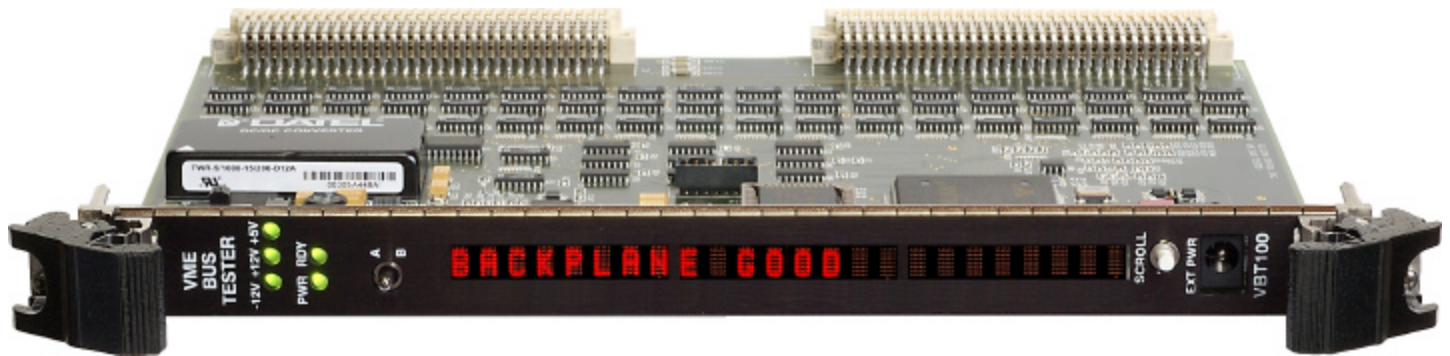


VBT100 - VME BACKPLANE TESTER



VBT100

The VBT100 performs these tests to determine if your backplane is safe and within the VME or VME64x specification.

POWER SUPPLY TEST

- Continuously Measures +5V, +12V, -12V supplies
- Also measures +3.3V, +5VSTBY, VPC, +/-V1, +/-V2
- Accuracy +/- 10mv
- Displays measured voltages
- Indicates a failure if out of range
- LED monitor of +5V, +12V and -12V supplies

INTRUSIVE VOLTAGE TEST

- Detects voltages which may cause damage to boards
- Measures and displays intrusive voltages
- Alerts user to fix intrusive voltage
- Measurement of +40Vdc to -40Vdc voltages
- Accuracy +/- 40mv

SHORT TEST

- Checks for shorts between signals
- Checks for signal shorts to power and ground
- Detects resistive shorts and hard shorts
- Displays shorted signal connector pins

OPEN TEST

- Checks for open signals on backplane
- Detects improper terminations
- Identifies missing pullup and pulldown resistors
- Displays signal names and connector pins

IMPEDANCE TEST

- Checks signals for proper resistive impedance
- Detects high and low impedance
- Displays out of tolerance signals and connector pins
- Identifies excessive capacitive signal loads

Verify VME Backplane Performance

Silicon Control introduces the quick, easy and accurate way to verify that your VME and VME64x backplanes are safe and within specification. The VBT gives you the confidence to plug in other cards without damaging them and insures the backplane will operate properly in a loaded system.

- **Quickly identifies unsafe and out of specification VME backplanes**
- **Checks all VME and VME64x signals**
- **Withstands +40Vdc to -40Vdc on any signal**
- **Detects high voltages that may damage cards**
- **Identifies open or shorted signals**
- **Detects improper terminations**
- **Checks signal impedance**
- **Continuously measures power supply voltages**
- **Power supply LEDs illuminate Green if within spec or Red for out of spec**
- **All tests and results are displayed on a 24 character alphanumeric LED display**
- **Tests are initiated and results are read using front panel switches**
- **Signal names and connector pinouts are identified during and after testing**
- **Choice of quick or comprehensive tests**
- **Results are stored for review**
- **Tests both powered and unpowered backplanes**
- **Works with other boards in backplane**
- **Hot Swap capable**
- **Operates on backplane or external power**
- **Low power consumption**
- **Available in 160mm or 220mm deep versions**

The VBT100 plugs into a backplane and performs a series of tests that check for intrusive voltages, correct power supply voltages, signal shorts and opens and proper impedance.

