

8. SIMCHECK II OPTIONS

This section describes options that can be added to your SIMCHECK II or SIMCHECK II se and which are available from your dealer. These options enhance your testing capabilities, making sure that your investment does not become obsolete as new memory devices are introduced to the market.

As we continuously develop new options, you may want to check our web site for updated information.

8.0 QUICK INDEX

ADAPTER	P/N	DESCRIPTION
Sync DIMMCHECK 168	INN-8558-6	168-pin DIMM adapter supporting SDRAM/EDO/FPM modules.
Sync DIMMCHECK 144	INN-8558-7	144-pin DIMM adapter supporting SDRAM/EDO/FPM modules.
Sync CHIP TESTER	INN-8558-9	Supports individual SDRAM TSOP chips.
Sync DIMMCHECK 100	INN-8558-8	100-pin DIMM adapter supporting SDRAM/EDO/FPM modules.
200-PIN DIMM ADAPTER	INN-8558-10	200-pin DIMM adapter supporting FPM/EDO modules for the Sun Sparc Station and other Sun Microsystem computers.
DIMMCHECK 168P PRO	INN-8484-10	168-pin DIMM adapter supporting EDO/FPM modules.
DIMMCHECK 144P PRO	INN-8558-2	144-pin DIMM adapter supporting EDO/FPM modules.
DIMMCHECK 72P PRO	INN-8558-3	72-pin DIMM adapter.
DRAM CARD ADAPTER	INN-8484-3	88-pin DRAM card adapter.
SIM II SOJ ADAPTER	INN-8558-5	Universal adapter for testing 20-pin to 42-pin SOJ chips, including 256Kx4, 1Mx4, 1Mx1, 4Mx1, 4Mx4, 16Mx1, 1Mx16, 8Mx8, 16Mx4, and 2Mx8.
DIRECT PRINTER INTERFACE	INN-8558-4	Interface which allows you to print directly to a dot matrix printer, without the need for a PC connection.
SIP ADAPTER	INN-8558-1	Adapter that supports older 30-pin SIP modules. Also supports SIMCHECK PLUS adapters requiring the use of a SIP socket.

8.1 SYNC DIMMCHECK 168



Our new addition to the SIMCHECK II/IIse line provides a state-of-the-art solution for testing SDRAM/EDO/FPM 168-pin DIMM modules. The new Sync DIMMCHECK 168's patent pending 133MHz test engine, as well as the SIMCHECK II line's 1nS technology, combine to achieve true 100MHz testing of your SDRAM modules.

The Sync DIMMCHECK 168 (p/n INN-8558-6) enables SIMCHECK II, or SIMCHECK II se, to test SDRAM DIMMs up to 100MHz, as well as standard 3V/5V, buffered/unbuffered, EDO/FPM DIMM modules.



Install or remove this adapter only when SIMCHECK II is OFF!

The Sync DIMMCHECK 168 is conveniently installed in the 90-pin expansion slot, and is automatically recognized by SIMCHECK II. It comes with a high quality test socket for easy insertion and removal of DIMMs, suitable for high volume testing.

8.1.1 OPERATION

8.1.1.1 CONNECTION AND DIMM INSERTION

This adapter connects to SIMCHECK II via the expansion slot. Plug the adapter into the expansion port only when SIMCHECK II is OFF.



DIMM insertion and removal should be done only when SIMCHECK II is in STANDBY Mode.

CAUTION: Failure to turn SIMCHECK II OFF when connecting or disconnecting the Sync DIMMCHECK 168 may result in damage to the internal PAL chip of the SYNC DIMMCHECK 168!

INSERTION: The Sync DIMMCHECK 168 uses a vertically mounted high quality test socket with two ejectors that need to be opened prior to insertion. Carefully insert the DIMM into the socket, pushing it evenly along its top. When the DIMM is

properly inserted, the ejectors will snap onto the semi-circular notches on each side of the module.

REMOVAL: The DIMM is easily released from the socket by pulling both ejectors sideways.

8.1.1.2 DIMM TESTING

Full support for SDRAM and EDO/FPM DIMM modules is available on the Sync DIMMCHECK 168. They will test according to our procedure outlined in Section 5.4. Please note that the LEDs will not glow when Standard DRAM DIMMs are tested.

Simply press F1 to start the test! The Sync DIMMCHECK will automatically identify and test an SDRAM or EDO/FPM DIMM without setup.

```
BASIC TEST CCCCCCCC
BYTES: B1 |iiiiiii| B8
00:02.2 100Mhz %
2Mx64 SDRAM B1/0
```

After the BASIC test, SIMCHECK II will provide explicit structure information on the module tested.

```
1Mx64'S STRUCTURE:
BANKS:1 RAS:0+2
CAS:0+1+2+3+4+5+6+7
168P DIMM BUFFERED
```



SPD Management including editing and filing are explained in further detail in Section 5.5.

8.1.2 SPD MANAGEMENT

SPD Management Mode allows you to view, edit, file, and program the SPD device.

