Features

System Features

- **Real-time, Non-intrusive, In-circuit Emulation**
- **Real-time Bus State Analysis**
- **Four Complex Breakpoints; a Data Breakpoint can be qualified by an Address, an Address Range, Data, or Externally Connected Logic Clips**
- **32 Variables or Real-time Variables, plus a 32-byte Block of Real-time Memory**
- **RS-232 Interface at Baud Rates up to 56 kBaud.**
- **Improved Security (as AT05SC Silicon running in an Expanded Mode is not Used)**

AT05SC Device Specific Features Supplied by Atmel

Atmel Smart Card ICs provide a device specific hardware customisation module for the MMDS05 system to emulate members of the AT05SC family. Features include:

- **Real-time Emulation @ 5 MHz**
- **AT05SC Memory Map**
- **Full Interrupt Support**
- **All Reset Actions**
- **Programmable Timer**
- **Address Lockout**
- **EEPROM and Associated Registers**
- **PRAM (Protected Random Access Memory)**
- **CRC Register Support**
- **Random Number Generator (RNG)**
- **All Security Features Emulated**
- **Watchdog System**
- **DES Support**
- **DPA/SPA Support**

System Requirements

- **A Motorola MMDS05 Development System (This Must be Purchased Directly from Motorola Using the Part Number: M68MMDS0508)**
- **A PC running Windows® 95, Windows® 98 or Windows NT® 4.0**
- **HI-WAVE Version 6.0 or Motorola MCUez MMDS05 User Interface**

Overview

When fitted to the Motorola Modular Development System (MMDS05), the AT05SCEM3R Emulation Module board provides an accurate code development tool for Atmel AT05SC family smart card devices.

The AT05SCEM3R board is shipped with the following items:

- Smart card adapter board and cable (M68HC05SCADPT2). This allows the development tool to be connected to an external smart card reader.
- Target setup utility used to configure the MMDS05 platform (AT05SCEM3RT).

Table 1. AT05SC family devices supported by the AT05SCEM3R Emulation Module

AT05SC4616R	AT05SC3216R	AT05SC1604R
	AT05SC3208R	AT05SC1602R
	AT05SC3204R	
	AT05SC3202R	

Smart Card Microcontrollers

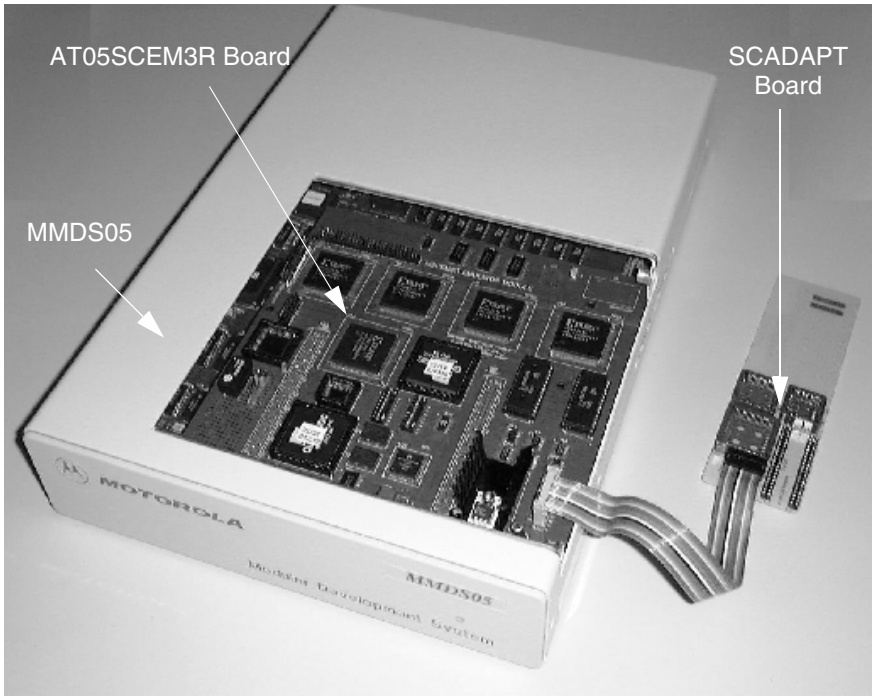
AT05SCEM3R Emulation Module

Preliminary

Rev. 1539A–06/00

Diagram

Figure 1. View of the AT05SC Development System



Ordering Information

- Smart Card Emulation Module: AT05SCEM3R

Contact details

- To order Atmel Smart Card ICs components, contact your local Atmel sales office.
- To order Motorola components, contact your local Motorola sales office.
- To order HIWARE software tools, contact:
  HIWARE AG, Riehenring 175, 4058 Basel, Switzerland
  (Tel: +41 61 690 75 00; http://www.hiware.com)

Atmel Headquarters, 2325 Orchard Parkway, San Jose, CA 95131, TEL (408) 441-0311, FAX (408) 487-2600
Atmel Colorado Springs, 1150 E. Cheyenne Mtn. Blvd., Colorado Springs, CO 80906, TEL (719) 576-3300, FAX (719) 540-1759
Atmel Rousset, Zone Industrielle, 13106 Rousset Cedex, France, TEL (33) 4-4253-6000, FAX (33) 4-4253-6001
Atmel Smart Card ICs, Scottish Enterprise Technology Park, East Kilbride, Scotland G75 0QR, TEL (44) 1355-803000, FAX (44) 1355-242743

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