Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Product Flyer

FUJITSU

Mixed Signal Division

DK86064-1

February 2004
Version 1.0

FME/MS/DAC80/FL_2/5084

Dual 14-bit 1GSa/s DAC Development Kit

Features

- Modular development kit for MB86064
  - General Purpose Motherboard
  - PC USB Interface lead
  - Plug-on DAC Module
  - User Manual
  - SMA data adaptors (optional)
- PC control software supplied on CD
  - Win98/2000 compatible
- Provides easy access to on-chip waveform memories to perform initial performance tests, avoiding need for high performance data generating equipment
- Evaluate multiple devices by swapping DAC modules (optional)

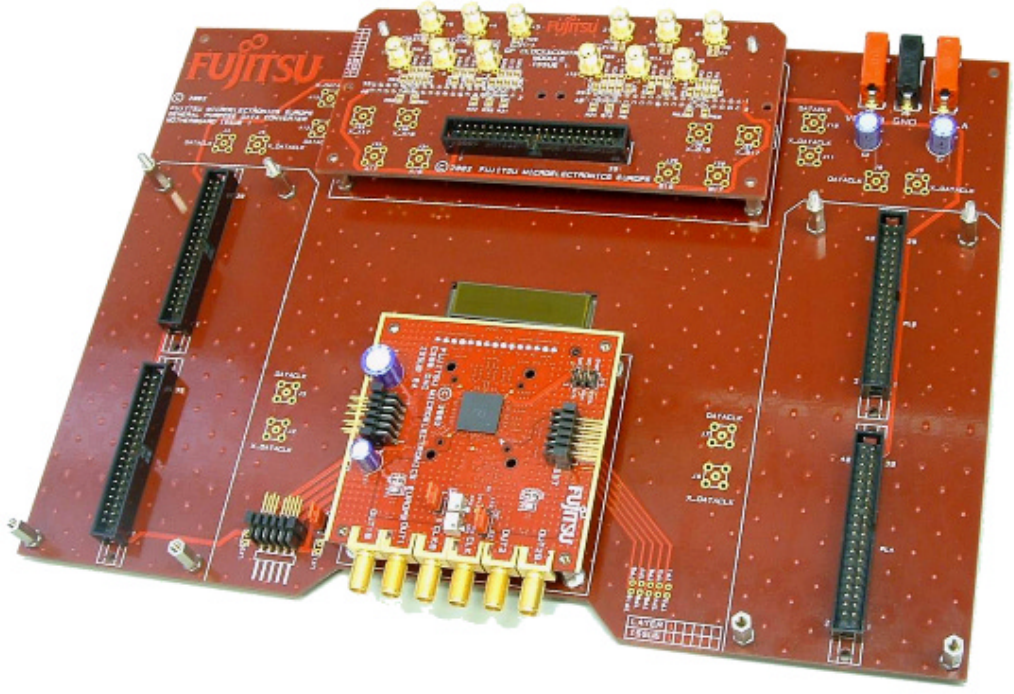
Description

Fujitsu's DK86064-1 Dual 14-bit 1GSa/s DAC Development Kit provides a simple and effective means of evaluating the MB86064 Digital to Analog Converter (DAC).

A user manual provides a step-by-step guide from configuring the board, connecting test equipment, through to evaluating the MB86064's performance. Schematics, PCB overlays and connector pin-outs are included. The evaluation platform requires two DC power supplies, 1.8V & 3.3V, each capable of providing 1A.

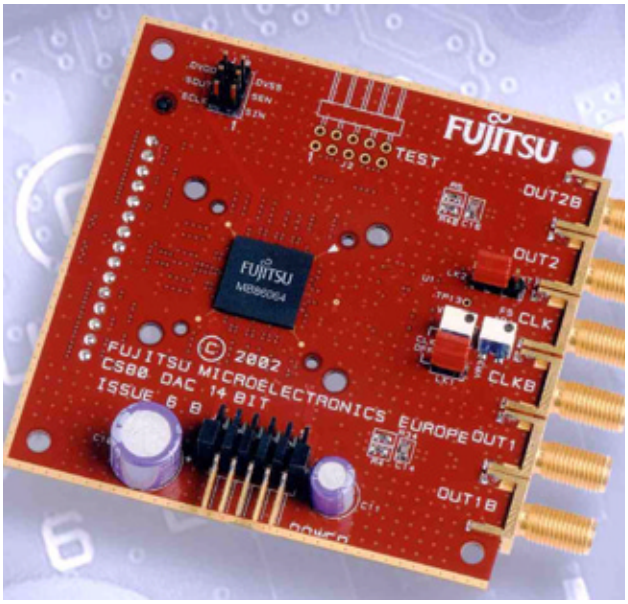
A PC USB interface lead and control software are provided to configure, control and download test vectors to the device.

