



Product Change Notification

Obsolete Product: AC21C00

Replacement Product: AC2200

PCN No: AC21C00_April27_06

Date: April 27, 2006

Reason for Change:

- Improvements in compatibility across a wide range of SDIO enabled Consumer Electronics devices including PDA's, SmartPhones, Gaming Platforms and Multimedia Players.
- Bug fixes
- Additional functionality
 - High Speed SPI Mode
 - 8051 Mode (8/16 bit)
 - APB Mode
- Upgraded to support SDIO Specification Version 1.20
 - 50Mhz operation
 - 200Mhz throput in SD-4 bit mode

Consequence of change:

- The AC2200, by default has been set to operate in UART mode making it a drop in replacement for the AC21C00
- Pin Compatibility is maintained
- No Change in Electrical Performance
- EPROM is not mandatory for AC2200 operation in UART mode i.e when used as a replacement for the AC21C00. CIS contents are stored onboard the chip making the EPROM redundant.
- EPROM is required to support all modes other than UART
- CSA support has been eliminated and the FLASH Interface has been removed.

AC21C00 Errata corrected in the AC2200:

1. Clocks out data at positive edge of clock which leads to CRC errors and timeouts in some PDA's that work at higher frequencies and at higher baud rates.
2. Interrupt signaling is cut down if the PDA stops the clock.
3. Interrupt is signaled on the SD lines even before the Master interrupt is enabled by the Device Driver.
4. If stop bit or start bit is erroneous, a CRC error is reported.
5. CMD52 SDIO reset will not reset the settings in the function0 registers
6. CMD 0 is accepted as an invalid command in SD mode.
7. SD to SPI mode switching is not handled properly.
8. Improper working if EEPROM programming is done from SD host is observed.
9. Bugs in hardware and software flow controls.
10. Bugs in parity error handling in UART.
11. Function1's SD response timeout not handled.

Description of AC21C00 Vs AC2200 Driver updates:

1. Query the supported block size and set the value as the default block size.
2. Hard ware and soft ware flow control routines added
3. Driver to test the UART hardware in loop-back mode.
4. Mishandling of the SD card like removing and connecting the card without closing application will not cause any problems – handled in the application.
5. A special EEPROM driver to program or modify the contents of the EEPROM from PDA or SD host.
6. Application is launched automatically on card's insertion.
7. This driver supports CMD53, 4 bit mode for data transfers to increase throughput

AC21C00 Vs AC2200 Board Updates:

- NONE.
- If EPROM is eliminated, then the EPROM pins need to be shorted

Verification:

- The AC2200 has been tested for compatibility in all modes across a wide range for SDIO Host Device from various manufacturers.
- The AC2200 has been populated on the AC21C00 HDK to ensure that it is a Pin Compatible Drop in replacement.

Change active from:

Last date to order:

Last date for shipments:

April 27, 2006

May 31, 2006

June 30, 2006

AC2200 Ordering Instructions

All AC2200 parts are qualified as Industrial Grade.

AC2200i

AC2200ei Environmentally friendly Lead Free Package; RoHS compliant package.

Signature :

Suresh Kumar

Vice President India Operations

Arasan Chip Systems, Inc.

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