



*digital dna*<sup>™</sup>

*SOFTWARE AND  
DEVELOPMENT TOOLS*

QUARTER 1, 2002  
SG1011/D REV 0

[WWW.MOTOROLA.COM/SEMICONDUCTORS](http://WWW.MOTOROLA.COM/SEMICONDUCTORS)

# *What's New!*

## *HOW THIS SELECTOR GUIDE IS ORGANIZED*

This selector guide is divided into sections that support other selector guides in this series. Currently, these sections include the following:

- 32-Bit Embedded Processors (SG1001/D)
- Analog (SG1002/D)
- Digital Signal Processors (SG1004/D)
- Microcontrollers (SG1006/D)
- Network And Communications Processors (SG1007/D)

Within each section, information is divided into the following categories (where applicable):

- Software Tools
- Hardware Tools
- Development Systems
- Cables and Host-Target Interfaces
- Third Party Tools

32-BIT EMBEDDED PROCESSORS  
SOFTWARE TOOLS

68K, ColdFire, MPC5xx, PowerPC ISA, and MCORE — Metrowerks

Product	Description	Target Support	RTOS Support	Board Support	Host-Target Interface	Host Platforms	Language Support	IDE Version	Compiler Output Formats
CW68KCF	CodeWarrior Software Development Tools for 68K/ColdFire	68xxx; 683xx; MCF5206e; MCF5307; MCF5407; MCF5272		DragonBall EZ (v1, v2, v3); DragonBall VZ; ADS68360; M5206eLite and M5206eC3; M5307C3; M5407C3; M5272C3	MetroTRK; P&E Microcomputer CPU32 BDM Cable; P&E Microcomputer ColdFire BDM Cable	Windows 95/98/2000/NT	C/C++, 68000 Assembly, ColdFire Assembly	4.1.0.3	ELF/DWARF
CWMPC5XX	CodeWarrior Software Development Tools for MPC5xx	MPC555; MPC 560; MPC561; MPC563; MPC565	OSEK	Axiom CME555; Axiom CMD565	Abatron BDI 2000; P&E	Windows 95/98/2000/ ME/NT	C/C++, EC++, PowerPC ISA Assembly	4.2.5	ELF/DWARF 1.0; Motorola S-Record
CWEPPC	CodeWarrior Software Development Tools for PowerPC ISA	MPC505, MPC509, MPC555, MPC821, MPC823, MPC850, MPC860, MPC8240, MPC8260, PPC603, PPC603ei, MPC7400	QNX Neutrino; RTXC from Lineo; Embedix SDK from Lineo, Precise MQX, ATI Nucleus		MetroTRK, Applied Microsystems CodeTAP, Applied Microsystems PowerTAP, Applied Microsystems WireTAP Run Control Interface (JTAG and BDM (8xx only), Macraigor Systems COP Raven (for MPC82xx and PPC6xx), Macraigor Systems BDM Raven (for MPC8XX, MPC5xx), Abatron BDI 2000 (5xx, 8xx)	Windows 95/98/2000/NT	C/C++, EC++, and PowerPC ISA Assembly	4.2.1	ELF/DWARF 1.0; Motorola S-Record
CWMCORE	CodeWarrior Software Development Tools for MCORE	M2xx/3xx family processors		MMC2001; MMC2075/2080; MMC2107, MMC2103, MMC3401	MetroTRK; Metrowerks EBDI	Windows 95/98/2000/NT	C/C++, Assembly	4.1	

## 32-BIT EMBEDDED PROCESSORS

32-BIT EMBEDDED PROCESSORS (continued)  
SOFTWARE TOOLS (continued)

### Other Software

Company	Product Name	Product Type
Bytecodes	Embedded Bytecode Interpreter	Optimized Java Virtual Machines
Counterpoint Systems Foundry	IrLite Development Kit	Infrared communications SDK
Precise Software Technologies	Various	Embedded I/O components
Grammar Engine	PromICE	Firmware development
Inverness Systems	ATIC	ATM protocols and applications
Micro APL	PortAsm	Porting tools that implement the PowerPC architecture (Note)
Pacific Softworks	Fusion	Internet protocols for Embedded Solutions
Sun Consumer Electronics	Internet Software Solution	Embedded internet software
Total Impact	Total PowerSMPPCI	Multiprocessing application accelerator
US Software	USNET	Real-time embedded TCP/IP
Wind River	SystemsWind	ViewSystem visualizer for embedded software

Note: Check with tool vendor for specific derivative support.

## HARDWARE TOOLS

### Metrowerks

Product	Description	Target Board	Power Supply	Schematic	Documentation	Interface Board	RTOS Support
MPC823FADS	MPC823 FADS Board	•	•	•	•		
MPC850SRFADS	MPC850 FADS Board	•	•	•	•		
MPC8260ADS-P	MPC8260 FADS Board	•	•	•	•		
MPC860FADS	MPC860 FADS Board	•	•	•	•		
MPC860TFADS	MPC860 TFADS Board	•	•	•	•		
MMCEVB1200PV	MMC2001 Low Cost Evaluation	•	•	•	•		
MMCEVB1200PV-A	MMC2001 Low Cost Evaluation Academic	•	•	•	•		
MMCCMB1200	MMC2001 Development Platform	•	•	•	•		
KITEVSMMC1200	MMC2001 High Performance System	•	•	•	•	•	
MMCEVB2107	MMC2107 Low Cost Evaluation	•	•	•	•		
MMCCMB2107	MMC2107 Development Platform	•	•	•	•		
KITEVSMMC2107	MMC2107 High Performance System	•	•	•	•	•	
KITEVSMMC2107	MMC2107 Complete Development System	•	•	•	•		

32-BIT EMBEDDED PROCESSORS (continued)

HARDWARE TOOLS (continued)

Host and Communication Processors

Company	Product Name	Motorola Products Supported
3M	Interconnects & Socket Adapters	Products that implement the PowerPC architecture (Note)
AMP	Interconnects & Socket Adapters	Products that implement the PowerPC architecture (Note)
Applied Microsystems	SuperTAP, CodeTAP, NetROM	MPC821
ASIC Designs	PowerPAQ Handheld Reference Platform	MPC821/823
Atlas Communication Engines	ACE860 Internetworking System	MPC821/823
Cogent Computer Systems	MPU Development Platform	603e, 604(e), MPC505/509, MPC801/821/823/850/860
Digital Logic Instruments (DLI)	Personal Line and proLine Logic	MPC5xxMPC8xx analyzers
DY 4 Systems Embedded Support	S/DMV VMEbus Evaluation Boards	603e, 604e, MPC801/821/823/850/860
Tools (ET) Emulation Technology	BGA Socket/Probing System	Products that implement the PowerPC architecture (Note)
EmuTec	PROMJet and DebugJet Emulators	Products that implement the PowerPC architecture (Note)
Hewlett-Packard	Emulators, Logic Analyzers	Products that implement the PowerPC architecture (Note)
Huntsville Microsystems	Series 200/1000/2000 ICE, Background Mode Debuggers	MPC5xx, MPC8xx
Lauterbach	TRACE32-ICE	MPC505/509, MPC821/860, MPC5xx Family
Macraigor Systems	Serial BDM Wiggler	MPC5xx, MPC8xx
Methode Electronics	Interconnects & Socket Adapters	Products that implement the PowerPC architecture (Note)
Microtek International	MICEpack-J BDM	MPC860
P&E Microcomputer Systems	Contact vendor	MPC555
Radstone Technology	VME single board computers	603e, 604e
Smart Modular Technologies	SMARTengine/603PCI	603e
Tektronix	Oscilloscopes, Logic Analyzers	Products that implement the PowerPC architecture (Note)
Tundra Semiconductor	QSpan PCI Bus Bridge	MPC821/860
V-I Computer	PowerPC ISA single board computers	603e, 604e
Vista Controls	SCORE 603	603e

Note: Check with tool vendor for specific derivative support.

## 32-BIT EMBEDDED PROCESSORS

### 32-BIT EMBEDDED PROCESSORS (continued) DEVELOPMENT SYSTEMS

#### Metrowerks

Product	Description	RTOS Support	Debug Interface	Serial Cable	Integrated Development Environment	CD ROM	User Manuals	Power Supply	Host Platforms
CWDEVSYS5272	CodeWarrior Development System for 68K/ColdFire <sup>(1)</sup>	•	•	•	4.1.0.3	•	•	•	Windows 95/98/2000/NT
CWDEVSYS823FADS <sup>(2)</sup>	CodeWarrior Development System for MPC823				4.1.0.3				Windows 95/98/2000/NT
CWDEVSYS850FADS <sup>(2)</sup>	CodeWarrior Development System for MPC850				4.1.0.3				Windows 95/98/2000/NT
CWDEVSYS860FADS <sup>(2)</sup>	CodeWarrior Development System for MPC860				4.1.0.3				Windows 95/98/2000/NT
CWDEVSYS860TFADS <sup>(2)</sup>	CodeWarrior Development System for MPC860T				4.1.0.3				Windows 95/98/2000/NT
CWDEVSYS8260AMC <sup>(2)</sup>	CodeWarrior Development System for MPC8260				4.1.0.3				Windows 95/98/2000/NT
CWDEVSYSMCF5407 <sup>(2)</sup>	CodeWarrior Development System for ColdFire MCF5407 Edition	•	•	•	4.1.0.3	•	•	•	Windows 95/98/2000/NT

(1) 12-month support plan available

(2) Contact Metrowerks for more information

### CABLES AND HOST-TARGET INTERFACES

#### Metrowerks

Product/Part Number	Description	Target Support	Connection Device	Power Supply
CWWIRETAPBDM	AMCis WireTAP Run Control Interface (BDM)			
CWWIRETAPJTAG	AMCis WireTAP Run Control Interface (MPC6xx, 7xx, 82xx, 74xx)			
MMC14EBD102	Enhanced Background Debug Interface			

### THIRD PARTY TOOLS

#### Compilers

Company	Product Name	Motorola Products Supported
Green Hills Software	Optimizing Compilers	Products that implement the PowerPC architecture (Note)
Metaware	High C/C++ Cross Toolset	6xx, MPC5xx, MPC8xx
Mentor Graphics (Microtec Division)	C & C++ Compilers	603(e), 604(e), MPC505, MPC801/821/860
Microware	FasTrak v2.1 IDE	Products that implement the PowerPC architecture (Note)
TASKING	EDE, C/C++/EC++ Compiler products that implement the PowerPC architecture	

Note: Check with tool vendor for specific derivative support.

32-BIT EMBEDDED PROCESSORS (continued)

THIRD PARTY TOOLS (continued)

**Debuggers**

Company	Product Name	Motorola Products Supported
Green Hills Software	MULTI	68K/683xx/ColdFire/MCORE/PowerPC architecture (Note)
Huntsville Microsystems	SourceGate II	Products that implement the PowerPC architecture (Note)
Lauterbach	TRACE32	Products that implement the PowerPC architecture (Note)
Mentor Graphics	XRAY	603(e), 604(e), MPC505, MPC801/821/860
TASKING	CrossView Pro	Products that implement the PowerPC architecture (Note)
WindRiver	Tornado	Products that implement the PowerPC architecture (Note)

Note: Check with tool vendor for specific derivative support.

**Chip Drivers**

Company	Product Name	Motorola Products Supported
Aisys	DriveWay	MPC821/850/860
Embedded Concepts and Solutions	NA	6xx, 7xx, MPC8xx
Inverness Systems	NA	MPC860
Precise Software Technologies	NA	Products that implement the PowerPC architecture (Note)
Target Technologies	NA	MPC860

Note: Check with tool vendor for specific derivative support.

## 32-BIT EMBEDDED PROCESSORS

32-BIT EMBEDDED PROCESSORS (continued)

THIRD PARTY TOOLS (continued)

### Real Time Operating Systems and Kernels

Company	Product Name	Motorola Products Supported
CMX	CMX-RTX	Products that implement the PowerPC architecture (Note)
Enea OSE Systems	OSE Real-Time Kernel	Products that implement the PowerPC architecture (Note)
Etno Team	EOS	MPC5xx
Express Logic	ThreadX	Products that implement the PowerPC architecture (Note)
Green Hills Software	Integrity, VeIOSity	Products that implement the PowerPC architecture (Note)
JMI Software SYS	C Executive, PSX	Products that implement the PowerPC architecture (Note)
KADAK Products	AMX	Products that implement the PowerPC architecture (Note)
Lynx Real-Time SYS	LynxOS	603, 603e, 604, 604e, MPC821, MPC860;
Mentor Graphics		
Microtec Division	VRTXsa	Products that implement the PowerPC architecture (Note)
Micro Digital	smx Modular RTOS	Products that implement the PowerPC architecture (Note)
Microware Systems	OS-9	Products that implement the PowerPC architecture (Note)
Precise Software TECH.	Precise/MQX	Products that implement the PowerPC architecture (Note)
QNX	QNX RTOS	MPC8xx
Motorola	RTEK	MPC5xx, MPC8xx
Tao Systems	Elate	Products that implement the PowerPC architecture (Note)
US Software	superTask RTOS	Products that implement the PowerPC architecture (Note)
Wind River Systems	VxWorks	Products that implement the PowerPC architecture (Note)

Note: Check with tool vendor for specific derivative support.

### Models

Company	Product Name	Motorola Products Supported
Mentor Graphics	Seamless Co-Verification Environment	Products that implement the PowerPC architecture (Note)
Summit Design	Virtual-CPU Co-Verification Environment	Products that implement the PowerPC architecture (Note)
Simpod, Inc.	DeskPOD	Products that implement the PowerPC architecture (Note)
Synopsys	Various	Products that implement the PowerPC architecture (Note)

Note: Check with tool vendor for specific derivative support.

