



## SBC104 Product Change Notice

**Issue Date:**30.03.00

**PCB Version:** 3

**PCB Issue:** 2

**Circulation:**General

**Schematic Version:** 3

**Schematic Issue:** 2

We would like to inform you that we are now replacing the current product with a new revision of the board. Please consider the changes listed below and contact Arcom Technical Support on +44 (0)1223 412428, support@arcom.co.uk, or 816 941 7025, support@arcomcontrols.com if you have any questions.

The changes are intended to improve the flexibility of the product and therefore extend its production life. Please note that several links have been added, the orientation of the 'reset' and IDE LED connectors have been rotated 90° and the front mounting holes have been moved apart. All other connector positions and mechanical dimensions are the same as the current product. Arcom will highlight the changes by including a Product Notice label with all board deliveries until September 30th, 2000. A copy of this change notice will be included on the Utilities disk.

In addition to this, we would like to reaffirm the production life of the key components used on the SBC104 products. The board uses a core logic device from Chips and Technologies, the SCATsx (82C836B) and the 82C721 to provide peripheral support (IDE, floppy disk, com ports etc). Chips and Technologies Inc. have been part of Intel Corp. for the last two years. Intel have now sold the Chips & Technologies product line to a new company called Asilant Technologies. Asilant have confirmed that they intend to focus on supporting the embedded market and will continue production of these key parts until further notice.

### **Product Obsolescence.**

The 50MHz 486SXLC variant of the SBC104 product is now being withdrawn because of the obsolescence of the Texas 486SXLC processor. Arcom currently have stock of this variant, however, it is not recommended for new designs. For high performance requirements, we would recommend using our ELAN-104NC which uses a 100MHz 486SX processor. Please contact your local sales office to discuss your outstanding requirements for the SBC104-486-504-F2 boards.

### **V2 Iss3 to V3 Iss 2 Product Changes.**

The changes to the current product are listed below. We have also highlighted any issues you may wish to consider as a result of these changes :

1. The board revision will be changed from V2 Iss 3 to V3 Iss2.
2. The BIOS ROM has changed from Arcom Control Systems V1.3 to V1.6
3. Replaced the site for the second 1MByte Flash device with a location for a 56 pin SSOP 4MByte Intel 28F320J5 StrataFlash part. This now provides two product options, SBC104-386-252-F1 and SBC104-386-254-F4. Customers who originally purchased the SBC104-386-254-F2 will receive the -F4 variant in future.

The board has also been designed to accommodate the 56-pin SSOP 8MByte Intel 28F640J5 StrataFlash device.

**Note:** The 8Mbyte part is a factory fit option and only available with a minimum order quantity of 250 units.

The extra paging register bits for the larger memory options are now included in Flash Page Register 259h.

4. Included a site for surface mount 128Kbyte SRAM part on the rear of the board. This will enable customers to order the board with 128Kbyte of SRAM fitted and also use a M-Systems Disk-On-Chip device.

**Note:** This is a factory fit option and only available with a minimum order quantity of 250 units.

Replace the through hole IC sockets for IC1 (SRAM/Disk-on-Chip) & IC2 (BIOS) with surface mount D.I.L sockets.

5. COM2 supports both half duplex RS-485 and now full duplex RS-422. Refer to manual for link/jumper changes.
6. The V2 Iss3 board uses Datalight CardTrick software to control and implement the flash filing system. The V3 Iss2 board has been updated to use Datalight's FlashFX product. This provides improved wear levelling and faster operation. The two license labels (ROM-DOS and CardTrick) has been replaced with a single label.

Both CardTrick and FlashFX will default to be the primary boot drive. If you need to boot from an external IDE hard drive, you must disable the FlashFX driver in the BIOS.

If the user reformats the Flash drive at any time, it is necessary to use a new utility called FXFMT rather than VBFORMAT.

7. The board is now fitted with 128Kbyte Flash EPROM instead of windowed EPROM. Also added the /WR line connection to the BIOS EPROM site. This will allow the BIOS to be updated on board.

Due to changes in product ownership, the Chips and Technologies BIOS label is no longer required and will not be attached to the BIOS ROM.

8. The board includes surface mount zero ohm links on the COM1 TxD and RxD lines to enable these signals to be buffered and routed off board as TTL level signals. Clamping diodes are included for the TTL level TxD and RxD lines.

**Note:** This is a factory build option and only available with a minimum order quantity of 250 units.

9. The board now has an additional link option to select the hardware Watchdog Time-out period. It is either 3 seconds (default) or 8 seconds.
10. The 'Flash Access' LED now only flashes for accesses to the Flash memory window. On the V2 Iss3 board, this would flash for accesses to both the Flash and the SRAM/Disk-on-Chip site.
11. The front mounting holes (adjacent to the COM1 / COM2 DB9 connectors) have been moved apart to meet the Eurocard specification. This will allow the attachment of a standard Eurocard front panel mounting if required. The new positions are detailed in the manual.

12. The two pin Dubox headers for the external reset and external IDE LED have been rotated by 90°. This allows a right-angled version of the connector to be fitted in some customer enclosures. This reduces the vertical clearance required for the mating part of the Dubox connector.
13. The PLD firmware has been modified on the new version of board to implement the Flash 'enable/disable' function. The current V2 Iss3 board does not implement the Flash enable/disable bit in control register 258H. The Flash is always enabled.
14. Additional capacitors are included on the 14.318 MHz crystal of the clock synthesizer. This will improve the long-term clock stability for the real time clock.

**Other minor design changes are listed below:**

- Removed MNR34 resistor packs and replace with individual resistors.
- Replace current RS-232 line transceivers LT1137 with MAX211E parts
- Remove loop test points TP8 (VMPU), TP32 (filtered +5v) and TP34 (filtered GND).
- Add text to silkscreen for LK3 detailing connections (i.e. Battery Connected, Not Connected).
- Add text to silkscreen highlighting pin 40 of PL3, 34 of PL4 and 26 of PL10.
- The user link is now read on the XD7 rather than the SD7.

## Product Information

Full information about other Arcom products is available by visiting our **WebSite** at: [www.arcomcontrols.com](http://www.arcomcontrols.com)

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