DK86064-1 Evaluation Platform



Essential Equipment

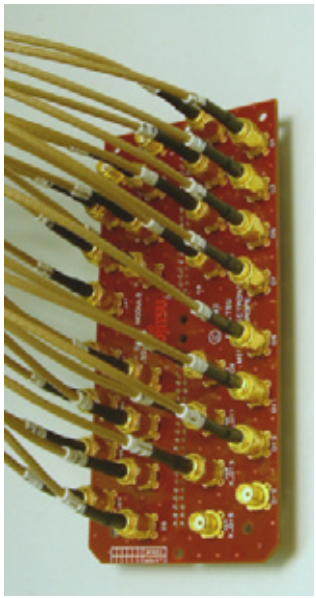
Apart from the power supplies, equipment vital to conducting an evaluation of the MB86064 is a high quality RF clock and spectrum analyser. The phase & spurious performance of the clock should be such as to not limit the DAC performance (e.g. HP8664A). However, performance of even the best spectrum analysers available is inferior to that of the converter. To overcome this, filtering techniques and careful attention to analyser settings, e.g. RF Attenuation, is essential during the course of the evaluation.



Driving the DAC

As with any DAC evaluation, an appropriate stimulus [test vector] is required. Unfortunately at data rates above 300MSa/s this requires digital pattern generation capabilities beyond most standard test equipment. The DK86064-1 Development Kit has been designed to help overcome this difficulty in a number of ways. Initially, simple unmodulated or pseudo-modulated single and multi-tone tests can be conducted using waveforms downloaded to the device's on-chip waveform memories.

Test waveforms are easily loaded into the waveform memories, via a USB interface, using the PC software supplied with the main Motherboard. Even if high speed digital pattern generating equipment is available, initial testing using the waveform memories serves as a useful setup check.



Pattern generators can be connected to the General Purpose Motherboard using either the on-board 2-row 0.1" data headers, or the optional SMA Adaptors. When using the 0.1" data headers it is assumed that a custom wiring harness will be required. This would be made according to the connector type and pinout of the generator's output. The optional SMA Adaptors provide a convenient conversion from SMA to the Motherboard's 0.1" headers. This simplifies the simultaneous removal of 28 SMAs (14-bit differential LVDS) when required. One advantage of this is the ability to swap the data generator easily between DAC data ports if insufficient channels are available to drive both ports simultaneously.

Rather than using general purpose test equipment, customers may wish to use parts of the development kit to construct an evaluation platform more representative of their end application. This might, for example, involve an FPGA to implement a variety of pre-processing and/or waveform generation. At the simplest level, a setup similar to that described for the digital pattern generator could be used, where a custom wiring harness interfaces a standard or existing FPGA evaluation platform to the Motherboard. Control of the DAC from the PC software can be maintained to minimise effort to get up and running.

Alternatively, an FPGA board could be designed with a DAC interface connector compatible with the Fujitsu DAC Module's 114-pin Mictor

connector, thereby removing the Motherboard. Having done this, it is still possible to continue using the PC USB interface lead and software if this functionality is not incorporated in the FPGA.