### Functional Test and Diagnosis

Company	Product Name	Motorola Products Supported
International Test Technologies	µMaster 4031 (PXI version)	603e, 740, 750, 7400, 8240
International Test Technologies	µMaster 4031 (PCI version)	603e, 740, 750, 7400, 8240

SG1011-8



32-BIT EMBEDDED PROCESSORS (continued)  
 THIRD PARTY TOOLS (continued)

32-Bit Third Party Tools 683XX, MPC500, MCORE, and ColdFire

Company	68300	MPC500	MCORE	ColdFire	Web Address
---------	-------	--------	-------	----------	-------------

**Assemblers**

Green Hills	•	•	•	•	www.ghs.com
P&E Microcomputer Systems, Inc.	•				www.pemicro.com
WindRiver Systems	•	•	•	•	www.wrs.com

Company	68300	MPC500	MCORE	ColdFire	Web Address
---------	-------	--------	-------	----------	-------------

**BDM Support Tools**

Cosmic Software	•				www.cosmic-software.com
WindRiver Systems	•	•	•	•	www.wrs.com
Hitex Development Tools	•				www.hitex.com
Agilent Technologies, Inc.	•	•	•		www.agilent.com
iSystem	•		•		www.isystem.com
Lauterbach	•		•	•	www.lauterbach.com
Macraigor Systems LLC	•	•			www.macraigor.com
P&E Microcomputers, Inc.	•				www.pemicro.com
Tasking, Inc.	•				www.tasking.com

Company	68300	MPC500	MCORE	ColdFire	Web Address
---------	-------	--------	-------	----------	-------------

**Code Coverage Tools**

Ashling Microsystems		•			www.ashling.com
Cosmic Software	•				www.cosmic-software.com
WindRiver Systems	•	•	•	•	www.wrs.com
Green Hills Software	•	•	•	•	www.ghs.com
Hitex Development Tools	•				www.hitex.com
iSystem	•	•			www.isystem.com
Tasking, Inc.	•		•		www.tasking.com

## 32-BIT EMBEDDED PROCESSORS

32-BIT EMBEDDED PROCESSORS (continued)

THIRD PARTY TOOLS (continued)

32-Bit Third Party Tools 683XX, MPC500, MCORE, and ColdFire (continued)

Company	68300	MPC500	MCORE	ColdFire	Web Address
<b>Compilers</b>					
Byte Craft Limited			•		www.bytecraft.com
Tasking, Inc.	•		•		www.tasking.com
Cosmic Software	•				www.cosmic-software.com
WindRiver Systems	•	•	•	•	www.wrs.com
Green Hills Software	•	•	•	•	www.ghs.com
Company	68300	MPC500	MCORE	ColdFire	Web Address
<b>Debuggers</b>					
Ashling Microsystems	•				www.ashling.com
WindRiver Systems	•	•	•	•	www.wrs.com
Green Hills Software	•	•	•	•	www.ghs.com
iSystem	•	•	•		www.isystem.com
Lauterbach	•	•	•	•	www.lauterbach.com
P&E Microcomputers, Inc.	•			•	www.pemicro.com
Company	68300	MPC500	MCORE	ColdFire	Web Address
<b>Evaluation Boards</b>					
Axiom Manufacturing		•	•		www.axman.com
Arrow	•	•	•	•	www.arrow.com
Avnet	•	•	•	•	www.avnet.com
Future	•	•	•	•	www.future.com
Company	68300	MPC500	MCORE	ColdFire	Web Address
<b>In-Circuit Emulators</b>					
Ashling Microsystems	•	•			www.ashling.com
WindRiver Systems	•	•			www.wrs.com
Hitex Development Tools	•				www.hitex.com
iSystem	•	•			www.isystem.com
Lauterbach	•	•			www.lauterbach.com
Microtek International Inc.	•				www.microtek.com.tw/mice

32-BIT EMBEDDED PROCESSORS (continued)

THIRD PARTY TOOLS (continued)

32-Bit Third Party Tools 683XX, MPC500, MCORE, and ColdFire (continued)

Company	68300	MPC500	MCORE	ColdFire	Web Address
<b>Logic Analyzers</b>					
Agilent Technologies, Inc.	•	•	•		www.agilent.com
iSystem	•				www.isystem.com
Tektronix	•	•	•		www.tek.com/measurement/logic_analyzers/
Company	68300	MPC500	MCORE	ColdFire	Web Address

<b>Performance Analysis Tools</b>					
WindRiver Systems, Inc.	•	•	•	•	www.wrs.com
Green Hills Software	•	•	•	•	www.ghs.com
iSystem	•	•			www.isystem.com
Company	68300	MPC500	MCORE	ColdFire	Web Address

<b>Real-Time Operating Systems</b>					
Accelerated Technology Inc.	•	•	•		www.atinucleus.com
Lineo	•	•	•	•	www.rtxc.com
ETAS	•	•			www.etasinc.com
Green Hills Software	•	•	•		www.ghs.com
Precise Software	•	•	•	•	www.psti.com
Tasking, Inc.	•				www.tasking.com
U S Software	•	•		•	www.ussw.com
WindRiver Systems, Inc.				•	www.wrs.com
Company	68300	MPC500	MCORE	ColdFire	Web Address

<b>Simulation Tools</b>					
WindRiver Systems, Inc.	•		•	•	www.wrs.com
Green Hills Software	•	•	•	•	www.ghs.com
Tasking, Inc.	•		•		www.tasking.com

ANALOG

ANALOG  
DEVELOPMENT SYSTEMS

**Development Tools — Communications Application-Specific Standard Products**

Product	Description	Key Product	Status	Documentation
MC14LC5480EVK	PCM Codec-Filter Evaluation Kit	MC14LC5480, MC145481, MC145482, MC145483, MC145484	Available	MC14LC5480EVK/D
MC145572EVK	ISDN U-Interface Transceiver Evaluation Kit	MC145572	Available	Note
MC145574EVK	ISDN S/T-Interface Transceiver Evaluation Kit	MC145574	Available	Note
MC145576EVK	ISDN Single-Chip NT1 Evaluation Kit	MC145576	Available	Note
MC145576DRV	Driving Board for the MC145576EVK for Smart NT1 Evaluation	MC145576	Available	Note
Hipster™	Hipster Reference Design for SOHO Router	MC145572, MC145574, MPC850DH	Available	Note

Note: For documentation, go to <http://www.motorola.com/semiconductors>, and click on the Tools Library link.

DIGITAL SIGNAL PROCESSORS  
SOFTWARE TOOLS  
DSP56800 Development Tools — Software

Product	Description	Status	Additional Information
MSW3SDK000AA	Embedded software development kit (SDK) for DSP56800		Software infrastructure that allows development of efficient, high level software applications that are fully portable and reusable not only across all DSP56800 family processors, but any future SDK supported architectures as well.

DSP56800 and StarCore — Metrowerks

Product	Description	Target Support	RTOS Support	Board Support	Host-Target Interface	Host Platforms	Language Support	IDE Version	Compile Output Formats
CWSP56800	CodeWarrior Software Development Tools for DSP56800	DSP56F801; DSP56F803; DSP56F805; DSP56F807; DSP56824	RTXC by Lineo	DSP56F801EVM; DSP56F803EVM; DSP56F805EVM; DSP56F807EVM; DSP56824 EVM; DSP56824ADSA	Parallel Port; PCI; Ethernet	Windows 95/98/2000/NT	C, DSP56800 Assembly	4.1	ELF/DWARF 1.1
CWSTARCOREWIN	CodeWarrior Software Development Tools for StarCore v.1.1 (Windows)	MSC8101	Task aware debugging for RTXC from Lineo	MSC8101	Panther HTI for OnCE/JTAG Communication; DSP Parallel Port Based HTI; DSP PCI Based HTI	Windows 98/2000/NT	C, StarCore Assembly	4.1	ELF/DWARF, Motorola S Records
CWSTARCORESOL	CodeWarrior Software Development Tools for StarCore v.1.1 (Solaris)	MSC8101	Task aware debugging for RTXC from Lineo	MSC8101	Panther HTI for OnCE/JTAG Communication; DSP Parallel Port Based HTI; DSP PCI Based HTI	Sun Ultra 5 Class processors running Solaris 2.6 or Solaris 2.7	C, StarCore Assembly	4.1	ELF/DWARF, Motorola S Records

Networking Application Software

Partner	Description	Contact
Signals and Software Limited	Embedded communications software including speech coders, modems and echo cancellers for applications such as cellular and PCS telephones, pagers, and wireless basestations.	<a href="http://www.sasl.com">http://www.sasl.com</a>
VoicePump	Off-the-shelf licensable software modules suitable for use in the wireless communications, satellite communications, networking and computer industries.	<a href="http://www.voicepump.com/index.html">http://www.voicepump.com/index.html</a>
Lake Communications	Lake Genus suite of DSP algorithms provide many common modem and vocoder combinations using a common API, enabling easy integration into products.	<a href="http://www.lakecommunications.com">http://www.lakecommunications.com</a>
Surf Communication Solution, Ltd.	Advanced universal port solution for converged packet voice, packet fax, V.9x modems and high-speed data services.	<a href="http://www.surf-com.com">http://www.surf-com.com</a>
Trinity Convergence	VeriCall distributed packet telephony software framework enables packet telephony, including universal port capability, for network equipment manufacturers.	<a href="http://www.trinityconvergence.com">http://www.trinityconvergence.com</a>
Delphi Communication Systems	Multi-protocol Framework, SoftRadio Physical Layers for 2nd and 3rd generation protocols, speech coding and telephony algorithms for wireless interworking functions and packet voice applications.	<a href="http://www.delcomsys.com">http://www.delcomsys.com</a>

<http://www.motorola.com/DSP>

DIGITAL SIGNAL PROCESSORS (continued)  
HARDWARE TOOLS

## Audio DSP Development Tools — Hardware

Product	Description	Additional Information
DSP56301ADSA	DSP56301 Development System for IBM PC	For use with 56362,4,6,7 generic or software devices
DSP56301ADSF	DSP56301 Development System for SUN-4	
DSP56303EVM	DSP56303 Evaluation Module Including Software	
DSP56L307EVM	DSP56L307 Evaluation Module Including Software	
DSP56309EVM	DSP56309 Evaluation Module Including Software	
DSP56311EVM	DSP56311 Evaluation Module Including Software	
DSP5636XEVM	DSP5636X Evaluation Module Including Software, Debugger and PPI cable	

## DSP56800 Development Tools — Hardware

Product	Description	Status
DSP56824EVM	DSP56824 Evaluation Module Kit	Available
DSP56F801EVM	Evaluation kit for the DSP56F801 processor	Available
DSP56F803EVM	Evaluation kit for the DSP56F803 processor	Available
DSP56F805EVM	Evaluation kit for the DSP56F805 processor	Available
DSP56F807EVM	Evaluation kit for the DSP56F807 processor	Available
DSP56F826EVM	Evaluation kit for the DSP56F826 processor	Available
DSP56F827EVM	Evaluation kit for the DSP56F827 processor	Available
DSPCOMMAND	Emulation support for DSP56F80X processors. Requires ISA slot.	Available
DSPCOMMPARALLEL	Emulation support for DSP56F80X processors. Requires parallel port.	Available
DSPCOMMANDPCI	Emulation support for DSP56F80X processors. Requires PCI slot.	Consult Web or Metrowerks for availability of CodeWarrior software support
DSPCOMMETHERNET	Emulation support for DSP56F80X processors. Requires Ethernet network.	Consult Web or Metrowerks for availability of CodeWarrior software support

## Audio DSP Development Tools — Universal Hardware

Product	Description	Additional Information
DSPPCHOST	PC Compatible Host Board and Interface Software	Version 2.0
DSPSUN4HOST	SUN-4 Host Board and Interface Software	Version 2.0
DSPCOMMAND	16- and 24- Bit Command Converter Board	Version 6.1
DSPCOMMANDPCI	16- and 24- Bit Command Converter Board for PCI Interface	Version 1.0
DSPCOMMPARALLEL	16- and 24- Bit Command Converter Board for Parallel Interface	Version 1.0

## Metrowerks

Product	Description	Target Board	Power Supply	Schematic	Documentation	Interface Board	RTOS Support
MSC8101ADS	8101 ADS Board						RTXC by Lineo

*DIGITAL SIGNAL PROCESSORS (continued)*  
*DEVELOPMENT SYSTEMS*  
**Networking DSP Development Tools**

Product	Description
DSPTOOLSCD	DSP56300 Family Simulator/Assembler/Librarian/C Compiler for IBM PC, SUN-4, and Hewlett-Packard Series 700
CDDSP56300/D	DSP56300 Training CD
DSP56301ADM	DSP56301 Applications Development Module
DSP56303EVM	DSP56303 Evaluation Module
DSP56L307EVM	DSP56L307 Evaluation Module
DSP56309EVM	DSP56309 Evaluation Module
DSP56311EVM	DSP56311 Evaluation Module
DSP56321EVM	DSP56321 Evaluation Module
MSC8101ADS	MSC8101 Application Development System
DSPCOMMAND	16-, 24-, 32-bit Command Converter Board which allows the host to talk with DSP target system via OnCE/JTAG port
DSPCOMMPCI	Command Converter with PCI Host Interface
DSPCOMMANDUSB	Command Converter with SBUS Host Interface
DSPCOMMETHERNET	Command Converter with Ethernet Host Interface
DSPCOMMPARALLEL	Command Converter with Parallel Port Host Interface
DSPPCHOST	PC-Compatible Host Interface Board
DSP2UN4HOST	Sun-4 Host Interface Board

DIGITAL SIGNAL PROCESSORS

DIGITAL SIGNAL PROCESSORS (continued)  
 DEVELOPMENT SYSTEMS (continued)  
 DSP56800 and StarCore — Metrowerks

Product	Description	RTOS Support	MMEVS Platform Board	Serial Cable	Integrated Development Environment	CD ROM	Documentation	Power Supply	Host Platforms	In-Circuit Simulator/ Programmer (Board)
DSP56F803EVM	DSP56803 Evaluation System (EVM)						•	•		
DSP56F805EVM	DSP56805 Evaluation System (EVM)						•	•		
DSP56F807EVM	DSP56807 Evaluation System (EVM)						•	•		
DSP56F826EVM	DSP56826 Evaluation System (EVM)						•	•		
DSP56824ADSA	DSP56824 Application Development System (ADS)						•	•		
DSP56824EVM	DSP56824 Evaluation System (EVM)						•	•		
DSP56826EVM	DSP56826 Evaluation System (EVM)						•	•		
DSP56F801EVM	DSP56801 Evaluation System (EVM)						•	•		
CWDEVSYS56F803	CodeWarrior Development System for DSP56803									
CWDEVSYS56F805	CodeWarrior Development System for DSP56805									
CWDSSTAR8101-WIN	MSC8101 Application Development System for Windows	RTXC by Lineo	•	•	•	•	•	•	Win 98/ NT/2000	Simulator SC140
CWDSSTAR8101-SOL	MSC8101 Application Development System for Solaris	RTXC by Lineo	•	•	•	•	•	•	Solaris 2.6/ Solaris 2.7	Simulator SC140
CWDSSTARWIN	Development System w/ Panther for Windows	RTXC by Lineo	•	•	•	•	•	•	Win 98/ NT/2000	Simulator SC140
CWDSSTAR SOL	Development System w/ Panther for Solaris	RTXC by Lineo	•	•	•	•	•	•	Solaris 2.6/ Solaris 2.7	Simulator SC140

CABLES AND HOST-TARGET INTERFACES

Metrowerks

Product/Part Number	Description	Target Support	Connection Device	Power Supply
HTIONCEJTAG	Panther HTI for OnCE/JTAG Communication	CodeWarrior for StarCore Windows/ Solaris		•
DSPCOMMPARALLEL	DSP Parallel Port Based HTI	CodeWarrior for StarCore Windows		
DSPCOMMANDPCI	DSP PCI Based HTI	CodeWarrior for StarCore Solaris		



DIGITAL SIGNAL PROCESSORS (continued)

THIRD PARTY TOOLS

Networking DSP Development Tools

[www.motorola.com/DSP](http://www.motorola.com/DSP)

