

Who's Controlling Your World?

P.O. Box 455
 Osceola, MO 64776

MICROCONTROLLERS

The NCD Series Preprogrammed Microcontrollers can be found in control applications all over the world. Our microcontrollers have a proven reputation for reliability and simplicity, offering an off-the-shelf solution for your OEM product.

Our extensive line of preprogrammed microcontrollers offer your corporation, university, or small business a cost competitive edge by significantly reducing design time and engineering costs.

NCD Microprocessors have been available since 1994 and our product line is always growing. With our extensive collection of CPUs already in daily operation all over the world, our product line is here to stay and to grow with all of your computer control needs.

NCD Supported CPU Families

CPU	Pins	Speed	Package
PIC12C671/672	8	INT, 4 MHz*	DIP/SOIC
PIC16C54A	18	4 MHz*	DIP/SOIC
PIC16C71	18	<=4 MHz*	DIP/SOIC
PIC16C554A	18	4 MHz*	DIP/SOIC
PIC16C62	18	<=20 MHz	DIP/SOIC
PIC16C715	18	<= 20 MHz	DIP/SOIC
PIC16C73B	28	<= 20 MHz	DIP
PIC16C74B	40	<=20 MHz	DIP
PIC16C77B	40	<=20 MHz	DIP
PIC17C42	40	<=16 MHz	DIP
PIC17C43	40	<=20 MHz	DIP
PIC17C44	40	<=20 MHz	DIP
PIC17C756	68	<=33 MHz	PLCC

INT=Internal Oscillator, *=OK to Over-clock at 8 MHz.



**Preprogrammed Microcontrollers
 for Advanced Control Applications**

Absolute Maximum Ratings

Normal Operating Conditions	Minimum	Typical	Maximum
V+ Supply Voltage	3 Volts	5 Volts	6.25 Volts
Supply Current at 4 MHz		2 ma	3.6 ma
Supply Current at 2 MHz		.4 ma	.9 ma
Supply Current at 500 KHz		.2 ma	.7 ma
Input Low Voltage Ground	Ground		.15 Volts
Input High Voltage	.6 Volts		V+
Output Low Voltage			.5 Volts
Output High Voltage	V+ -.5 Volts		
Single Pin Current Draw			20 ma
Current Draw from all Pins			40 ma

Static Sensitivity

NCD Preprogrammed microcontrollers are static sensitive. Neutralize static in your body by touching a grounded surface BEFORE handling.

Returns

NCD Preprogrammed microcontrollers cannot be returned or replaced if the original sealed packaging is broken.

Firmware Errors

While every precaution has been taken to prevent firmware errors, it is possible for minor bugs to escape our testing procedures. Unless otherwise noted, we do not accept ANY responsibility for firmware errors that may be discovered by our users. We will make every effort to update the firmware to correct the problem for future purchases. However, devices cannot be returned for refund or exchange based on firmware errors.

Firmware Upgrade Policy

We currently do not offer any price breaks for firmware upgrades of any kind.

Prototyping

DO NOT USE NCD MICROCONTROLLERS ON A BREADBOARD, DEVICE FAILURE MAY OCCUR. Breadboards often disrupt the oscillator lines resulting in unreliable operation and in most cases, device failure. Only Byte Bugs that do not rely on an external oscillator may be prototyped on a breadboard. All other devices require the use of a solder-based prototyping board. We recommend the use of IC sockets when prototyping. External crystals or resonators must be soldered as close to the oscillator lines as possible.

Monitoring

Never monitor the oscillator lines of an NCD preprogrammed microcontroller with an oscilloscope. Doing may damage the device permanently.

Technical Support

Technical support is only available via e-mail: ncdryan@aol.com

