

Microcomputer Development Support Tool Catalog

Tool products that bring out the best performance of your Mitsubishi MCUs

Mitsubishi Electric helps you build development environments compatible with a wide range of MCUs. Functions are continuously enhanced and new products regularly developed to meet evolving customer needs. In addition to Mitsubishi proprietary tools, many third party tools are ready for Mitsubishi MCUs. And Mitsubishi now provides real-time support through the Internet.

Mitsubishi Tools

Mitsubishi tools enable you to obtain maximum performance from your Mitsubishi microcomputers.

> Windows[®] 98/95 & Windows NT[®] 4.0 compatible Advanced integrated development environment 8-bit & 16-bit common emulator PC4701 New emulator system for M32R Family Easy-to-operate debuggers

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Third-Party Tools

Further enhances third-party tie-ups

Wide product line, from cross tools to programmers

User Support

Mitsubishi backs you up in your MCU development, with the support you need - when you need it

> Detailed technical support for Mitsubishi tools Useful, up-to-date Mitsubishi Tool Homepage http://www.tool-spt.mesc.co.jp/jrdex_e.htm

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Mitsubishi Tool Product Line Supports a wide range of MCUs -from 4-bit to 32-bit

Mitsubishi Develop- ment Support Tools



	MCU				Cimple Teel			Emulator System	
				and others Cross Tool		Real - time OS	Simulator Debugger	Emulator Debugger	Emulator
32	2	M32R	M32R/D Series		Cross tool kit CC32R	MR32R	DD22DSIM	PD32000	M32000TB-2MB-E
-bit	it	Family	M32R/E Series	Evaluation board MSA21xx	Integrated development environment TM C compiler cc32R Assembler as32R	WINDER	- D32N3IWI	PD32R Under development	M32170T-SDI-E Under development
		M16C Family	M16C/80 Series	Starter kit Under development	Integrated C compiler NC308WA Integrated development environment TM Assembler AS308	MR308	PD308SIM	PD308	
			M16C/60 M16C/20 Series	Compact Emulator, Starter kit & others	Integrated C compiler NC30WA Integrated development environment TM Assembler AS30	MR30	PD30SIM	PD30	PC4701 *
1 <i>6</i> -bit	6 ^{it}		7900 Series		Integrated C compiler NC79WA Integrated development environment TM Assembler AS79		PD79SIM	PD79	104/01
		7700 Family	7700 7751 7770	Simple tool	Integrated C compiler NC77WA		PD77SIM	PD77	
			7790 Series	M377xxT-PAC	Integrated development environment TM Assembler RASM77			PDB77	PC4816B
8 -bit	B it		740 Family	Simple tool M3xxxxT-PAC	Assembler SRA74 Integrated development environment TM		PD38SIM	PD38	PC4701 *
4			4500 Series		Assembler ASM45			PD45	PC4504
-bit	it		720 Series		Assembler ASM72			RTT72/ RTT72S	PC4400/ M34250T-SET

Tryout version downloadable from Mitsubishi Tool Homepage (http://www.tool-spt.mesc.co.jp/trial/trys_e.htm)
 PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

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For the latest information http://www.tool-spt.mesc.co.jp/datsheet/lineup/lineup_e.htm

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HITOOLS

For more information http://www.tool-spt.mesc.co.jp/datsheet/m16c80_e/index.htm

M16C/80 Series Development Support Tools									
Series	Series Integrated Real-time Simulator I C Compiler OS Debugger I				Emulator	Emulation Pod			
M16C/80	NC308WA *1	MR308	PD308SIM	PD308	PC4701 *3	M30800T-RPD-E			

*1. NC308WA includes TM (integrated development environment) and AS308 (assembler).

*2. MR308 is the generic name for real-time OS development kit (MR308K) and mass production contract (MR308S).

*3. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

Optional Product for Emulator System

Option	Product Name
Parallel interface board for IBM PC/AT compatibles	PCA4202G02

M16C/80 Series Flash Programmers

Series	ROM Type	Package Type	Package Name	Third Party Programmer
	Frash Memory	100-pin 0.65mm-pitch QFP	100P6S-A	A E200 *1
M16C/80		100-pin 0.5mm-pitch LQFP	100P6Q-A	or
		144-pin 0.5mm-pitch LQFP	144P6Q-A	EFP-I *2

*1. AF200 is a product of Yokogawa Digital Computer Corp., and supports parallel programming.

*2. EFP-I is a product of Suisei Electronics System Co., Ltd. only for Asia and Oceania, and supports serial and parallel programming.

Operating Environment for Software Tools

Product Type	Product Name	Host Machine (OS)		
Integrated C Compiler w/ assembler	NC308WA *1			
Real-time OS	MR308 *2	IDM DC (AT compatibles (Mindows09, Windows 05, Mindows NT 4.0)		
Simulator Debugger	PD308SIM	IBM PC/AT compatibles (Windows98, Windows 95, Windows NT 4.0		
Emulator Debugger	PD308			

*1. NC308WA includes TM (Integrated development environment) and AS308 (Assembler).

*2. MR308 is the generic name for real-time OS development kit (MR308K) and mass production contract (MR308S).

Windows 98/95/NT-based Development Environment

Mitsubishi Electric backs up your programming environment with high-performance C compilers featuring a broad range of functions for developing embedded systems, and assemblers capable of assembling structural description.



Integrated C compiler NCxxWA

- Supports the integrated development environment. (Includes TM integrated tool manager and ASxx assembler.)
- Compliance with ANSI standards.
- Performs very high code efficiency, comparable to assembler.
- #pragma extension provides various ROMable features.
- Specifiable near/far variables.
- Stack size calculation utility.

Relocatable Assembler ASxx

- Supports structured language.
- Generates optimized code with effective use of MCU instruction sets.
- Complete macro instructions.
- Convenient utility functions.
- Supports standard object formats:
 - IEEE-695
 - Motorola S format
 - Intel HEX format

* The xx found in product names varies according to MCU family and series

Advanced Integrated Development Environment

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The Mitsubishi integrated development environment TM improves downstream process productivity, by integrating an editor, compiler, assembler and other tools used for software development.





Real-time OS and PDxx's Debug Functions

Mitsubishi provides real-time OS in compliance with µITRON specifications, supporting development of real-time control systems as well as debugging functions.



The PDxx controls PC4701 emulators from Windows on a PC in order to debug application programs and target systems. It provides real-time OS dedicated debug functions by combining the PC4701M and PC4701HS emulators.



* The xx found in product names varies according to MCU family and series.

* PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

Easy-to-Operate Emulator Debugger & Simulator Debugger

Mitsubishi's PDxx emulator debugger and PDxxSIM simulator debugger offer a rich array of debugging functions and a superb window-based user interface. And, both debuggers support customization allowing you to add their own windows and commands.



(7) RTT window with source reference, etc.



Simulator Debugger PDxxSIM

- Independent target development and program evaluation
- Machine cycle count function
- I/O, interrupt simulator function

- Target input/output functions provided as a new GUI
- RAM monitor display
- C/Assembly language source-level debugging



* The xx found in product names varies according to MCU family and series.

The PC4701 emulator system meets your needs for a flexible development environment, improving debugging efficiency in your application programs. This system can even support MCUs developed in the future, simply by changing the emulation pod.

Emulator Debugger PDxx

- Windows 98/95 & Windows NT 4.0 compatible
- Enhanced functions such as real-time tracing and C0 coverage
- High-speed serial, LPT parallel, dedicated parallel and LAN interfaces
- C/Assembly language source-level debugging functions
- Debugging real-time OS (see page 6)
- Real-time RAM monitor
- Supports customization function. (see page 7)

Emulation Pod

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- Supports high-speed clock.
- Supports low input voltages.
- Flexible cable
- · Easy connection to target systems
- · Compliant with international standards



- Emulator PC4701
- Emulator main unit works for Mitsubishi's 8-bit and 16-bit MCUs
- Compliant with international standards (UL/FCC standard and CE marking)
- Real-time RAM monitor comes standard
- Communications interfaces

		PC4701M	PC4701HS				
	Serial	RS-232C (max.38,400bps)					
Communications Interfaces	Parallel	LPT Parallel *1	Dedicated Parallel *2				
interfaceo	LAN	—	10Base-T,10Base-5				
Power Su	ipply	Built-in	External				
Emulator De	ebugger	Bundled	Optional				

*1. Printer port supporting ECP, EPP, Byte/compatibility and Nibble/compatibility modes *2. PCA4202G02 parallel interface board (optional) required

* The xx found in product names varies according to MCU family and series.
* PC4701 is the generic name for PC4701M, PC4701HS, and PC4701L.

PC4701M Emulator NEW

- Supports future Mitsubishi 16-bit and 8-bit MCUs simply by replacing the MCU dependent emulation pod and others.
- Debugging functions such as high-level breaks and real-time trace
 Performance evaluation functions such as C0 coverage and time measurement
- Real-time RAM monitor
- High-speed downloading by an LPT parallel interface
- Compact and equipment with AC power circuit
- The latest version of PDxx emulator debugger downloadable from the homepage without charge.



PC4701M Emulator Site

http://www.tool-spt.mesc.co.jp/pc4701m/index_e.htm

New Emulator System for M32R Family

The emulator system for the M32R family increases the efficiency of debugging your application programs with various debugging features that conform to the MCU's high-frequency workings by use of the on-board MCU that complies with the JTAG-based scalable debug interface (SDI) specifications (MCU: M32310, M32120, M32170 or newer).