Tools Description	Partner	Contact
Real-Time Operating System	Eonic Systems Embedded Power Corporation Precise Software Technologies Wind River Systems	<a href="http://www.eonics.com">http://www.eonics.com</a> <a href="http://www.embeddedpower.com/">http://www.embeddedpower.com/</a> <a href="http://www.psti.com">http://www.psti.com</a> <a href="http://www.windriver.com">http://www.windriver.com</a>
Integrated Development Environment	Green Hills MetroWerks Signalogic Tasking	<a href="http://www.greenhills.com">http://www.greenhills.com</a> <a href="http://www.metrowerks.com">http://www.metrowerks.com</a> <a href="http://www.signalogic.com">http://www.signalogic.com</a> <a href="http://www.tasking.com">http://www.tasking.com</a>
Optimizing Compilers / Assembler / Linker	Green Hills Tasking Wind River Systems	<a href="http://www.greenhills.com">http://www.greenhills.com</a> <a href="http://www.tasking.com">http://www.tasking.com</a> <a href="http://www.windriver.com">http://www.windriver.com</a>
Debugger	Domain Technologies Green Hills Precise Software Technologies Tasking Wind River Systems	<a href="http://www.domaintec.com">http://www.domaintec.com</a> <a href="http://www.greenhills.com">http://www.greenhills.com</a> <a href="http://www.psti.com">http://www.psti.com</a> <a href="http://www.tasking.com">http://www.tasking.com</a> <a href="http://www.windriver.com">http://www.windriver.com</a>
Simulator	Precise Software Technologies Tasking Wind River Systems	<a href="http://www.psti.com">http://www.psti.com</a> <a href="http://www.tasking.com">http://www.tasking.com</a> <a href="http://www.windriver.com">http://www.windriver.com</a>
DSP Algorithm Development	Mathworks Hyperception	<a href="http://www.mathworks.com">http://www.mathworks.com</a> <a href="http://www.hyperception.com">http://www.hyperception.com</a>
System Simulation and Verification	Cadence Mentor Graphics Synopsys	<a href="http://www.cadence.com/alta">http://www.cadence.com/alta</a> <a href="http://www.mentorgraphics.com">http://www.mentorgraphics.com</a> <a href="http://www.synopsys.com">http://www.synopsys.com</a>
Hardware Debug Connections/ Analyzers	Corelis/HP Macraigor Systems Signalogic Wind River Systems	<a href="http://www.corelis.com/">http://www.corelis.com/</a> <a href="http://www.macraigor.com">http://www.macraigor.com</a> <a href="http://www.signalogic.com">http://www.signalogic.com</a> <a href="http://www.windriver.com">http://www.windriver.com</a>
Integration and Debug Environment	Metrowerks	<a href="http://www.metrowerks.com">http://www.metrowerks.com</a>
Hardware Development Tools	CDA Systems P&E Microcomputer Systems United Electronic Industries White Electronic Designs	<a href="http://www.cdasy.com">http://www.cdasy.com</a> <a href="http://www.pemicro.com">http://www.pemicro.com</a> <a href="http://www.ueidaq.com">http://www.ueidaq.com</a> <a href="http://www.whiteedc.com">http://www.whiteedc.com</a>

Metrowerks

Product	Company
RTXC RTOS Awareness Kernel	Lineo

## MICROCONTROLLERS

### MICROCONTROLLERS SOFTWARE TOOLS 68HC05 Programmers

Product	Packages Supported	Programming Adapter	Programmer Board
68HC705B16 68HC705B32	52 PLCC (FN) 56 SDIP (B)	NA	M68ICS05B Serial Programmer/In-Circuit Simulator
68HC705BD3 68HC705BD7	40 DIP (P) 42 SDIP (B)	M68UPA05BD3040 M68UPA05BD3B42	M68HC705UPGMR
68HC705C8A 68HC705C9A	40 DIP (P/S) 44 PLCC (FN/FS)	NA	M68ICS05C Serial Programmer/In Circuit Simulator
68HC705E6	44 QFP (FB) 28 SOIC (DW)	NA	M68HC705E6PGMR
68HC705F32	100 TQFP	NA	X68HC705F32PGMR
68HC705H12	52 PLCC (FN)	NA	X68HC705H12PGMR
68HC705KJ1 68HC705J1A	16 and 20 DIP (P) 16 and 20 SOIC (DW)	NA	M68ICS05KJ Serial Programmer/In-Circuit Simulator
68HC705J5A	16 DIP (P) 20 DIP (P) 20 SOIC (DW)	M68UPA05J5AP16 M68UPA05J5AP20 M68UPA05J5ADW20	M68HC705UPGMR
68HC705JB3	20 DIP (P) 28 DIP (P) 28 SOIC (DW)	M68UPA05JB3P20 M68UPA05JB3P28 M68UPA05JB3DW28	M68HC705UPGMR
68HC705JB4	28 DIP (P) 28 SOIC (DW)	M68UPA05JB4P28 M68UPA05JB4DW28	M68HC705UPGMR
68HC705JJ7	20 DIP (P) 20 SOIC (DW)	NA	M68ICS05JP Serial Programmer/In-Circuit Simulator
68HC705JP7	28 DIP (P) 28 SOIC (DW)	NA	M68ICS05JP Serial Programmer/In-Circuit Simulator
68HC705L16	80 QFP (FU/FZ)	NA	KITPGMR05L16
68HC705P6A	28 DIP (P) 28 SOIC (DW)	NA	M68ICS05P Serial Programmer/In-Circuit Simulator
68HC805P18	28 DIP (P/S)	NA	X68HC805P18PGMR
68HC705PL4	20 DIP (P) 28 DIP (P) 20 SOIC (DW) 28 SOIC (DW)	M68UPA05PL4P20 M68UPA05PL4P28 M68UPA05PL4DW20 M68UPA05PL4DW28	M68HC705UPGMR or M68HC705UGANG
68HC805PV8	28 SOIC (DW)	NA	X68HC805PV8PGMR
68HC705SR3	40 DIP (P) 44 QFP (FB)	M68UPA05SR3P40 M68UPA05SR3FB44	M68HC705UPGMR
68HC705X4	28 DIP (P/S) 28 SOIC (DW)	NA	M68HC705X4PGMR
68HC705X32	64 QFP (FU) 68 PLCC (FN)	NA	M68HC705X32PGMR

*MICROCONTROLLERS (continued)*  
*SOFTWARE TOOLS (continued)*  
**68HC08 Programmers**

Product	Packages Supported	Programming Adapter	Programmer Board
68HC908AB32	64 QFP	NA	M68ICS08AB Serial Programmer/In-Circuit Simulator
68HC908AB32	64 QFP	M68UPA08AB32FU64	M68HC705UPGMR or M68HC705UGANG Parallel Programmer
68HC908AZ60A 68HC908AS60A	64 QFP (FU) 52 PLCC (FN)	NA	M68ICS08AZAS Serial Programmer/In-Circuit Simulator
68HC908BD48	44 QFB (FB) 42 SDIP (B) 28 DIP (P)	M68UPA08BD48FB44 M68UPA08BD48B42 M68UPA08BD48P28	M68HC705UPGMR or M68HC705UGANG Parallel Programmer
68HC908GP32	40 DIP (P) 44 QFP (FB)	NA	M68ICS08GP Serial Programmer/In-Circuit Simulator: recommended for DIP and QFP programming
68HC908GP32	40 DIP (P) 42 SDIP (B) 44 QFP (FB)	M68UPA08GP32P40 M68UPA08GP32B42 M68UPA08GP32FB44	M68HC705UPGMR or M68HC705UGANG Parallel Programmer
68HC908GR8 68HC908GR4	28 DIP (P) 32 QFP (FA)	NA	M68ICS08GR Serial Programmer/In-Circuit Simulator
68HC908JB8	20 DIP (P) 20 SOIC (DW) 28 SOIC (DW) 42 SDIP (B) 44 QFP (FB)	NA	M68ICS08JB Serial Programmer/In-Circuit Simulator
68HC908JB8	20 DIP (P) 20 SOIC (DW) 28 SOIC (DW) 42 SDIP (B) 44 QFP (FB)	M68UPA08JB8P20 M68UPA08JB8DW20 M68UPA08JB8DW28 M68UPA08JB8B42 M68UPA08JB8FB44	M68HC705UPGMR or M68HC705UGANG Parallel Programmer
68HC908JK3/JK1	20 DIP (P) 20 SOIC (DW)	NA	M68ICS08JLJK Serial Programmer/In-Circuit Simulator
68HC908JK3/JK1	20 DIP (P) 20 SOIC (DW)	M68UPA08JK3P20 M68UPA08JK3DW20	M68HC705UPGMR or M68HC705UGANG Parallel Programmer
68HC908JL3	28 DIP (P) 28 SOIC (DW)	NA	M68ICS08JLJK Serial Programmer/In-Circuit Simulator
68HC908JL3	28 DIP (P) 28 SOIC (DW)	M68UPA08JL3P28 M68UPA08JL3DW28	M68HC705UPGMR or M68HC705UGANG Parallel Programmer

## MICROCONTROLLERS

MICROCONTROLLERS (continued)

SOFTWARE TOOLS (continued)

### 68HC08 Programmiers (continued)

Product	Packages Supported	Programming Adapter	Programmer Board
68HC908KX8 68HC908KX2	16 DIP (P) 16 SOIC (DW)	NA	M68ICS08KX
68HC908LD64	64 QFP (FU)	M68UPA08LD64FU64	M68HC705UPGMR or M68HC705UGANG Parallel Programmer
		M68PA08LD64FU64	M68SPGMR08 Serial Programmer with NO In-Circuit Simulator M68PGMR08DDC FLASH Programming through DDC Interface
68HC908LJ12	64 QFP (FU) 52 QFP (FB) 64 LQFP (PB)	NA	M68ICS08LJ Serial Programmer/In-Circuit Simulator
		NA	M68ICS08MR Serial Programmer/In-Circuit Simulator
68HC908MR32 68HC908MR16 68HC908MR8	56 SDIP (B) 64 QFP (FU) 32 QFP (FA)	NA	M68ICS08MR Serial Programmer/In-Circuit Simulator
68HC908RK2	20 SOIC (DW)	NA	M68ICS08RK2 Serial Programmer/In-Circuit Simulator
68HC908SR12	42 SDIP (B) 48 QFP (FA)	NA	M68ICS08SR Serial Programmer/In-Circuit Simulator
68HC908SR12	42 SDIP (B) 48 QFP (FA)	M68UPA08SR12B42	M68HC705UPGMR or M68HC705UGANG Parallel Programmer
		M68UPA08SR12FA48	

MICROCONTROLLERS (continued)  
SOFTWARE TOOLS (continued)

68HC11 Programmers

Product	Platform	Package	Programmer Adapter
68HC711D3	M68SPGMR11	40-pin plastic DIP (P)	M68PA11D3P40
		44-pin QFP (FB)	M68PA11D3FB44
		44-lead PLCC (FN)	M68PA11D3FN44
68HC711E9 68HC11E9/E1	M68SPGMR11	52-lead PLCC (FN)	M68PA11E20FN52
		52-lead QFP (PB)	M68PA11E20PB52
		64-lead QFP (FU)	M68PA11E20FU64
68HC711E20 68HC11E20	M68SPGMR11	52-lead PLCC (FN)	M68PA11E20FN52
		64-lead PLCC (FN)	M68PA11E20FU64
68HC811E2	M68SPGMR11	48-pin plastic DIP (P)	M68PA11A8P48
68HC11F1	M68SPGMR11	52-lead PLCC (FN)	M68PA11E20FN52
		68-lead PLCC (FN)	M68PA11F1FN68
68HC11G5 68HC11G7	M68SPGMR11	80-lead TQFP (PU)	M68PA11F1PU80
		84-lead PLCC (FN)	M68PA11G5FN84
68HC711K4 68HC11K4/K1	M68SPGMR11	80-lead TQFP (FU)	M68PA11K4FU80
		84-lead PLCC (FN)	M68PA11K4FN84
68HC711KA2 68HC11KA2	M68SPGMR11	68-lead PLCC (FN)	M68PA11KA4FN68
68HC711KA4 68HC11KA4	M68SPGMR11	68-lead PLCC (FN)	M68PA11KA4FN68
68HC711KS2 68HC11KS2	M68SPGMR11	68-lead PLCC (FN)	M68PA11KA4FN68
68HC711L6 68HC11L6	M68SPGMR11	64-lead QFP (FU)	M68PA11L6FU64
		68-lead PLCC (FN)	M68PA11L6FN68
68HC711P2 68HC11P2	M68SPGMR11	84-lead PLCC (FN)	M68PA11K4FN84

## MICROCONTROLLERS

MICROCONTROLLERS (continued)  
SOFTWARE TOOLS (continued)

HC05, HC08, HC11, HC12, HC16, MPC5xx, 568xx, and MCORE — Metrowerks

Product	Description	Target Support	RTOS Support	Board Support	Host-Target Interface	Host Platforms	Language Support	IDE Version
CWHC05ASM	CW ASM Tools for HC05	HC05 family processors (B, BD, C, F, J, JB, JJ, JP, K, KJ, L, LJ, P, PV, SR, SU and X families)		MMEVS, MMDS		Windows 95/98/ 2000/ ME/NT4.0	Assembly, C/C++, cC++, EC++	4.1.1
CWHC05	CW Full Package for HC05							4.1.1
CWHC08PROMO	CW HC08 Promo	HC08 family processors (AB, AS, AZ, BD, EY, GP, GR, JB, JK, JL, KH, KX, LD, MR, RF, RK and SR families)	Metrowerks OSEKturbo OS HC08		MON08	Windows 95/98/ 2000/ ME/NT4.0	Assembly, C/C++, cC++, EC++	4.1.1
CWHC08ASM	CW ASM Tools for HC08		Metrowerks OSEKturbo OS HC08		MON08			4.1.1
CWHC08	CW Full Package for HC08		Metrowerks OSEKturbo OS HC08		MON08			4.1.1
CWHC08CC	Standalone C/C++/cC++/EC++ Compiler for HC08		Metrowerks OSEKturbo OS HC08		MON08			4.1.1
CWHC08MIG	CW Full Package for HC08 Migration		Metrowerks OSEKturbo OS HC08		MON08			4.1.1
CWHC11ASM	CW ASM Tools for HC11	HC11 family processors (D, E, F, FC, K, KS, KW and P families)			Monitor	Windows 95/98/ 2000/ ME/NT4.0	Assembly, C/C++, cC++, EC++	4.1.1
CWHC11	CW Full Package for HC11				Monitor			4.1.1
CWHC11MIG	CW Full Package for HC11 Migration		Metrowerks OSEKturbo OS H		Monitor			4.1.1
CWHC12ASM	CW ASM Tools for HC12	HC12 family processors, (B, BC, BE, D, DG, DT, PP, H and DTB families)	Metrowerks OSEKturbo OS H		SDI, P&E ICD, Abatron BDI, Noral BDM, Lauterbach BDM, Dbug12	Windows 95/98/ 2000/ ME/NT4.0	Assembly, C/C++, cC++, EC++	4.1.1
CWHC12	CW Full Package for HC12		Metrowerks OSEKturbo OS H		SDI, P&E ICD, Abatron BDI, Noral BDM, Lauterbach BDM, Dbug12			4.1.1
CWHC12MIG	CW Full Package for HC12 Migration		Metrowerks OSEKturbo OS H		SDI, P&E ICD, Abatron BDI, Noral BDM, Lauterbach BDM, Dbug12			4.1.1

*MICROCONTROLLERS (continued)*

*SOFTWARE TOOLS (continued)*

*HC05, HC08, HC11, HC12, HC16, MPC5xx, 568xx, and MCORE — Metrowerks (continued)*