For more information or training contact our outstanding technical support, application and sales engineers.



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VBT 100 SPECIFICATIONS

GENERAL SPECIFICATIONS

Signal Protection

Power On: -40V to +40V
Power Off: -40V to +40V

VME Signals Tested

D[31:0], A[31:01], AM[5:0], DS[1:0], AS*, WRITE*,
LWORD*, DTACK*, BERR*, RETRY*, SERA, SERB
IACK*, IACKIN*, IACKOUT*, IRQ[7:1],
SYSRESET*, SYSFAIL*, SYSCLK, ACFAIL*,
BBSY*, BCLR*, BR[3:0], BGIN[3:0], BGOUT[3:0],

VME64x Additional Signals Tested

GAP*, GA[4:0], LI/I, LI/O, RESP*
MPR, MCLK, MSD, MMD, MCTL,
Rsvbus pins on P1 Row D
Rsvbus pins on P1 Row Z

Power Supplies Tested

+5V, +12V, -12V, 5VSTDBY
+3.3V, VPC, +V1, +V2, -V1, -V2

Power Supplies Monitored

+5V, +12V, -12V
LED bi-color front panel indicators
Illuminates RED when out of range
Illuminates GREEN when in range
+5V range: 4.875V to 5.25V
+12V range: 11.64V to 12.60V
-12V range: -11.64V to -12.60V

Miscellaneous Features

Detection and display of geographical address
Automatic detection of VME and VME64x backplanes
Tests both powered and unpowered backplanes
Hot Swap Capable

Front Panel Control and Display

Alphanumeric 24 character LED display
Power Supply monitor bi-color LEDs (x3)
Test selection toggle switch: 3 position ON-OFF-ON
Results Scroll pushbutton: momentary click
External power connector: 2 wire
Power selector slide switch (recessed)

Power Requirements

Operating—3.0V to 6.25V at 1 Amps max
Standby—3.0V to 6.25V at 0.5 Amp max
Fully isolated from supply to 1500 Vdc
Operates from bus or external power
Slide switch selection

Environmental

Operating Temperature -40 to +85 deg C
Storage Temperature -55 to +100 deg C
Humidity Up to 85% Non-Condensing

Dimensions

VME 6U Eurocard
160mm or 220mm depth

TEST SPECIFICATIONS

Test Times

Total test time: 90 sec. max
Initialization time: 3 sec. max

Tests Performed

Test A: Power Supply, Intrusive Voltage
Test B: Power Supply, Intrusive Voltage, Short,
Open, Impedance

Results

Displayed: Failures after test executed
Information: Signal names, pin / connector numbers
Control: Scroll thru results using pushbutton
Result buffer capacity: approx. 192 failures

Power Supply Test

Measured: +5V, +12V, -12V, 5VSTDBY,
+3.3V, VPC, +V1, +V2, -V1, -V2
Measurement range: -40V to +40V
Accuracy: +/-10 mv
Measure Interval: Continuous and test switch
Acceptable Range:
+5V range: 4.875V to 5.25V
+12V range: 11.64V to 12.60V
-12V range: -11.64V to -12.60V

Intrusive Voltage Test

Measured: All bussed and daisy chained signals
Measurement range: -40V to +40V
Accuracy: +/-40 mv
Measure Interval: Test switch
Acceptable Range: -0.8V to 5.25V

Short Test

Measured: All bussed and daisy chained signals
Measurements: Signal, ground and power short
Measure interval: Test switch
Measurement method: Drive test pulse
Short Resistance: < 100 ohms
Ground short detection voltage: < 0.25V
Power short detection voltage: > 4.75V

Open Test

Measured: All bussed signals
Measurements: Missing pullups and pulldowns
Measure Interval: Test switch

Impedance Test

Measured: All bussed signals
Measurements: High and Low impedance
Measure Interval: Test switch
Serial impedance detection: < 50 ohms

Ordering Information

VBT100 - 160 VME Bus Tester (160 mm)
VBT100 - 220 VME Bus Tester (220 mm)

Included with every VBT100:

VBT100 tester, power cable, documentation,
quick start guide and carrying case.

