# Freescale Semiconductor, Inc.

M5282LITEKIT Data Sheet

M5282LITE is a low cost development kit for the Motorola MCF5282 ColdFire® microcontroller. Application development is quick and easy with the included Axiom M5282LITE evaluation / application board, DB9 serial cable, Ethernet cable, 3rd party Demo Software, Motorola dBUG monitor, BDM Cable, and GNU Software Tool Package that includes C compiler and source level debug utilities. The BDM port is compatible with standard ColdFire® BDM / JTAG development cables and hosting software, allowing easy application debugging and development.

Features:

- MCF5282 CPU
    - 512K Byte Flash (on chip)
    - 64K Byte Ram (on chip)
    - 2K Byte Cache Ram (on chip)
    - DMA Controller w/ Timers
    - Interrupt Controller
    - 8 Channel 10 BIT queued A/D
    - SPI, IIC, and CAN Serial Ports
    - 3 x SCI UART Ports with DMA capability
    - Edge / Interrupt Port
    - 2 x 4 channel GPT Timers
    - BDM / JTAG Port
    - 3.3V operation
    - Up to 66Mhz operation
- 2M Byte Flash (16 bit, external)
- 16M Bytes SDRAM (32 bit, external)
- 8Mhz reference crystal, up to 66Mhz operation
- MCU Port, 50 pin I/O port
- CONTROL Port, 26 pin BUS and CPU control signals
- BUS Port, 60 pins, Address and Data Bus
- BDM / JTAG Port, 26 Pins, development port.
- COM1 Port (UART0) w/ RS232 DB9-S Connector
- 10/100TX Ethernet Port w/ RJ45 Connector,
- 4 status Indicators, Auto MDI-X crossover.
- CAN port w/ 1Mbaud transceiver, 3pin header
- RESET switch and indicator
- ABORT (IRQ7) switch
- Regulated +3.3V and +2.5V power supply w/ indicators
- Supplied with DB9 Serial Cable, Cat 5E Ethernet cable, BDM Development Cable,
- Utility / Support CD, Manuals, and Universal Wall Adapter power supply.
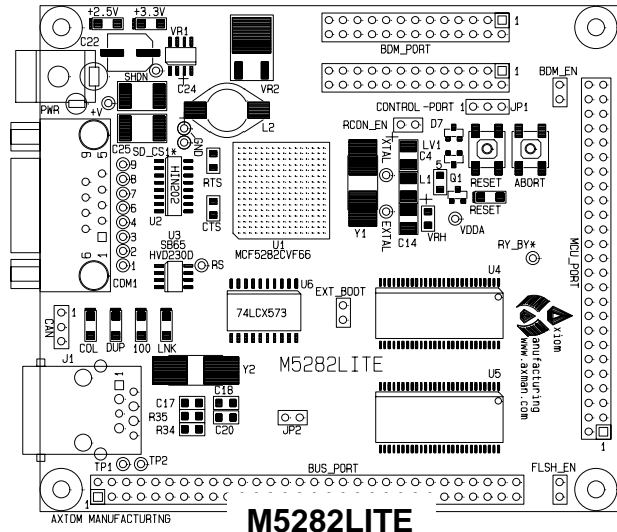
Specifications:
Board Size 3.5" x 4.0"
Power Input: +5 - +30VDC, 9VDC typical
Current Consumption: 120ma @ 9VDC input

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For More Information On This Product,
Go to: www.freescale.com

The M5282LITE is provided operating the Motorola dBUG monitor for the MCF5282. The ROM monitor/debugger dBUG, offers an intuitive command line interface that can be used to download and execute code. It contains the primary features needed to create a useful debugging environment. The dBUG firmware is stored in the lower 256K bytes of the external Flash Memory device.

The user interface to dBUG is the M5282LITE COM1 serial port. The monitor provides communication with a serial terminal or PC host for commands. Ethernet TFTP downloads are also supported by the monitor.

MCF5282 applications can be loaded and execution supervised using the dBUG monitor. Tested software may then be located and programmed into the MCF5282 internal flash memory for dedicated user application operation of the board. A single option jumper (EX_BOOT) allows for control to be returned to the monitor if needed. User may also use the external flash memory in their application but should reserve the lower 256K bytes of the flash memory to maintain the dBUG monitor.

Development using the BDM / JTAG interface can be performed without restrictions. The BDM cable included in the kit requires a 25 pin printer / LPT port and can be used with the GNU debugger from the kit's CD.

The support CD contains sample applications using the RTXC Quadros Single Stack LITE real-time operating system and the OpenTCP network stack.   The sample applications can be modified and rebuilt using the GNU development tools installed from the CD.   The GNU tools allow development and debugging of C, C++, and assembly code via the BDM cable included in the kit. Also on the CD are device data sheets, user manuals, and several utility programs. The kit is plug and play out of the box with a wall adapter power supply and necessary cables. A personal computer with a serial COM port, a printer / LPT port, and Windows® 98SE/ME/NT/2000/XP are the minimum system requirements to perform application development.

M5282LITE OPTION SUMMARY:

RCON_EN – 2 pin option jumper, enables external default Reset configuration.
EXT_BOOT – 2 pin option jumper, enables Reset program startup from the external flash memory. Normally the dBUG monitor.
FLSH_EN – 2 pin option jumper, enables the external flash memory to reside on the CS0 chip select.
BDM_EN – 2 pin option jumper, enables BDM mode for the BDM / JTAG development port.
JP1 – 3 pin option jumper, selects standard or special operating mode of the development port.
JP2 – 2 pin option jumper, enables Ethernet PHY interrupt on MCF5282 IRQ6.
RTS and CTS OPTION PADS – Provide enabling of hardware flow controls on the COM1 port.