Product	Description	Target Support	RTOS Support	Board Support	Host-Target Interface	Host Platforms	Language Support	IDE Version
CWHC16ASM	CW ASM Tools for HC16	HC16 family processors (R, X, Y and Z families)			P&E ICD, Abatron BDI, Lauterbach BDM	Windows 95/98/ 2000/ ME/NT4.0	Assembly, C/C++, cC++, EC++	4.1.1
CWHC16	CW Full Package for HC16				P&E ICD, Abatron BDI, Lauterbach BDM		Assembly, C/C++, cC++, EC++	4.1.1
CWHC16MIG	CW Full Package for HC16 Migration				P&E ICD, Abatron BDI, Lauterbach BDM		Assembly, C/C++, cC++, EC++	4.1.1
CWMPC5XX	CodeWarrior Software Development Tools for MPC5xx	MPC555; MPC 560; MPC561; MPC563; MPC565	OSEK	Axiom CME555; Axiom CMD565	Abatron BDI 2000; P&E		ELF/DWARF 1.0; Motorola S-Record	4.2.5
CWMCORE	CodeWarrior Software Development Tools for MCORE	M2xx/3xx family processors		MMC2001; MMC2075/2080; MMC2107; MMC2103; MMC3401	MetroTRK; Metrowerks EBDI			4.1

## MICROCONTROLLERS

### MICROCONTROLLERS (continued) HARDWARE TOOLS

#### 68HC05 Emulators, Cables, and Adapters

Product	Platform	Emulation Modules	Packages Supported	Flex Cable	Target Head Adapter	Surface Mount Adapter
68HC05B6/B8/B16/B32 68HC705B16/B32	M68MMPFB0508 or M68MMDS0508	M68EM05B32	56 SDIP (B) 64 QFP (FU) 52 PLCC (FN)	M68CBL05B M68CBL05C M68CBL05C	M68TB05B32B56 M68TC05B32FU64 M68TC05B32FN52	M68TQP064SA1 <sup>(1)</sup> M68TQS064SAG1 <sup>(1)</sup>
68HC05BD3/BD5/BD7 68HC705BD3/BD7	M68MMPFB0508 or M68MMDS0508	M68EM05BD7	40 DIP (P) 42 SDIP (B)	M68CBL05B M68CBL05B	M68TB05BD7P40 M68TB05BD7B42	
68HC05BD9/BD16/BD24 68HC705BD9/BD24	M68MMPFB0508 or M68MMDS0508	X68EM05BD9	40 DIP (P) 42 SDIP (B)	M68CBL05B M68CBL05B	M68TB05BD9P40 M68TB05BD9B42	
68HC05C4A/C8A/C12A 68HC705C8A	M68MMPFB0508 or M68MMDS0508	M68EM05C9A	40 DIP (P) 44 PLCC (FN) 44 QFP (FB) 42 SDIP (B)	M68CBL05B M68CBL05C M68CBL05C M68CBL05B	M68TB05C9P40 M68TC05C4FN44 M68TC05C9FB44 M68TB05C9B42	M68TQS044SAG1 <sup>(1)</sup> M68TQP044SAMO1 <sup>(1)</sup>
68HC05C9A 68HC705C9A	M68MMPFB0508 or M68MMDS0508	M68EM05C9A	40 DIP (P) 44 PLCC (FN) 42 SDIP (B) 44 QFP (FB)	M68CBL05B M68CBL05C M68CBL05B M68CBL05C	M68TB05C9P40 M68TC05C9FN44 M68TB05C9B42 M68TC05C9FB44	M68TQS044SAG1 <sup>(1)</sup> M68TQP044SAMO1 <sup>(1)</sup>
68HC05E6 68HC705E6	M68MMPFB0508 or M68MMDS0508	M68EM05E6	28 SOIC (DW) 44 QFP (FB)	M68CBL05C M68CBL05C	M68TC05E6P28 M68TC05E6FB44	M68DIP28SOIC M68TQS044SAG1 <sup>(1)</sup> M68TQP044SAMO1 <sup>(1)</sup>
68HC705F32	M68MMPFB0508 or M68MMDS0508	M68EM05F32	100 TQFP (PU) 80 TQFP (PU)	M68CBL05E M68CBL05E	M68TE05F32PU100 M68TE05F32PU80	
68HC05H12 68HC705H12	M68MMPFB0508 or M68MMDS0508	X68EM05H12	52 PLCC (FN)	M68CBL05C	X68TC05H12FN52	
68HC05J5A 68HC05LJ5 68HC705J5A	M68MMPFB0508 or M68MMDS0508	X68EML05J5A	16 DIP (P) 20 DIP (P) 16 SOIC (DW) 20 SOIC (DW)	M68CBL05A M68CBL05A M68CBL05A M68CBL05A	M68TA05J5AP16 M68TA05J5AP20 M68TA05J5AP16 M68TA05J5AP20	M68DIP16SOIC M68DIP20SOIC

1. Each QFP target head adapter includes one TQSOCKET with guides (M68TQxxxSyG1) and one TQPACK disposable surface mount adapter (M68TQPxxxSy1 – 1.2-mm lead length or M68TQPxxxSyMO1 – 1.6-mm lead length). Order additional TQPACKs and TQSOCKETS (optional) using part numbers referenced in the Surface Mount Adapters column to support multiple target systems.



MICROCONTROLLERS (continued)  
 HARDWARE TOOLS (continued)  
 68HC05 Emulators, Cables, and Adapters (continued)

Product	Platform	Emulation Modules	Packages Supported	Flex Cable	Target Head Adapter	Surface Mount Adapter
68HC705JB3	M68MMPFB0508 or M68MMDS0508	X68EM05JB3	20 DIP (P)	M68CBL05A	M68TA05JB3P20	M68DIP28SOIC
			28 DIP (P)	M68CBL05A	M68TA05JB3P28	
			28 SOIC (DW)	M68CBL05A	M68TA05JB3P28	
68HC705JB4	M68MMPFB0508 or M68MMDS0508	X68EM05JB4	28 DIP (P)	M68CBL05A	M68TA05JB4P28	M68DIP28SOIC
			28 SOIC (DW)	M68CBL05A	M68TA05JB4P28	
68HC705JJ7 68HC05JJ6	M68MMPFB0508 or M68MMDS0508	X68EM05JP7	20 DIP (P)	M68CBL05A	X68TA05JJ7P20	M68DIP20SOIC
			20 SOIC (DW)	M68CBL05A	X68TA05JJ7P20	
68HC705JP7 68HC05JP6	M68MMPFB0508 or M68MMDS0508	X68EM05JP7	28 DIP (P)	M68CBL05A	X68TA05JP7P28	M68DIP28SOIC
			28 SOIC (DW)	M68CBL05A	X68TA05JP7P28	
68HC05J1A 68HC705J1A	M68MMPFB0508 or M68MMDS0508	M68EM05J1A	20 DIP (P)	M68CBL05A	M68TA05J2P20	M68DIP20SOIC
			20 SOIC (DW)	M68CBL05A	M68TA05J2P20	
68HC705KJ1	M68MMPFB0508 or M68MMDS0508	M68EM05J1A	16 DIP (P)	M68CBL05A	M68TA05KJ1P16	M68DIP16SOIC
			16 SOIC (DW)	M68CBL05A	M68TA05KJ1P16	
68HC05L5/L16 68HC705L16	M68MMPFB0508 or M68MMDS0508	M68EML05L16	80 QFP (FU)	M68CBL05E	M68TE05L16FU80	M68TQS080SBG1 <sup>(1)</sup> M68TQP080SBMO1 <sup>(1)</sup>
68HC05L25 68HC705L26	M68MMPFB0508 or M68MMDS0508	M68EML05L26	52 LQFP (PB)	M68CBL05C	M68TC05L26PB52	
68HC05P1A/P4A/P9A 68HC705P6A	M68MMPFB0508 or M68MMDS0508	X68EML05P6A	28 DIP (P)	M68CBL05A	M68TA05P9P28	M68DIP28SOIC
			28 SOIC (DW)	M68CBL05A	M68TA05P9P28	
68HC05P18 68HC805P18	M68MMPFB0508 or M68MMDS0508	X68EM05P18	28 DIP (P)	M68CBL05A	M68TA05P9P28	M68DIP28SOIC
			28 SOIC (DW)	M68CBL05A	M68TA05P9P28	
68HC05PL4 68HC705PL4	M68MMPFB0508 or M68MMDS0508	X68EML05PL4	20 DIP (P)	M68CBL05A	M68TA05PL4P20	M68DIP20SOIC M68DIP28SOIC
			28 DIP (P)	M68CBL05A	M68TA05PL4P28	
			20 SOIC (DW)	M68CBL05A	M68TA05PL4P20	
			28 SOIC (DW)	M68CBL05A	M68TA05PL4P28	
68HC805PV8	M68MMPFB0508 or M68MMDS0508	X68EM05PV8	28 SOIC (DW)	M68CBL05A	X68TA05PV8P28	M68DIP28SOIC

1. Each QFP target head adapter includes one TQSOCKET with guides (M68TQxxxxSyG1) and one TQPACK disposable surface mount adapter (M68TQPxxxSy1 – 1.2-mm lead length or M68TQPxxxSyMO1 – 1.6-mm lead length). Order additional TQPACKs and TQSOCKETs (optional) using part numbers referenced in the Surface Mount Adapters column to support multiple target systems.

## MICROCONTROLLERS

MICROCONTROLLERS (continued)

HARDWARE TOOLS (continued)

68HC05 Emulators, Cables, and Adapters (continued)

Product	Platform	Emulation Modules	Packages Supported	Flex Cable	Target Head Adapter	Surface Mount Adapter
68HC05RC18 68HC705RC16/RC17	M68MMPFB0508 or M68MMDS0508	X68EM05RC16	28 DIP (P) 28 SOIC (DW)	M68CBL05A M68CBL05A	X68TA05RC16P28 X68TA05RC16P28	M68DIP28SOIC
68HC05SR3/SU3A 68HC705SR3	M68MMPFB0508 or M68MMDS0508	M68EM05SR3	40 DIP (P) 44 QFP (FB) 42 SDIP (B)	M68CBL05B M68CBL05C M68CBL05B	M68TB05SR3P40 M68TC05SR3FB44 M68TB05SR3B42	M68TQS044SAG1 <sup>(1)</sup> M68TQP044SAMO1 <sup>(1)</sup>
68HC05X4 68HC705X4	M68MMPFB0508 or M68MMDS0508	M68EM05X4	28 DIP (P) 28 SOIC (DW)	M68CBL05A M68CBL05A	M68TA05X4P28 M68TA05X4P28	M68DIP28SOIC
68HC05X16/X32 68HC705X32	M68MMPFB0508 or M68MMDS0508	M68EML05X32	64 QFP (FU)	M68CBL05E	M68TE05X32FU64	M68TQS064SAG1 <sup>(1)</sup> M68TQP064SA1 <sup>(1)</sup>

1. Each QFP target head adapter includes one TQSOCKET with guides (M68TQSxxxSyG1) and one TQPACK disposable surface mount adapter (M68TQPxxxSy1 – 1.2-mm lead length or M68TQPxxxSyMO1 – 1.6-mm lead length). Order additional TQPACKs and TQSOCKETs (optional) using part numbers referenced in the Surface Mount Adapters column to support multiple target systems.

MICROCONTROLLERS (continued)  
HARDWARE TOOLS (continued)  
68HC08 Emulators, Cables, and Adapters

Product	Platform	Emulation Modules	Packages Supported	Flex Cable	Target Head Adapter	Surface Mount Adapter
68HC908AB32 68HC08AB16A	M68MMPFB0508 or M68MMDS0508	M68EML08AB32	64 QFP (FU)	M68CBL05C	M68TC08AB32FU64	M68TQS064SAG1 <sup>(2)</sup> M68TQP064SA1 <sup>(2)</sup>
68HC08AS20/32/60 68HC908AS32/48/60A	M68MMPFB0508 or M68MMDS0508	M68EM08AS60	52 PLCC (FN) 64 QFP (FU)	M68CBL05C M68CBL05C	X68TC08AX48FN52 X68TC08AX48FU64	M68TQS064SAG1 <sup>(2)</sup> M68TQP064SA1 <sup>(2)</sup>
68HC08AZ32/60 68HC908AZ60 68HC908AZ60A 68HC908AZ32A	M68MMPFB0508 or M68MMDS0508	M68EM08AZ60	52 PLCC (FN) 64 QFP (FU)	M68CBL05C M68CBL05C	X68TC08AX48FN52 X68TC08AX48FU64	M68TQS064SAG1 <sup>(2)</sup> M68TQP064SA1 <sup>(2)</sup>
68HC908BD48	M68MMPFB0508 or M68MMDS0508	M68EM08BD48	42 SDIP (B) 44 QFP (FB)  28 DIP (P)	M68CBL05B M68CBL05C  M68CBL05B	M68TB08BD48B42 M68TC08BD48FB44  M68TB08BD48P28	M68TQS044SAG1 <sup>(2)</sup> M68TQP044SAMO1 <sup>(2)</sup>
68HC908GP32 68HC08GP32	M68MMPFB0508 or M68MMDS0508	M68EML08GP32	40 DIP (P) 42 SDIP (B) 44 QFP (FB)	M68CBL05B M68CBL05B M68CBL05C	M68TB08GP32P40 M68TB08GP32B42 M68TC08GP32FB44	M68TQS044SAG1 <sup>(2)</sup> M68TQP044SAMO1 <sup>(2)</sup>
68HC908GR8 68HC908GR4	M68MMPFB0508 or M68MMDS0508	M68EML08GP32	28 DIP (P) 32 QFP (FA)	M68CBL05C M68CBL05C	M68TC08GR8P28 M68TC08GR8FA32	M68TQS032SAG1 <sup>(2)</sup> M68TQP032SA1 <sup>(2)</sup>
68HC908JB8	M68MMPFB0508 or M68MMDS0508	M68EM08JB8	20 DIP (P) 20 SOIC (DW) 28 SOIC (DW) 42 SDIP (B) 44 QFP (FB)	M68CBL05C M68CBL05C M68CBL05C M68CBL05B M68CBL05C	M68TC08JB8P20 M68TC08JB8P20 M68TC08JB8P28 M68TB08JB8B42 M68TC08JB8FB44	M68DIP20SOIC M68DIP28SOIC  M68TQS044SAG1 <sup>(2)</sup> M68TQP044SAMO1 <sup>(2)</sup>
68HC908JL3 68HC08JL3	M68MMPFB0508 or M68MMDS0508	M68EML08GP32	28 DIP (P) 28 SOIC (DW) 48 QFP (FA)	M68CBL05C M68CBL05C M68CBL05C	M68TC08JL3P28 M68TC08JL3P28 M68TC08JL3FA48	M68DIP28SOIC M68TQS048SDG1 <sup>(2)</sup> M68TOAP048SD1 <sup>(2)</sup>

1. New development tool product to be introduced.

2. Each QFP target head adapter includes one TQSOCKET with guides (M68TQSxxxSyG1) and one TQPACK disposable surface mount adapter (M68TQPxxxSy1 – 1.2-mm lead length or M68TQPxxxSyMO1 – 1.6-mm lead length). Order additional TQPACKS and TQSOCKETs (optional) using part numbers referenced in the Surface Mount Adapters column to support multiple target systems.

