

# T-Frame for VPX

## 5-Slot OpenVPX<sup>®</sup> (VITA 65) Test and Development System

Tracewell's popular T-Frame<sup>™</sup> development platform is now available for OpenVPX<sup>®</sup>, supporting the latest standards for high-speed and interoperability. This all-new design offers industry leading performance and features aimed specifically at the advanced developer.

T-Frame's patented open-frame design provides unrestricted access to installed boards, eliminating the need for performance robbing extender cards. The OpenVPX<sup>®</sup> (VITA 65) standard profile backplane supports data rates of 3.125Gb/s+ per link, providing 4 payload slot and 1 switch slot. The T-Frame<sup>™</sup> includes comprehensive monitoring of all backplane voltages, current, as well as intake and exhaust air temperature. The front panel LCD interface displays these monitor outputs and includes temperature, fan speed, voltage, and status indication. Standard Ethernet interface provides the user with remote status and control of monitored elements, including backplane reset, remote voltage adjust, and an ability to set alarm thresholds. The 1500W high current power supply provides power for the most demanding applications. High pressure push-pull cooling supports up to 200W per slot, with isolated cooling provided for the boards and power supply. Fans are adjustable for full speed or automatic operation, where speed is adjusted based on temperature to reduce unwanted noise. The front removable fan tray allows for easy service and cooling upgrades. And a modular chassis design allows reconfiguration for different slot pitch and airflow options. The T-Frame<sup>™</sup> is easily portable yet rugged, with rigid reinforced steel card cages to eliminate flex. Other conveniences include a tilt base, removable side access covers, and removable top mounted handle.

T-Frame<sup>™</sup> for VPX supports high-speed design by solving the problems of accessibility, measurement and control during development, thereby reducing design cycles and time-to-market.

### FEATURES:

- **Patented open frame design offers unparalleled front and rear access for test and debug**
- **High speed 5-slot VPX backplane per VITA 65**
- **VIPER connector option per VITA 60**
- **High capacity push-pull variable speed cooling supports up to 200W/ slot**
- **Advanced Voltage/Current/Temp monitoring with LCD display and Ethernet for remote monitoring and control**
- **High current 1500W power supply**
- **Fault protection with user selectable thresholds**
- **Highly configurable design**



**GENERAL:** Open access 5-slot OpenVPX<sup>®</sup> (VITA 65) 1500W air-cooled development system with RT2 connectors (VITA 46) and Ethernet-based chassis monitoring

**DIMENSIONS:** Tilt base installed: 13.7" D, 13.9" W, 20.2" H (w/ handle), 18.4" H (w/out handle); Bottom feet installed (tilt base uninstalled): 13.7" D, 10.7" W, 18.7" H (w/ handle), 16.9" H (w/out handle)

**FINISH:** All exterior surfaces to be textured light grey paint; all other aluminum is brushed clear chromate per MIL-STD 5541

**CARDCAGE:** Vertical, air cooled per VITA 48.1, design provides 6 physical slots on 1.0" pitch; 6 front load, 6U x 160mm payload slots per IEEE 1101.10 and VITA 46.0; 6 rear load, 6U x 81.5mm rear transition slots per IEEE 1101.11 and VITA 46.10

**BACKPLANE:** 5-slots, OpenVPX<sup>®</sup> (VITA 65) with Tyco RT2 connectors (VITA 46) in all slots; compliant to standard backplane profile BKP6-CEN05-11.2.5-1; slots 1 - 4 are payload slots, slot 5 is a switch/management slot; RTM connectors included on all slots; backplane is installed in physical slots 1 - 5

**COOLING:** The cooling system is designed to thermally manage up to five (5) 200W front-loading VPX boards. Three (3) 240CFM high-pressure fans are arranged in a push-pull configuration to provide exceptional flow rate and pressure performance. Fans are speed controlled based on temperature, operating at reduced speed for quiet operation in a lab environment at lower temperatures and power usage, or full speed at higher temperatures and power consumption; metered airflow provides cooling for the rear transition modules; fans are accessible for easy service; airflow path is front/rear intake and top exhaust

**POWER:** 1200/1500W, AC input, 90 - 264VAC, 47 - 63Hz, DC outputs: +5V/60A, +12V/62.5A, +3.3VAUX/10A, +12VAUX/10A, -12VAUX/4A, 12V/10A (isolated fan output); maximum output power 1200W when operating below 180VAC

**MONITORING:** The unit includes an Ethernet chassis monitoring module (CMM). The CMM is mounted on a removable internal tray to allow for future upgrades to VPX chassis management modules.

The CMM provides the following monitor and control elements:

- (4) temperature sensors (1 intake and 3 exhaust)
- PS output voltage (+5, +12, +3.3AUX, +12AUX, -12AUX)
- PS output current (+5, +12, +3.3AUX, +12AUX, -12AUX)
- Fan speed monitoring
- Variable fan speed control based on temperature with front panel full-speed override switch
- Front panel LEDs for Power Good, Reset, and Fail
- Front panel LCD provides voltage, current, fan speed, and temperature values, FRU data, and fault status
- Power supply remote inhibit via the Ethernet monitor interface
- Fault shutdown on fan failure, over-temperature, over/under voltage, or over-current condition
- Remote backplane reset via the Ethernet monitor interface
- User selectable limits for voltage, current, fan speed, and temperature faults

**CONTROL/INPUT:** Front panel: Backplane reset switch, Fan speed control switch (auto/full), LCD screen select buttons (up/down/hold); Rear panel: On/Off switch, Circuit breaker, IEC power input connector with integrated line filter, Monitor interface connector (RJ45); includes a 15A line cord

**ACCESS:** Patented open-frame construction provides easy access to installed modules; removable front and rear side inspection covers

**OTHER:** Removable tilt base and carrying handle; includes hard-mount points to support customer specific mounting requirements; rack-mount brackets can be quoted as an option; unique integrated cardcage and fan module allows the unit to be easily reconfigured for various slot pitch and airflow requirements

**ORDERING INFORMATION:**

P/N 580-6200-F00-00                      T-FRAME VPX, 5SL, RT2, 1500W, ME

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