As an example of SPD activity, once the F5 key is pressed after the Basic Test and the SPD is read from the DUT, you may select GET SPD DATA FROM SIMCHECK from the SIMCHECK menu using the SIMCHECK II PC Program Software. The software will then acquire the 256 bytes of information as seen in the SPD viewer (shown in HEX).

The acquired information can be saved or edited. Programming the SPD device should be done only by advanced users, and is explained in our online manual addendum.

8.2 SYNC DIMMCHECK 144



Our recent addition to the SIMCHECK II/Iise line provides a state-of-the-art solution for testing SDRAM/EDO/FPM 144-pin DIMM modules. The Sync DIMMCHECK 144's patent pending 133MHz test engine, as well as the SIMCHECK II line's 1nS technology, combine to achieve true 100MHz testing of your SDRAM modules.

The Sync DIMMCHECK 144 (p/n INN-8558-7) enables SIMCHECK II, or SIMCHECK II se, to test SDRAM DIMMs up to 100MHz, as well as standard EDO/FPM DIMM modules.



Install or remove this adapter only when SIMCHECK II is OFF!



DIMM insertion and removal should be done only when SIMCHECK II is in STANDBY Mode.

8.2.1 OPERATION

8.2.1.1 CONNECTION AND DIMM INSERTION

This adapter connects to SIMCHECK II via the expansion slot. Plug the adapter into the expansion port only when SIMCHECK II is OFF.

CAUTION: Failure to turn SIMCHECK II OFF when connecting or disconnecting the Sync DIMMCHECK 144 may result in damage to the internal PAL chip of the SYNC DIMMCHECK 144!

INSERTION: The Sync DIMMCHECK 144 uses a vertically mounted high quality test socket with two ejectors that need to be opened prior to insertion. Carefully insert the DIMM into the socket, pushing it evenly along its top. When the DIMM is properly inserted, the ejectors will snap onto the semi-circular notches on each side of the module.

REMOVAL: The DIMM is easily released from the socket by pulling both ejectors sideways.

8.2.1.2 DIMM TESTING

Full support for SDRAM and EDO/FPM DIMM modules is available on the Sync DIMMCHECK 144. They will test according to our procedure outlined in Section 5.4. Please note that the LEDs will not glow when Standard DRAM DIMMs are tested.

```
BASIC TEST 55555555
BYTES: B1 Iiiiiiii B8
00:00.5 100MHZ %
8Mx64 SDRAM B1/0
```

After the BASIC test, SIMCHECK II will provide explicit structure information on the module tested.

```
8Mx64'S STRUCTURE:
BANKS:1 -S:0
CHIP SIZE: 4x2Mx8
SDRAM 144P UNBUFFERED
```



SPD Management including editing and filing are explained in further detail in Section 5.5.

8.2.2 SPD MANAGEMENT

If SIMCHECK II detects the use of an SPD EEPROM chip, a summary screen will appear giving you the option of entering the SPD Management Mode.

```
1Mx64'S STRUCTURE:
SERIAL PRD
F5 TO VIEW THE SPD
PARITY MODE
```

8.3 SYNC DIMMCHECK 100



Our latest addition to the SIMCHECK II/IIse line provides a state-of-the-art solution for testing SDRAM/EDO/FPM 100-pin DIMM modules, which are typically used by Laser Printers. True 100MHz testing of your SDRAM is achieved through the Sync DIMMCHECK 100's patent pending 133MHz test engine.

The Sync DIMMCHECK 100 (p/n INN-8558-8) enables SIMCHECK II, or SIMCHECK II se, to test SDRAM DIMMs up to 100MHz, as well as standard EDO/FPM DIMM modules.



Install or remove this adapter only when SIMCHECK II is OFF!

8.3.1 OPERATION

8.3.1.1 CONNECTION AND DIMM INSERTION

This adapter connects to SIMCHECK II via the expansion slot and is automatically detected when turned on.



Plug the adapter into the expansion port only when SIMCHECK II is OFF.



DIMM insertion and removal should be done only when SIMCHECK II is in STANDBY Mode.

CAUTION: Failure to turn SIMCHECK II OFF when connecting or disconnecting the Sync DIMMCHECK 100 may result in damage to the internal PAL chip of the SYNC DIMMCHECK 100!

INSERTION: The Sync DIMMCHECK 100 uses a vertically mounted high quality test socket with two ejectors that need to be opened prior to insertion. Carefully insert the DIMM into the socket, pushing it evenly along its top. When the DIMM is properly inserted, the ejectors will snap onto the semi-circular notches on each side of the module.

REMOVAL: The DIMM is easily released from the socket by pulling both ejectors sideways.

8.3.1.2 DIMM TESTING

Full support for SDRAM and EDO/FPM DIMM modules is available on the Sync DIMMCHECK 100.

```
BASIC TEST 99999999
  BYTES: B1 ▲▲▲▲ B4
00:00.9 100MHZ 3
2Mx32 SDRAM B1
```

They will test according to our procedure outlined in Section 5. Please note that the LEDs will not glow when EDO/FPM DIMMs are tested.



