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DSP56F805EVM : Evaluation Kit for 56F805 Processor

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The 56F805EVM kit is a low-cost kit that contains everything you need to quickly evaluate the features and capabilities of the 56F805 digital signal controller and tools. It also provides an efficient, cost-effective vehicle for hardware and software development. It can be used alone or in conjunction with Freescale's broad range of modular motion control development hardware. The DSP56F805EVM Kit is targeted for use on PC-compatible systems running Windows 95, Windows 98, Windows 2000, Windows ME and Windows NT 4.0.

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Product Image

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DSP56F805EVM Features

- 56F805 16-bit 3.3V Digital Signal Controller operating at 80MHz
- External fast static RAM (FSRAM) memory, configured as:
 - 64K x 16-bit of program memory with 0 wait states at 70MHz
 - 64K x 16-bit of data memory with 0 wait states at 70MHz
- 4-Channel 10-bit Serial D/A, SPI for real-time user data display
- 8.00MHz crystal oscillator for DSP frequency generation
- Optional external oscillator frequency input connector
- Joint Test Action Group (JTAG) port interface connector to interface to an external command converter
- On-board Parallel port command converter, with a connector for a PC printer port cable
- RS-232 interface for easy connection to a host processor
- CAN interface for high speed, 1.0Mbps, communications
- Two standard UNI-3 and encoder connectors, and associated circuitry, enabling the EVM to interface into two separate Modular Motion Control Development Hardware Systems

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DSP56F805EVM Kit Contains

- 56F805EVM Board
- Parallel cable
- +12V DC power supply
- Metrowerks® CodeWarrior® with Processor Expert™ Development Tools CD-ROM
- Freescale 56800/E Accelerated Development System Resource CD-ROM
- 56F805EVM Kit Installation Guide
- Warranty Registration card

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DSP56F805EVM Documentation

Documentation

Fact Sheets

ID and Description	Vendor ID	Format	Size K	Rev #	Date Last Modified
56800-EDEVFS 56F800, 56F8300/8100, 56F8000 and 56850 Series Hardware Development Tools	FREESCALE	pdf	118	2	5/30/2005
56F805FLASHFS 56F805 Fact Sheet	FREESCALE	pdf	80	2	5/30/2005
DSP56F805EVMKIG 56F805EVM Kit Installation Guide	FREESCALE	pdf	55	1	10/01/2004

Selector Guides

ID and Description	Vendor ID	Format	Size K	Rev #	Date Last Modified
SG1004 Digital Signal Processors and Controllers Selector Guide SG1004	FREESCALE	pdf	1577	0	4/26/2006

Training Reference Material

ID and Description	Vendor ID	Format	Size K	Rev #	Date Last Modified
56800_56800E_RESOURCE_PACK_CD Order Free Resource Pack CD	FREESCALE	htm	3	1	5/22/2002

Users Guides

ID and Description	Vendor ID	Format	Size K	Rev #	Date Last Modified
DSP56F805EVMUM 56F805 Evaluation Module Hardware User's Manual	FREESCALE	pdf	542	5	7/30/2005

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DSP56F805EVM Reference Designs

ID and Description	Vendor ID	Format	Size K	Rev #	Order Availability
<u>RDDSP56F8ACIMVHD</u> 3-Phase ACIM Volt per Hertz Motor Control Using 56F80X or 56F8300 Digital Signal Controllers	FREESCALE	-	-	-	-
<u>RDDSP56F8ACVCD</u> 3-Phase AC Induction Motor Vector Control Using 56F80X or 56F8300 Digital Signal Controllers	FREESCALE	-	-	-	-
<u>RDDSP56F8BLDCAZC</u> 3-Phase BLDC Motor Control with Sensorless Back-EMF ADC Zero Crossing Detection Using 56F80X or 56F8300 Digital Signal Controllers	FREESCALE	-	-	-	-
<u>RDDSP56F8BLDCE</u> 3-Phase BLDC Motor Control with Encoder using 56F80X or 56F8300 Digital Signal Controllers	FREESCALE	-	-	-	-
<u>RDDSP56F8BLDCHS</u> 3-Phase BLDC Motor Control with Hall Sensor Using 56F80X or 56F8300 Digital Signal Controllers	FREESCALE	-	-	-	-
<u>RDDSP56F8BLDCZC</u> 3-Phase Sensorless BLDC Motor Control with Back-EMF Zero Crossing Detection using 56F80X or 56F8300 Digital Signal Controllers	FREESCALE	-	-	-	-
<u>RDDSP56F8PMSDE</u> 3-Phase PM Synchronous Motor Control with Quadrature Encoder Using 56F80X Digital Signal Controllers	FREESCALE	-	-	-	-
<u>RDDSP56F8SMTVC</u> 3-Phase PM Synchronous Motor Torque Vector Control Using 56F80X or 56F8300 Digital Signal Controllers	FREESCALE	-	-	-	-
<u>RDDSP56F8SRDE</u> 3-Phase Switched Reluctance Motor Control with Encoder Using 56F80X Digital Signal Controllers	FREESCALE	-	-	-	-
<u>RDDSP56F8SRDHS</u> 3-Phase SR Motor Control with Hall Sensor Reference Design for 56F80X or 56F8300 Digital Signal Controllers	FREESCALE	-	-	-	-
<u>RDDSP56F8SRDS</u> 3-Phase SR Motor Sensorless Control Reference Design using 56F80X or 56F8300 Digital Signal Controllers	FREESCALE	-	-	-	-