Emulator M32xxxT-SDI-E

· Complies with the SDI specifications.

- Allows you to effect not only the conventional in-circuit connection but also the JTAG connection(via the SDI connector) to the on-board MCU.
 - On-board debugging and on-site tests
 - Eliminates poor contact and space shortage resulting from probing.
 - The SDI pin- an exclusive pin-maintains the electrical equivalence of the user pin.
 - Downloading programs to the flash ROM of MCU

- A number of debugging features that conform to the M32R's high clock frequency
 - Debugging with zero-wait states
 - Real-time trace, real-time RAM monitor
- LPT parallel port*1 and LAN interfaces
- Power supply range: 100 to 240V
- UL/FCC standards and CE marking
- *1. Printer port supporting ECP, EPP, Byte/compatibility and Nibble/compatibility modes

Mitsubishi M32R Family Tools

The M32R Family of high-performance RISC MCUs

- Integrated development environment with total support from coding to debugging
- Programming environment offering development in C/assembly language
- Real-time OS conforming to μITRON specifications that supports development of real-time control systems
- Simulator debugger and emulator debugger with common easy-to-use GUI front-end
- Emulator adapted for high-speed operation of the M32R Family and supporting on-board debugging by use of the SDI specifications





Professional Developers Tools



* The xx found in product codes varies according to MCU family and series. And communications interfaces vary according to emulators.



For more information http://www.tool-spt.mesc.co.jp/datsheet/m32r_e/index.htm

M32R/D Series Development Support Tools

Series	MCU Name	Cross Tool Kit	Real-time OS	Simulator Debugger	Emulator Debugger	Emulator
M32P/D	M32000D4BFP	CC32P	MP32P	DISSESIM	PD32000	M32000TB-2MB-E
101321X/D	M32000D4BFP-80	*1	*2	T DOZINONIM	1 032000	(Max. 80MHz)

*1. CC32R includes integrated development environment, C compiler, assembler and other tools.
 *2. MR32R is the generic name for real-time OS development kit (MR32RK) and mass production contract (MR32RS).

M32R/E Series Development Support Tools

Series	Group	MCU Name	Cross Tool Kit	Real-time OS	Simulator Debugger	Emulator	Programmer	Programmer MCU Dependent Part	Evalution Board
	32150	M32150F4TFP		MR32R *2	PD32RSIM				
	00400	M32160F3UFP							
	32160	M32160F4UFP						FL002 *4	
	32170	M32170F3VWG					AF200 *4		
M22D/E		M32170F4VWG	CC22P			M32170T-SDI-E			
WJZK/E		M32170F6VWG	*1						
		M32170F3VFP				**			MSA2114
		M32170F4VFP				*3			
		M32170F6VFP							
	32171	M32171F3VFP							

*1. CC32R includes integrated development environment, C compiler, assembler and other tools.
*2. MR32R is the generic name for real-time OS development kit (MR32RK) and mass production contract (MR32RS).
*3. Emulator debugger PD32R bundled. (Under development)
*4. AF200 and FL002 are products of Yokogawa Digital Computer Corporation.
*5. The emulator made by Yokogawa Digital Computer Corporation is also available.

Operating Environment for Software Tools

Product Type	Product Name	Host Machine (OS)
Cross tools kit	CC32 *1	
Real-time OS	MR32R *2	
Simulator debugger	PD32RSIM	IBM PC/AT compatibles (Windows 98, Windows 95, Windows NT 4.0)
Emulator debugger for M32xxxT-SDI-E	PD32R **	
Emulator debugger for M32000TB-2MB-E	PD32000	

*1. CC32R includes integrated development environment, C compiler, assembler and other tools.
 *2. MR32R is the generic name for real-time OS development kit (MR32RK) and mass production contract (MR32RS).

**: Under development

Mitsubishi 16-bit M16C/80 Series Tools

New line, M16C/80 Series MCUs with enhanced CPU performance of the M16C Family

- Integrated development environment with total support from coding to debugging
- Programming environment offering development in C/assembly language
- Real-time OS conforming to µITRON specifications that supports development of real-time control systems
- Easy-to-use debuggers featuring GUI (graphical user interface) and user-customized windows
- Emulator debugger supporting powerful real-time OS debugging function
- Common emulators for 8-and 16-bit MCUs



Professional Developers Tool



* PC4701 is the generic name for PC4701M, PC4701HS and PC4701L. And communications interfaces vary according to emulators. For details, see page 8.

HITOOLS

For more information http://www.tool-spt.mesc.co.jp/datsheet/m16c80_e/index.htm

M16C/80 Series Development Support Tools									
Series	Series Integrated Real-time Simulator I C Compiler OS Debugger I				Emulator	Emulation Pod			
M16C/80	NC308WA *1	MR308	PD308SIM	PD308	PC4701 *3	M30800T-RPD-E			

*1. NC308WA includes TM (integrated development environment) and AS308 (assembler).

*2. MR308 is the generic name for real-time OS development kit (MR308K) and mass production contract (MR308S).

*3. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

Optional Product for Emulator System

Option	Product Name
Parallel interface board for IBM PC/AT compatibles	PCA4202G02

M16C/80 Series Flash Programmers

Series	ROM Type	Package Type	Package Name	Third Party Programmer
M16C/80 Frash Memory	100-pin 0.65mm-pitch QFP	100P6S-A	A E200 *1	
	100-pin 0.5mm-pitch LQFP	100P6Q-A	or	
		144-pin 0.5mm-pitch LQFP	144P6Q-A	EFP-I*2

*1. AF200 is a product of Yokogawa Digital Computer Corp., and supports parallel programming.

*2. EFP-I is a product of Suisei Electronics System Co., Ltd. only for Asia and Oceania, and supports serial and parallel programming.

Operating Environment for Software Tools

Product Type	Product Name	Host Machine (OS)
Integrated C Compiler w/ assembler	NC308WA *1	
Real-time OS	MR308 *2	IDM DC (AT compatibles (Mindows09, Windows 05, Mindows NT 4.0)
Simulator Debugger	PD308SIM	Town PC/AT compatibles (Windows96, Windows 95, Windows NT 4.0)
Emulator Debugger PD308		

*1. NC308WA includes TM (Integrated development environment) and AS308 (Assembler).

*2. MR308 is the generic name for real-time OS development kit (MR308K) and mass production contract (MR308S).

Mitsubishi 16-bit M16C/60 & M16C/20 Series Tools

M16C/60 & M16C/20 Series-supporting a wide range of applied product development interests

- Integrated development environment with total support from coding to debugging
- Programming environment offering development in C/assembly/structured language
- Real-time OS conforming to μITRON specifications that supports development of real-time control systems
- Easy-to-use debuggers featuring GUI (graphical user interface) and user-customized windows
- Emulator debugger supporting powerful real-time OS debugging function
- Common emulators for 8-and 16-bit MCUs



Professional Developers Tool



* PC4701 is the generic name for PC4701M, PC4701HS and PC4701L. And communications interfaces vary according to emulators. For details, see page 8.

Series	Group	Integrated C Compiler	Real-time OS	Simulator Debugger	Emulator Debugger	Emulator	Emulation Pod	Pod Probe												
	M16C/61			PD30SIM	PD30SIM PD30		M30610T-RPD-E													
M16C/60	M16C/62	NC30WA *1					M30620T2-RPD-E													
	M16C/6V					PC4701 *4	M306V0T-RPD-E													
	M16C/6K		MR30				M306K1T-RPD-E													
	M16C/6N		· ·	2		Ū		M306N0TB-RPD-E												
	M16C/20													M30201T-PRB						
M16C/20	M16C/21						M30200T-RPD-E	M30218T-PRB												
	M16C/24																			

M16C/60, M16C/20 Series Development Support Tools

*1. NC30WA includes TM (integrated development environment) and AS30 (assembler).

*2. MR30 is the generic name for real-time OS development kit (MR30K) and mass production contract (MR30S).

*3. PDB30SIM and PDB30 have been changed to PD30SIM and PD30, respectively.

*4. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

M16C/60, M16C/20 Series Programmers and PROM Programming Adapters

Series	ROM Type	Package Type	Package Name	Programmer	Programming Adapter	
		80-pin 0.65mm-pitch QFP 80P6S-A				
	Flash Memory	100-pin 0.65mm-pitch QFP	100P6S-A	*1	*1	
	r lash wentery	100-pin 0.5mm-pitch LQFP	100P6Q-A			
		144-pin 0.4mm-pitch TQFP	144PFB-A			
M16C/60	OTP or EPROM	64-pin 1.778mm-pitch QFP	64P4B-A		PC7412E4S-64	
		80-pin 0.65mm-pitch QFP	80P6S-A	R4945 *2	PCA7413F-80	
		100-pin 0.65mm-pitch QFP 100P6S-A or		or	PCA7412F-100	
		100-pin 0.5mm-pitch LQFP	100P6Q-A	R4945 *2	PCA7412G-100	
		100 -pin 0.65mm - pitch LCC	100D0		PCA7412L-100	
		52-pin 1.778mm-pitch SD IP	52P4B		PCA7302F1S-52	
M16C/20	Flash Memory *1	56-pin 0.65mm-pitch QFP	56P6S-A	R4945 *2 or	PCA7302F1F-56	
		100-pin 0.65mm-pitch QFP	100P6S-A		PCA7302F1F-100	
	OTP	80-pin 0.8mm-pitch QFP	80P6N-A	R4945 *2	PCA7302E1F-80	
	EPROM	80-pin 0.8mm-pitch LCC	80D0		PCA7302E1L-80	

*1. EFP-I programmer (product only for Asia and Oceania made by Suisei Electronics System Co., Ltd.) and AF200 programmer (made by Yokogawa Digital Computer Corporation) are provided. *2. R4945 and R4945A are products of ADVANTEST CORPORATION (http://www.advantest.co.jp/index-e.html).