## MICROCONTROLLERS

MICROCONTROLLERS (continued)

HARDWARE TOOLS (continued)

68HC08 Emulators, Cables, and Adapters (continued)

Product	Platform	Emulation Modules	Packages Supported	Flex Cable	Target Head Adapter	Surface Mount Adapter
68HC908JK3 68HC908JK1	M68MMPFB0508 or M68MMDS0508	M68EML08GP32	20 DIP (P) 20 SOIC (DW)	M68CBL05C M68CBL05C	M68TC08JK3P20 M68TC08JK3P20	M68DIP20SOIC
68HC908KX8 68HC908KX2	M68MMPFB0508 or M68MMDS0508	M68EML08KX8	16 DIP (P) 16 SOIC (DW)	M68CBL05A M68CBL05A	M68TA05KX6P16 M68TA05KX6P16	M68DIP16SOIC
68HC908LD64	M68MMPFB0805 or M68MMDS0508	X68EML08LD64	64 QFP (FU)	M68CBL05C	M68TC08LD64FU64	M68TQS064SAG1 <sup>(2)</sup> M68TQP064SA1 <sup>(2)</sup>
68HC908LJ12	M68MMPFB0805 or M68MMDS0508	M68EML08LJ12	64 QFP (FU) 64 LQFP (PB) 52 QFP (FB)	M68CBL05C	M68TC08LJ12FU64 M68TC08LJ12PB64 M68TC08LJ12FB52	M68TQS064SAG1 <sup>(2)</sup> M68TQP064SA1 <sup>(2)</sup>
68HC908MR8 68HC08MR4	M68MMPFB0805 or M68MMDS0508	M68EM08MR8 <sup>(1)</sup>	32 QFP (FA)	M68CBL05C	MC68TC08MR8FA32	M68TQS032SAG1 <sup>(2)</sup> M68TQP032SA1 <sup>(2)</sup>
68HC908MR32 68HC908MR24 68HC908MR16	M68MMPFB0508 or M68MMDS0508	M68EM08MR32	64 QFP (FU) 56 SDIP (B)	M68CBL05C M68CBL05C	M68TC08MR24FU64 M68TC08MR24B56	M68TQS064SAG1 <sup>(2)</sup> M68TQP064SAMO1 <sup>(2)</sup>
68HC908RK2	M68MMPFB0508 or M68MMDS0508	M68EML08RK2 <sup>(1)</sup>	20 DIP (P) 20 SOIC (DW) 32 QFP (FA)	M68CBL05A M68CBL05A M68CBL05A	M68TA05RK2P20 <sup>(1)</sup> M68TA05RK2P20 <sup>(1)</sup> M68TA05RK2FA32	M68DIP20SOIC M68TQS032SAG1 <sup>(2)</sup> M68TQP032SA1 <sup>(2)</sup>
68HC908SR12	M68MMPFB0508 or M68MMDS0508	M68EML08SR12	42 SDIP (B) 48 QFP (FA)	M68CBL05B M68CBL05C	M68TB08SR12B42 M68TC08SR12FA48	M68TQS048SDG1 <sup>(2)</sup> M68TQP048SD1 <sup>(2)</sup>

1. New development tool product to be introduced.

2. Each QFP target head adapter includes one TQSOCKET with guides (M68TQSxxxSyG1) and one TQPACK disposable surface mount adapter (M68TQPxxxSy1 – 1.2-mm lead length or M68TQPxxxSyMO1 – 1.6-mm lead length). Order additional TQPACKS and TQSOCKETs (optional) using part numbers referenced in the Surface Mount Adapters column to support multiple target systems.

*MICROCONTROLLERS (continued)*  
*HARDWARE TOOLS (continued)*  
**68HC11 Evaluation Board**

Products	Board
68HC11A8 68HC11E9 68HC711E9 68HC811E2	M68HC11EVBU2

**68HC11 Emulators, Cables, and Adapters**

Product	Platform	Emulation Module (EM)	Package	Flex Cable	Target Head
68HC11D3	M68MMDS11 or M68HC11PFB	M68EM11D3	40-pin plastic DIP (P)	M68CBL05C	M68TC11D3P40
		M68EM11D3	44-lead PLCC (FN)	M68CBL05C	M68TC11D3FN44
		M68EM11D3	44-lead QFP (FB)	M68CBL05C	M68TC11D3FB44
68HC711D3	M68MMDS11 or M68HC11PFB	M68EM11D3	40-pin plastic DIP (P)	M68CBL05C	M68TC11D3P40
		M68EM11D3	44-lead PLCC (FN)	M68CBL05C	M68TC11D3FN44
68HC11E9 68HC711E9	M68MMDS11 or M68HC11PFB	M68EM11E20	52-lead PLCC (FN)	M68CBL05C	M68TC11E20FN52
		M68EM11E20	52-lead QFP (PB)	M68CBL05C	M68TC11E20PB52
		M68EM11E20	64-lead QFP (FU)	M68CBL05C	M68TC11E20FU64
68HC11E20 68HC711E20	M68MMDS11 or M68HC11PFB	M68EM11E20	52-lead PLCC (FN)	M68CBL05C	M68TC11E20FN52
		M68EM11E20	64-lead PLCC (FU)	M68CBL05C	M68TC11E20FU64
68HC811E2	M68MMDS11 or M68HC11PFB	M68EM11E20	48-pin plastic DIP (P)	M68CBL05B	M68TB11E20P48
		M68EM11E20	52-lead PLCC (FN)	M68CBL05B	M68TC11E20FN52
68HC11F1	M68MMDS11 or M68HC11PFB	M68EM11F1	68-lead PLCC (FN)	M68CBL05C	M68TC11F1FN68
		M68EM11F1	80-lead TQFP (PU)	M68CBL05C	M68TC11F1PU80
68HC11G5 68HC11G7	M68MMDS11 or M68HC11PFB	M68EM11G5	84-lead PLCC (FN)	M68CBL05D	M68TD11G5FN84
		M68EM11K4	80-lead TQFP (FU)	M68CBL05E	M68TE11K4FU80
68HC11K4 68HC711K4	M68MMDS11 or M68HC11PFB	M68EM11K4	84-lead PLCC (FN)	M68CBL05D	M68TD11K4FN84
		M68EM11KA4	68-lead PLCC (FN)	M68CBL05C	M68TC11KA4FN68
68HC11KS2 68HC711KS2	M68MMDS11 or M68HC11PFB	M68EM11L6	64-lead QFP (FU)	M68CBL05C	M68TC11L6FU64
		M68EM11L6	68-lead PLCC (FN)	M68CBL05C	M68TC11L6FN68
68HC11P2 68HC711P2	M68MMDS11 or M68HC11PFB	M68EM11P2	84-lead PLCC (FN)	M68CBL05D	M68TD11K4FN84

## MICROCONTROLLERS

MICROCONTROLLERS (continued)

HARDWARE TOOLS (continued)

### 68HC12 Family

Product	Part Number	Evaluation Board	Serial Debug Interface Cable (BDM Cable)	ROM Monitor	Software	User Manual	Programming	Additional Information
68HC812A4	M68HC12A4EVB	•		•	•	•		Evaluation board for HC812A4.
	M68SDIL12		•		•	•	•	Serial cable to connect to HC12 background debug mode (BDM) debug connector.
68HC912B32	M68EVB912B32	•		•	•	•		Evaluation board for HC912B32.
	M68SDIL12		•		•	•	•	Serial cable to connect to HC12 BDM debug connector
68HC912BC32	M68KIT912D60A	•		•		•		Kit with HC912D60 evaluation board (EVB) and serial debug interface (SDI) cable.
	M6EVB912D60A		•		•	•	•	Evaluation board for HC912D60A.
98HC912D60A	M68KIT912DG128A	•	•		•	•	•	Serial cable to connect to HC12 BDM debug connector.
	M68EVB912DG128A	•			•	•		Kit with HC912DG128A.
	M68SDIL12		•		•	•	•	Serial cable to connect to HC12 BDM debug connector.
68HC912DG128A	M68KIT912DG128A	•	•		•	•	•	Kit with HC912DG128A EVB and SDI.
	M68EVB912DG128A	•			•	•		Evaluation board for HC912DG128A.
	M68SDIL12		•		•	•	•	Serial cable to connect to HC12 BDM debug connector.
ALL HC12 FAMILY	X68BDMPGMR12						•	Serial programmer usable without host PC.

### HCS12 Family

Product	Part Number	Evaluation Board	Serial Debug Interface Cable (BDM Cable)	ROM Monitor	Software	User Manual	Programming	Additional Information
9512DP256	M68EVB912DP256	•		•	•	•		Evaluation board for 9512DX256.
9512DT256	M68KIT912DP256	•	•	•	•	•	•	Kit with 912BP256 evaluation board and serial debug interface cable (SDI).
9512DJ256			•		•	•	•	Serial cSerial cable to connect to HC12 BDM debug connector
9512DG256	M68SDIL12		•		•	•	•	
	CWDEV54512DP256	•	•	•	•	•		Includes full compiler and EVB in handsome suitcase
	X68BDMPGMR12						•	Serial programmer usable without host PC.

*MICROCONTROLLERS (continued)*  
*HARDWARE TOOLS (continued)*  
**68HC16 and 68300 MEVB Families**

Product	Platform	Package	Microcontroller Personality Board	BDM Cable <sup>a</sup>	Software
68HC916X1	M68MPFB1632	120 PQFP (FH)	M68MPB916X1C	M68ICD16 or M68SDIL	Included M68SDBUG16AB
68HC16Y1	M68MPFB1632	160 PQFP (FT)	M68MPB16Y1B	M68ICD16 or M68SDIL	Included M68SDBUG16AB
68HC16Z1	M68MPFB1632	132 PQFP (FC)	M68MPB16Z1B	M68ICD16 or M68SDIL	Included M68SDBUG16AB
68331	M68MPFB1632	132 PQFP (FC)	M68MPB331B	M68ICD32 or M68SDIL	Included M68SDBUG32AB
68332A	M68MPFB1632	132 PQFP (FC)	M68MPB332AB	M68ICD32 or M68SDIL	Included M68SDBUG32AB
68332G	M68MPFB1632	132 PQFP (FC)	M68MPB332GB	M68ICD32 or M68SDIL	Included M68SDBUG32AB
68336	M68MPFB1632	160 PQFP (FT)	M68MPB336GB	M68ICD32 or M68SDIL	Included M68SDBUG32AB
68376	M68MPFB1632	160 PQFP (FT)	M68MPB376GB	M68ICD32 or M68SDIL	Included M68SDBUG32AB

a. ICD = Parallel cable to connect to the HC16 or 6833X BDM debut connector  
SDI = Serial cable to connect to the HC16 or 6833X BDM connector

**M68300 Business Card Computer**

Product	Platform	BCC
68331	M68300PFB	M68BCC331
68332A	M68300PFB	M68BCC332A
68332G	M68300PFB	M68BCC332G

## MICROCONTROLLERS

MICROCONTROLLERS (continued)

HARDWARE TOOLS (continued)

M\*CORE Family

Product Supported	Description	Part Number	Serial Cable	CD ROM	User Manuals	Power Supply	Silicon Samples
MMC2001	Low-cost evaluation board	MMCEVB1200PV	•	•	•	•	•
	MMCEVB1200PV with larger, faster SRAMs and MAPI ring for connection to other boards	MMCCMB1200	•	•	•	•	•
	Kit with MMCCMB1200 and Altera FPGA board that connects with MAPI ring. Includes Altera MAX + plus II software	KITFPGAMMC1200	•	•	•	•	•
	Kit with MMCCMB1200 and platform board with large on-board memories that connect with MAPI ring.	KITEVSMMC1200	•	•	•	•	•
MMC2107	Low-cost evaluation board	MMCEVB2107	•	•	•	•	•
	Mid-range evaluation board	MMCMB2107	•	•	•	•	•
	Mid-range evaluation board plus platform board	KITEVSMMC2107	•	•	•	•	•
All M*CORE	Serial debugger interface to 6833X BDM or M*CORE OnCE debug connector	MMC14EBDI02	•		•	•	
	400-pin MAPI extender board to add 3/8 inch (9.5 mm) of vertical space	MMCMAPIXT400					
	Logic analyzer board to bring MAPI 400 signals to 100-mil headers	MMCLAB01					



*MICROCONTROLLERS (continued)*  
*DEVELOPMENT SYSTEMS*

***In-Circuit Simulator (ICS) Kits***

**Economical, Integrated Developing and Debugging**

Motorola's in-circuit simulator kits are low-cost tools for developing and debugging target systems incorporating Motorola's most popular 68HC05 and 68HC08 MCUs. They provide an innovative interface to a user's target system for Windows-based editing, assembly, software simulation, programming, and in-circuit simulation. In-circuit simulation allows you to use the actual inputs and outputs of your target system during simulation of your code.

**Features:**

- Windows-based integrated development environment (IDE) with editor, assembler, debugger, and simulator:
  - Run under Windows 3.x®/Windows 98®
  - Examine and modify memory, registers, and I/O
  - Up to 64 instruction and register (accumulator, stack, index) break points
  - Several single-stepping and run modes of execution
  - Trace buffer holds previously executed instructions and variables
  - Data variable display window
  - Simulates all I/O, interrupts, timers, and other on-chip hardware
  - Detects attempted use of uninitialized or unimplemented locations
  - Data logging and script commands for recording and automatic execution of a sequence of commands
  - On-screen context-sensitive Windows help
- In-circuit simulation:
  - Emulation cable for connection to target system
  - Non-realtime in-circuit emulation
- Program EPROM, OTP, EEPROM, and FLASH microcontrollers

**Kit Contents:**

- Windowed EPROM or FLASH MCU sample
- Comprehensive documentation:
  - MCU technical data books
  - Software and hardware user's manual
  - Application guide/text book
  - MCU technical documentation CD-ROM
- Serial cable for PC to ICS connection
- Wall-mount power supply

**Added Capabilities of the 68HC08 ICS Kits:**

- Real-time in-circuit emulation available except for clock control and communication
- Real-time in-circuit debug using the 68HC08's MON08 serial debug/breakpoint capability
- Runs under Windows NT® and Windows 98

In Support of	Motorola Part Number
68HC705B16	M68ICS05B
68HC705C8A/C9A	M68ICS05C
68HC705JP7/JJ7	M68ICS05JP
68HC705KJ1/J1A	M68ICS05KJ
68HC705P6A	M68ICS05P
68HC908AB32	M68ICS08AB
68HC908AZ60A/AS60A	M68ICS08AZAS
68HC908GP32	M68ICS08GP
68HC908GR4/GR8	M68ICS08GR
68HC908JB8	M68ICS08JB
68HC908JL3/JK3/JK1	M68ICS08JLJK
68HC908KX8/KX2	M68ICS08KX
68HC908LJ12	M68ICS08LJ
68HC908MR8/MR16/MR32	M68ICS08MR
68HC908RK2	M68ICS08RK2
68HC908SR12	M68ICS08SR

## MICROCONTROLLERS

### MICROCONTROLLERS (continued)

### DEVELOPMENT SYSTEMS (continued)

#### Modular Evaluation System (MMEVS) Kits

The Motorola modular evaluation system (MMEVS) is Motorola's economical, two-board emulator for the 68HC(7)05 and 68HC(9)08 Families of microcontrollers. The MMEVS consists of a platform board and an emulator module (EM). Connected to your target system, the emulator replicates the actual target system MCU. An integrated development environment (IDE) allows for quick edits and changes to assembly code, which makes design, debug, and real-time evaluation of the target system as efficient as possible. Use this economical system to perform traditional debugging activities such as executing code in run or step mode, setting break points, monitoring or modifying CPU registers, memory and application variables, and creating log or script files to record test results or create test suites.

