

# Tracewell 6U Backplane for VME64

## 6U 32/64 bit VME backplanes

### Description

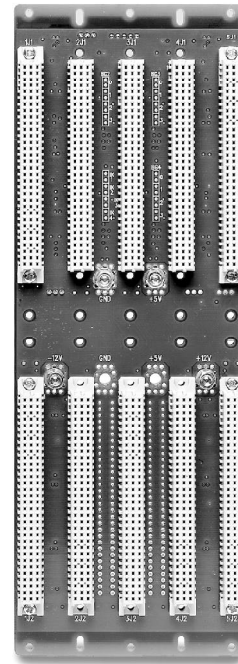
Tracewell Systems Inc. has combined our extensive experience in standard architecture backplanes and high-frequency design. The result is a line of

performance backplanes for VME that meet the needs of a wide range of industrial, military, data and communication real-time applications. By utilizing the latest in design and manufacturing technology, Tracewell Systems provides a unique combination of performance, quality and value to its VME customers. Tracewell 6U VME backplanes provide ideal signal and power distribution for both 32 and 64-bit applications.

An all-stripline 8-layer design uses advanced surface mount technology (SMT) to maximize performance and reliability, while reducing cost to manufacture. Evolving out of a fundamental need for high frequency performance, Tracewell VME backplanes utilize SMT to dramatically reduce the inductance and capacitance associated with component leads, resulting in improved overall impedance and voltage characteristics. Ground

tracking, which surrounds every signal line with a ground layer, lowers signal-induced noise, crosstalk, and IR losses. By using SMT, ground tracking is possible even in the J1 section where it is most critical. Space optimized power and ground planes minimize voltage drop and ground shift, while eliminating the need for busbars to distribute power. Single-point power connections capable of up to 140 amps are user configurable to support a range of wiring requirements. The existing backplane can also be assembled for fully passive applications as an option.

The Tracewell 6U VME backplanes address the needs of high-technology computing applications for today and tomorrow.

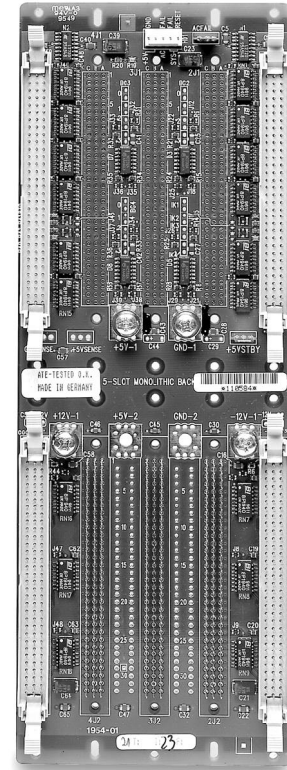


### Features

- Low noise design is all-stripline with outer ground planes
- SMT/ press-fit assembly adds reliability and performance
- 96 pin, 3 row DIN 41612 connectors J1/J2
- Extended tails on all J2 slots and first slot J1 for I/O
- High frequency decoupling at each slot
- Distributed bulk low frequency decoupling
- Convenient automatic BG/IACK jumpering
- Low-current active inboard termination
- Flexible power connections require no bus-bars
- Interleaved grounds for I/O header grounding
- Fully passive assembly (optional)
- ANSI/VITA 1-1994 compliant

## Specifications

- Bus Structure:** VME, 32/64 bit, J1/J2 monolithic
- Dimensions:** Width (in) = (# slots x 0.8") - 0.30; Height 10.35" (263 mm)
- Weight:** 3.32 lbs. (1.51 kg; 21 slot)
- Assembly:** SMT/ press-fit assembly
- Layer count:** 8 layers
- Control:** System header for SYSRESET, SYSFAIL, ACFAIL, +5V and return; 5 pin MTA-100
- PCB:** FR4 epoxy-glass laminate, multilayer, all-stripline, SMOBC, silkscreen 2 sides, 1 oz. copper signal and power planes minimum, UL 94V-0, 0.125" thickness
- Impedance:** 50 Ohms, non-loaded pcb
- Termination:** Active, electrically outboard, mechanically inboard; Thevenin equivalent to 194 Ohms at 2.94V  
Decoupling: High-frequency at each slot; 0.1mF MCL ceramics (SMT); Low-frequency distributed across the backplane; 100mF Tantalum (SMT)
- Rear shrouds:** Extended 15mm tails on all J2 slot and J1 slot 1; latching shrouds provided on first and last slots
- DC distribution:** 140A rated power bridges with M6 screws for +5VDC and return, M6 screws; 70A rated power bolts with M4 screws on 12VDC; Zener diode ESD protection on all power rails
- Performance:** End-to-end voltage drop and ground shift less than 150mV (21-slot backplane, 5V at 140A)
- Compliance:** ANSI/VITA 1-1994
- Warranty:** 1 year limited warranty
- Connectors:** System Connector (5 pin; mates to AMP #640440-5)  
1 | GRD | +5V | ACFAIL | SYSFAIL | SYSRESET | 5



(070-1305-000-0B SHOWN)

## Ordering Information

Tracewell Systems 6U 32/64 bit backplane is available in the following standard configurations:  
(Consult factory for other slot sizes and configurations)

Part number	Description
070-1303-000-0B	BP, VME64X, 6U, 3-SL, J1/J2/J0
070-1305-COM-0B	BP, VME64X, 6U, 5-SL, J1/J2/J0
070-1306-000-0B	BP, VME64X, 6U, 6-SL, J1/J2/J0
070-1307-COM-0B	BP, VME64X, 6U, 7-SL, J1/J2/J0
070-1308-COM-0B	BP, VME64X, 6U, 8-SL, J1/J2/J0
070-1309-COM-0B	BP, VME64X, 6U, 9-SL, J1/J2/J0
075-1312-COM-0B	BP, VME64X, 6U, 12-SL, J1/J2/J0
075-1002-000-PP	BP, VME64X, 6U, 21-SL, J1/J2/J0

request a quote at our web site:  
[www.tracewellsystems.com](http://www.tracewellsystems.com)  
 or call: 1.800.848.4525

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P/N 095-6017-000-0P 07/04