Optional Product for Emulator System

Option	Product Name
Parallel interface board for IBM/AT compatibles	PCA4202G02

Operating Environment for Software Tools

Product Type	Product Name	Host Machine (OS)
Intergrated C compiler w/ assembler	NC30WA *1	
Real-time OS	MR30 *2	IPM PC / AT compatibles (Windows 08, Windows 05, Windows NT 4.0
Simulator debugger	PD30SIM *3	Ibin PC/AT compatibles (windows 96, windows 95, windows 11 4.0
Emulator debugger PD30 *3		

*1. NC30WA includes TM (integrated development environment) and AS30 (Assembler).

*2. MR30 is the generic name for real-time OS development kit (MR30K) and mass production contract (MR30S).

*3. PDB30SIM and PDB30 have been changed to PD30SIM and PD30, respectively.

Mitsubishi 16-bit 7900 Series Tools

A new series with built-in flash memory, operable on a single power supply at 3.3V or 5V

- Integrated development environment with total support from coding to debugging
- Programming environment offering development in C/assembly/structured language
- Real-time OS conforming to µITRON specifications that supports development of real-time control systems
- Easy-to-use debuggers featuring GUI (graphical user interface) and user-customized windows
- Emulator debugger supporting powerful real-time OS debugging function
- Common emulators for 8-and 16-bit MCUs



Professional Developers Tool



* PC4701 is the generic name for PC4701M, PC4701HS and PC4701L. And communications interfaces vary according to emulators. For details, see page 8.



For m	nore	information
http://www.tool-spt.mesc.co.jp/datsheet/79	900	e/index.htm

Group	Integrated C Compiler	Simulator Debugger	Emulator Debugger	Emulator	Emulation Pod
7902		DDZOSIM	DDZ0	DC 4704	M37902T-RPD-E **
7920	*1	PD/9Silvi	PDI9	*2	M37920T-RPD-E

*1. NC79WA includes TM (Integrated development environment) and AS79 (Assembler).

*2. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

7900 Series Development Support Tools

Third-Party Programmers for 7900 Series

Group	ROM Type	Package Type	Package Name	Programmer
7902 Flash Mem 7920	Flash Memory	100-pin 0.65mm-pitch QFP	100P6S-A	AF200 *1
	Flash Memory	100-pin 0.5mm-pitch LQFP	100P6Q-A	EFP-1 *2

*1. AF200 programmer is made by Yokogawa Digital Computer Corporation.

*2. EFP-I programmer is made by Suisei Electronics System Co., Ltd. and it is available only in Asia and Oceania areas.

Optional Product for Emulator System

Option	Product Name
Parallel interface board for IBM PC/AT compatibles	PCA4202G02

Operating Environment for Software Tools

Product Type	Product Name	Host Machine (OS)
Intergrated C compiler w/ assembler	NC79WA *1	
Simulator debugger	PD79SIM	IBM PC/AT compatibles (Windows 98, Windows 95, Windows NT 4.0)
Emulator debugger	PD79	

*1. NC79WA includes TM (Integrated development environment) and AS79 (Assembler).

Mitsubishi 16-bit 7700,7751,7770,7790 Series Tools -1

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One of the most widely-used series in the world

- Integrated development environment with total support from coding to debugging
- Programming environment offering development in C/assembly/structured language
- Real-time OS conforming to µITRON specifications that supports development of real-time control systems
- Easy-to-use debuggers featuring GUI (graphical user interface) and user-customized windows (PD77, PD77SIM)
- Emulator debugger supporting powerful real-time OS debugging function (PD77)
- Common emulators for 8-and 16-bit MCUs (PC4701)



Professional Developers Tool



* PC4701 is the generic name for PC4701M, PC4701HS and PC4701L. And communications interfaces vary according to emulators. For details, see page 8.

Group	Integrated C Compiler	Assembler	Simulator Debugger	Emulator Debugger	Emulator	Emulation Pod
7702						
7703						
7704						M37702T-RPD-E *3
7705				PD77	PC4701	or
7710	NC77WA RASM77 *1			*2	M37751T-RPD-E *4	
7733						
7735						
7736						M37736T-RPD-E
7721				00077	DC 404 CD	M37721TB-HPD
7732				PDB77	PC4816B	M37732TL-HPD

7700 Series Development Support Tools

*1. NC77WA includes TM (integrated development environment) and RASM77 (assembler).

*2. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

*3. For MCUs except M37702M3, MD, M4, E4, S4 and M37703M3, MD, M4, E4, S4, the optional MCU board kits listed below are required.

*4. The optional MCU board kit listed below is required.

MCU Boards for PC4701 Emulator

Series	Group	MCU board kit
	7702	M37702T_PPDM *1
7700	7703	
	7704	M27704T BDDM *2
	7705	M377041-RPDM 2
	7710	M37710T-RPDM
	7733	
	7735	101377331-RFD101
7751	7751	M37751T-RPDM

*1. Using a 7703 Group MCU requires the optional package converter PCA4977E. *2. Using a 7705 Group MCU requires the optional package converter PCA4978.

7700 Series PROM Programming Adapters and MCU Units

Group	Package Type	Package Name	Programming Adapter	
7700 7704	80-pin 0.5mm-pitch LQFP	80P6D-A/80P6Q-A	PCA4773G05	
7702, 7704,	80-pin 0.65mm-pitch QFP	80P6S-A	PCA4775	
7710, 7733 7735	80-pin 0.8mm-pitch QFP	80P6N-A	PCA4774G05	
	80-pin 0.8mm-pitch LCC	80D0	PCA4708G05	
7703, 7705	64-pin 1.778mm-pitch SDIP	64P4B/64S1B-E	PCA4709	
7736	100-pin 0.5mm-pitch LQFP	100P6Q-A	PCA7422HPG02	
	100-pin 0.65mm-pitch QFP	100P6S-A	PCA7422GPG02	
	100-pin 0.65mm-pitch LCC	100D0	PCA7422GSG02	

Mitsubishi 16-bit 7700,7751,7770,7790 Series Tools - 2

One of the most widely-used series in the world

7751 Series Development Support Tools						
Group	Integrated C Compiler	Assembler	Simulator Debugger	Emulator Debugger	Emulator	Emulation Pod
7751			SM77 PD77SIM		PC4701 *2	M37751T-RPD-E or M37702T-RPD-E *3
7753	NC77WA	RASM77		PD77		M37753T-RPD-E
7754	*1					M37754T-RPD-E
7752				PDB77	PC4816B	M37752TB-HPD-E

*1. NC77WA includes TM (Integrated development environment) and RASM77 (Assembler).

*2. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

*3. To debug a 7751 Group MCU with M37702T-RPD-E, the optional MCU board kit M37751T-RPDM is required.

7751 Series PROM Programming Adapters

Group	Package Type	Package Name	Programming Adapter
	80-pin 0.5mm-pitch LQFP	80P6Q-A	PCA4773G05
7751, 7753	80-pin 0.8mm-pitch QFP	80P6N-A	PCA4774G05
	80-pin 0.8mm-pitch LCC	80D0	PCA4708G05
7754	100-pin 0.5mm-pitch LQFP	100P6Q-A	PCA7437HP
	100-pin 0.65mm-pitch QFP	100P6S-A	PCA7437GP

7770 Series Development Support Tools

Group	Integrated C Compiler	Assembler	Simulator Debugger	Emulator Debugger	Emulator	Emulation Pod
7760						M37760TL-HPD
7776	NC77WA	RASM77	PD77SIM	PDB77	PC4816B	M37776TL-HPD
7777	*1					M37777TL-HPD

*1. NC77WA includes TM (Integrated development environment) and RASM77 (Assembler).

7770 Series PROM Programming Adapters

Group	Package Type	Package Name	Programming Adapter
7760	100-pin 0.65mm -pitch QFP	100P6P-E	PCA7477G-100



7790 Series Development Support Tools						
Group	Integrated C Compiler	Assembler	Simulator Debugger	Emulator Debugger	Emulator	Emulation Pod
7780						M37780T-HPD
7781	NC77WA RASM77 *1					M37781T-HPD
7782					DC 4916D	M37782TB-HPD
7783		PDITSIN	FDBH	PC4010B	M37783TB-HPD	
7785					M37785TB-HPD	
7798						M37798T-HPD

*1. NC77WA includes TM (Integrated development environment) and RASM77 (Assembler).