#### Features:

- Real-time, non-intrusive, in-circuit emulation at the MCU's operating frequency
- 64 hardware break points
- Control of code execution in run or step mode
- 64K bytes of fast emulation memory (SRAM)
- Current-limited target input/output connections
- 6 software-selectable oscillator clock sources
- Command and response logging to save session history and/or to generate script files
- SCRIPT command for automatic execution of a sequence of commands (such as system configuration setup and automated test runs)
- Assembly source-level debugging
- Host/emulator communication speeds as high as 57,600 baud
- Extensive on-line MCU information via the CHIPINFO command
- Integrated development environment (IDE) including editor, assembler, and assembly source-level debugger

#### Kit Contents:

- MMEVS platform board (M68MMPFB0508):
  - IDE (including editor, assembler, debugger)
  - 9-lead RS-232 serial cable
  - 9- to 25-pin serial cable adapter
  - MMEVS user's manuals
  - Power supply
- Device-specific emulation module
- Device- and package-specific target cables/adapters
- In-circuit simulation and programming kit (ICS)

In Support of	Motorola Part Number
68HC705B16	KITMMEVS05B
68HC705C8A/C9A	KITMMEVS05C
68HC705JP7/JJ7	KITMMEVS05JP
68HC705KJ1/J1A	KITMMEVS05KJ
68HC705P6A	KITMMEVS05P6A
68HC908AB32	KITMMEVS08AB32
68HC908AZ60A/AS60A	KITMMEVS08AZAS
68HC908GP32	KITMMEVS08GP
68HC908GR4/GR8	KITMMEVS08GR
68HC908JB8	KITMMEVS08JB8
68HC908JL3/JK3/JK1	KITMMEVS08JL
68HC908KX8/KX2	KITMMEVS08KX
68HC908LJ12	KITMMEVS08LJ
68HC908MR16/MR32	KITMMEVS08MR32
68HC908SR12	KITMMEVS08SR12

*MICROCONTROLLERS (continued)*  
*DEVELOPMENT SYSTEMS (continued)*

**Modular Development System (MMDS) Kits**

The Motorola modular development system (MMDS) is a full-featured emulator system for developing embedded systems using 68HC(7)05 and 68HC(9)08 microcontrollers. In addition to incorporating the debug features of the Motorola modular evaluation system (MMEVS), the MMDS adds advanced features such as real-time, dual-ported memory and a bus state analyzer to capture user-defined bus cycles or events. Use the dual-ported memory to tune filter circuits or monitor changes to program variables while your program is running at full speed. Verify nested or complex program flows using the bus state analyzer's full range of sequenced or logical event triggering and data capture modes. These added features help users develop, debug, and deliver 68HC05 or 68HC08 products in less time.

**Features:**

- Real-time, non-intrusive, in-circuit emulation at the operating frequency of the target device
- Control of code execution in run or step mode
- Real-time bus state analyzer:
  - 8K x 64 real-time trace buffer
  - Display of real-time trace data
  - Four hardware triggers
  - Nine triggering modes
  - up to 8190 pre- or post-trigger points for trace data
  - 16 general-purpose logic chips
  - 16-bit time tag, or optional 24-bit time tag
- 4 complex break points (any combination of address, data, control, and/or I/O)
- 64 instruction break points
- 32 real-time variables
- 32 bytes of real-time memory
- 64K bytes of fast emulation memory (SRAM)
- Current-limited target input/output connections
- 6 software-selectable oscillator clock sources
- Command and response logging to save session history and/or to generate script files
- SCRIPT command for automatic execution of a sequence of commands (such as system configuration setup and automated test runs)
- Host/emulator communications speeds as high as 57,600 baud
- Extensive on-line device information via CHIPINFO command
- Integrated development environment (IDE) including editor, assembler, and source-level debugger

**Contents:**

- MMDS Station module with built-in power supply (M68MMDS0508):
  - 39 cm deep x 25.9 cm wide x 7 cm high
  - Two logic clip cable assemblies
  - 9-lead RS-232 serial cable
  - 9- to 25-pin serial cable adapter
  - IDE with editor, assembler, and debugger
- Device-specific emulation module
- Device- and package-specific target cables/adapters
- In-circuit simulation and programming kit (ICS)

In Support of	Motorola Part Number
68HC705B16	KITMMDS05B
68HC705C8A/C9A	KITMMDS05C
68HC705JP7/JJ7	KITMMDS05JP
68HC705KJ1/J1A	KITMMDS05KJ
68HC705P6A	KITMMDS05P6A
68HC908AB32	KITMMDS08AB32
68HC908AZ60A/AS60A	KITMMDS08AZAS
68HC908GP32	KITMMDS08GP
68HC908GR4/GR8	KITMMDS08GR
68HC908JB8	KITMMDS08JB8
68HC908JL3/JK3/JK1	KITMMDS08JL
68HC908KX8/KX2	KITMMDS08KX
68HC908LJ12	KITMMDS08LJ
68HC908MR16/MR32	KITMMDS08MR32
68HC908SR12	KITMMDS08SR12

## MICROCONTROLLERS

MICROCONTROLLERS (continued)  
DEVELOPMENT SYSTEMS (continued)  
68HC08 Development Kits

Product Supported	Part Number	In-Circuit Simulator/ Programmer (Board)	MMEVS Platform Board	MMDS Station Module	Emulation Module	Flex Cable	SMT & DIP Target Head Adapter	DIP Target Cable	Serial Cable	Integrated Development Environment	CD ROM	User Manuals	Power Supply	Silicon Samples
68HC908AB32	M68ICS08AB	•							•	•	•	•	•	•
	KITMMEVS08AB32	•	•		•	•	•	•	•	•	•	•	•	•
	KITMMDS08AB32	•		•	•	•	•	•	•	•	•	•	•	•
68HC908GP32	M68ICS08GP	•							•	•	•	•	•	•
	KITMMEVS08GP	•	•		•	•	•	•	•	•	•	•	•	•
	KITMMDS08GP	•		•	•	•	•	•	•	•	•	•	•	•
68HC908GR8 68HC908GR4	M68ICS08GR	•							•	•	•	•	•	•
	KITMMEVS08GR <sup>(1)</sup>	•	•		•	•	•	•	•	•	•	•	•	•
	KITMMDS08GR <sup>(1)</sup>	•		•	•	•	•	•	•	•	•	•	•	•
68HC908JB8	M68ICS08JB	•							•	•	•	•	•	•
	KITMMEVS08JB8	•	•		•	•	•	•	•	•	•	•	•	•
	KITMMDS08JB8	•		•	•	•	•	•	•	•	•	•	•	•
68HC908JL3 68HC908JK3 68HC908JK1	M68ICS08JLJK	•							•	•	•	•	•	•
	KITMMEVS08JL	•	•		•	•	•	•	•	•	•	•	•	•
	KITMMDS08JL	•		•	•	•	•	•	•	•	•	•	•	•
68HC908KX8 68HC908KX2	M68ICS08KX	•							•	•	•	•	•	•
	KITMMEVS08KX	•	•		•	•	•	•	•	•	•	•	•	•
	KITMMDS08KX	•		•	•	•	•	•	•	•	•	•	•	•
68HC908MR8	M68ICS08MR	•							•	•	•	•	•	•
	KITMMEVS08MR8 <sup>(1)</sup>	•	•		•	•	•	•	•	•	•	•	•	•
	KITMMDS08MR8 <sup>(1)</sup>	•		•	•	•	•	•	•	•	•	•	•	•

1. New development tool product to be introduced.

*MICROCONTROLLERS (continued)*  
*DEVELOPMENT SYSTEMS (continued)*  
**68HC08 Development Kits (continued)**

Product Supported	Part Number	In-Circuit Simulator/ Programmer (Board)	MMEVS Platform Board	MMDS Station Module	Emulation Module	Flex Cable	SMT & DIP Target Head Adapter	DIP Target Cable	Serial Cable	Integrated Development Environment	CD ROM	User Manuals	Power Supply	Silicon Samples
68HC908MR32 68HC908MR16	M68ICS08MR	•						•	•	•	•	•	•	•
	KITMMEVS08MR32	•	•		•	•	•	•	•	•	•	•	•	•
	KITMMDS08MR32	•		•	•	•	•	•	•	•	•	•	•	•
68HC908RK2	M68ICS08RK2	•						•	•	•	•	•	•	•
	KITMMEVS08RK2 <sup>(1)</sup>	•	•		•	•	•	•	•	•	•	•	•	•
	KITMMDS08RK2 <sup>(1)</sup>	•		•	•	•	•	•	•	•	•	•	•	•
68HC908SR12	M68ICS08SR	•						•	•	•	•	•	•	•
	KITMMEVS08SR12	•	•		•	•	•	•	•	•	•	•	•	•
	KITMMDS08SR12	•		•	•	•	•	•	•	•	•	•	•	•

1. New development tool product to be introduced.

## MICROCONTROLLERS

MICROCONTROLLERS (continued)

THIRD PARTY TOOLS (continued)

### Microcontroller Third Party Development Tool Partners

Company Name	HC05	HC08	HC11	HC12	HC16	68300	MPC500	MCORE	World Wide Web URL	Email Address
<b>Adapters</b>										
Adapters.com	•	•	•	•	•	•	•	•	www.adapters.com	sales@adapters.com
Logical Systems Corp.		•	•						www.logicalsyst.com	info@logicalsyst.com
<b>Assemblers</b>										
Avocet Systems, Inc.	•	•	•		•	•			www.avocetsystems.com	sales@avocetsystems.com
Engineers Collaborative, Inc., The (TECI)	•		•						www.tec-l.com	sales@tec-l.com
Green Hills Software, Inc.						•	•	•	www.ghs.com	sales@ghs.com
Metrowerks Corporation	•	•	•	•	•	•		•	www.metrowerks.com	info@metrowerks.com
IAR Systems	•		•	•	•				www.iar.se	info@iar.se
P&E Microcomputer Systems, Inc.	•	•	•	•	•	•			www.pemicro.com	pemicro@pemicro.com
TASKING, Inc.						•		•	www.tasking.com	sales@tasking-us.com
Virtual Micro Design	•	•	•						www.vmdesign.com	info@vmdesign.com
<b>BDM Support Tools</b>										
Archimedes Software, Inc.					•	•			www.archimedessoftware.com	customer-service@archimedesinc.com
Axiom Mfg.				•					www.axman.com	Gary@axman.com
Cosmic Software, Inc.				•	•	•			www.cosmic-software.com	info@cosmic-us.com
Wind River Systems, Inc.						•	•	•	www.wrs.com	inquiries@windriver.com
Hitex Development Tools				•		•			www.hitex.com	info@hitex.com
Metrowerks Corporation				•	•	•	•	•	www.metrowerks.com	info@metrowerks.com
Agilent Technologies, Inc.						•	•	•	www.agilent.com	www.agilent.com
Avocet Systems							•	•	www.avocetsystems.com	sales@avocetsystems.com
IAR Systems				•					www.iar.se	info@iar.se
iSYSTEM				•	•	•		•	www.isystem.com	emulators@isystem.com
Kevin W Ross				•					www.nwlink.com/~kevinro/ products.html	kevinro@nwlink.com
Lauterbach, Inc.				•	•	•		•	www.lauterbach.com	info@lauterbach.com
Macraigor Systems LLC						•	•		www.macraigor.com	sales@macraigor.com
Microtek International, Inc.									www.microtek.com.tw/mice	mice@smt.microtek.com.tw
Noral Micrologics, Inc.				•		•			www.noral.com/pages/bdmhc12.htm	www.noral.com/pages/moreinfo.htm
P&E Microcomputers, Inc.				•	•	•			www.pemicro.com	pemicro@pemicro.com
Sid Price's Software Tools				•					www.softtools.com/tools/	sales@softtools.com
TASKING, Inc.						•			www.tasking.com	sales@tasking-us.com

SG1011-38

*MICROCONTROLLERS (continued)*  
*THIRD PARTY TOOLS (continued)*  
**Microcontroller Third Party Development Tool Partners (continued)**

Company Name	HC05	HC08	HC11	HC12	HC16	68300	MPC500	MCORE	World Wide Web URL	Email Address
<b>Code Coverage Tools</b>										
Ashling Microsystems, Ltd.	•	•	•	•					www.ashling.com	www.ashling.com/motocontact.html
Cosmic Software, Inc.	•	•	•	•	•	•			www.cosmic-software.com	info@cosmic-us.com
Wind River Systems, Inc.						•	•	•	www.wrs.com	inquiries@windriver.com
Green Hills Software, Inc.						•	•	•	www.ghs.com	sales@ghs.com
Hitex Development Tools	•	•	•	•		•			www.hitex.com	info@hitex.com
Metrowerks Corporation	•	•	•	•	•	•	•	•	www.metrowerks.com	info@metrowerks.com
iSYSTEM	•	•	•		•	•			www.isystem.com	emulators@isystem.com
TASKING, Inc.						•		•	www.tasking.com	sales@tasking-us.com
<b>Compilers</b>										
Archimedes Software, Inc.	•	•	•	•	•	•			www.archimedessoftware.com	customer-service@archimedesinc.com
Avocet Systems, Inc.			•			•			www.avocetsystems.com/	sales@avocetsystems.com
Byte Craft Limited	•	•							www.bytecraft.com/c6805.html	info@bytecraft.com
ImageCraft Creations, Inc.		•	•	•	•				www.imagecraft.com/software	info@imagecraft.com
TASKING, Inc.						•		•	www.tasking.com	sales@tasking-us.com
AppForge, Inc.								•	www.appforge.com	info@appforge.com
Cosmic Software, Inc.	•	•	•	•	•	•			www.cosmic-software.com	info@cosmic-us.com
Wind River Systems, Inc.						•	•	•	www.wrs.com	inquiries@windriver.com
Green Hills Software, Inc.						•	•	•	www.ghs.com	sales@ghs.com
Metrowerks Corporation	•	•	•	•	•	•	•	•	www.metrowerks.com	info@metrowerks.com
IAR Systems			•	•	•				www.iar.se	info@iar.se
Irvine Compiler Corporation							•		www.irvine.com/ppc.html	info@irvine.com
MCT Paul & Scherer GmbH						•			www.mct.net	sales@mct.de
Mekatronix, Inc.			•						www.mekatronix.com/	customer@mekatronix.com
<b>Debuggers</b>										
Ashling Microsystems, Ltd.	•	•	•	•	•	•			www.ashling.com/advice	www.ashling.com/advice/motocontact.html
Avocet Systems / 2500AD Software	•		•		•				www.avocetsystems.com/2500ad/	sales@avocetsystems.com
Cosmic Software, Inc.	•	•	•	•	•	•			www.cosmic-software.com	info@cosmic-us.com
Wind River Systems, Inc.						•	Y	Y	www.wrs.com	inquiries@windriver.com
Green Hills Software, Inc.						•	Y	Y	www.ghs.com	sales@ghs.com
Metrowerks Corporation	•	•	•	•	•	•	Y	Y	www.metrowerks.com	info@metrowerks.com
Avocet Systems, Inc.						•	Y		www.avocetsystems.com	sales@avocetsystems.com

