

DATA SHEET



CT-400

MODULAR 13-SLOT C-SIZE
VXIBUS MAINFRAME

FEATURES

A Price/Performance Breakthrough for VXI Mainframes

Modular Power Supply Assembly

Over 1100 Watts of Usable Power

Highly Efficient, Quiet Cooling System

Enhanced Monitoring Included

All Seven DC Supply Lines Available on Rear Panel for
Powering External Devices

All Eight TTL Trigger Lines Available on Rear Panel for Triggering
to/from Other Instruments

Fault Output Signal Available on Rear Panel, Flags System
Failure Condition

Remote Power-off Input on Rear Panel Allows System to be
Shut Down



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RELIABLE DATA FIRST TIME EVERY TIME

OVERVIEW

The CT-400 has been designed with over a decade of experience in VXIbus mainframe and instrument development, and in pioneering reduced cost of entry into VXI, while maximizing performance. By combining the CT-400 with VTI Instrument's lines of high-performance VXIbus instruments (VMIP™ family), and high-density modular switching systems (SMIP™ family), a modular test system can be cost-effectively configured in a small footprint.

COST-EFFECTIVENESS

The price of a VXIbus mainframe considerably impacts the overall cost of the complete test system, particularly if the test system uses multiple VXIbus mainframes. When putting several instruments in a system, the power and cooling capacity of the mainframe is also an important consideration. The CT-400 offers customers a 1100 W high-performance mainframe for the price of 500 W VXIbus mainframes available from other manufacturers.

PERFORMANCE

Being a leading instrumentation supplier, VTI designed the CT-400 with performance in mind. Emphasis has been put into the following areas:

BACKPLANE - The backplane incorporates a feature set that is unique in the industry: a custom power sub-panel to distribute all supply lines across the backplane, automatic active Bus Grant and IACK jumpering, as well as a 10-layer stripline construction providing superior performance that minimizes crosstalk. The use of computer simulation has resulted in an optimized design with low resistance, low AC noise, and outstanding power distribution. Backplane and inter-module shields are also available for improved EMI/RFI performance.

AIRFLOW - The airflow design utilizes a pressurized plenum system with a unique baffling system to guarantee enough cooling capacity to satisfy even the most power-hungry applications. The cooling direction follows traditional airflow conventions for instrument racks, guaranteeing that hot air escaping from neighboring equipment does not interfere with the CT-400 cooling system.

MAINTENANCE - The power supply assembly is completely removable and field-upgradeable from the rear of the CT-400, minimizing the mean-time-to-repair.

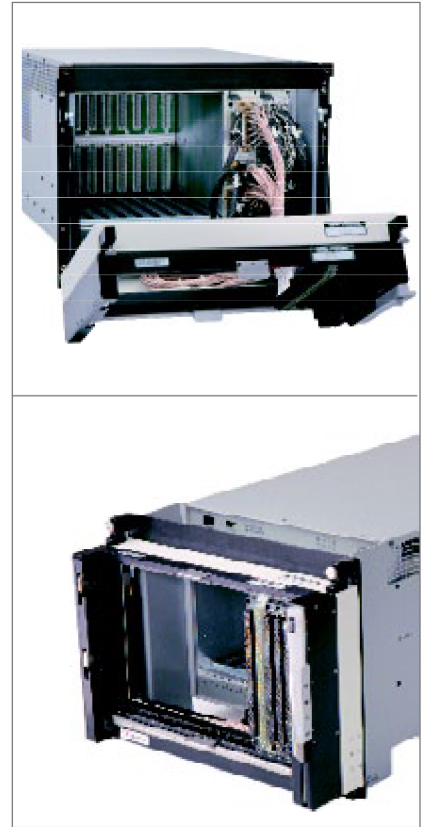
POWER AND HEALTH MONITORING

The CT-400 includes, as a standard feature, a powerful monitoring system with user outputs on the rear panel for the following:

- Over-temperature interrupt
- Over-voltage interrupt
- Over-current interrupt
- Over-ambient air temperature (>55 °C) interrupt
- Fan-speed drop interrupt
- Fan tachometer outputs
- Main fault interrupt output - the logical 'OR' of all other fault interrupts
- All seven VXIbus supply lines protected to 1 A with self-healing fuses, allowing the VXIbus mainframe to provide DC power to devices other than VXIbus cards
- All eight TTL trigger lines; allows other non- VXI devices or additional chassis to share trigger bus

All failure outputs are made available as open-collector lines that can be tied with other VXIbus chassis in a multi-chassis system. Fan speed can also be set to low, high or variable. When in variable mode, the fan speed is automatically adjusted based on power usage and ambient air temperature. One LED per interrupt output immediately indicates the failure condition of the VXIbus system.