7790 Series PROM Programming Adapters

Group	Package Type	Package Name	Programming Adapter
7781	84-pin 1.27mm-pitch PLCC	84P0	PCA4781
7782, 7783	136-pin 0.65mm-pitch QFP	136P6S-C	PCA4782G02
7781, 7785	100-pin 0.65mm-pitch QFP	100P6S-A	PCA4785G02
7798	84-pin 1.27mm-pitch PLCC	84P0	PCA4798
	100-pin 0.65mm-pitch QFP	100P6S-A	PCA4799G02

Optional Products for Emulator Systems

Emulator	Option	Product Name
PC4701HS, PC4701L PC4816B	Parallel interface board for IBM PC/AT compatibles	PCA4202G02
PC4816B	1MB emulation memory expansion board	PCA4800M

Operating Environment for Software Tools

Product Type	Product Name	Host Machine (OS)		
Intergrated C compiler w/ assembler	NC77WA *1			
Assembler	RASM77	IPM PC / AT compatibles (Windows 09, Windows 05, Windows NT 4.0)		
Simulator debugger	PD77SIM	IBM PC/AT compatibles (Windows 98, Windows 95, Windows NT 4.0)		
Emulator debugger for PC4701 *2	PD77			
Emulator debugger for PC4816B	PDB77	IBM PC/AT compatibles (Windows 98, Windows 95, Windows 3.1)		

*1. NC77WA includes TM (Integrated development environment) and RASM77 (Assembler).

*2. PC4701 is the generic name for PC4701M, PC4701HS, and PC4701L.

Mitsubishi 8-bit 740 Family Tools - 1

Formidable functions and wide variations

- Programming environment offering development in assembly/structured language
- Debugger environment for more efficient team development
- The development environment looks and feels more consistent, thanks to the same operability and interface for all tools.
- Accessory tools for connecting to all kinds of target systems
- Optimal tools are available for every process-from software development to debugging and mounting.



Professional Developers Tool



* PC4701 is the generic name for PC4701M, PC4701HS and PC4701L. And communications interfaces vary according to emulators. For details, see page 8.

Group	Assembler	Simulator Debugger	Emulator Debugger	Emulator	Emulation Pod	Emulator MCU
3800						M38007RSS
3802						M38027RSS
3803						MODALODI OD
3804						M38049RLSS
3806						M38067RFS
3807						M38078RFS
3812					M38000TL2-FPD	M38127RSS
3819				PC4701 *3		M38197RFS
3820						M38207RFS
3822						M38227RFS
3825	SRA74	PD38SIM	PD38			M38257RFS
3826	*1		*2			M38267LRFS
3850						100517000
3851						M38517R55
3874					M38749T-RPD	
3880						M38807RSS
3881						M38817RSS
3886						M38867RFS
38B5					WI360001L2-FPD	M38B57RFS
2002						M38C37RFS or
3003						M38C37RMFS *4

38000 Series Development Support Tools

*1. SRA74 has supported TM (Integrated development environment) since the upgrade in January, 1999.

*2. PDB38 has been changed to PD38.

*3. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

*4. Port 50 at reset is input for M38C37RFS and that is pull down for M38C37RMFS.

38000 Series Programming Adapters (OTP/EPROM version)

Group	Package Type	Package Name	PROM Version Programming Adapter
2950 2951	42-pin 0.8mm-pitch SSOP	42P2R-A/E	PCA4738F-42A
3630, 3631	42-pin 1.778mm-pitch SDIP	42P4B	PCA4738S-42A
	64-pin 0.5mm-pitch LQFP	64P6Q-A	PCA4738H-64
3800, 3802	64-pin 0.65mm-pitch QFP	64P6S-A	PCA4738G-64
3812, 3880	64-pin 0.8mm-pitch QFP	64P6N-A	PCA4738F-64A
3881	64-pin 0.8mm-pitch LCC	64D0	PCA4738L-64A
	64-pin 1.778mm-pitch SDIP	64P4B/64S1B-E	PCA4738S-64A
	80-pin 0.5mm-pitch LQFP	80P6Q-A	PCA4738H-80A
3806, 3807	80-pin 0.65mm-pitch QFP	80P6S-A	PCA4738G-80A
3820, 3822	80-pin 0.8mm-pitch QFP	80P6N-A	PCA4738F-80A
3874, 3886	80-pin 0.8mm-pitch LCC	80D0	PCA4738L-80A
	100-pin 0.4mm-pitch TQFP	100PFB-A	PCA4738H-100A
3819	100-pin 0.5mm-pitch LQFP	100P6Q-A	PCA4738G-100A
3825	100-pin 0.65mm-pitch QFP	100P6S-A	PCA4738F-100A
3826	100-pin 0.65mm-pitch LCC	100D0	PCA4738L-100A
38B5	80-pin 0.8mm-pitch QFP	80P6N-A	PCA7438F-80A
38C3	80-pin 0.8mm-pitch LCC	80D0	PCA7438L-80A

38000 Series Programming Adapters (Flash memory version)

Group	Package Type	Package Name	PROM Version Programming Adapter
0000	64-pin 0.5mm-pitch LQFP	64P6Q-A	PCA4738HF-64
3803	64-pin 0.8mm-pitch QFP	64P6N-A	PCA4738FF-64
5004	64-pin 1.778mm-pitch SDIP	64P4B	PCA4738SF-64
	80-pin 0.5mm-pitch LQFP	80P6Q-A	PCA4738HF-80
3886	80-pin 0.65mm-pitch QFP	80P6S-A	PCA4738GF-80

7450 Series Development Support Tools

Group	Assembler	Simulator Debugger	Emulator Debugger	Emulator	Emulation Pod	Emulator MCU
7451	SRA74	PD38SIM	PD38	PC4701	M38000TL2-FPD	M37451RFS *4 or M37451RSS *4

*1. SRA74 has supported TM (Integrated development environment) since the upgrade in January, 1999.

*2. PDB38 has been changed to PD38.

*3. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

*4. M37451RFS is an 80-pin QFP/LCC and M37451RSS is a 64-pin SDIP.

7450 Series PROM Programming Adapters

Group	Package Type	Package Name	Programming Adapter
	64-pin 1.778mm-pitch SDIP	64P4B/64S1B-E	PCA4710
7454	80-pin 0.65mm-pitch QFP	80P6S-A	PCA4752
7451	80-pin 0.8mm-pitch QFP	80P6N-A	PCA4751
	80-pin 0.8mm-pitch LCC	80D0	PCA4719

Mitsubishi 8-bit 740 Family Tools - 2

Formidable functions and wide variations

7470 Series Development Support Tools						
Group	Assembler	Simulator Debugger	Emulator Debugger	Emulator	Emulation Pod	Emulator MCU
7477	SRA74 *1					M37478RSS
7478		SRA74 PD38SIM PD38	0020	DC4701		1007 47 61 (66
7480			FC4/01	M380001L2-FPD		
7481			2	5		M37481RSS

*1. SRA74 has supported TM (Integrated development environment) since the upgrade in January, 1999.

*2. PDB38 has been changed to PD38.

*3. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

7470 Series PROM Programming Adapters

Group	Package Type	Package Name	Programming Adapter
7477, 7480	32-pin 1.778mm-pitch SDIP	32P4B	DC 4 4720
7478, 7481	42-pin 1.778mm-pitch SDIP	42P4B/42S1B-E	PCA4730
7477, 7480	32-pin 1.27mm-pitch SOP	32P2W-A	PCA4767
7481	44-pin 0.8mm-pitch QFP	44P6N-A	PCA7411
7478	56-pin 0.8mm-pitch QFP	56P6N-A	PCA4731

7500 Series Development Support Tools

Group	Assembler	Simulator Debugger	Emulator Debugger	Emulator	Emulation Pod	Emulator MCU
7529	SRA74 *1	PD38SIM	PD38 *2	PC4701	M38000TL2-FPD	M37520RFS

*1. SRA74 has supported TM (Integrated development environment) since the upgrade in January, 1999.

*2. PDB38 has been changed to PD38.

*3. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

7500 Series PROM Programming Adapters

Group	Package Type	Package Name	Programming Adapter
7529	100-pin 0.65mm-pitch QFP	100P6S-A	PCA7428FP

7600 Series Development Support Tools

Group	Assembler	Simulator Debugger	Emulator Debugger	Emulator	Emulation Pod	Emulator MCU
7630						M37630T-RFS
7632	SRA74	PD38SIM	PD38	PC4701	M380001L2-FPD	M37632RFS
7640	*1		*2	*3	M37640T-RPD-E	

*1. SRA74 has supported TM (Integrated development environment) since the upgrade in January, 1999.

*2. PDB38 has been changed to PD38.

*3. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

7600 Series PROM Programming Adapters

Group	Package Type	Package Name	Programming Adapter
7620	44-pin 0.8mm-pitch QFP	44P6N-A	PCA7430
7030	80-pin 0.8mm-pitch LCC	80D0	PCA7431
7622	80-pin 0.65mm-pitch QFP	80P6S-A	PCA7443FP
1032	80-pin 0.8mm-pitch LCC	80D0	PCA7443FS
7640	80-pin 0.8mm-pitch QFP	80P6N-A	PCA7440FP
7040	80-pin 0.8mm-pitch LCC	80D0	PCA7440FS

740 Series Development Support Tools

Group	Assembler	Simulator Debugger	Emulator Debugger	Emulator	Emulation Pod	Emulator MCU
7513					M38000TI 2-EPD	M37513RFS
7515				PC4701		M37516RSS
7516	SRA74	PD38SIM	PD38			101373101333
7531	*1	*1 *2	*3	MOODOOTEETT D	M37531RSS	
7532						M37532RSS
7536						M37536RSS

*1. SRA74 has supported TM (Integrated development environment) since the upgrade in January, 1999.

*2. PDB38 has been changed to PD38.

