

CompactPCI™ 3U and 6U Models

Features

- ◆ Test points – short circuit protected and connecting directly to the backplane, enabling direct measurement of backplane voltages from the front panel
- ◆ Indicators – visually show load levels on active voltage rails.
- ◆ Switches – used to select resistive loads for each voltage at no-load, half-load or full-load condition
- ◆ Thermocouple access – thermocouple holes are provided to allow access for typical leads to pass through the front panel, while containing air flow through the slot
- ◆ 2 oz copper power and ground planes reduce voltage drop
- ◆ High quality, rugged inject/eject card guide handles
- ◆ Available from Dawn's e-store; ships same day if order is placed by noon PST

Application Note

THERMAL ANALYSIS

For thermal analysis, a load board is set to present a load comparable to that presented by the board that will ultimately be installed into the system. The system is operated with thermocouples located on the slot load board to measure air temperature as the air passes by the slot. The sensor leads pass through the front panel allowing easy access for measuring and recording temperatures at each slot.

DESIGN VALIDATION

Design validation is the verification of proper system operation with installed boards in the environmental conditions that the shipped product will experience. To validate the design of the power system:

- ◆ Populate a chassis/enclosure with Dawn's Slot Load Boards. Set the boards to present the desired load at each slot. Measure the voltage at the backplane to see that it conforms to specification. Measure drop from the supply to the backplane to determine if sufficient copper exists in the path. Verify that all connections

are good, including crimps at the terminal. The load board can present a load sufficient that ground shift and voltage drop across that copper of the backplane can be measured



SYSTEM CHARACTERIZATION

System characterization is measuring how effective each part of the design is. It will answer questions such as:

- ◆ How much power can be used at a given slot before it can no longer be cooled adequately? What is the maximum system power permissible with existing designs? How much power can the backplane source to the boards before the voltage falls out of specification? What is the cooling profile per slot, across the card cage? What is the voltage drop from slot to slot across the backplane? How much ground shift exists in the backplane? What is the voltage drop across the wiring harness?

- ◆ Dawn's CompactPCI Slot Load Board is capable of fully loading each pin on every slot to allow you to accurately characterize your system performance. This board allows a simple, cost effective, low risk solution to fully test your system performance.

Technical Specifications and Ordering Information

	Model 9554	Model 9555	Model 9556
V_{IO}	+5VDC	+3.3VDC	+3.3/+5VDC
Size	3U x 160mm	3U x 160mm	6U x 160mm
Power Rating	40W @ +5VDC	33W @ +3.3VDC	33W @ +3.3VDC
	12W @ +12VDC	12W @ +12VDC	40W @ +5VDC
	12W @ -12VDC	12W @ -12VDC	12W @ +12VDC
Operating Temp	0°C~105°C	0°C~105°C	0°C~105°C
Humidity	95% relative humidity, non-condensing		
Weight	6.0 oz.	6.0 oz.	6.0 oz.
Ordering Number	11-1009554	11-1009555	11-1009556