**Debuggers (continued)**

## MICROCONTROLLERS

*MICROCONTROLLERS (continued)*

*THIRD PARTY TOOLS (continued)*

*Microcontroller Third Party Development Tool Partners (continued)*

Company Name	HC05	HC08	HC11	HC12	HC16	68300	MPC500	MCORE	World Wide Web URL	Email Address
IAR Systems			•	•	•				www.iar.se	info@iar.se
iSYSTEM	•	•	•	•	•	•		•	www.isystem.com	emulators@isystem.com
Lauterbach, Inc.	•	•	•	•	•	•	•	•	www.lauterbach.com	info@lauterbach.com
MCT Paul & Scherer GmbH						•			www.mct.net	sales@mct.de
Nohau Corp.				•					www.nohau.com	sales@nohau.com
Noral Micrologics, Inc.				•		•			www.noral.com/pages/bdmhc12.htm	www.noral.com/pages/moreinfo.htm
P&E Microcomputers, Inc.	•		•	•	•	•			www.pemicro.com	pemicro@pemicro.com
Sid Price's Software Tools	•		•	•					www.softtools.com/tools/	sales@softtools.com
TASKING, Inc.						•		•	www.tasking.com	sales@tasking-us.com
Virtual Micro Design	•	•	•						www.vmdesign.com	info@vmdesign.com
<b>Evaluation Boards</b>										
Avnet Design Services		•							www.ads.avnet.com/evalkits.html	ads@avnet.com
Axiom Mfg.		•	•	•				•	www.axman.com	Gary@axman.com
emWare		•						•	www.emware.com	sales@emware.com
Engineers Collaborative, Inc., The (TECI)	•		•						www.tec-l.com	sales@tec-l.com
ETAS, Inc.							•		www.etasinc.com	sales@etasinc.com
Kevin W Ross		•	•						www.nwlink.com/~kevinro/products.html	kevinro@nwlink.com
MCT Paul & Scherer GmbH		•				•			www.mct.net	sales@mct.de
Mekatronix, Inc.		•							www.mekatronix.com/	customer@mekatronix.com
Microtek International, Inc.						•			www.microtek.com.tw/mice	mice@smtp.microtek.com.tw
Noral Micrologics				•		•			www.noral.com/pages/bdmcfire.htm	www.noral.com/pages/moreinfo.htm
Oztechnics P/L	•		•						www.oztechnics.com.au	info@oztechnics.com.au
P&E Microcomputers, Inc.					•	•			www.pemicro.com	pemicro@pemicro.com
<b>Fuzzy and Neuro Tools</b>										
Apronix, Inc.	•	•	•		•	•			www.aptronix.com/fide	sales@aptronix.com
Inform Software Corp.	•	•	•	•	•	•	•	•	www.fuzzytech.com	hotline@inform-ac.com
<b>Code Generation Tools</b>										
Aisys, Inc.	•	•							www.aisysinc.com	info@aisysinc.com
AppForge Software, LLC								•	www.appforge.com	info@appforge.com
ECS, Inc.						•	•		www.go-ecs.com	info-mcu@go-ecs.com
ETAS, Inc.				•		•	•		www.etasinc.com	sales@etasinc.com

SG1011-40



MICROCONTROLLERS (continued)

THIRD PARTY TOOLS (continued)

Microcontroller Third Party Development Tool Partners (continued)

Company Name	HC05	HC08	HC11	HC12	HC16	68300	MPC500	MCORE	World Wide Web URL	Email Address
<b>In-Circuit Emulators (ICE)</b>										
Ashling Microsystems, Ltd.	•	•	•	•	•	•			www.ashling.com/advice	www.ashling.com/advice/motocontact.html
Avocet Systems / iSYSTEM USA	•	•	•	•	•	•			www.avocetsystems.com/isystem/	sales@avocetsystems.com
Wind River Systems, Inc.						•	•		www.wrs.com	inquiries@windriver.com
Engineers Collaborative Inc.,The (TECI)	•		•						www.tec-l.com	sales@tec-l.com
Hitex Development Tools	•	•	•	•		•			www.hitex.com	info@hitex.com
Avocet Systems, Inc.			•			•	•		www.avocetsystems.com	sales@avocetsystems.com
iSYSTEM	•	•	•	•		•			www.isystem.com	emulators@isystem.com
Lauterbach, Inc.	•	•	•	•	•	•	•		www.lauterbach.com	info@lauterbach.com
MetaLink Corp.	•		•						www.metaice.com	sales@metaice.com
Microtek International Inc.						•			www.microtek.com.tw/mice	mice@smtp.microtek.com.tw
Nohau Corp.			•		•	•			www.nohau.com	sales@nohau.com
Noral Micrologics, Inc.						•			www.noral.com/pages/bdmcfire.htm	www.noral.com/pages/moreinfo.htm
<b>Logic Analyzers</b>										
Corelis, Inc.						•			www.Corelis.com	sales@corelis.com
dli digital logic instruments			•	•	•	•	•	•	www.dli.de	sales@dli.de
Agilent Technologies, Inc.			•	•		•	•	•	www.agilent.com	www.agilent.com
iSYSTEM	•	•	•	•	•	•			www.isystem.com	emulators@isystem.com
Tektronix, Inc.			•	•	•	•	•	•	www.tek.com/Measurement/logic_analyzers/	
<b>Performance Analysis Tools</b>										
Ashling Microsystems, Ltd.	•	•	•	•					www.ashling.com	www.ashling.com/motocontact.html
Wind River Systems, Inc.						•	•	•	www.wrs.com	inquiries@windriver.com
Green Hills Software, Inc.						•	•	•	www.ghs.com	sales@ghs.com
Hitex Development Tools	•	•	•	•		•			www.hitex.com	info@hitex.com
iSYSTEM	•	•	•			•	•		www.isystem.com	emulators@isystem.com
Virtual Micro Design	•	•	•						www.vmdesign.com	info@vmdesign.com
<b>Programmers</b>										
BP Microsystems, Inc.	•	•	•	•	•				www.bpmicro.com	info@bpmicro.com
Data I/O Corp.	•	•	•		•				www.dataio.com	webmaster@dataio.com
Engineers Collaborative, Inc.,The (TECI)	•		•						www.tec-l.com	sales@tec-l.com
Metrowerks Corporation	•	•	•	•	•	•		•	www.metrowerks.com	info@metrowerks.com
Mekatronix, Inc.			•						www.mekatronix.com	customer@mekatronix.com

Programmers (continued)

MICROCONTROLLERS

SG1011-41

## MICROCONTROLLERS

*MICROCONTROLLERS (continued)*

*THIRD PARTY TOOLS (continued)*

**Microcontroller Third Party Development Tool Partners (continued)**

Company Name	HC05	HC08	HC11	HC12	HC16	68300	MPC500	MCORE	World Wide Web URL	Email Address
Noral Micrologics, Inc.				•		•			www.noral.com/pages/bdmhc12.htm	www.noral.com/pages/moreinfo.htm
P&E Microcomputer Systems, Inc.				•	•	•			www.pemicro.com	pemicro@pemicro.com
Phyton, Inc.	•			•					www.phyton.com	info@phyton.com
SMS GmbH	•	•	•	•					www.sms-sprint.com	info@sms-sprint.com
<b>Real-Time Operating Systems (RTOS)</b>										
Accelerated Technology Inc.			•		•	•	•	•	www.atinucleus.com	info@atinucleus.com
AppForge, Inc.						•			www.appforge.com	info@appforge.com
Avocet Systems, Inc.	•	•	•	•	•	•	•	•	www.avocetsystems.com/	sales@avocetsystems.com
CMX Systems, Inc.	•	•	•	•	•	•	•		www.cmx.com	cmx@cmx.com
OSE Systems, Inc.			•			•	•		www.enea.com	info@enea.com
ETAS Inc.				•		•	•		www.etasinc.com	sales@etasinc.com
Green Hills Software, Inc.						•	•	•	www.ghs.com	sales@ghs.com
Metrowerks Corporation					•	•		•	www.metrowerks.com	info@metrowerks.com
KADAK Products, Ltd.						•	•		www.kadak.com	amxsales@kadak.com
Precise Software Technologies, Inc.						•	•	•	www.psti.com	info@psti.com
TASKING, Inc.						•			www.tasking.com	sales@tasking-us.com
U S Software			•		•	•	•		www.ussw.com	sales@ussw.com
<b>Simulation Tools</b>										
Cosmic Software, Inc.	•	•	•	•	•	•			www.cosmic-software.com	info@cosmic-us.com
Wind River Systems, Inc.						•		•	www.wrs.com	inquiries@windriver.com
Green Hills Software, Inc.						•	•	•	www.ghs.com	sales@ghs.com
Metrowerks Corporation	•	•	•	•	•	•	•	•	www.metrowerks.com	info@metrowerks.com
Oztechnics P/L	•		•						www.oztechnics.com.au	info@oztechnics.com.au
P&E Microcomputer Systems, Inc.	•	•	•	•	•				www.pemicro.com	pemicro@pemicro.com
TASKING, Inc.						•		•	www.tasking.com	sales@tasking-us.com
Virtual Micro Design	•	•	•						www.vmdesign.com	info@vmdesign.com

MICROCONTROLLERS (continued)

THIRD PARTY TOOLS (continued)

32-Bit Third Party Tools 683XX, MPC500, and MCore

Company	68300	MPC500	MCore	Web Address
<b>Assemblers</b>				
Green Hills	•	•	•	www.ghs.com
P&E Microcomputer Systems, Inc.	•			www.pemicro.com
WindRiver Systems	•	•	•	www.wrs.com

Company	68300	MPC500	MCore	Web Address
<b>BDM Support Tools</b>				
Cosmic Software	•			www.cosmic-software.com
WindRiver Systems	•	•	•	www.wrs.com
Hitex Development Tools	•			www.hitex.com
Agilent Technologies, Inc.	•	•	•	www.agilent.com
iSystem	•		•	www.isystem.com
Lauterbach	•		•	www.lauterbach.com
Macraigor Systems LLC	•	•		www.macraigor.com
P&E Microcomputers, Inc.	•			www.pemicro.com
Tasking, Inc.	•			www.tasking.com

Company	68300	MPC500	MCore	Web Address
<b>Code Coverage Tools</b>				
Ashling Microsystems		•		www.ashling.com
Cosmic Software	•			www.cosmic-software.com
WindRiver Systems	•	•	•	www.wrs.com
Green Hills Software	•	•	•	www.ghs.com
Hitex Development Tools	•			www.hitex.com
iSystem	•	•		www.isystem.com
Tasking, Inc.	•		•	www.tasking.com

Company	68300	MPC500	MCore	Web Address
<b>Compilers</b>				
Byte Craft Limited			y	www.bytecraft.com
Tasking, Inc.	y		y	www.tasking.com
Cosmic Software	•			www.cosmic-software.com
WindRiver Systems	•	•	•	www.wrs.com
Green Hills Software	•	•	•	www.ghs.com

MICROCONTROLLERS

## MICROCONTROLLERS

MICROCONTROLLERS (continued)

THIRD PARTY TOOLS (continued)

32-Bit Third Party Tools 683XX, MPC500, and MCORE (continued)

Company	68300	MPC500	MCORE	Web Address
<b>Debuggers</b>				
Ashling Microsystems	•			www.ashling.com
WindRiver Systems	•	•	•	www.wrs.com
Green Hills Software	•	•	•	www.ghs.com
iSystem	•	•	•	www.isystem.com
Lauterbach	•	•	•	www.lauterbach.com
P&E Microcomputers, Inc.	•			www.pemicro.com
Company	68300	MPC500	MCORE	Web Address
<b>Evaluation Boards</b>				
Axiom Manufacturing		•	•	www.axman.com
Arrow	•	•	•	www.arrow.com
Avnet	•	•	•	www.avnet.com
Future	•	•	•	www.future.com
Company	68300	MPC500	MCORE	Web Address
<b>In-Circuit Emulators</b>				
Ashling Microsystems	•	•		www.ashling.com
WindRiver Systems	•	•		www.wrs.com
Hitex Development Tools	•			www.hitex.com
iSystem	•	•		www.isystem.com
Lauterbach	•	•		www.lauterbach.com
Microtek International Inc.	•			www.microtek.com.tw/mice
Company	68300	MPC500	MCORE	Web Address
<b>Logic Analyzers</b>				
Agilent Technologies, Inc.	•	•	•	www.agilent.com
iSystem	•			www.isystem.com
Tektronix	•	•	•	www.tek.com/measurement/logic_analyzers/
Company	68300	MPC500	MCORE	Web Address
<b>Performance Analysis Tools</b>				
Ashling Microsystems				www.ashling.com
WindRiver Systems, Inc.	•	•	•	www.wrs.com
Green Hills Software	•	•	•	www.ghs.com
iSystem	•	•		www.isystem.com

*MICROCONTROLLERS (continued)*

*THIRD PARTY TOOLS (continued)*

**32-Bit Third Party Tools 683XX, MPC500, and MCORE (continued)**

Company	68300	MPC500	MCORE	Web Address
<b>Real-Time Operating Systems</b>				
Accelerated Technology Inc.	•	•	•	www.atinucleus.com
Lineo	•	•	•	www.rtxc.com
ETAS	•	•		www.etasinc.com
Green Hills Software	•	•	•	www.ghs.com
Precise Software	•	•	•	www.psti.com
Tasking, Inc.	•			www.tasking.com
U S Software	•	•		www.ussw.com
WindRiver Systems, Inc.				www.wrs.com
Company	68300	MPC500	MCORE	Web Address
<b>Simulation Tools</b>				
WindRiver Systems, Inc.	•		•	www.wrs.com
Green Hills Software	•	•	•	www.ghs.com
Tasking, Inc.	•		•	www.tasking.com

**NETWORK AND COMMUNICATIONS  
PROCESSORS**

*NETWORK AND COMMUNICATIONS PROCESSORS  
SOFTWARE TOOLS*

**PowerPC ISA — Metrowerks**

Product	Description	Target Support	RTOS Support	Board Support	Host-Target Interface	Host Platforms	Language Support	IDE Version	Compiler Output Formats
CWEPPC	CodeWarrior for PowerPC ISA	MPC505, MPC509, MPC555, MPC821, MPC823, MPC850, MPC860, MPC8240, MPC8260, PPC603, PPC603ei, MPC7400	QNX Neutrino; RTXC from Lineo; Embedix SDK from Lineo, Precise MQX, ATI Nucleus		MetroTRK, Applied Microsystems CodeTAP, Applied Microsystems PowerTAP, Applied Microsystems WireTAP Run Control Interface (JTAG and BDM (8xx only), Macraigor Systems COP Raven (for MPC82XX and PPC6XX), Macraigor Systems BDM Raven (for MPC8XX, MPC5XX), Abatron BDI 2000 (5xx, 8xx)	Windows 95/98/2000/NT	C/C++, EC++, and PowerPC ISA, Assembly	4.2.1	ELF/DWARF 1.0; Motorola S-Record

*HARDWARE TOOLS*

**Metrowerks**

Product	Description	Target Board	Power Supply	Schematic	User Manual	Documentation	Interface Board
MPC823FADS	MPC823 FADS Board	•	•	•	•	•	
MPC850SRFADS	MPC850 FADS Board	•	•	•	•	•	
MPC8260ADS-P	MPC8260 FADS Board	•	•	•	•	•	
MPC860FADS	MPC860 FADS Board	•	•	•	•	•	
MPC860TFADS	MPC860 TFADS Board	•	•	•	•	•	

