humidity:	5 – 95% non-condensing at 40^{O}C operating, 0 – 95% non-operating
Acoustic:	<55 dBa (1 meter)

Agency Compliance †

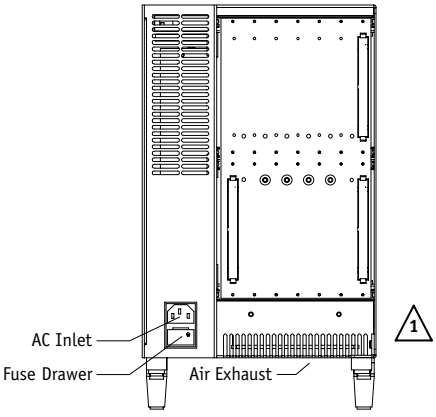
Safety/Emissions:	Information available for power supply only Consult factory for more details

Warranty

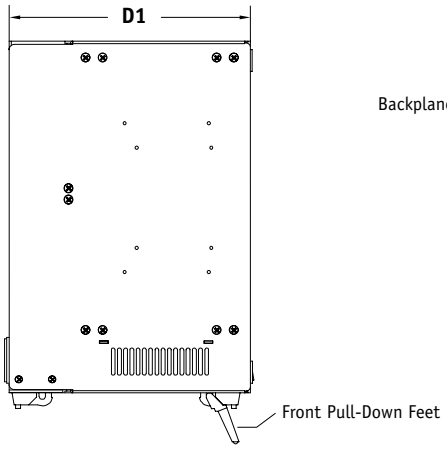
1 year limited warranty

Drawings

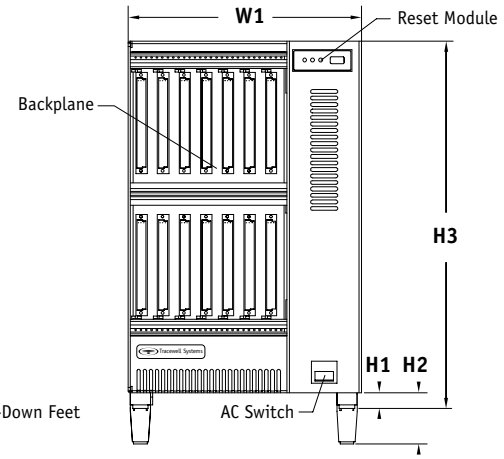
Main Assembly



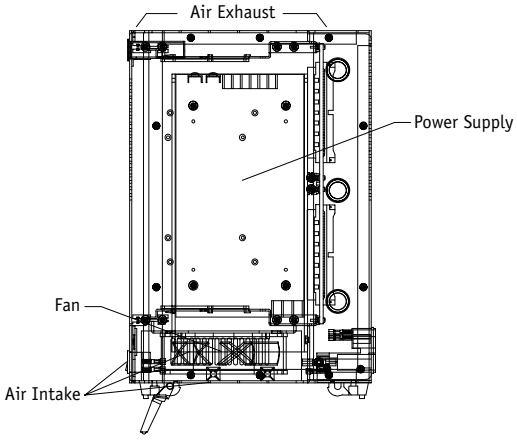
Rear View



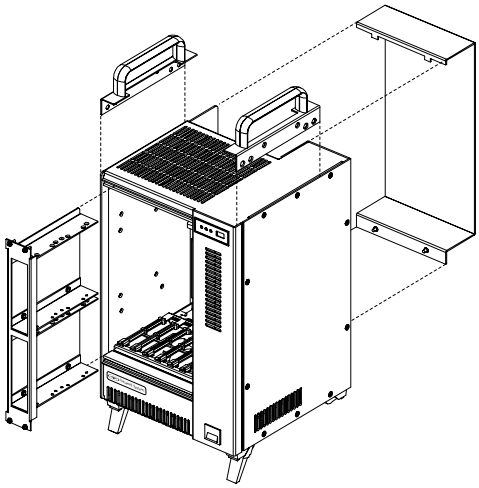
Left-Side View



Front View

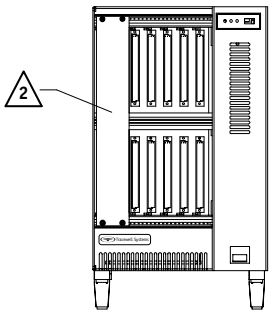


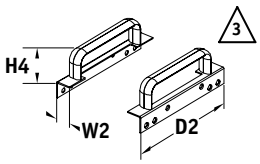
Right-Side View (Internal)



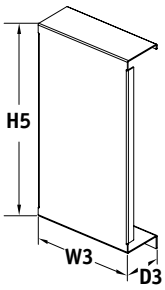
Front View (Isometric)

Sub-Assemblies and Options

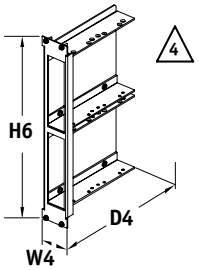




Handle Kit



S24 VME Rear Cover Kit



Storage Module

Dimensions:

D1: 8.92″ (227 mm)	**W1**: 8.63″ (219 mm)	**H1**: 0.57″ (15 mm)
D2: 6.39″ (162 mm)	**W2**: 0.84″ (21 mm)	**H2**: 1.88″ (48 mm)
D3: 2.20″ (56 mm)	**W3**: 5.75″ (146 mm)	**H3**: 13.58″ (345 mm)
D4: 5.50″ (140 mm)	**W4**: 1.59″ (41 mm)	**H4**: 1.50″ (38 mm)
		H5: 11.64″ (296 mm)
		H6: 10.31″ (262 mm)

Notes

1. Do not block intake or exhaust vents
2. 5-slot option includes filler panel and (2) air blocks
3. Handle kit attaches with existing side screw hardware
4. Storage module installs in slots 1 - 2 with 5-slot backplane

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Ordering Information

The Tracewell S24 includes chassis, backplane, power supply, and cooling per the following standard configurations:

Part number	Description
524-6000-F01-00	Chassis with 5 slot VME backplane, 250W power supply
524-6000-F02-00	Chassis with 7 slot VME backplane, 250W power supply
524-6000-F10-00	Chassis with 5 slot VME backplane, 250W power supply, storage bay (S1)

Accessories

106-1001-009-01	Non-shielded single-slot filler panel, 6U X 4T; installs in vacant slots
121-6012-099-01	Subrack air block, single slot; snaps into a vacant slot to block airflow
124-6030-004-01	Removable rear cover assembly, installs with (2) 6-32 thumbscrews
124-6001-K00-00	Handle kit, S24 VME
070-9930-000-0P	Shroud, 96 pin
070-9931-000-0P	Shroud latch

Notes:

† As an option, Tracewell Systems can evaluate agency compliance for the customer's specific integrated product. Consult factory for more details

P/N 095-6004-000-0P 070504