

## **Introduction:**

The Vadem VG-469 16-bit socket controller chip contains a unique protection circuit that prevents damage to low voltage PC cards. This circuit will automatically remove power from the socket when a card is removed. Unfortunately, this protection circuit does not incorporate a "test" mode that can disable this feature. For users of the PCCtest series of socket testers this means that the standard PCCtest models cannot be used without modification.

## **Description:**

The PCCtest series of socket testers perform a Card Detect (-CD1 and -CD2) test by driving these signals with a CMOS gate output. The Card Detect Test (enabled with the -z option) will toggle each Card Detect pin and monitor the corresponding pin status. On initial power-up to the socket, the -CD1 and -CD2 signals are tri-stated and then driven low after a short power-on delay (approximately 600ms.) The VG-469 upon powering the socket will see the -CD1 and -CD2 signals go high immediately after power-up. The protection circuitry on detection of the -CD1 and -CD2 signals going high will remove power from the socket. In short, the VG-469 cannot maintain power to the socket when the card detects are inactive.

There are two solutions to this situation. The first involves modifying the PCCtest card detects signals. The second solution is to use a socket tester specifically designed for the VG-469.

## **Solution 1: Grounding Card Detects**

Users of the PCCtest models 250/350/260/270 and 370 can test the VG-469 by externally grounding CD1 and CD2. This can be accomplished by inserting an extender card between the socket and the PCCtest unit and grounding the -CD1 and -CD2 signals. Because of this modification, the Card Detect tests (-z command line switch) are not supported.

## **Solution 2: The PCCtest 230/330/273/373.**

The PCCtest 230, 330, 273 and the 373 were specifically designed to support the VG-469 and other socket controllers that require active card detects before power can be applied. These PCCtest models internally ground the CD1 and CD2 signal pins. Because of this modification, the Card Detect tests (-z command line switch) are not supported. The features of each of the socket testers compatible with the VG-469 are outlined in the following table.

PCCtest Model	230	330	273	373
5V Operation	X	X	X	X
3.3V Operation			X	X
Serial Port		X		X
-VS[2:1] Testing			X	X
DMA			X	X