AX51

- Op-Code Decoder Triggers on Internal Events
- Performance Analysis of User Software Code
- Code Coverage (256K)
- Extended Banking Supports Up to 16 Banks
- Sophisticated Trace Recording Using HLL Lines
- On-The-Fly Accesses Are a Standard Feature
- Special Function Registers Displayed in English
- HiTOP For Windows* User Interface
- Real-Time Emulation Up to 42 MHz
- Low Voltage Support
- Supports All Intel 8051 Microcontrollers

The AX51 emulator is very similar to the MX51 with added features and extended capabilities at a moderate cost increase. The AX51 adds Code Coverage and Performance Analysis to the MX51 feature list. Memory protection (for banked applications) is extended to 1 Mbyte. The Real Timer is implemented in hardware as it is in the MX51 and with the same 250 ns resolution. All other MX51 features are implemented on the AX51 as standard features.

The AX51 uses the same HiTOP for Windows user interface as all other Hitex products. HiTOP supports all major compiler vendors such as Archimedes, BSO/Tasking, Franklin, IAR and of course, Keil. HiTOP is a debugger optimized for using sophisticated emulation features as found in Hitex hardware.

Code Coverage is used to verify if certain code segments were executed during the emulation and is useful to find dead code. The AX51 can cover 256K of code at one time.

The Performance Analysis feature allows statistical analysis of your application code. A typical example is to examine how often a code's execution time fell

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Elle Deline Yiew Go Analyze Setup Options GPU Local Pane Window Help										
🛍 Instru	uction	-	ALL DESCRIPTION	<u>- 0 ×</u>	 Profile 					
BP PC	Address	CC Data	Mnemo	nic	No. ID Activity				Time	
	C:0x0445	6030	JZ	#169	1 BACKGRN	D 74 8			000:17.590	
	C:0x0447	2402	ADD	A, #2	2 descr	27 8			000:01.650	
L .	C:0x0449	7040	JNZ	#172	3 cntdwn	56 8 00000000000000000000000000000000000			000:03.400	
	#161	O 901016	MOV	DPTR, #1016	4 rol1	4 8			000:00.250	
	C:0x044E	0 7441	MOV	A,#41	5 t0isr	1 8			000:00.050	
	C:0x0450	O F0	MOVX	ØDPTR, A	6					
	#162	0 90101D	MOV	DPTR, #101D	Total time:			Bela	tive Started	
_	C:0x0454	0 7402	MOV	A,#2	Watch			1.1010		
					Ne	No ID Value			× 1012	
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					2 ant	2 ant 0x00000000 0		unaia	unsigned long	
BP PC Line # CC Source								unsig	unsigned rong	
154 / lb_lp1: roll_string(); 155 / if (counter % 4 == 0)								unsig	ned long	
					4 display "Initializing\0\0\0\0\0\0\0\0 \0 \ 0 \ 0 \ 0 \ 0 \					
		{					and the second second		•	
157 SmplStrct.switch_value										
158√ switch (SmplStrct.switch_value) /* different handl Magister										
			((PC = 0446 B3			CY = 1	
case 0:						DPTR = 1015 R4			AC = 1	
	If O Smplstrct.case_ABC = 'A'; Smplstrct.case_ABC = 'A';							S1 = 0		
1	162 O SmplStrct.scr_text = (char *) text						$\begin{array}{ccc} \text{ct} & \mathbf{B} &= 00 \\ \mathbf{R0} &= 00 \end{array}$	R7 = 00 BK = 00	S0 = 0 OV = 0	
	163 0		b	reak;	· · · · · · · · · · · · · · · · · · ·		R1 = 00		UF = 0	
Source file: EXAMPLE.C						Total Lines: 18	5	Que Ba		
P Memory (X:0x104D, 64 bytes, Byte)										
displ	aybuffer 4	9 6E 69 74	69 61	6C 69 7A 69 6	: 67 2E 2E 2E 00 Initializing			BH		
X:0x105D 00 00 00 00 00 00 00 00 00 00 00 00 00					0 00 00 00 00			= SF	-R - Ser 🗗 🗆 🗙	
X:0x1	06D 0		00 00		0 00 53 36 21	F 2F		- SF	R - Inte BOX	
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between certain time limits or to measure the length of an interrupt latency period.

The triggers used on both the MX51 and AX51 can occur on any type of memory access or by external events supplied by an optional logic probe. They can be used to stop the emulation, start/stop the real-time clock or trace function recording. Triggers can be sequenced with boolean operators. Triggers can be combined with breakpoints by using a Condition Program. This Condition Program can check register variables as well as local and global variables for certain values.

The AX51 uses the same small probes as the MX51 for added flexibility and upgradeability. Each probe is designed to emulate as many Intel 8051 variants as possible reducing the cost as new products are introduced.

MICROCONTROLLERS SUPPORTED:

8xC3x, 8xC5x, 8xC51Fx, 8xC51Rx, 8xC5xGx, 8xL5xFx

DEVELOPMENT PLATFORMS:

DOS, Windows 3.1, Windows 95, Windows NT

AVAILABILITY:

Now

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