*3. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

	740 Series PROM Programm		
Group	Package Type	Package Name	Programming Adapter
	100-pin 0.4mm-pitch TQFP	100PFB-A	PCA4738H-100A
7513	100-pin 0.5mm-pitch LQFP	100P6Q-A	PCA4738G-100A
	100-pin 0.65mm-pitch LCC	100D0	PCA4738L-100A
7545 7540	48-pin 0.5mm-pitch LQFP	48P6D-A	PCA7419
7515, 7516	64-pin 0.8mm-pitch LCC	64D0	PCA7433
7531	32-pin 0.8mm-pitch LQFP	32P6B-A	PCA7435GP
7531, 7532	36-pin 0.8mm-pitch SSOP	36P2R-A	PCA7435FP
7531 7536	32-pin 1.778mm-pitch SDIP	32P4B	DC 474250D
7551, 7550	42-nin 1 778mm-nitch SDIP	42D4B	PCA74355P

7200 Series Development Support Tools

MOU	Assembler	Simulator	Emulator	Emulator	Emulation Dad	
MCO	Assembler	Debugger	Debugger	Emulator	Emulation Pod	
M37207					M37207T-RPD	
M37210						M27210EBSS
M37211					M38000TL2-FPD	W37210EK33
M37212				PC4701 *3		M37212ERSS
M37220			PD38 *2			
M37221						M37221ERSS
M37224	SRA74	SRA74 PD38SIM *1				
M37270	*1					MOTOTOEDEE
M37271						W37270ER33
M37272						M37273RSS
M37273						10372751000
M37274						M37274ERSS
M37280						M37280ERSS

*1. SRA74 has supported TM (Integrated development environment) since the upgrade in January, 1999. *2. PDB38 has been changed to PD38.

*3. PC4701 is the generic name for PC4701M, PC4701HS and PC4701L.

7200 Series PROM Programming Adapters

MCU	Package Type	Package Name	PROM Programming Adapter
107007	80-pin 0.8mm-pitch QFP	80P6N-A	PCA7417
10137207	64-pin 1.778mm-pitch SDIP	64P4B	PCA4762
M27210	64-pin 0.8mm-pitch QFP	64P6N-A	PCA4756
10137210	52-pin 1.778mm-pitch SDIP	52P4B	PCA4754
M07040	80-pin 0.8mm-pitch QFP	80P6N-A	PCA7420
M37212	52-pin 1.778mm-pitch SDIP	52P4B	PCA7406
1407004	42-pin 0.8mm-pitch SSOP	42P2R-A	PCA7439
11/137221	42-pin 1.778mm-pitch SDIP	42P4B	PCA7408
M37270	64-pin 1.778mm-pitch SDIP	64P4B	PCA7401
M37271	52-pin 1.778mm-pitch SDIP	52P4B	PCA7400
M07070	42-pin 0.8mm-pitch SSOP	42P2R-A	PCA7427
IVI37272	42-pin 1.778mm-pitch SDIP	42P4B	PCA7429G02
M37273	52-pin 1.778mm-pitch SDIP	52P4B	PCA7426G02
M37274	52-pin 1.778mm-pitch SDIP	52P4B	PCA7400
M37280	64-pin 1.778mm-pitch SDIP	64P4B	PCA7401

Optional Product for Emulator System

Option	Product Name
Parallel interface board for IBM PC/AT compatibles	PCA4202G02

Operating Environment for Software Tools

Product Type	Product Name	Host Machine (OS)
Assembler	SRA74 *1	
Simulator debugger	PD38SIM	IBM PC/AT compatibles (Windows 98, Windows 95, Windows NT 4.0)
Emulator debugger	PD38 *2	

*1. SRA74 has supported TM (Integrated development environment) since the upgrade in January, 1999.

*2. PDB38 has been changed to PD38.

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Mitsubishi 4-bit 4500 Series Tools

For more information http://www.tool-spt.mesc.co.jp/datsheet/4500_e/index.htm

- Tool line for Mitsubishi's high-cost-performance 4-bit 4500 Series
- Software tools for Windows 98/95/NT 4.0
- Optimal tools are available for every process-from software development to debugging and mounting.



4500 Series Development Support Tools

Group	Cross Software	Emulator	MCU Board	MCU Package	Programming Adapter		
4501			M34502T-MCU	20-pin 1.27mm-pitch QFP	20P2N-A	MS4238-20F *2	
4502			**	24-pin 0.8mm-pitch SSOP	24P2Q-A	MS4502-24F *2 **	
4512				32-pin 0.8mm-pitch LQFP	32P6B-A	- *3	
4540			M24514T MCU	32-pin 1.778mm-pitch SDIP	32P4B	PCA7442SP	
4513			101345141-10100	32-pin 0.8mm-pitch LQFP	32P6B-A	PCA7442FP	
4514				42-pin 0.8mm-pitch SSOP	42P2R-A	PCA7441	
4515		PC4504	M34515T-MCU	36-pin 0.8mm-pitch SSOP	36P2R-A	PCA7407	
	PD45		M34520T-MCU	64-pin 1.778mm-pitch SDIP	64P4B, 64S1B-E	PCA4747	
4520	*1			64-pin 0.8mm-pitch QFP	64P6N-A	PCA4748	
				64-pin 0.8mm-pitch LCC	64D0	PCA4749	
			M34550T-MCU	80-pin 0.8mm-pitch QFP	80P6N-A	PCA4745	
4550				80-pin 0.8mm-pitch LCC	80D0	PCA4746	
4551			MOAFFATO MOUL	48-pin 0.65mm-pitch QFP	48P6S-A	PCA7414	
4555			M3455112-MCU	48-pin 0.65mm-pitch QFP	48P6S-A	- *4	
4570			M34570T-MCU	36-pin 0.8mm-pitch SSOP	36P2R-A	PCA7425	
4580					M34502T-MCU	20-pin 1.27mm-pitch SOP	20P2N-A

*1. Single package including ASM45 (assembler) and PD45 (emulator debugger).

*2. MS4238-20F and MS4502-24F are products available from Suisei Electronics Co., Ltd. of Japan and operable with MSP-I and MSP-II programmers.

*3. You can use PCA7442FP (M34513E4FP substituted for MCU) as a programming adapter for 4512 group.

*4. You can use PCA7414 (M34551E8FP substituted for MCU) as a programming adapter for 4555 group. When you use M34551E8FP, you need M34551T2-MCU together as an evaluation board, because M34551E8FP dose not accomodate all functions.

Operating Environment for 4500 Series Software Tools

	Product Type	Product Name	Host Machine (OS)
	Abusolute assembler	ASM45 *1	
	Emulator debugger	PD45	IBM PC/AT compatibles (windows 98, windows 95, windows NT 4.0)
*4	A CM45 is is shuded with DD45		

*1. ASM45 is included with PD45.





720 Series Development Support Tools

		Emulator				
Group	Cross Software	Main Unit	Option Board	MCU Package T	уре	Programmer
4520	RTT72S *1	M34250T-SET *3		20-pin 1.27mm-pitch SOP	20P2N-A	MSP-I or MSP-1*5
4280	RTT72 *2 PC4400 Card Cage + PC4000E Emulator Unit + PCA4400A Control Board *4	PC4400 Card Cage +		20-pin 1.27mm-pitch SOP	20P2N-A	+ MS4238-20F *5
		M34280T5-OPT	20-pin 0.65mm-pitch SSOP	20P2E/F-A	MSP-I or MSP-I *5 + MS4280-20G *5	

*1. Single package including ASM72 (assembler) and RTT72S (emulator debugger).

*2. Single package including ASM72 (assembler) and RTT72 (emulator debugger).

*3. Real-time trace and C0 coverage functions require PCA4410R (function extension board).

*4. Real-time trace and C0 coverage functions require PCA4400R (function extension board).

*5. MSP-I, MSP-II, MS4238-20F, and MS4280-20G are products available from Suisei Electronics Co., Ltd. of Japan.

Operating Environment for 720 Series Software Tools

Product Type		Product Name	Host Machine (OS)
At	ousolute assembler	ASM72 *1	
Emulator of	lebugger for M34250T-SET	RTT72S	IBM PC/AT compatibles (DOS)
Emulat	or debugger for PC4400	RTT72	
*4 4 01470 := :	a alurale al unitite DTT70 and DTT7	0	

*1. ASM72 is included with RTT72 and RTT72S.