Clock Inputs & Analog Outputs

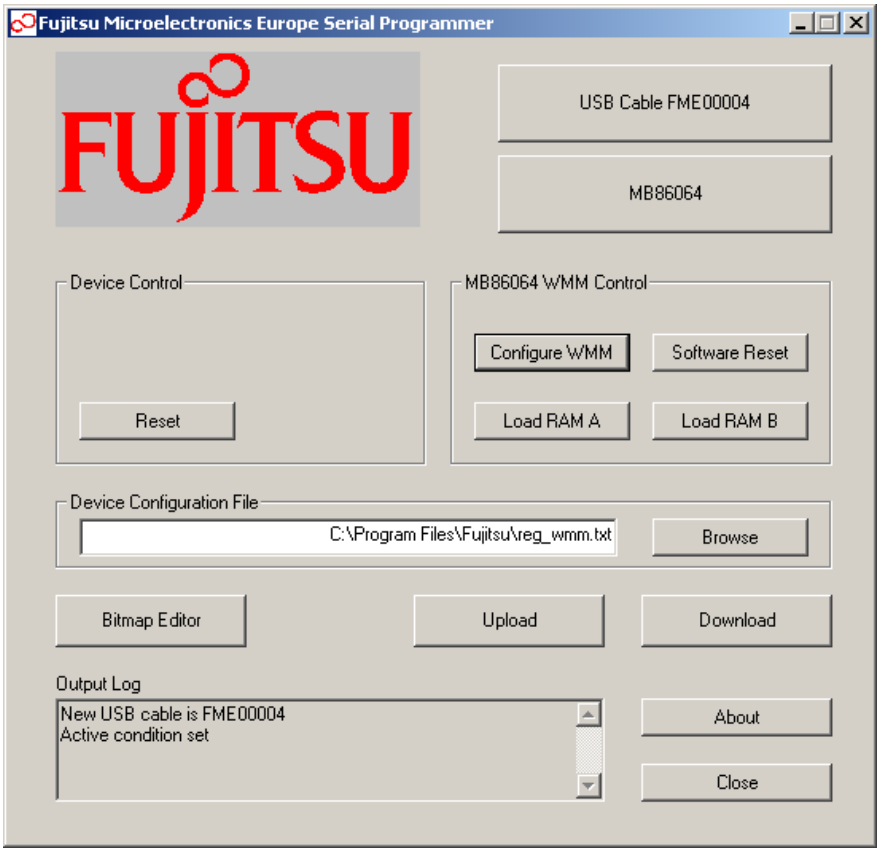
The DAC module is designed to accommodate up to six SMA connectors. Two are used for the differential clock in and four for the two differential analog outputs. Modules are supplied with transformers on-board to perform single ended-to-differential and differential-to-single ended conversions. As such, only 3 SMAs are required. This facilitates easier connection to standard test equipment during evaluation.

PC Control Software

To simplify control & configuration of the MB86064 during evaluation the development kit includes a PC USB interface lead and a software utility. The USB interface lead interfaces between a host PC's USB port and the 4-wire serial interface implemented on the device. Software is supplied on CD.

Ordering Information

Part	Order Reference
DK86064-1 Development Kit (includes General Purpose Motherboard, DAC module, PC USB Interface Lead & Control Software and User Manual)	DK86064-1
Additional DAC Module	DK86064-1-DAC
SMA Adaptors (optional)	DK86064-1-SMA
PC USB Interface Lead & Control Software	DKUSB-1
MB86064 Device	MB86064PB-G
DK86064-1 User Manual	Contact Fujitsu
MB86064 Datasheet	Contact Fujitsu



FUJITSU

DK86064-1 Dual 14-bit 1GSa/s DAC Development Kit

Worldwide Headquarters

Japan

Tel: +81 44 754 3753
Fax: +81 44 754 3329

Fujitsu Limited
Kamikodanaka 4-1-1
Nakahara-ku
Kawasaki-shi
Kanagawa-ken 211-8588
Japan

http://www.fujitsu.com

Asia

Tel: +65 281 0770
Fax: +65 281 0220

Fujitsu Microelectronics Asia Pte Ltd
151 Lorong Chauan
New Tech Park
#05-08
Singapore 556741

http://www.fmal.fujitsu.com

USA

Tel: +1 408 737 5600
Fax: +1 408 737 5999

Fujitsu Microelectronics America, Inc.
1250 E. Arques Avenue, M/S 333
Sunnyvale, CA 94088-3470
USA

Tel: +1 800 866 8608
Fax: +1 408 737 5984

Customer Response Center
Mon-Fri: 7am-5pm (PST)

http://www.fma.fujitsu.com/

Europe

Tel: +49 6103 6900
Fax: +49 6103 690122

Fujitsu Microelectronics Europe GmbH
Am Siebenstein 6-10
D-63303 Dreieich-Buchschlag
Germany

http://www.fme.fujitsu.com/

FME/MS/DAC80/FL_2/5084 1.0