Front panel voltage indicator LED's also provide a comprehensive indication of the health of the chassis at a glance. Status of each of the power supply lines and the operational status of the chassis are provided. A green LED indication specifies the voltage is within limits, a red indication specifies an over-voltage condition, and an unlit indication specifies an under voltage condition.



MOUNTING AND CABLING ACCESS

Several options are available for mounting and integrating the CT-400 into a standard EIA rack:

- Cable trays are available in 1U and 2U depths that allow access between the front and rear of the mainframe and other instruments within the rack (Options 105 and 106).
- A transparent front door is available that allows protection of instruments and cables while permitting the viewing of VXIbus instrument annunciators (Option 103).
- A customizable front panel (Option 104) is available that hinges down and mounts on the front of the CT- 400.This option allows custom connectors and small interface adapters to be mounted directly on the front of the VXIbus mainframe, reducing cable lengths and improving signal integrity.
- A VXIplug&play compliant adapter kit (Option 101) is available that allows the CT-400 to be used with VXIplug&play adapters and interfaces.
- VXIplug&play interface connector assembly.

The CT-400 has been designed to allow front and rear panels to be easily customized.This reduces the need for customers to design custom panels elsewhere in the rack, and keeps cable lengths at a minimum. VTI Instrument’s custom engineering services can help configure these panels.

Adjustable rackmount flanges with handles (Option 100) are available that allow the mainframe to be accommodated in any depth rack -- either recessed in the rack (up to 10 inches), or extended out from the rack (up to 5 inches).

Specifications

SIZE	25" deep x 14" high x 16.7" wide C-size 13 VXIbus card slots
WEIGHT	< 50 lbs
VXIBUS REVISION	1.4
COOLING	> 100 W/slot
INPUT VOLTAGE	100-240Vac/120-135Vdc 50/60 Hz (47 Hz-440 Hz with increased leakage current and reduced PFC)
MTBF	100,000 Hours
MTTR	5 Minutes
TEMPERATURE	0 °C to 55 °C Operating - 40 °C to +70 °C Storage

Specifications

POWER SUPPLIES

UL, CSA, TUV approved.
Short circuit, over-voltage, reverse voltage, and thermal shutdown protection.

* A total of 1100 Watts may be supplied to the modules with the following maximum currents:

DC SUPPLY VOLTAGE

	Peak Current (Imp)	Dynamic Current (Imd)
+5 V	80 A	15 A
-5.2 V	75 A	9 A
-2 V	40 A	4.5 A
+12 V	18 A	3 A
-12 V	18 A	3 A
+24 V	16 A	6.5 A
-24 V	16 A	6.5 A

TOTAL AVAILABLE POWER

2000 W

TOTAL USABLE POWER

1100W

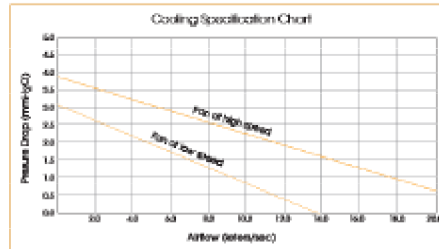
PERIODIC AND RANDOM DEVIATIONS (PARD)

+/- 24 V

150 mVp

All others

50 mVp



Ordering Information

CT-400	13-slot VXI Mainframe
Option 100	Adjustable Rackmount Flanges with Handles
Option 101	VXIplug&play (VPP-8) Rackmount Kit
Option 102	Rackmount Slides
Option 103	Transparent Front Door
Option 104	Hinged Custom Front Panel (includes option 100)
Option 105	1U Cable Tray
Option 106	2U Cable Tray
Option 108	Inter-module Shields (12)
Option 110	Blanking Panel (Single)
Option 111	Blanking Panel (Double)
Option 113	Spare Power Supply (52-0912-100)