Tracewell Systems

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Data Sheet

Tracewell S34 for VME64x

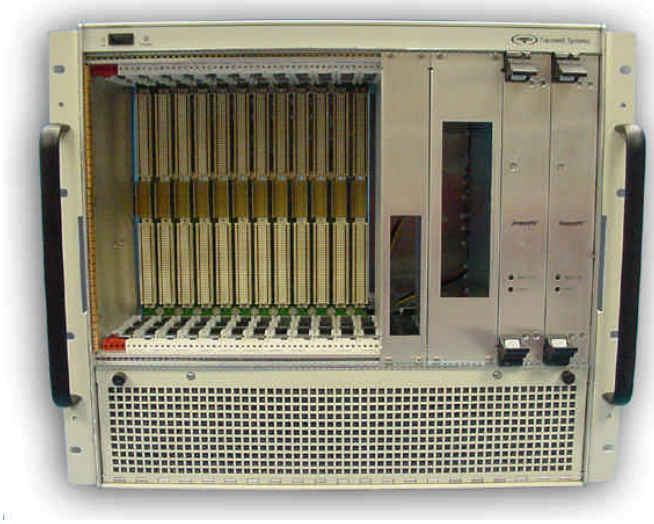
High Performance Rack or Benchtop System

Description

The S34 for VME64x is designed for VME applications requiring additional power and cooling capacity. Rugged construction and a host of standard features make S34 ideal for any high-performance requirement.

The S34 for VME64x features rugged form steel and aluminum construction that provides exceptional strength without excessive weight. Three 150cfm high-pressure fans provide filtered, pressurized airflow to installed modules. Hot-swap fan modules are individually front removable. Front-to-rear airflow allows units to be stacked for 19” rack or bench-top operation, without effecting cooling performance. System power includes universal AC input and power factor correction in either an embedded 420W power, or dual front plug-in power configuration for redundant or combined output up to 700W. DC power options are also available. A hinged rear panel provides easy access the optional monitor or for additional I/O wiring. Backplane options include either 12 or 16 slots, with P0 connectors and auto-jumpering. Rear transition slots are also provided. The 12-slot versions also include front storage bays both 3.5” and 5.25” devices. An optional advanced system monitor provides status of all power supply outputs, fan speeds, and exhaust temperature, and outputs this information via front panel LEDs and through an RS-232 or Ethernet interface.

The S34 for VME64x from Tracewell Systems delivers innovative design and performance in a low profile, cost effective platform for commercial, industrial, and COTS military applications.



Features

- Compact 9U overall height, 12” depth
- 420W, 400W, N+1, or 700W; 24/48VDC available
- Standard 12 and 16 slot configurations
- Front plugging hot-swap fan modules
- Rugged formed steel card cages add strength and eliminate flex
- Monitoring for power and cooling optional
- Customer modifications and integration services available

MEMBER VITA Open Standards, Open Markets

BVQI ANSI-RAB QMS ACCREDITED ISO 9001:2000

Physical

Construction:	Aluminum sheet, 5052-H32 alloy; Steel sheet, ASTM A366; Aluminum Extrusion, 6101-T6 alloy; Cardguides, 94V-0 flame rated material
Cardcage:	Front 6U x 160mm, IEEE 1101.10 Rear 6U x 80mm, IEEE 1101.11
Dimensions:	12.08”D (307mm, without handles), 13.46”D (342mm, w/ handles), 17.08”W (434mm, less rack ears), 19.00”W (483mm, w/ rack ears) 15.72”H (400mm, 6U without feet) 16.25”H (413mm, with feet)
Weight:	45 lbs. (20.5 kg; p/n 534-6100-F10-00)
Finish:	Textured paint, light gray per Sherwin Williams F63TXA9008; all front surfaces, rack flanges, covers; all other aluminum is brushed clear chromate per MIL-STD 5541, steel is zinc plate
Other:	(4) removable rubber feet; (2) removable rack flanges, adjust to provide 1.64” (42 mm) recess, front and mid-mount; removable lower rear I/O panel; removable front cover (optional)

Backplane

General:	BP, VME64x, 12-slot, J1/J2/P0 BP, VME64x, 16-slot, J1/J2/P0
Bus structure:	VXI 32/64 bit, J1/J2 monolithic
Connectors:	160 pin, 5 row, J1/J2, IEC 61076-4-113 133 pin, 7 row, J0, IEC 61076-4-101
Assembly:	SMT/ press-fit assembly
Layer count:	10 layers
Control:	System header for SYSRESET, SYSFAIL, ACFAIL, +5 and return; 5 pin MTA-100
PCB:	FR4, all-stripline, UL94V-0, 0.154” (3.9mm)
Termination:	Passive, elect. outboard, mech. inboard
Decoupling:	High-freq. decoupling at each slot; 0.1mF MCL ceramics (SMT) Low-freq. decoupling distributed across the backplane; 100mFTantalum (SMT)
Rear shrouds:	Extended tails and shrouds on all J2 and J0 slots
DC distribution:	Screw terminals for +5, +3.3, +/-12, return (70A rating per terminal)
Compliance:	ANSI/VITA 1.1-1997