Third - Party Tool Product Line

	MCU			Cross Tools		Real-time OS		Emulators & Debugger	rs				
				D-CC/M32R,D-C++/M32R Diab-SDS	P.30	pSOSystem/pRISM+ Integrated Systems,Inc.(ISI)	P.33	ADViCE Yokogawa Digital Computer Corporation	P.35				
	32	м	132R	GNUPro Cygnus Solutions	P.30	pOSEK NEW Integrated Systems, Inc. (ISI)	P.33	EZIyzer Yokogawa Digital Computer Corporation	P.36				
	-bit	F	amily	OPENplus NEW Gaio Technology Co.,Ltd.	P.32	Tornado,VxWorks Wind River Systems,Inc.	P.33	SingleStep NEW Diab-SDS	P.38				
						OPENplus(G-OS) NEW Gaio Technology Co.,Ltd.	P.32	E590xA Under development Agilent Technologies, Inc.	P.38				
1			M16C/80	EWMC80 IAR Systems AB	P.31	OPENplus(G-OS) NEW Gaio Technology Co.,Ltd.	P.32	ADViCE Yokogawa Digital Computer Corporation	P.35				
Ľ			Series	OPENplus NEW Gaio Technology Co.,Ltd.	P.32			MultiSTAC M16C/80 Sophia Systems and Technology Corporation	n P.36				
4		M16C		EWM16C IAR Systems AB	P.31	osCAN M16C Vector Informatik GmbH	P.34	ADViCE Yokogawa Digital Computer Corporation	P.35				
		Family	Family	Family	Family	Family	M16C/60	EDE TASKING Inc.	P.32	RTXC Empower Corporation	P.34	MultiSTAC M16C/6X Sophia Systems and Technology Corporation	P.36
1	16 -bit				M16C/20 Series	OPENplus NEW Gaio Technology Co.,Ltd.	P.32	OPENplus (G-OS) NEW Gaio Technology Co., Ltd.	P.32	Ultra-M16C Ashling Microsystems Ltd.	P.37		
								EMUL M16C-PC Nohau Corporation	P.37				
			7900 Series					ADViCE Yokogawa Digital Computer Corporation	P.35				
Ľ		7700 Family	7700 Family	7700 Family	7700 7751 7770	EW7700 IAR Systems AB	P.31			ADViCE Yokogawa Digital Computer Corporation	P.35		
			7790 Series	OPENplus NEW Gaio Technology Co.,Ltd.	P.32			Ultra-7700 Ashling Microsystems Ltd.	P.37				
	8	740 Family		EW740 IAR Systems AB	P.31	osCAN M7600 Vector Informatik GmbH	P.34	ADViCE Yokogawa Digital Computer Corporation	P.35				
	-bit			OPENplus NEW Gaio Technology Co.,Ltd.	P.32								
				Pro	ogran	nmer							
				Yokogawa Digi	AF200 ital Com) puter Corporation			P.39				

• • • A wide-variety of combinations

As part of the Mitsubishi microcomputer development environment, a variety of tools with a rich array of functions are available from major third-party companies. Choose the combination of third-party and Mitsubishi tools that is best for you. Some examples are given here below. Mitsubishi Electric will continue to work with other tool manufacturers, to meet the growing diversity of customer needs.

	Combination 1	Combination 2	Combination 3	Combination 4
Cross Tool	Mitsubishi	Third Party	Third Party	Mitsubishi
Emulator	Mitsubishi	Third Party	Mitsubishi	Third Party

Combinations for M32R Family MCUs

M32R Family		Cross Tools						
		CC32R Mitsubishi	D-CC/M32R,D-C++/M32R Diab-SDS	GNUPro Cygnus Solutions	OPENplus Gaio Technology			
Emulators & Debuggers	M32XXX-XXX-E Mitsubishi	Yes	Yes	-	-			
	ADViCE Yokogawa Digital Computer	Yes	Yes	-	Yes			
	EZIyzer Yokogawa Digital Computer	Yes	Yes	-	-			
	SingleStep Diab-SDS	-	Yes	-	-			

Combinations for M16C/80 Series MCUs

		Cross Tools				
M160	/80 Series	NC308WA Mitsubishi	EWMC80 IAR Systems	OPENplus Gaio Technology		
Emulators	PC4701 Mitsubishi	Yes	Yes	-		
& Dobuggors	ADViCE Yokogawa Digital Computer	Yes	-	Yes		
Debuggers	MultiSTAC M16C/80 Sophia Systems and Technology	Yes	-	Yes		

Combinations for M16C/60, 20 Series MCUs

M16C/60,20 Series		Cross Tools				
		NC30WA Mitsubishi	EWM16C IAR Systems	EDE TASKING	OPENplus Gaio Technology	
Emulators & Debuggers	PC4701 Mitsubishi	Yes	Yes	Yes	-	
	ADViCE Yokogawa Digital Computer	Yes	Yes	-	Yes	
	MultiSTAC M16C/6X Sophia Systems and Technology	Yes	Yes	Yes	Yes	
	Ultra-M16C Ashling Microsystems	Yes	Yes	Yes	-	
	EMUL M16C-PC Nohau	Yes	Yes	Yes	-	

Combinations for 7900 Series MCUs

	Cross Tools		
790	NC79WA Mitsubishi		
Emulators	PC4701 Mitsubishi	Yes	
ھ Debuggers	ADViCE Yokogawa Digital Computer	Yes	

Combinations for 77XX Series MCUs

77XX Series		Cross Tools			
		NC77WA Mitsubishi	EW7700 IAR Systems	OPENplus Gaio Technology	
Emulators & Debuggers	PC4701 Mitsubishi	Yes	Yes	-	
	ADViCE Yokogawa Digital Computer	Yes	Yes	Yes	
	Ultra-7700 Ashling Microsystems	Yes	Yes	-	

Combinations for 740 Family MCUs

74	0 Family	SRA74 Mitsubishi	
Emulators	PC4701 Mitsubishi	Yes	
ه Debuggers	ADViCE Yokogawa Digital Computer	Yes	

Cross Tools	
EW740 IAR Systems	OPENplus Gaio Technology
Yes	-
Yes	Yes

Cross Tools -1



Cygnus Solutions http://www.cygnus.com/

C compiler GNUPro

- GNUPro for M32R Family consists of C and C++ compiler, gdb debugger, gas, simulator and utilities and hosted on Solaris, Windows NT, 95 and 98.
- Supports the debugging environment using the evaluation board with the M32R/D Series MCUs.
- Progressive updated releases-twice a year Cygnus updates the entire GNUPro toolchain and distributes this to contracted customers.
- GNUPro is based on The GNU General Public License so that users can use, copy and distribute GNUPro without paying any additional charge.
- And its runtime library is not based on GNU GPL so that compiled application program is not restricted by GNU GPL.
- The source code comprehension tool, Source-Navigator is bundled.
- 5-day acknowledgment to support requests
- For support and pricing, contact http://www.cygnus.com/.

Supported MCUs : 32-bit M32R/D Series 32-bit M32Rx/D Series 32-bit M32R/E Series



Contact Information: Corporate Headquarters: Cygnus Solutions Tel:+1-408-542-9600 Fax:+1-408-542-9699 E-mail: info@cygnus.com http://www.cygnus.com/

Cross Tools - 2

IAR Systems AB http://www.iar.com/

Integrated development environment (EW EMBEDDED WORKBENCH)

- Fully integrated development environment under Win95/98/NT
- Create Projects, edit files, compile, assemble, link, build and debug your application without leaving the Workbench
- ANSI standard C Compiler
- Extended Keywords specific for M16C/80, M16C/6x, 7700 and 740 Families
- A powerful relocating macro assembler with a versatile set of directives and operators
- Includes the preprocessor of the C compiler (thus accepting all C macro definitions)
- Supports complete linking, relocation and format generation to produce PROMable code
- The librarian creates & maintains libraries & library modules
- C-SPY high level language simulator incorporating a C expression analyzer and full C-type knowledge
- Supports powerful & complex breakpoints setting
- Displays the content of RAM, ROM and all MCU registers
- Graphical function level profiling
- Graphical code coverage
- Interrupt simulation
- Powerful C-like macro language for I/O simulation

Contact Information: U.S. and Canada: IAR Systems Software Inc. One Maritime Plaza, Suite 1770, San Francisco, CA 94111, USA Tel: +1-415-765-5500 Fax: +1-415-765-5503 E-mail: info@iar.com http://www.iar.com/

Europe:

IAR Systems AB PO Box 23051, S-750 23 Uppsala, Sweden Tel: +46-18-16-78-00 Fax: +46-18-16-78-38 E-mail: info@iar.se http://www.iar.se/





Supported MCUs : 16-bit M16C/80 Series 16-bit M16C/60 Series 16-bit M16C/20 Series 16-bit 7700 Family 77XX Series 8-bit 740 Family

Cross Tools - 3

TASKING Inc. http://www.tasking.com/

Embedded development environment EDE

Award-winning Embedded Development Environment



Contact Information: International Headquarters: Tel: +1-781-320-9400 (800-458-8276) Fax: +1-781-320-9212 E-mail: sales_us@tasking.com http://www.tasking.com/

European Headquarters: TASKING Software BV Tel: +31-33-455-8584 Fax: +31-33-455-0033 E-mail: sales_nl@tasking.com http://www.tasking.com/

C compiler toolset

• Full ANSI C compiler, with optimization

• IEEE-695 object modules, including symbolic information

Debugger CrossView Pro

- Full ANSI C compiler, with optimization
- Extensive debugging capabilities through CrossView Pro
- High performance M16C simulator
- ROM Monitor for stand-alone use or with CrossView Pro

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Supported MCUs : 16-bit M16C/60 Series 16-bit M16C/20 Series

Gaio Technology Co., Ltd. http://www.gaio.com/

IDE for embedded real-time systems OPENplus NEW

OPENplus can well serve for whole development processes of embedded systems.

- Generation of effective ROMable codes by C/C++ Optimizing Cross
 C compiler, "XCC-V/XCC++"
- Automatic source generation by CASE tool "XASM-GEN"
- Automatic generation of charts and structure specification sheet from source codes by CASE tool, "XASM-REV/XSTR-REV"
- Virtual actual hardware in Simulation Environment by MMI. Peripheral Circuit System Simulator "CMS"
- Visual Verification of input and output functions, tasks, function modules, and I/O block, "AMS"
- \bullet Real time and Multi task environment by "G-OS", $\mu ITRON$ specificated Real time OS
- TCP/IP protocol stack based on ITRON specifications, "G-OS Network"
- Co-verification environment of mechanical models and MPU, "Msim-G"

Supported MCUs : 32-bit M32R Family 16-bit M16C/80 Series 16-bit M16C/60 Series 16-bit M16C/20 Series 16-bit 7700 Family 77XX Series 8-bit 740 Family



Contact Information: Overseas: Gaio Technology Co., Ltd. U.S. Office TEL: +1- 805-499-7722 FAX: +1-805-499-5512 E-mail: gaio@gol.com URL: http://www.gaio.com/

Japan:

Gaio Technology Co., Ltd. TEL: +81-3-3662-3041 FAX: +81-3-3662-3043 E-mail: sales@gaio.co.jp http://www.gaio.com/

Real-time OS - 1

Integrated Systems, Inc. (ISI) http://www.isi.com/

Real-time OS/Integrated development environment pSOSystem/pRISM+

- Used with over 38 million licensed consumer products pSOSystem has been given a very warm reception as a 32-bit embedded OS for compact, mass-produced consumer products such as car navigation system, set-top box, digital cameras. Already, it has been shipped in more than 38 million licensed products (as of April 1999).
- pSOS is one of the few OSs to clear strict reliability standards of the FAA and FDA.