SPD Management including editing and filing are explained in further detail in Section 5.5.

8.3.2 SPD MANAGEMENT

If SIMCHECK II detects the use of an SPD EEPROM chip, a summary screen will appear giving you the option of entering the SPD Management Mode.

8.4 SYNC CHIP TESTER



Another addition to the SIMCHECK II/IIse line using our 133MHz test engine provides a state-of-the-art solution for testing individual SDRAM TSOP chips.

The Sync CHIP TESTER (p/n INN-8558-9) enables SIMCHECK II, or SIMCHECK II se, to test TSOP SDRAM chips up to 100MHz. This adapter supports 44-pin, 50-pin, and 54-pin TSOP SDRAM chips in sizes of 4Mx4, 16Mx4, 64Mx4, 2Mx8, 8Mx8, 32Mx8, 1Mx16, 4Mx16, 16Mx16, and more.



Install or remove this adapter only when SIMCHECK II is OFF!



DIMM insertion and removal should be done only when SIMCHECK II is in STANDBY Mode.

8.4.1 OPERATION

This adapter connects to SIMCHECK II via the expansion slot and is automatically identified by the tester. Plug the adapter into the expansion port only when SIMCHECK II is OFF.

CAUTION: Failure to turn SIMCHECK II OFF when connecting or disconnecting the Sync CHIP TESTER may result in damage to the internal PAL chip of the SYNC CHIP TESTER!

HANDLING THE TSOP CHIPS: The Sync CHIP TESTER uses three high-quality test sockets to support 44-pin, 50-pin, and 54-pin TSOP chips. Pin 1 of the TSOP chip is typically marked with a dot. Alternatively, the short edge of the package, which is near pin 1, may be marked with a semi-circular tab. Place the chip in the corresponding socket so that pin 1 points away from you. Also make sure that the markings on the top of the chip face up (this is called "LIVE BUG" insertion). Insert the chip carefully at the bottom of the ZIF socket and press and release both sides of the black socket top to lock in the chip. Once the TSOP chip is inserted, press F1 to start the test.

<pre>BASIC TEST 0000FFFF BYTES: 00 00 00 00:00.6 100MHz 0% 1Mx16 SDRAM B1</pre>	<pre>1Mx16'S STRUCTURE: CHIP SIZE: 2x512Kx16 JEDEC x16</pre>
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Test summary and structure information screens follow the Basic Test. The test procedure is exactly the same as our SDRAM module test. After the test, press the black socket top to remove the chip from the socket.

8.5 200-PIN DIMM ADAPTER



The 200-pin DIMM ADAPTER (p/n INN-8558-10) enables SIMCHECK II, or SIMCHECK II se, to test 200-pin FPM/EDO DIMM (Dual-Inline-Memory-Module) modules with a basic configuration of 144 bits used in the Sun Sparc Stations and other Sun Microsystem computers.

The 200-pin DIMM module is similar in appearance to the old 72-pin SIMMs with the main differences being the arrangement of the 200-pins along a double-sided 100x2 edge connector and larger memory chips. The module provides 144 bits (9 words) which are controlled by one or two -RAS lines, two -CAS lines, and one -W line.

The 200-pin DIMM ADAPTER is conveniently installed into SIMCHECK II's expansion slot located just above the tester's built-in sockets; it is also automatically recognized by the SIMCHECK II. All memory cells are fully tested, with a parallel write/read operation. The test procedure is similar to our regular module test.



Install or remove this adapter only when SIMCHECK II is OFF! Installing the adapter when SIMCHECK II is on may damage the sensitive PAL devices on this adapter.

8.5.1 OPERATION

This tester connects to SIMCHECK II via the expansion slot. Plug the adapter into the expansion port only when SIMCHECK II is off.

INSERTION: The 200-pin DIMM ADAPTER uses a vertically mounted YAMAICHI test socket with two insertion/removal levers (flanges) that need to be moved back prior to insertion, note that they can be pushed back about 35 degrees. Inspect them closely and notice that each flange has a tab, which is designed to enter the standard holes present on the module's sides when the DIMM is correctly inserted. With very little pressure, insert the module into the socket and tilt it backwards (thus also

tilting the flanges) until the small tabs on the socket flanges enter the holes in the module sides. With both hands, return the flanges to the normal vertical position until the DIMM module enters the socket.

REMOVAL: Make sure that the power red LED is OFF. DIMM insertion and removal should be done only during STANDBY mode. Take note not to remove the module while there is a test in progress. Place one finger on top of the DIMM module to prevent the module from popping upward and simultaneously push the two flanges away from you.

Turn SIMCHECK II ON once the 200-PIN DIMM ADAPTER is installed in the expansion slot and insert the first DIMM module. **THERE IS NO NEED TO SETUP SIMCHECK II**, as it automatically recognizes this adapter. After the first DIMM has been tested and SIMCHECK II returns to the STANDBY mode, the presence of the 200-PIN DIMM ADAPTER is recognized.

The 200-PIN DIMM ADAPTER test procedure is similar to our regular module test.