Power*

General:	(a) Two 400W AC input front plug, hot swap (b) 420W AC rear, embedded
Total output:	(a) 400/700W, design for 400W N+1 or 700W combined output based cooling; (b) 420W; all outputs combined
Input:	90 – 264VAC, universal input
Frequency:	47 – 63 Hz
Efficiency:	68% or greater
Power factor:	0.99 with PFC
Input current:	(a) 12.7A (both supplies); (b) 10A max
Inrush current:	(a) 30A/115V, 60A/264V (per ps); (b) 10A max
Hold-up time:	20 ms minimum
DC outputs:	(a) +5V/50A,+3.3V/40A,+12V/12A,-12V/4A (ratings are per supply); (b) +5V/40A,+3.3V/30A, +12V/15A,-12V/1A (5V & 3.3V $\leq$220W)
Minimum load:	4% minimum load required on 5V
Remote sense:	Provided on +3.3, +5, +12V outputs
Cooling:	System airflow

Cooling

Airflow:	Front intake, top rear/side exhaust, pressurized
Fans:	Three 150 CFM, high-pressure tube-axial, +12VDC, 1.5A per fan, fixed speed (variable speed available with monitor option)
Air filter:	Front accessible, washable media, 30 PPI, UL flame rated
Accessibility:	Fans contained in indivudual front removable, hot-plugging trays; tool accessable

Storage

Storage tray:	Various configurations (see below)
Power harness:	4-pin IDC, AMP 1-480424-0 or equivalent; 4-pin IE (mini), AMP 171822-4 equivalent; one power connector provided per device bay
Cooling:	Cardcage cooling
Accessibility:	Front removable trays, non-plugging, tool accessable

Control and Input

Switches:	Front panel on/standby, fan speed (FULL/AUTO, req. monitor option)
Power input:	Rear panel IEC320 (AC) with detachable 7’ line cord provided
Fusing:	Rear panel pushbutton single pole cirbuit breaker

Monitoring (optional)

General:	M2-System Monitor with RS232 interface ME-System Monitor with Ethernet interface
Interface:	Front panel LED indicators; Rear panel (M232) DB-9 or (ME) RJ-45 connector
Functions:	Power supply DC output voltage verification (90% nominal); fan speed low-tach indicator for <50% rated fan RPM all fans; exhaust air temperature; fan speed control by temperature
Outputs:	LED indicators: +5, +3.3, +12, -12VDC output, Fan A, B and C (green=good, off=fail), Over-termprature (off=good, red=fail; 60°C trip point); serial interface provide alert status and individual values of all monitored elements

Environmental

Temperature:	0°C to +50°C operating; -40°C to +70°C non-oper.
Shock/Vibe:	Basic transportation per MIL STD 810
Humidity:	5 – 95% non-condensing at 40°C operating, 0 – 95% non-operating
Acoustic:	<55 dBA maximum (1 meter)

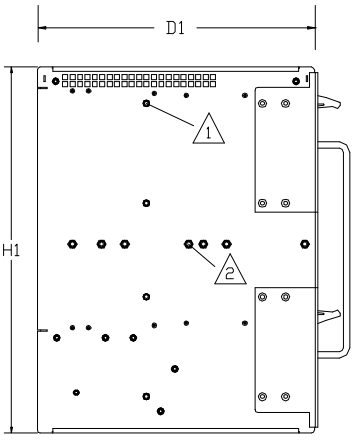
Agency Compliance**

Safety/Emissions: Available for the power supply only. Consult factory for more details

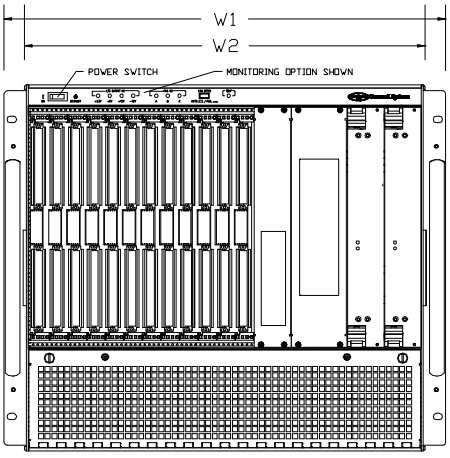
Warranty

1 year limited warranty

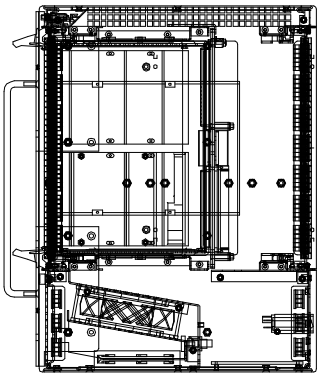
Main Assembly:

