



PIC16C57 → PIC16C57C Migration

DEVICE MIGRATIONS

This document is intended to describe the functional differences and the electrical specification differences that are present when migrating from one device to the next.

Note: Even though compatible devices are specified to be tested to the same electrical specification, the characteristics of the devices may be different from each other (due to process difference). For systems that were designed to the device specifications, these process differences should not cause any issues in the application. For systems that did not tightly meet the electrical specifications, the process differences may cause the device to behave differently in the application.

Table 1 shows the considerations that must be taken into account when migrating from the PIC16C57 to the PIC16C57C.

TABLE 1: PIC16C57 → PIC16C57C DIFFERENCES

Functional Differences				
No.	Difference	H/W	S/W	Prog.
1	Master Clear Filter added, PIC16C57C. See Electrical Specification #30	✓	—	—
2	Programming algorithm change, PIC16C57C uses a new programming algorithm	—	—	✓
3	Oscillator configuration bits are user selectable on the PIC16C57C	—	✓	—

Electrical Specification Differences

Parm. No.	Sym.	Characteristic	PIC16C57 Data Sheet			PIC16C57C Data Sheet			Units	Conditions	
			Min	Typ	Max	Min	Typ	Max			
	VDD	Supply Voltage									
		XT, RC Options	3.0	—	6.25	3.0	—	5.5	V	Note 4	
		LP Option	2.5	—	6.25	2.5	—	5.5	V		
		HS option	4.5	—	5.5	4.5	—	5.5	V		
		XT, RC Opt. Extended	3.25	—	6.0	3.0	—	5.5	V	Note 4	
LP Option Extended	2.5	—	6.0	3.0	—	5.5	V				
	IDD	Supply Current									
		XT and RC options	—	1.8	3.3	—	1.8	2.4	mA	Note 1	
		HS option	—	4.8	10	—	4.5	16	mA	Note 2	
		LP Option, Commercial	—	15	32	—	14	32	μA	Note 3	
		LP Option, Industrial	—	15	40	—	17	40	μA	Note 3	
	IPD	Power Down Current									
		Industrial	—	4.0	14	—	4.0	14	μA	VDD=3.0V WDT Enabled	
			—	0.6	12.0	—	0.25	5.0	μA	WDT Disabled	
		Extended	—	5.0	22	—	4.5	22	μA	WDT Enabled	
			—	0.8	18	—	0.3	18	μA	WDT Disabled	
	VIL	Input Low Voltage									
		I/O Ports	VSS	—	0.2 VDD						4.0V < VDD ≤ 5.5V For all VDD
					VSS	—	0.8	V		4.5V < VDD ≤ 5.5V	
					VSS	—	0.15 VDD	V		Otherwise	
	VIH	Input High Voltage									
		I/O Ports	2.0	—	VDD						4.0V < VDD ≤ 5.5V For all VDD
			0.45 VDD	—	VDD						4.5V < VDD ≤ 5.5V
					2.0	—	VDD	V		Otherwise	
					0.25 VDD + .8V	—	VDD	V			

Note 1: FOSC=4.0MHz, VDD=5.5V

2: FOSC=20MHz, VDD=5.5V

3: FOSC=32kHz, VDD=3.0V, WDT disabled

4: The LP oscillator option is specified for the PIC16C55 up to 40kHz.

Note: If you change from one device to another device, please verify oscillator characteristics in your application.

NOTES:



MICROCHIP

WORLDWIDE SALES AND SERVICE

AMERICAS

Corporate Office

Microchip Technology Inc.
2355 West Chandler Blvd.
Chandler, AZ 85224-6199
Tel: 480-786-7200 Fax: 480-786-7277
Technical Support: 480-786-7627
Web Address: <http://www.microchip.com>

Atlanta

Microchip Technology Inc.
500 Sugar Mill Road, Suite 200B
Atlanta, GA 30350
Tel: 770-640-0034 Fax: 770-640-0307

Boston

Microchip Technology Inc.
5 Mount Royal Avenue
Marlborough, MA 01752
Tel: 508-480-9990 Fax: 508-480-8575

Chicago

Microchip Technology Inc.
333 Pierce Road, Suite 180
Itasca, IL 60143
Tel: 630-285-0071 Fax: 630-285-0075

Dallas

Microchip Technology Inc.
4570 Westgrove Drive, Suite 160
Addison, TX 75248
Tel: 972-818-7423 Fax: 972-818-2924

Dayton

Microchip Technology Inc.
Two Prestige Place, Suite 150
Miamisburg, OH 45342
Tel: 937-291-1654 Fax: 937-291-9175

Detroit

Microchip Technology Inc.
Tri-Atria Office Building
32255 Northwestern Highway, Suite 190
Farmington Hills, MI 48334
Tel: 248-538-2250 Fax: 248-538-2260

Los Angeles

Microchip Technology Inc.
18201 Von Karman, Suite 1090
Irvine, CA 92612
Tel: 949-263-1888 Fax: 949-263-1338

New York

Microchip Technology Inc.
150 Motor Parkway, Suite 202
Hauppauge, NY 11788
Tel: 631-273-5305 Fax: 631-273-5335