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DSP56F805EVM Design Tools

Hardware Tools

Emulators/Probes/Wigglers

ID and Description	Vendor ID	Format	Size K	Rev #	Availability
<u>DSPCOMMPARALLEL</u> Parallel Port Command Converter for DSP	FREESCALE	-	-	-	Distributor
<u>JTAG DEBUGGER</u> JTAG Debugger Parallel Port to JTAG/EOnCE adapter	<u>AXIOM MAN</u>	-	-	-	-
<u>PARALLEL TO JTAG/ONCE INTERFACE</u> SEG13 Parallel to JTAG/OnCE Interface SEG13 Parallel to JTAG/Once Interface provides a low cost migration path from the DSP56F800DEMO board to your target hardware.	<u>SEG13LLC</u>	-	-	-	-
<u>WNPJ-ONCE</u> Wiggler for DSP, 5554 The Wiggler is a low-cost, parallel port interface used for debugging embedded systems. One side of the Wiggler interfaces to the parallel port of a Windows host PC and the other side connects to the debug port of the target system.	<u>MACRAIGOR</u>	-	-	-	-

Evaluation/Development Boards and Systems

ID and Description	Vendor ID	Format	Size K	Rev #	Availability
<u>ECMTREVAL</u> Evaluation Motor Board	FREESCALE	-	-	-	Distributor

Schematics

ID and Description	Vendor ID	Format	Size K	Rev #	Availability
<u>DSP56F805EVMAFD</u> Assembly and Fabrication Drawings for the DSP56F805EVM board	FREESCALE	zip	340	0	Download
<u>DSP56F805EVMAFG</u> Assembly and Fabrication GERBER files for the DSP56F805EVM board	FREESCALE	zip	1157	0	Download
<u>DSP56F805EVMBAG</u> GERBER files used to Assemble the DSP56F805EVM board	FREESCALE	zip	519	0	Download
<u>DSP56F805EVMBFG</u> GERBER files used to Fabricate the DSP56F805EVM board	FREESCALE	zip	995	0	Download
<u>DSP56F805EVMLD</u> PADS PCB and PADS ASC Design files for DSP56F805EVM board	FREESCALE	zip	422	0	Download
<u>DSP56F805EVMORCADSCH</u> OrCAD Schematic Capture Design file for DSP56F805EVM board	FREESCALE	zip	390	0	Download

Software

Application Software

Bootloader Code

ID and Description	Vendor ID	Format	Size K	Rev #	Availability
56F8XXCEBOOT Serial Bootloader for 56F80x/2x	FREESCALE	zip	9	0	Download

