

Tracewell S31 for *CompactPCI*[™]

8 Slot *CompactPCI*[™] Rackmount System

Description

The Tracewell S31 from Tracewell Systems, Inc. delivers innovative design and performance in a low-profile, cost effective 8-slot CompactPCI system. Available in standard configurations, the Tracewell S31 addresses commercial, industrial, and telecommunication applications.

The space-conscious Tracewell S31 occupies only 8U of total rack space, yet is also ideal for bench-top operation. Designed around a modular concept, all major components are quickly accessible for ease of configuration and service. A front plugging service module supports power, cooling and monitoring, and a front storage module provides up to five drive bays. Advanced design and manufacturing minimizes fasteners while providing EMI control without the need for costly gasketing. Tracewell's rigid steel cardcage eliminates flexing often seen in conventional extruded rail designs, while meeting all IEEE 1101.10/11 standards. Removing just four screws allows the entire rear subrack assembly to slide from the chassis, providing unrestricted access to the backplane and all internal DC wiring. System features include backplane options supporting the latest PCMIG hot swap, 64 bit and H.110 TDM telephony bus platforms. A standard system monitor verifies fan speed and power supply output voltage limits. Reliable, low cost power for AC and DC input uses proven PS/2 power supply technology and high-pressure axial fans provide distributed airflow throughout the chassis.

The Tracewell S31 from Tracewell Systems delivers flexibility and performance for a broad marketplace.



Features

- Compact 8U overall height
- Available with H.110 TDM telephony backplane
- Hot-Swap compatible per PICMG 2.1
- IEEE 1101.10/11 compliant steel subracks eliminate flex
- Removable rear cardcage improves access
- Front plugging power, cooling and storage
- System monitor verifies output voltage and fan speed
- EMI shielded design
- Durable steel and aluminum construction



ISO 9001
certified

Physical

Construction: Steel and aluminum
Cardcage: *Front:* 6U x 160mm, 10 slots (3 slot, 12HP CPU), IEEE 1101.10
Rear: I/O, 6U x 80mm, 9 slots (2 slot, 8HP behind CPU), IEEE 1101.11
Dimensions: 12.33" D (313 mm), 17.64" W (448 mm, less rack flanges), 19.00"W (483 mm, with rack flanges), 13.98"H (355mm, 8U)
Weight: 30 lbs. (13.63 kg)
Finish: Textured paint, light gray per Sherwin Williams F63TXA9008; front upper/lower panels, rack flanges, top and bottom covers, service and storage module faceplates; all other aluminum is brushed clear chromate per MIL-STD 5541, steel is bright zinc plate
Plastics: Cardguide, snap-in, 0.062" pcb, nylon, UL 94V-2 material; cardguide entry, snap-in, 0.062" pcb, nylon, UL 94V-0 material
Accessories: Kit provided including (8) +5.0 (brilliant blue) and +3.3V (cadmium yellow) backplane I/O keys, (2) I/O jumpers, and (4) feet

Backplane

Option code B1: 32/64 bit, J1-J5 populated all slots, system slot right
Option code B2: 32/64 bit, J1-J2 populated all slots, J3-J5 fully populated in system slot only, system slot right
Option code B3: 32/64 bit with H.110 bus, J1-J5 fully populated, system slot right

Bus Structure: cPCI 32/64 bit (B1, B2), cPCI 32/64 bit H.110 (B3)
Assembly: SMT/press-fit assembly
Layer count: 8 layers (B1, B2), 10 layers (B3)
Impedance: 65 Ohms nominal on all signal lines, non-loaded pcb
Control: System header for PRST#, DEG#, FAL#, return
Termination: None provided
PCB construction: FR4 epoxy-glass laminate, multilayer, all-stripline, SMOBC,

Decoupling: silkscreen on two sides UL 94V-0, .150" (3.8 mm) thickness
Rear shrouds: SMT decoupling per PCMIG 2.0 R2.1
 Extended 16mm tails and AB compatible shrouds on all P3 – P5 connectors (B1, B2) H.110 (B3) P4 has no rear shrouds and cut tails, P5 row Z is not populated
Compliance: PICMG 2.0 R2.1 (B1, B2), PCMIG Draft 2.5 (B3), hot swap compatible per PCMIG 2.1

Power†

Total output: 300 watts; maximum for all outputs combined
DC outputs: +5.0V/32A, +3.3V/23A, +12V/12A, -12V/1A
Input: 90 – 135/180 – 265VAC, user selectable
Hold-up time: 17 ms minimum at full load at 115VAC; 20ms at 230 VAC
Efficiency: > 65% nominal at full load
Minimum load: None required
Frequency: 47 – 63 Hz
Inhibit: Global output inhibit using front panel on/standby switch
Inrush current: < 80A peak at 135V cold start at 25°C
Input current: 6.5A at 115VAC; 3.5A at 230VAC
Cooling: Internal 20 CFM fan cools power supply independent of chassis
Accessibility: Power supply contained within front plugging module