*NETWORK AND COMMUNICATIONS PROCESSORS (continued)*  
*DEVELOPMENT SYSTEMS*  
**Motorola Development Tools**

Part Number	Description
<b>C-Ware Software Toolset (CST)</b>	
CSTC5010200W	CST Release 2.0, provided via download from the support website
<b>C-Ware Development System (CDS)</b>	
CDEV101A	CDS Base Unit (Chassis, Power Supply, Single Board Computer)
CDEV501A	CDS Power Supply (additional or spare)
CDEV201200A	CDS Switch Module ("D0" C-5 silicon, 200 MHz max operating frequency)
CDEV221200A	CDS Switch Module with xTLU ("D0" C-5 silicon, 200 MHz max operating frequency)
CDEV222200A	CDS Switch Module with xTLU and Power X ("D0" C-5 silicon, 200 MHz max operating frequency)
<b>CDS Physical Interface Modules (PIM)</b>	
CDEV301A	10/100 Ethernet PIM (16 ports 10BaseT/100BaseT Ethernet ports)
CDEV302A	Gigabit Ethernet PIM (2 ports Gigabit Ethernet with 1000BaseSX GBICs)
CDEV304A	OC-12 PIM (4 ports OC-12 with SC optical connectors)
CDEV305A	Combo 1 - Ethernet x OC-3 PIM (4 ports 10BaseT/100BaseT, 4 ports OC-3 with MT-RJ connectors, 1 port Gigabit Ethernet with 1000BaseSX GBIC)
CDEV306A	Combo 2 - Ethernet x OC-3 x OC-12 PIM (1 port 1000BaseT GMII, 4 ports OC-3 with MT-RJ connectors, 1 port with OC-12)

**NETWORK AND COMMUNICATIONS  
PROCESSORS**

*NETWORK AND COMMUNICATIONS PROCESSORS (continued)  
DEVELOPMENT SYSTEMS (continued)*

**MPC8xx and MPC82xx — Metrowerks**

Product	Description	RTOS Support	Flex Cable	Serial Cable	Integrated Development Environment	CD ROM	User Manuals	Power Supply	Host Platforms	In-Circuit Simulator/ Programmer (Board)
CWDEVSYS823FADS	MPC823 Development System	QNX Neutrino; RTX from Lineo; Embedix SDK from Lineo, Precise MQX, ATI Nucleus		•	4.2.1	•	•	•	Windows 95/98/2000/NT	
CWDEVSYS850FADS	MPC850 Development System	QNX Neutrino; RTX from Lineo; Embedix SDK from Lineo, Precise MQX, ATI Nucleus		•	4.2.1	•	•	•	Windows 95/98/2000/NT	
CWDEVSYS860FADS	MPC860 Development System	QNX Neutrino; RTX from Lineo; Embedix SDK from Lineo, Precise MQX, ATI Nucleus		•	4.2.1	•	•	•	Windows 95/98/2000/NT	
CWDEVSYS860TFADS	MPC860T Development System	QNX Neutrino; RTX from Lineo; Embedix SDK from Lineo, Precise MQX, ATI Nucleus		•	4.2.1	•	•	•	Windows 95/98/2000/NT	
CWDEVSYS8260AMC	MPC8260 Development System	QNX Neutrino; RTX from Lineo; Embedix SDK from Lineo, Precise MQX, ATI Nucleus		•	4.2.1	•	•	•	Windows 95/98/2000/NT	

**CABLES AND HOST-TARGET INTERFACES**

**Metrowerks**

Product	Description	Target Support	Connection Device	Power Supply
CWWIRETAPBDM	AMCis WireTAP Run Control Interface (BDM)		•	•
CWWIRETAPJTAG	AMCis WireTAP Run Control Interface (MPC6xx, 7xx, 82xx, 74xx)		•	•



*NETWORK AND COMMUNICATIONS PROCESSORS (continued)*

*THIRD PARTY TOOLS*

**Network Processors**

Tool Description	Partner	Contact
TeraChannelÆ Fabric	Power X Networks	<a href="http://www.powerxnetworks.com/products">http://www.powerxnetworks.com/products</a>
Packet Routing Switch Fabric	IBM	<a href="http://www.chips.ibm.com/products/wired/communications/switch_fabric.html">http://www.chips.ibm.com/products/wired/communications/switch_fabric.html</a>
TornadoÆ for Managed Switches and VxWorksÆ	Wind River Systems	<a href="http://www.windriver.com/products/html/tornado.html">http://www.windriver.com/products/html/tornado.html</a>
Network Database Search Engines	Cypress	<a href="http://www.laranetworks.com/home.html">http://www.laranetworks.com/home.html</a>
ClassiPITM Packet Content Classification Processor	PMC-Sierra	<a href="http://www.pmc-sierra.com/products/details/pm2329/">http://www.pmc-sierra.com/products/details/pm2329/</a>
Expert Design Services for C-5 Network Processors	Tality	<a href="http://www.tality.com">http://www.tality.com</a>
Multi-Service Packet Transport Platform (MXP)	Motorola Computing Group	<a href="http://www.mcg.mot.com/index.cfm">http://www.mcg.mot.com/index.cfm</a>

DIRECTORY

**Chip Drivers**

Business	Contact
Aisys Inc.	(800) 397-7922
Embedded Concepts and Solutions (ECS)	(630) 953-8676
Motorola, Inc.	(512) 895-3823
Netplane Systems	(781) 329-3200
Precise Software Technologies Inc. (PSTI)	(800) 628-8631
SoftProse, Inc.	(515) 221-2220 (515) 988-4157
Target Technologies, Inc.	(978) 975-9919

**Compilers and Code Generation Tools**

Business	Contact
Aisys Inc.	(800) 397-7922
Avocet Systems (was Huntsville Microsystems)	(205) 881-6005
Green Hills Software, Inc.	(805) 965-6044
Lauterbach	(508) 303-6812
Mentor Graphics	(408) 487-7000
MetaWare	(408) 429-6382
Metrowerks	(512) 997-4700
Micro APL	(+44) 171 922 8866
Microware	(515) 223-8000
RedHat Software	(888) 733-4281 (919) 547-0012
TASKING, Inc.	(781) 320-9400
Wind River Systems	(510) 748-4100

**Companion and Support Chips**

Business	Contact
AMCC	(800) 840-6055
AMD Local sales offices	
Broadcom	(949) 450-8700
Eureka Technology	(650) 960 3800
IBM Local sales offices	
Motorola - Ethernet Transceivers	(602) 413-4026
PLX Technology (PLX)	(800) 759-3735
Power X	(+44) 161 286 2000
PMC-Sierra (was SwitchOn Networks)	(408) 586-6300
Rainbow Technologies	(800) 852-8569 (949) 450-7350
Southland Micro Systems, Inc.	(800) 255-4200
Tundra Semiconductor Corp.	(613) 592-0714

**Consultants**

Business	Contact
JTAG Technologies B.V.	31 40 295 08 70
Integrated Systems Design Center	(619) 457-4545
LynuxWorks (was Integrated Software & Devices Corp.)	(408) 383-9800
Nurun (was Informission Group)	(514) 951-5112
SoftProse, Inc.	(515) 221-2220 (515) 988-4157

**Debuggers**

Business	Contact
Domain	
Green Hills Software, Inc.	(805) 965-6044
Huntsville Microsystems	(205) 881-6005
Lauterbach	(508) 303-6812
Metrowerks	(512) 997-4700
Mentor Graphics	(408) 487-7000
RedHat Software	(888) 733-4281 / (919) 547-0012
TASKING, Inc.	(781) 320-9400
Wind River Systems	(510) 748-4100

**Design Services**

Business	Contact
JTAG Technologies B.V.	31 40 295 08 70
LynuxWorks (was Integrated Software & Devices Corp.)	(408) 383-9800
SoftProse, Inc.	(515) 221-2220 (515) 988-4157
Wind River Systems	(510) 748-4100

### Development Systems

Business	Contact
ASIC Designs	(630) 505-0404
ACT/Technico	(800) 445-6194
Analogue & Micro, Ltd. (8xx Dev Board)	+44(0)1633645980
Applied Microsystems	(800) 426-3925
Polycom (was Atlas Communication Engines, Inc.)	(805) 898-2450, ext. 111
Cogent Computer Systems	(508) 278-9400
DY 4 Systems	(613) 599-9191
Embedded Planet	(877) 468-6899
Metrowerks	(512) 997-4700
Motorola SPS	(800) 521-6274
Motorola Computer Group	(602) 732-6882
Radstone Technology	(800) 368-2738
TQ Components	(49) 8153 - 9308 - 0
Varisys Ltd.	01844 279595 (UK)
Wind River Systems	(510) 748-4100

### DSP Algorithm Development

Business	Contact
Mathworks	(508) 647-7000

### Emulators

Business	Contact
Agilent Technologies	(800) 452-4844
Applied Microsystems	(800) 426-3925 (425) 882-5276
Avocet Systems (was Huntsville Microsystems)	(205) 881-6005
Corelis	(562) 926-6727
EmuTec	(425) 267-9604
Lauterbach	(508) 303-6812
Macraigor Systems	(617) 739-8693
Wind River Systems	(510) 748-4100

### Hardware Tools

Business	Contact
3M	(512) 984-3492
Agilent Technologies	(800) 452-4844
AMP	(910) 855-2276
Applied Microsystems	(800) 426-3925 (425) 882-5276
ASIC Designs	(630) 505-0404
Avocet Systems (was Huntsville Microsystems)	(205) 881-6005
Cogent Computer Systems (Adaptec)	(508) 278-9400
Corelis	(562) 926-6727
Digital Logic	
DY 4 Systems	(613) 599-9191
Emulation Technology	(408) 982-0660
EmuTec	(425) 267-9604
Lauterbach	(508) 303-6812
Macraigor Systems	(617) 739-8693
Methode Electronics, Inc.	(800) 323-6858
Microtek International	(503) 533-4463 (800) 886-7333
Polycom (was Atlas Communication Engines, Inc.)	(805) 898-2450, ext. 111
Radstone Technology	(800) 368-2738
Smart Modular Technologies	(510) 623-1231
Tektronix	(800) 833-9200
V-I Computer	
Vista Controls	
Wind River Systems	(510) 748-4100

### Logic Analyzer Disassembler Support

Business	Contact
Agilent Technologies	(800) 452-4844
Corelis	(562) 926-6727
Digital Logic Instruments	(408) 487-3214
Tektronix	(800) 833-9200

**DIRECTORY**

**Models**

Business	Contact
Mentor Graphics	(408) 487-7000
Simpod, Inc.	(408) 330-9300
Innoveda (Summit Design & Viewlogic)	(503) 643-9281
Synopsys	(650) 584-5000

**Network Software**

Business	Contact
Accelerated Technology	(334) 661-5770
Applied Microsystems	(800) 426-3925 (425) 882-5276
Bytecodes mail@bytecodes.com	
Extended Systems (was Counterpoint Systems Foundry)	(800) 235-7576
Embedded Concepts and Solutions, Inc. (ECS)	(630) 953-8676
Grammar Engine	(800) 776-6423
IBM Local sales offices	
InterNiche Technologies, Inc.	(408) 257-8014
Mentor Graphics	(408) 487-7000
Micro APL	(+44) 171 922 8866
Motorola, Inc. Local sales offices	
Netplane Systems	(781) 329-3200
NetSilicon Softworks Group (was Pacific Softworks)	(800) 541-9508, ext. 117
Nortel Networks	(800) 466-7835
OSE Systems	(214) 346-9339
Precise Software Technologies Inc. (PSTI)	(800) 265-9833
Routerware (Now Wind River Systems)	(510) 748-4100
SoftProse, Inc.	(515) 221-222 (515) 988-4157
Spider Systems	
Sun Consumer Electronics Local sales offices	
Telenetworks	(707) 584-6100
Total Impact	(888) 373-3403 (805) 987-8704
Treck, Inc.	(800) 340-6648 (513) 688-0553
Trillium	(310) 442-9222
U.S. Software	(800) 356-7097 (503) 844-6614
Wind River Systems	(510) 748-4100

**Real-Time Operating Systems**

Business	Contact
Accelerated Technology	(334) 661-5770
CMX Systems	(508) 872-7675
Extended Systems (was Counterpoint Systems Foundry)	
Eonics	(714) 255-9889
Etno Team	
ESP	
Express Logic, Inc.	(858) 613-6640
Green Hills Software	(805) 965-6044
JMI Software Systems	(408) 287-7090
KADAK Products	(604) 734-2796
LynuxWorks	(408) 879-3900
Mentor Graphics	(408) 487-7000
Micro Digital, Inc.	(800) 366-2491 (714) 437-7333
Microware	(515) 223-8000
MontaVista Software	(408) 328-9200
OSE Systems	(214) 346-9339
Precise Software Technologies Inc. (PSTI)	(800) 265-9833
QNX Software Systems, Ltd.	+44 (0) 1223 204800
Sun Microsystems Local Sales Offices	
Tao Systems	(858) 793-1453
TASKING, Inc.	(781) 320-9400
U.S. Software	(800) 356-7097 (503) 844-6614
Wind River Systems	(510) 748-4100

**System Simulation Environment**

Business	Contact
Cadence	(800) 746-6223
Mentor Graphics	(408) 487-7000
Synopsys	(650) 584-5000

### *Training*

Business	Contact
ARNEWSH	(970) 223-1616
BlueLabs Stockholm AB	+46 (0) 8 470 2150
HILF! GmbH	+49 89 613 7900
Metrowerks	(512) 997-4700
Wind River Systems	(510) 748-4100

## ***NOTES***

*SG1011-54*

**NOTES**

SG1011-55

### *HOW TO REACH US:*

#### **USA/EUROPE/LOCATIONS NOT LISTED:**

Motorola Literature Distribution  
P.O. Box 5405  
Denver, Colorado 80217  
1-303-675-2140  
1-800-441-2447

#### **JAPAN:**

Motorola Japan Ltd.  
SPS, Technical Information Center  
3-20-1, Minami-Azabu  
Minato-ku  
Tokyo 106-8573, Japan  
81-3-3440-3569

#### **ASIA/PACIFIC:**

Motorola Semiconductors H.K. Ltd.  
Silicon Harbour Centre  
2 Dai King Street  
Tai Po Industrial Estate  
Tai Po, N.T. Hong Kong  
852-26668334

#### **TECHNICAL INFORMATION CENTER:**


1-800-521-6274

#### **HOME PAGE:**

<http://www.motorola.com/semiconductors/>

[www.motorola.com](http://www.motorola.com)



Motorola reserves the right to make changes without further notice to any products herein. Motorola makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Motorola assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. "Typical" parameters can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals", must be validated for each customer application by customer's technical experts. Motorola does not convey any license under its patent rights nor the rights of others. Motorola products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the Motorola product could create a situation where personal injury or death may occur. Should Buyer purchase or use Motorola products for any such unintended or unauthorized application, Buyer shall indemnify and hold Motorola and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Motorola was negligent regarding the design or manufacture of the part. Motorola and  are registered trademarks of Motorola, Inc. Motorola, Inc. is an Equal Opportunity/Affirmative Action Employer.

MOTOROLA and the Stylized M Logo are registered in the US Patent & Trademark Office. All other product or service names are the property of their respective owners.

© Motorola, Inc. 2002

SG1011/D REV 0