

**TABLE 5—REPRESENTATIVE CAN-BASED MICROCONTROLLERS**

Company	Device	Description	ROM	EPROM	RAM	EEPROM	Flash	Timer	Serial I/Os	I/O ports	A/D inputs	PWM outputs	Package type	CAN function	Additional features
Intel Circle No. 339	87C196A	Integrated 16-bit microcontroller	32 kbytes OTP	None	1 kbyte, 256 bytes ¹	None	None	Two 16-bit timer/counters	UART synchronous serial I/O	38	8/10 bits, six channels	Six capture/compare event-processor arrays	68-pin PLCC	Complies with CAN 2.0B specification	Suits antilock-brake and engine-control systems
	87196CB	Integrated 16-bit controller	56 kbytes	None	1.5 kbytes 256 bytes ²	None	None	Two 16-bit timer/counters	UART synchronous serial I/O	56	8/10 bits, eight channels	10 capture/compare event-processor arrays	84-pin PLCC	Complies with CAN 2.0B specification	Features user-selectable 4× PLL clock multiplier
Mitsubishi Circle No. 340	M37630E/M4-xxxFP	8-bit microcontroller with on-chip BasicCAN	16,252 bytes	None	512 bytes	None	None	Two 16 bit, three 8 bit, watchdog	UART, clock synchronous	35	8 bits, eight channels	None	44-pin PLCC	Complies with CAN 2.0B specification; supports standard and extended data frames with 0- to 8-byte data length	To reduce power consumption, supports wait, stop, and CAN sleep modes
Motorola ³ Circle No. 341	68HC05X4	8-bit CAN microcontroller	4112 bytes	None	176 bytes	None	None	16 bits, one-input capture, one-output compare	None	16	None	None	28-pin SOIC	Features one transmitting and two receiving buffers	The CPU must handle all messages
	68HC705X4	8-bit CAN microcontroller	None	4112 bytes	176 bytes	None	None	16 bits, one-input capture, one-output compare	None	16	None	None	28-pin SOIC	Receives and transmits only on message-by-message basis	Suits body-control applications
	68HC05X16	8-bit CAN microcontroller	15,102 bytes	None	352 bytes	256 bytes	None	16 bits, two-input capture, two-output compare	SCI	32	8 bits, eight channels	8 bits, two channels	64-pin QFP	Receives and transmits only on message-by-message basis	Suits body-control applications
	68HC05X32	8-bit CAN microcontroller	31,232 bytes	None	528 bytes	256 bytes	None	16 bits, two-input capture, two-output compare	None	32	8 bits, eight channels	8 bits, two channels	64-pin QFP	Receives and transmits only on message-by-message basis	Suits body-control applications
	68HC705X32	8-bit CAN microcontroller	None	31,232 bytes	528 bytes	256 bytes	None	16 bits, two-input capture, two-output compare	SCI	32	8 bits, eight channels	8 bits, two channels	64-pin QFP	Receives and transmits only on message-by-message basis	Suits body-control applications
	68HC08AZ0	8-bit CAN microcontroller	None	None	1 kbyte	512 bytes	None	16 bits, two-input capture, two-output compare	SCI/SPI	23	8 bits, eight channels	8 bits, two channels	100-pin TQFP	Both the MC68HC08AZ and the MCHC908AZ families comply with CAN 2.0A and 2.0B specifications	Both target body-electronics, safety, and entertainment systems
	68HC08AZ16	8-bit CAN microcontroller	16 kbytes	None	512 bytes	512 bytes	None	16 bits, two-input capture, two-output compare	SCI/SPI	23	8 bits, eight channels	8 bits, two channels	64/44-pin QFP		
	68HC08AZ24	8-bit CAN microcontroller	24 kbytes	None	768 bytes	512 bytes	None	16 bits, two-input capture, two-output compare	SCI/SPI	23	8 bits, eight channels	8 bits, two channels	64/44-pin QFP		
	68HC08AZ32	8-bit CAN microcontroller	32 kbytes	None	768 bytes	512 bytes	None	16 bits, two-input capture, two-output compare	SCI/SPI	23	8 bits, eight channels	8 bits, two channels	64/44-pin QFP		
	68HC08AZ48	8-bit CAN microcontroller	48 kbytes	None	1.5 kbytes	768 bytes	None	16 bits, six-input capture, six-output compare	SCI/SPI	23	8 bits, 15 channels	8 bits, two channels	64-pin QFP		
NEC Electronics Circle No. 342	μPD780948	8-bit microcontroller with DCAN	60 kbytes masked	None	2 kbytes	256 bytes	60 kbytes (μPD78F0948)	Five 16 bit	Two-wire, three-wire, and UART	79	8 bits, eight channels	14 bits	80-pin PQFP	Supports CAN 2.0B for 11- or 29-bit-identifier	Features valid-protocol-activity detection for automatic baud-rate detection
Siemens Circle No. 343	C505C	8-bit microcontroller with CAN capability	16 kbytes	None	256 bytes internal, 256 bytes extended	None	None	Three 16-bit timer/counters	USART and synchronous serial port	34	8 bits, eight channels	Four channels	44-pin PQFP, MQFP	Supports CAN 2.0B active with 15 message objects and BasicCAN feature	A/D converter inputs can be used as digital I/O, suits body electronics
	C515C	Multipurpose microcontroller with on-chip FullCAN module	64 kbytes	None	256 bytes internal, 2 kbytes extended	None	None	Three 16-bit timer/counters	Synchronous serial interface with SPI compatibility	49	10 bits, eight channels	Four channels	80-pin PQFP, MQFP	Supports CAN 2.0B active with 15 message objects and BasicCAN feature	Suits car-radio applications
	C164CI	General-purpose, high-performance microcontroller	64 kbytes OTP	None	2 kbytes	None	None	Three 16 bit	Synchronous/asynchronous	59	10 bits, eight channels	16 bits capture/compare, three/six channels	80-pin MQFP	Supports CAN 2.0B active	Features four programmable chip-select signals
	C167R	16-bit microcontroller with on-chip CAN module	None	None	2 kbytes internal, 2 kbytes extended	None	128 kbytes	Five 16 bit	Synchronous/asynchronous	111	10 bits, 16 channels	Two 16-channel capture/compare	144-pin MQFP	Supports CAN 2.0B active with 15 message objects and Basic CAN feature	Suits gateway functions
STMicro-electronics Circle No. 344	ST10F167	16-bit microcontroller with CAN 2.0B	None	None	None	None	128 kbytes	Five 16 bit	USART and synchronous serial port	111	10 bits, 16 channels	Four channels	144-pin TQFP	Supports CAN 2.0B for 11- or 29-bit identifier	Features 8/16-bit external bus interface with five chip selects

Notes:
¹ 1 kbyte on-chip register RAM, 256 bytes on-chip code RAM.
² 1.5 kbytes on-chip register RAM, 256 bytes on-chip code RAM.
³ Contact Motorola for information on other available microcontrollers.