Cooling

Airflow: Front intake, side/rear exhaust, pressurized
Air filter: Front accessible, washable media, 30 PPI, UL 94-HF flame rating
Fans: Two 130 CFM, high pressure tube-axial, 12VDC
Accessibility: Fans contained within front plugging module; tool accessible

Storage

Option code S1: Embedded storage, 22HP; Peripheral Support: (1) 5.25" CD, (1) 3.5" floppy, (3) 3.5" HDD
Option code S2††: Multimedia storage, 26HP; Peripheral Support: (2) 5.25" CD, (2) 3.5"E floppy/HDD

Power harness: (4) 4-pin IDC, AMP 1-480424-0 or equivalent; (2) 4-pin IE (mini), AMP 171822-4 or equivalent

Cooling: Upper and lower vent openings utilize subrack airflow
Accessibility: Front removable storage module, tool accessible

Control/Input

Switches: Front panel on/standby, rear AC voltage selector for 90 – 135VAC or 180 – 265VAC
Power input: Rear panel IEC320 (AC) with detachable line cord provided
Circuit protection: Power supply internal breaker resets by cycling AC or front panel on/standby switch
Accessory outlet: Rear panel outlet IEC320R provides accessory AC power; 3A 100 – 120VAC, 2A 200 – 240VAC

Monitoring

Interface: Front panel LED indicators
Functions: Power supply DC output voltage verification (90% nominal); fan speed low-tach indication at <50% rated fan RPM or locked rotor for both fans
Outputs: Green LED indicators for +5, +3.3, +12, -12VDC, Fan 1 and 2; all LEDs on for good, off for fail

Environmental

Temperature: +10°C to +50°C operating; -40°C to +70°C non-operating
Humidity: 5 – 95% non-condensing at 40°C operating, 0 – 95% non-operating
Shock/Vibration: Basic transportation per ASTM 0775
Acoustic: < 58 dBa (1 meter)

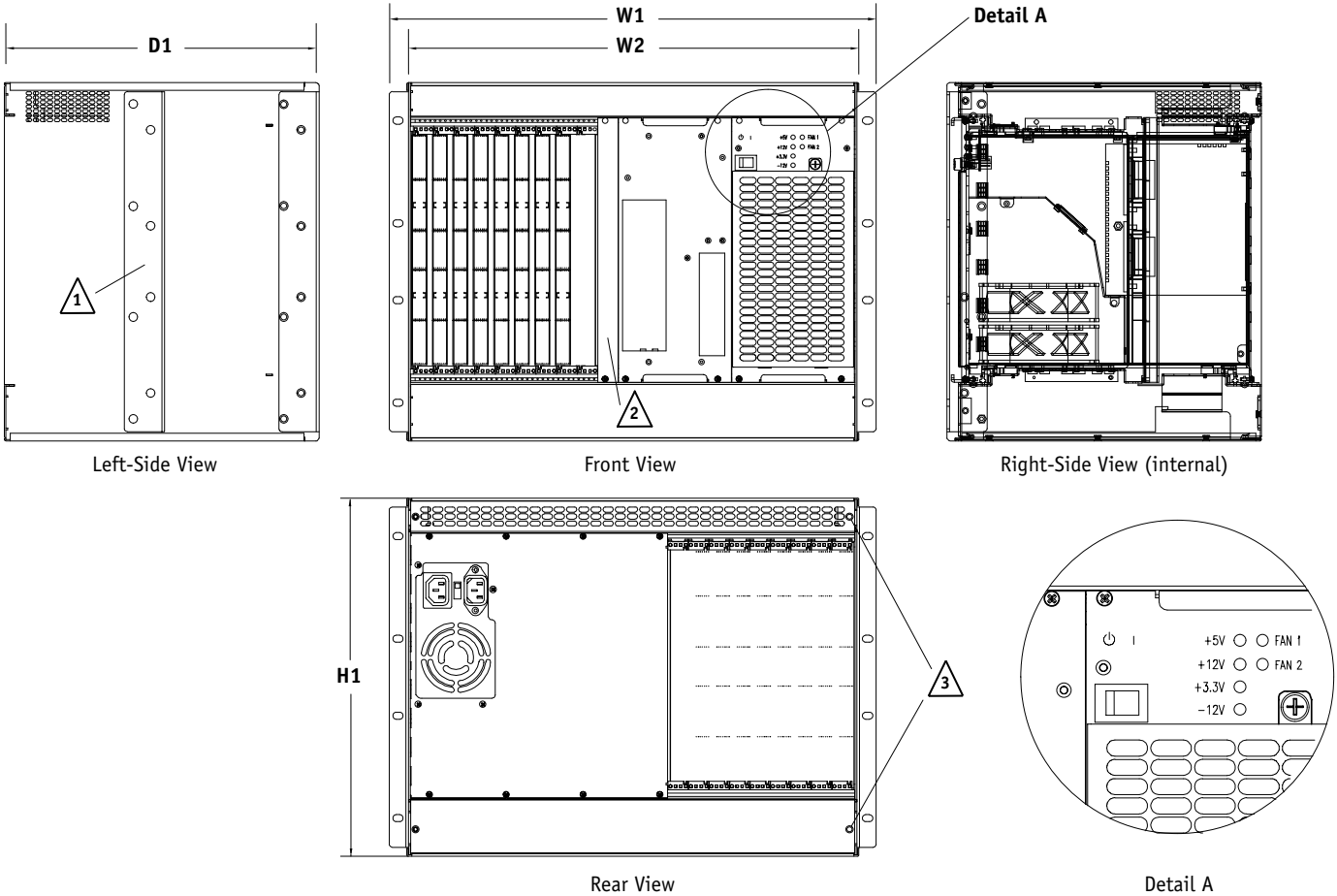
Agency Compliance†††

Safety: Designed to meet: UL 1950 *Third Edition*, CAN/CSA-C22.2 No. 950-95 *Third Edition*
Emissions††††: See note on back