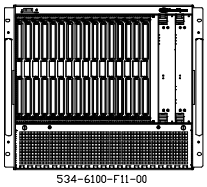


Left-side View



Front View (534-6100-F10-10)


Right-side View (Internal)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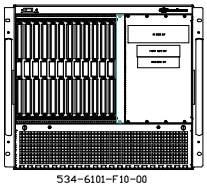
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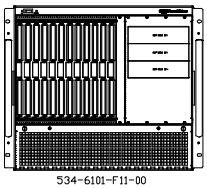
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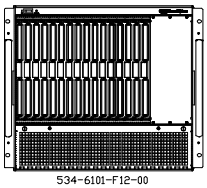
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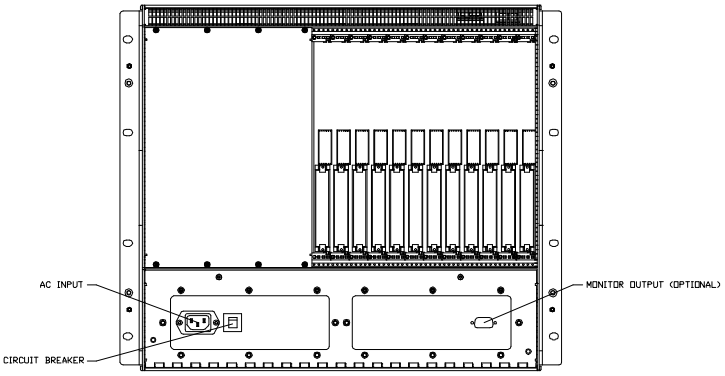
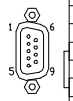
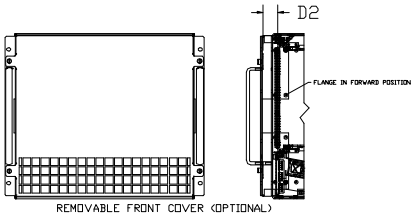


Rear View

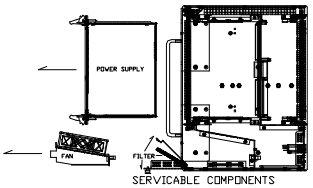
RS-232 SERIAL PINOUT



PIN	ID
1	NC
2	RXDA
3	TXDA
4	PIN 6
5	GND
6	PIN 4
7	RTSA
8	CTSA
9	NC



REMOVABLE FRONT COVER (OPTIONAL)



SERVICABLE COMPONENTS

Dimensions:

D1: 11.90” (303 mm) W1: 19.00” (483 mm) H1: 15.72” (400 mm, 9U)
D2: 1.60” (41 mm) W2: 17.22” (438 mm)

Notes

1. Rack flange alternate mid-mount location
2. Rack slide mounting locations

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Ordering Information:

The S34 for VME64x is available in the following configurations (consult factory for additional versions and options):

Part number	Description
534-6100-F10-00	S34 VME64x,12sl,2-400W,H/F/C
534-6100-F11-00	S34 VME64x,16sl,2-400W
534-6101-F10-00	S34 VME64x,12sl,420W,H/F/C
534-6101-F11-00	S34 VME64x,12sl,420W,3C
534-6101-F12-00	S34 VME64x,16sl,420W

For monitor option M2, use 534-6xxx-Fxx-1x with any of the part numbers above.
For monitor option ME, use 534-6xxx-Fxx-2x with any of the part numbers above.
Order codes H/F/C for storage bays denote: H= 3.5” x 1” hard disk, F= 3.5” floppy disk, C= CD (5.25” hh device)

Accessories

014-6001-001-0P	Shielded single-slot filler panel, 6U X 4T; installs in vacant slots
110-1171-099-01	Subrack air block, single slot; snaps into a vacant slot to block airflow
134-6028-004-01	S34 solid front cover, removable
134-6023-K00-00	Kit, rack-slides, 14"

Notes:

* Additional power supply options for 400Hz, 24 or 48VDC are available. Consult factory for more details.

** Safety and EMC compliance information is available for the power supply only. Tracewell Systems can test and certify for agency compliance on the customer specific integrated products. Consult factory for more details.

P/N 095-6036-000-0P 061213