San Jose

Microchip Technology Inc.
2107 North First Street, Suite 590
San Jose, CA 95131
Tel: 408-436-7950 Fax: 408-436-7955

AMERICAS (continued)

Toronto

Microchip Technology Inc.
5925 Airport Road, Suite 200
Mississauga, Ontario L4V 1W1, Canada
Tel: 905-405-6279 Fax: 905-405-6253

ASIA/PACIFIC

Hong Kong

Microchip Asia Pacific
Unit 2101, Tower 2
Metroplaza
223 Hing Fong Road
Kwai Fong, N.T., Hong Kong
Tel: 852-2-401-1200 Fax: 852-2-401-3431

Beijing

Microchip Technology, Beijing
Unit 915, 6 Chaoyangmen Bei Dajie
Dong Erhuan Road, Dongcheng District
New China Hong Kong Manhattan Building
Beijing 100027 PRC
Tel: 86-10-85282100 Fax: 86-10-85282104

India

Microchip Technology Inc.
India Liaison Office
No. 6, Legacy, Convent Road
Bangalore 560 025, India
Tel: 91-80-229-0061 Fax: 91-80-229-0062

Japan

Microchip Technology Intl. Inc.
Benex S-1 6F
3-18-20, Shinyokohama
Kohoku-Ku, Yokohama-shi
Kanagawa 222-0033 Japan
Tel: 81-45-471-6166 Fax: 81-45-471-6122

Korea

Microchip Technology Korea
168-1, Youngbo Bldg. 3 Floor
Samsung-Dong, Kangnam-Ku
Seoul, Korea
Tel: 82-2-554-7200 Fax: 82-2-558-5934

Shanghai

Microchip Technology
Unit B701, Far East International Plaza,
No. 317, Xianxia Road
Shanghai, 200051 P.R.C.
Tel: 86-21-6275-5700 Fax: 86-21-6275-5060

ASIA/PACIFIC (continued)

Singapore

Microchip Technology Singapore Pte Ltd.
200 Middle Road
#07-02 Prime Centre
Singapore 188980
Tel: 65-334-8870 Fax: 65-334-8850

Taiwan, R.O.C

Microchip Technology Taiwan
10F-1C 207
Tung Hua North Road
Taipei, Taiwan, ROC
Tel: 886-2-2717-7175 Fax: 886-2-2545-0139

EUROPE

United Kingdom

Arizona Microchip Technology Ltd.
505 Eskdale Road
Winkersham Triangle
Wokingham
Berkshire, England RG41 5TU
Tel: 44 118 921 5858 Fax: 44-118 921-5835

Denmark

Microchip Technology Denmark ApS
Regus Business Centre
Lautrup hof 1-3
Ballerup DK-2750 Denmark
Tel: 45 4420 9895 Fax: 45 4420 9910

France

Arizona Microchip Technology SARL
Parc d'Activite du Moulin de Massy
43 Rue du Saule Trapu
Batiment A - 1er Etage
91300 Massy, France
Tel: 33-1-69-53-63-20 Fax: 33-1-69-30-90-79

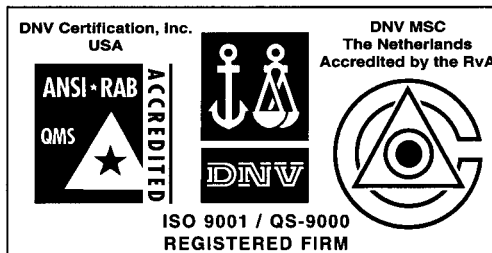
Germany

Arizona Microchip Technology GmbH
Gustav-Heinemann-Ring 125
D-81739 München, Germany
Tel: 49-89-627-144 0 Fax: 49-89-627-144-44

Italy

Arizona Microchip Technology SRL
Centro Direzionale Colleoni
Palazzo Taurus 1 V. Le Colleoni 1
20041 Agrate Brianza
Milan, Italy
Tel: 39-039-65791-1 Fax: 39-039-6899883

11/23/99



Microchip received QS-9000 quality system certification for its worldwide headquarters, design and wafer fabrication facilities in Chandler and Tempe, Arizona in July 1999. The Company's quality system processes and procedures are QS-9000 compliant for its PICmicro® 8-bit MCUs, KEELOC® code hopping devices, Serial EEPROMs and microperipheral products. In addition, Microchip's quality system for the design and manufacture of development systems is ISO 9001 certified.

All rights reserved. © 1999 Microchip Technology Incorporated. Printed in the USA. 12/99 Printed on recycled paper.

Information contained in this publication regarding device applications and the like is intended for suggestion only and may be superseded by updates. No representation or warranty is given and no liability is assumed by Microchip Technology Incorporated with respect to the accuracy or use of such information, or infringement of patents or other intellectual property rights arising from such use or otherwise. Use of Microchip's products as critical components in life support systems is not authorized except with express written approval by Microchip. No licenses are conveyed, implicitly or otherwise, under any intellectual property rights. The Microchip logo and name are registered trademarks of Microchip Technology Inc. in the U.S.A. and other countries. All rights reserved. All other trademarks mentioned herein are the property of their respective companies.