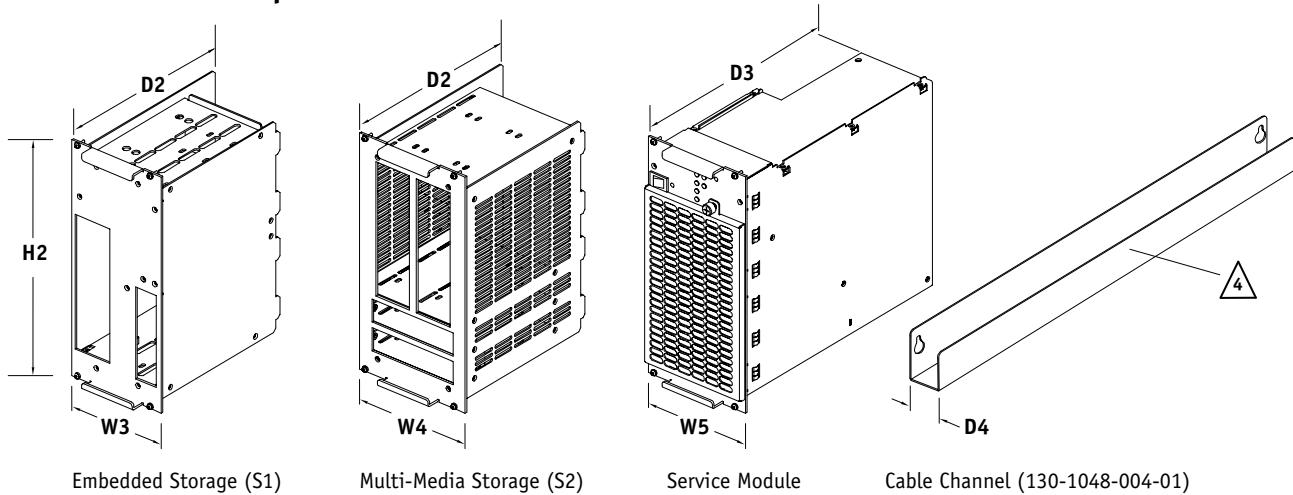
Warranty

1 year limited warranty

Main Assembly



Sub-Assemblies and Options



Dimensions:

D1: 12.28" (312 mm)	W1: 19.00" (483 mm)	H1: 13.98" (355 mm, 8U)
D2: 8.26" (209 mm)	W2: 17.64" (448 mm)	H2: 10.32" (262 mm)
D3: 11.00" (279 mm)	W3: 4.41" (112 mm)	
D4: 1.50" (38 mm)	W4: 5.21" (132 mm)	
	W5: 4.79" (122 mm)	

- 1 Rack flange alternate mid-mount location
- 2 Filler panel not provided with S2 option
- 3 Remove rear cardcage using (4) screws
- 4 Mounts using lower front EIA flange holes

Ordering Information

The Tracewell S31 as shipped includes chassis, backplane, power supply, storage and monitoring, and is available in the following standard configurations:

Part number	Description
531-6000-F00-00	Chassis w/cPCI 64 bit backplane (B1), 300W AC power supply, embedded storage (S1)
531-6000-F01-00	Chassis w/cPCI 64 bit backplane (B1), 300W AC power supply, multi-media storage (S2)
531-6000-F10-00	Chassis w/cPCI 64 bit P1-P2 backplane (B2), 300W AC power supply, embedded storage (S1)
531-6000-F11-00	Chassis w/cPCI 64 bit P1-P2 backplane (B2), 300W AC power supply, multi-media storage (S2)
531-6000-F20-00	Chassis w/cPCI 64 bit H.110 backplane (B3), 300W AC power supply, embedded storage (S1)
531-6000-F21-00	Chassis w/cPCI 64 bit H.110 backplane (B3), 300W AC power supply, multi-media storage (S2)

Accessories

130-1048-004-01	Cable shelf; mounts to chassis front flanges using rack screws
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

Notes

- † Additional standard power supply options for -48VDC, consult factory for more details
- †† Option S2 is 4HP wider than S1, limiting the CPU slot size to 8HP maximum
- ††† EMC compliance information is available for the power supply only
- †††† As an option, Tracewell Systems can evaluate agency compliance for the customer's specific integrated product. Consult factory for more details

visit our website at:
www.tracewellsystems.com

or call toll free: 1.800.848.4525