Code Examples

ID and Description	Vendor ID	Format	Size K	Rev #	Availability
56800CEDSPT DSP Function Library Test Applications for 56800/E, which includes tests for: add, subtract, multiply, FFT, FIR, IIR, correlation, acos(), asin(), atan(), tan(), cos(), sin(), sine wave generation, single-dimensioned arrays, matrix, and vector funtions.	FREESCALE	zip	9	0	Download
56800CEFIOT File I/O Test Application for 56800/E	FREESCALE	zip	8	0	Download
56800CEHW Peripheral Example Applications for 56800/E, supporting: ADC, Decoder, ESS/ SSI, EMI, Flash, GPIO, HPI, INTC, I2C, PLL, PWM, Timer, SCI/LIN, SIM, SPI, TOD, EEPROM, Terminal, Button, Codec, LED, Switch.	FREESCALE	zip	8	0	Download
56800CEPMT PCMaster Test Application for 56800/E	FREESCALE	zip	8	0	Download
56800CETELT Telephony Libraries Test Applications for 56800/E, which include tests for: AEC, AGC, Caller ID, CAS Detect, CID Parser, CID Type 1, CID Type 1 &2, CPT, CTG, DTMF, FDSPP, G.165, G.168, G.711, G.723, G.729AB, GEC, MFCR2, NS, and VAD.	FREESCALE	zip	9	1	Download
56800CEVRLT Voice Recognition (VRLite-1) Library Test Applications for 56800/E	FREESCALE	zip	9	0	Download
56F80XCE3DES Triple DES Example Application for 56F80x	FREESCALE	zip	9	0	Download
56F80XCE3DEST 3DES Test Application for 56F80x	FREESCALE	zip	9	0	Download
56F80XCEDES DES Example Application for 56F80x	FREESCALE	zip	9	0	Download
56F80XCEDEST DES Test Application for 56F80x	FREESCALE	zip	9	0	Download
56F80XCEMCT 56F80x Motor Control Test Applications for Brake Control, Clarke and Park transformations, Decoupling for Vector Control, Flux model calculations, Ramp function, and Space Vector Modulation	FREESCALE	zip	9	0	Download
56F80XCERSA RSA Example Application for 56F80x	FREESCALE	zip	9	0	Download
56F80XCERSAT RSA Test Application for 56F80x	FREESCALE	zip	9	0	Download
56F80XCEV42T V.42bis Test Application for 56F80x	FREESCALE	zip	9	0	Download

Programmers

ID and Description	Vendor ID	Format	Size K	Rev #	Availability
56800CWFP CodeWarrior Flash Programming Tool for 56800/E	FREESCALE	zip	8	0	Download
56F8XXFP Flash Programming Tool for 56F80x and 56F82x	FREESCALE	zip	9	0	Download

Software Tools

Compilers

ID and Description	Vendor ID	Format	Size K	Rev #	Availability
CodeWarrior Development Studio for 56800/E Digital Signal Controllers	FREESCALE	-	-	-	Buy Direct Distributor

Debuggers

ID and Description	Vendor ID	Format	Size K	Rev #	Availability
CodeWarrior Development Studio for 56800/E Digital Signal Controllers	FREESCALE	-	-	-	Buy Direct Distributor
LA-7738 BDM-DSP56800 ONCE Debugger for DSP56800 and DSP56800E. The debugger for Motorola 56800 allows fast access to the ONCE interface of the chip. Includes software for WINDOWS, HLL debugger, operation system, and cable.	LAUBACH	-	-	-	-

IDE (Integrated Development Environment)

ID and Description	Vendor ID	Format	Size K	Rev #	Availability
CodeWarrior Development Studio for 56800/E Digital Signal Controllers	FREESCALE	-	-	-	Buy Direct Distributor
FREEMASTERDD Real-Time Control and Debugging Tool	FREESCALE	zip	5	0	Download

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Applications

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- [Cooking Products](#)
- [DSP56F80x In Power Line Modem Applications](#)
- [Dishwashers](#)
- [Dryers](#)
- [Electromagnetic Actuator Control Using DSP](#)
- [Electronic Lighting Ballast](#)
- [Embedded Solutions](#)
- [Energy Efficient Solutions](#)
- [Energy Meter](#)
- [Fluorescent Light Ballast \(Advanced Dimming\) Half Bridge](#)
- [Industrial Controller Area Network \(CAN\) Applications](#)
- [Magnetic Card Strip Encoders and Readers with DSP](#)

- Motion Control
- Motor Control with Wireless Sensors
- Personal ECG Monitor
- Refrigerators and Freezers
- Robot Manipulator
- Robotic Arm
- Thermoelectric Cooler Temperature Control
- Uninterruptable Power Supply (UPS) with DSP56F80x
- Voice Control
- Washing Machines

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Orderable Parts Information

Order Availability	Part Number	Description	Tool Type	Status	Budgetary Price(\$US)	Compliance		RoHS Replacement Part
						Package Peak Temperature (°C)	RoHS	
Distributor	DSP56F805EVM	EVAL MODULE	Tested Packaged Module/ Misc Hardware	End of Life	\$298.90	-	-	-

NOTE:

- Not all orderable parts are offered through our online sampling program. For further assistance in selecting a similar part from within the program, please submit a [Request for a sample order advice.](#)
- Refer to [Samples FAQ](#) for more information.
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Related Products

- ▶ [DSP56F805 : Digital Signal Controller](#)
The 56F805, a member of the 56800 core-based ...

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