This reliability is backed by extensive application. It is embedded and used - for example - in important safety devices of private aircraft.

• Epilogue communication function that will open up a new world on the Internet

To expand the environment of embedded equipment to homes everywhere, the latest network functions such as IPv6, SNMP, RMON are necessary. Use Epilogue Series products.

• pRISM+ framework that supports embedded control software from design to implementation

The diversity of tools needed in the design, simulation, debugging and mounting phases of embedded software development have been linked to the basic components in an open environment via a CORBA interface. This makes it possible to team - engineer and reuse software resources across the entire development process.

OSEK/VDX compliant RTOS pOSEK NEW

pOSEK is a super-small, scalable RTOS, with a ROM footprint starting at 2072 Bytes, and RAM usage starting at 266 Bytes. A key characteristic of pOSEK is that the RTOS is statically configured for a given application, so only required operating-system services are included. In addition, certain objects (like tasks) are also scalable. ISI also offers a development environment to develop the embedded applications running on pOSEK.

Contact Information: Integrated Systems, Inc. (ISI)

Tel: +1-408-542-1699 Fax: +1-408-542-1952 E-mail: kyen@isi.com http://www.isi.com/



Products Supporting the Entire Development Process

Supported MCUs : 32-bit M32R/D Series 32-bit M32Rx/D Series NEW 32-bit M32R/E Series



(Development environment image)

Supported MCUs : 32-bit M32R/E Series (Under development)

Wind River Systems, Inc. http://www.wrs.com/

Real-time embedded system development environment Tornado for M32R/D

- Industry standard high performance scalable RTOS VxWorks
- Supports UNIX development platforms.
- Fully equipped host target communications (Ethernet/serial/ ICE/ROM emulator)
- · Powerful cross development tools and utilities
- Equipped with powerful networking facilities.
- A complete set of third party tools for easily customizing the Tornado development environment

Contact Information:

Corporate Headquarters: 1010 Atlantic Avenue, Alameda, CA 94501 Tel: +1-800-545-WIND (800-545-9463) Tel: +1-510-748-4100 Fax: +1-510-749-2010 E-mail: inquiries@wrs.com http://www.wrs.com/



Some of components in above are not supported on M32R/D. For more information, Please contact to Wind River Systems local sales offices.

Supported MCUs : 32-bit M32R/D Series

Real-time OS - 2

Vector Informatik GmbH http://www.vector-informatik.de/

Multitasking real-time operating system osCAN

- Economical multitasking RTOS, optimized for embedded control applications.
- Fully compliant with industrial standard OSEK/VDX V2.0.
- An optimized CAN driver for the internal CAN controller is provided. A complete set of communication modules, renown in the automotive industry, is available: for instance network management, transport protocols etc.
- Applications based on the CAN-bus are supported by an excellent tool chain.
- Worldwide support.
- No runtime royalties.

Supported MCUs : 16-bit M16C/6N Group 8-bit 740 Family 7630 Group, 7632 Group



Contact Information: Vector Informatik GmbH TEL: +49 711 139996-0 FAX: +49 711 139996-30 E-mail: can@vector-informatik.de http://www.vector-informatik.de/

Empower Corporation http://www.embeddedpower.com/

Real-time OS RTXC

- Royalty-free source code included
- RTXC has small ROM and RAM requirements
- ROMable and completely configurable
- · Single kernel/interrupt stack minimizes stack RAM usage
- RTXC supports M16C interrupt leveling
- Tight IAR compiler binding enhances kernel execution
- RTXC Characterization Suite provides complete testing on M16C
- Benchmark data available on M16C
- Includes board & processor specific sample applications
- Binding Manual specific to M16C and IAR compiler
- · Preemptive, time-sliced, and round-robin task scheduling
- Fixed or dynamically changeable task priorities
- Intertask communication/synchronization via semaphores, messages, queues
- RAM management through static and dynamic memory partitions
- Timeout capability on blocking actions
- Well-indexed 650-page User's Manual
- System level debug facility included
- Interactive system generation utility included
- Written primarily in ANSI C

Supported MCUs : 16-bit M16C/60 Series 16-bit M16C/20 Series



Contact Information:

U.S.: Empower Corporation TEL:+1-281-561-9990 FAX:+1-281-561-9980 E-mail: sales@embeddedpower.com http://www.embeddedpower.com/

Europe:

Empower Corporation Tel:+44-1256-474448 Fax:+44-1256-332032 E-mail: euro@embeddedpower.com http://www.embeddedpower.com/

Yokogawa Digital Computer Corporation http://www.ydc.co.jp/index_e.html

Emulator ADViCE

- General-purpose in-circuit emulator.
- Everything including memory area and interrupts are open to the user.
- Supports high speed emulation of internal ROM/RAMs.
- Prevents mistriggers caused by prefetches and delayed branching.
- Event setup function for maximum 6 points and 4 levels.
- Multiple point break conditions and powerful execution control.
- Formidable trace function with multiple measurement functions.
- Highly sophisticated debugger: microVIEW-G loaded.
- Powerful real-time OS support.



Source level debugger microVIEW-G

- microVIEW-G supports next generation ADViCE.
- Real time C source level debugger helps MPU design process.
- Hosted on windows 95/98/NT, Solaris, HP-UX.
- Ethernet, RS232C and GPIB flexible-connection.
- ADViCE and microVIEW-G support many kinds of MPU/MCU and Compiler/Assembler.
- microVIEW-G supports RTOS extensions.
- Supports RTOS for MR30 (for M16C/60, 20 Series) and MR32R (for M32R Family).

Supported MCUs : 32-bit M32Rx/D Series NEW

32-bit M32R/E Series NEW

32-bit M32R/I Series NEW

16-bit 7700 Family 77XX Series

16-bit M16C/80 Series

16-bit M16C/60 Series 16-bit M16C/20 Series 16-bit 7700 Family 7900 Series

8-bit 740 Family



Contact Information:

U.S. and Canada: Orion Instruments, Inc. 1376 Borregas Avenue, Sunnyvale, California 94089-1004 Tel: +1-408-747-0440 Fax: +1-408-747-0688 http://www.oritools.com/

Europe: Ashling Microsystems Limited National Technological Park, Limerick, Ireland Tel: +353-61-334466 Fax: +353-61-334477 http://www.ashling.com/

Other countries: Yokogawa Digital Computer Corporation E-mail: info@advice.ydc.co.jp http://www.ydc.co.jp/index_e.html

Yokogawa Digital Computer Corporation ht

http://www.ydc.co.jp/index_e.html

Emulator EZlyzer NEW

- Supports with no-wait up to MAX frequency.
- Everything including memory area and interruptions are available.
- EZlyzer supports M32R family internal on-chip debug SDI.
- Supports real-time memory access during program execution.
- Max 4MB ROM emulation memory.
- High level debugger: microVIEW-EZ.

Contact Information:

U.S. and Canada: Orion Instruments, Inc. 1376 Borregas Avenue, Sunnyvale, California 94089-1004 Tel: +1-408-747-0440 Fax: +1-408-747-0688 http://www.oritools.com/

Europe:

Ashling Microsystems Limited National Technological Park, Limerick, Ireland Tel: +353-61-334466 Fax: +353-61-334477 http://www.ashling.com/

Other countries: Yokogawa Digital Computer Corporation E-mail: info@advice.ydc.co.jp http://www.ydc.co.jp/index_e.html



Supported MCUs : 32-bit M32Rx/D Series 32-bit M32R/E Series NEW 32-bit M32R/I Series

Sophia Systems and Technology Corporation http://www.sophia.com/

Emulator MultiSTAC M16C/60, 61, 62, 6N, 80

- Supports Mitsubishi M16C/60, 80 Series microcontrollers (0.65mm and 0.5mm QFP packages)
- Real-time execution with 0 wait-states up to 20MHz
- 256Kbytes internal ROM and 64Kbytes internal RAM emulation memory is standard
- Access to Internal ROM/RAM and Special Function Registers displayed with real-time trace
- Unlimited software breakpoints available (within the Windows 95 memory limitation)
- Optional 1 Mbytes emulation memory can be allocated in 4-Kbyte blocks
- Easy access to target socket with Probe Extension Cable
- Display code Coverage, Profile, and Performance with optional CPA Unit
- WATCHPOINT high-level language debugger for Windows 95/ NT is included.
- IBM PC/AT or compatible and Notebook PC (with FB-100 interface) platforms supported

Supported MCUs : 16-bit M16C/80 Series 16-bit M16C/60 Series



Contact Information:

Sophia Systems and Technology Corporation 711B Charcot Avenue, San Jose, CA 95131 Tel:+1-408-943-9300 Fax:+1-408-943-9303 E-mail: sales@sophia.com http://www.sophia.com/

Ashling Microsystems Ltd.

http://www.ashling.com/

Emulator Ultra-M16C, Ultra-7700

- Real-time non-intrusive in-circuit emulators for Mitsubishi M16C and 7700 16-bit microcontroller families and their derivatives
- Source-level Debugger and integrated development environment hosted under Windows, Windows 95/98 and Windows NT
- Uniform environment supports editing, C compiling, assembling, in-circuit emulation and C source level debugging
- On-the-fly breakpoints, trigger set-up, trace display and data monitoring
- Performance Analysis and Code Coverage Measurement systems
- Interchangeable probe cards for all derivatives and packages, including on-chip Flash derivatives
- Support for all M16C and 7700 compilers and assemblers (Tasking, IAR and Mitsubishi)
- High-speed serial, USB or Ethernet interfaces to host
- Up to 16MB emulation (overlay) memory
- Dual-port RAM for on-the-fly variables monitoring
- Powerful, multi-buffer trace, with 6-level triggering
- Debugging support for Real-Time Operating Systems
- Developed in co-operation with Mitsubishi
- Stand-alone system, with universal power supply
- ISO 9001 certified supplier

Supported MCUs : 16-bit M16C/61 Group 16-bit M16C/62 Group 16-bit 7700 Family 77XX Series



Contact Information: International Headquarters: Ashling Microsystems Ltd. National Technological Park, Limerick, Ireland TEL: +353-61-334466 FAX: +353-61-334477 E-mail: sales.ie@ashling.com http://www.ashling.com/

U.S. and Canada:

Ashling Sales and Support Center Orion Instruments, Inc. 1376 Borregas Avenue, Sunnyvale, CA 94089-1004, USA Tel:+1-408-747-0440 (800-729-7700) Fax:+1-408-747-0688 E-mail: sales.usa@ashling.com http://www.ashling.com/

Nohau Corporation http://www.nohau.com/

Emulator EMUL M16C-PC

- On-Line Manual
- Windows User Interface
- Flexible trace triggers
- · Selective trace recording
- Performance Analysis
- Code Coverage
- PC Based
- Software and Hardware Breakpoints
- Full symbolic debugging
- Special Functions Register support
- Real-time emulation
- Window for source level debugging
- Macro Support

Supported MCUs : 16-bit M16C/60 Series



Contact Information: Nohau Corporation TEL: +1-408-866-1820 FAX: +1-408-378-7869 E-mail: sales@nohau.com http://www.nohau.com/

Diab-SDS http://www.diabsds.com/

Integrated development environment SingleStep NEW

SingleStep is an integrated debugging environment usable in D/E/I series of 32-bit RISC MCU M32R Family for embedded use. Owing to the SingleStep, developers of embedded systems can shorten the time-to-market of sophisticated and optimized applications and greatly reduce development cost.

- Integrated debugging environment by sophisticated GUI with high operability.
- Optimized program debugging.
- Simultaneous designing of H/W and S/W by Simulator.
- Networked emulation solutions offering scalable tool sets.
- Less project risk by RTOS integration.
- Automatic regression/unit testing by powerful scripting language

Supported MCUs: 32-bit M32R/D Series 32-bit M32R/E Series 32-bit M32R/I Series



Contact Information: Diah-SDS Tel: +1-650-356-5400 Fax: +1-650-356-5490 E-mail: jjs@ddi.com http://www.diabsds.com/

Agilent Technologies, Inc. http://www.agilent-tech.com/

Emulation solutions (E5900A, E5901A, E5902A, E5903A, 1660x, 1670x)

Under development

- You can debug the target CPU soldered on your target system.
- Transparent environment for a target
- Real time debug with high speed clock speed (Over 100MHz)
- External bus trace capability using Logic Analyzer
- I/O trace
- Analog signal and inversal assembler display
- Hardware and software integration tasks may be accomplished easily by using HP Emulation Solution User I/F
- You can obtain the program flow trace with the CPU cache turned on.



Supported MCUs : 32-bit M32Rx/D Series

Contact Information: U.S. and Canada: **Test and Measurement Call Center** P.O. Box 4026 Englewood, CO 80155-4026 Tel: +1-800-452-4844 http://www.agilent-tech.com/

Europe: **European Marketing Centre** P.O. Box 999 1180 AZ Amstelveen, The Netherlands Tel: +31-20-547-9900 http://www.agilent-tech.com/



Programmer

Yokogawa Digital Computer Corporation

ation http://www.ydc.co.jp/index_e.htm

Generic on-board flash micom programmer AF200

Perfectly satisfy your various needs. AF200, as an ideal generic tool, supports wide range of flash micoms. AF200, Programmer for Flash Micom, is a perfect tool to program diversified micoms with the flash memory soldered on the user system. AF200 supports new development and evaluation with remarkable features mentioned below.

• Universal Generic Programmer

Programs all kinds of micoms with flash memory simply by changing the control module.

• High Speed and High Capacity

Programs the target micom soldered on the user system efficiently. Shortens download and upload duration by storing object files in the DOS area of the control module.

Standalone

Edits the program data, screens the edited data and produces the edited data file (difference file from the original) as a standalone tool.

Control Module

- Generic Programmer (Definition Part for Programming) Expands the cover area by exchanging the control module and modifying the parameter.
 - Supports the different series micoms by exchanging the control module.
 - Supports the same series micoms by the parameter modification in the control module.

• DOS Area

High Speed download: The program and the edited data can be transferred a file with high speed between the host and AF200 through the DOS area in the PC card.

Supported MCUs : 32-bit M32R/E Series 16-bit M16C/80 Group NEW 16-bit M16C/62 Group 16-bit M16C/22 Group NEW 16-bit M16C/21 Group 16-bit M16C/20 Group 16-bit 7700 Family 7900 Series 7920 Group 16-bit 7700 Family 7900 Series 7902 Group



Contact Information: U.S. and Canada: Orion Instruments, Inc. 1376 Borregas Avenue, Sunnyvale, California 94089-1004 Tel: +1-408-747-0440 Fax: +1-408-747-0688 http://www.oritools.com/

Europe:

Ashling Microsystems Limited National Technological Park, Limerick, Ireland Tel: +353-61-334466 Fax: +353-61-334477 http://www.ashling.com/

Japan:

Yokogawa Digital Computer Corporation Instrument Division Tel: +81-42-333-6224 Fax: +81-42-352-6107 http://www.ydc.co.jp/index_e.html

Always something new about development support tools

Mitsubishi opened this site in order to provide Mitsubishi tool users with information more quickly. The contents of this homepage are constantly updated, so if you are looking for the latest information on Mitsubishi development support tools, visit here.



Mitsubishi MCU Technical Information Homepage

Mitsubishi Tool Documents

Mitsubishi publishes the below documents related to Mitsubishi microcomputer development support tools.



Microcomputer General Catalog

The Microcomputer Catalog introduces all Mitsubishi microcomputers. Functions, performance, transition of MCU core and general descriptions can be searched for by field of application. (Published annually)

Download

http://www.infomicom.mesc.co.jp/ . doclist/catalog.htm



Development Support Tool Catalog

The Development Support Tool Catalog introduces Mitsubishi and third party tools for Mitsubishi microcomputers. Most of the tool products are listed in this catalog. You are reading that catalog now. (Published annually)

Download

http://www.infomicom.mesc.co.jp/ doclist/catalog.htm



The Accessory Guide introduces MCU package

converters and other accessories for diverse microcomputer package variations. (Published annually)

Download

http://www.tool-spt.mesc.co.jp/ datsheet/prod_e.htm



The Semiconductor General

semiconductor products by

type name. This information

makes it possible to search for

anything from type names to

support tool products are also

products. Development

listed in this catalog.

(Published annually)

Catalog lists all the Mitsubishi

Microcomputer Catalog

Microcomputer catalogs introduce Mitsubishi's microcomputers in detail, giving features and functions for each MCU family. Information about development support tools is also contained.

Download

http://www.infomicom.mesc.co.jp/ doclist/catalog.htm





Microcomputer Data Sheets

Microcomputer Data Sheets provide technical information and explanations on basic performance including an overview, features and uses of microcomputer products.

Download

http://www.infomicom.mesc.co.jp/ doclist/list.htm

CD-ROM



Development Support Tool Data Sheets

Tool Data Sheets provide information on product configurations, overview, features and specifications of major tool products of each MCU family.

Download

http://www.tool-spt.mesc.co.jp/ datsheet/prod_e.htm

User Support

Operating Environment of Software Tool Products

	32-bit	16-bit		8-bit	4-bit	
	M32R Family	M16C Family	7700 Family	740 Family	4500 Series	720 Series
IBM PC/AT compatibles	Windows 98 Windows 95 Windows NT 4.0 *				DOS	

* Emulator debugger PDB77 (for emulator PC4816B) does not support Windows NT 4.0.

How to Purchase

To purchase the Mitsubishi development support tool products, contact your nearest distributor or Mitsubishi office.

How to Get Technical Assistance

■User Registration

Mitsubishi Electric Semiconductor Systems Corporation Microcomputer Software Support Tool Department

User Registration Office E-mail: regist@tool.mesc.co.jp or your nearest distributor FAX: +81-6-6338-4471 or your nearest distributor

Technical Support

Your nearest distributor or Mitsubishi office URL: http://www.tool-spt.mesc.co.jp/index_e.htm

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