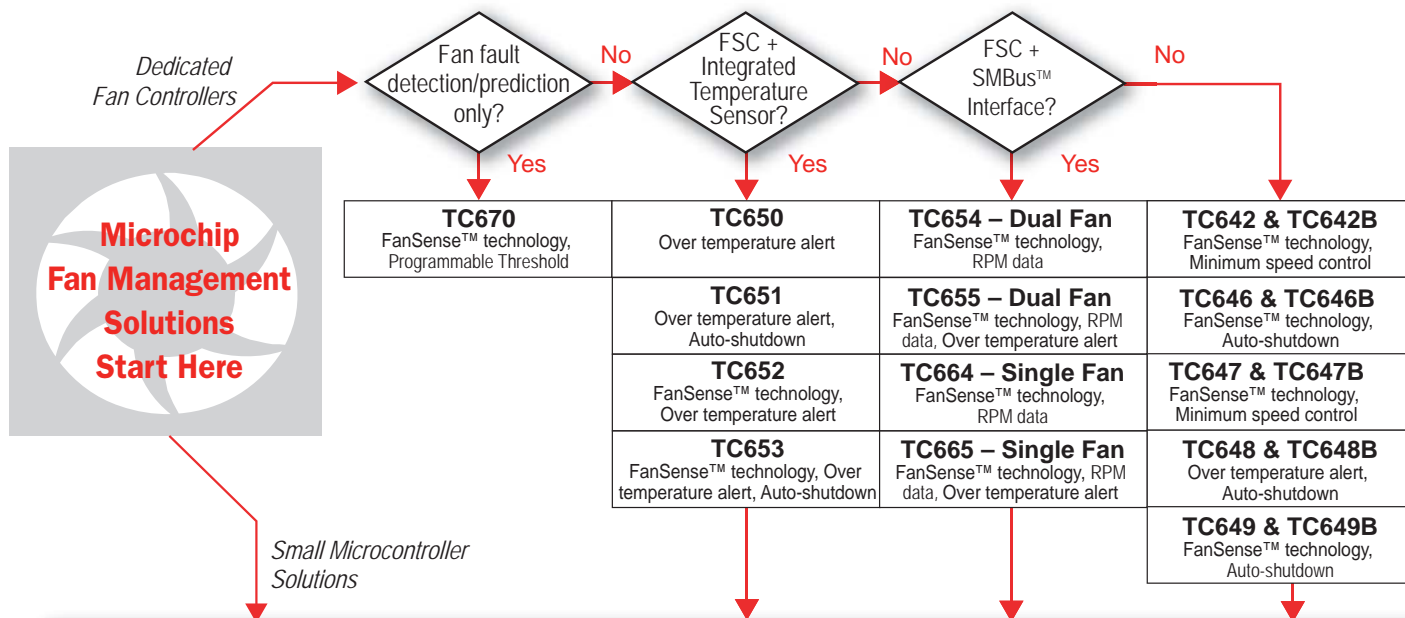


Fan Management Solutions

Microchip Technology offers design engineers a broad portfolio of products for Fan Speed Control (FSC) and Fan Fault Detection Solutions. The dedicated fan controller products are ideal for analog engineers since there is no firmware development required resulting in faster time to market. Some of these devices also feature onboard temperature sensor options in small space saving packages such as MSOP and SOT-23. For additional specialized requirements, flexibility and individual control over multiple fans, Microchip's range of small PIC® microcontrollers enables designers to customize designs to meet their requirements.



	Program Memory (bytes)	RAM (bytes)	EEPROM (bytes)	Sense Peripherals	Communication Peripherals	Control Peripherals
8-Pin PIC Microcontrollers						
PIC12C508/509	768/1536	25/41	–	–	–	–
PIC12F629	1792	64	128	1x Compare	–	–
PIC12F675	1792	64	128	1x Compare, 4x 10-bit A/D	–	–
PIC12F683	3584	128	256	1x Compare, 4x 10-bit A/D	–	Capture Compare PWM
14-Pin PIC Microcontrollers						
PIC16F630	1792	64	128	1x Compare	–	–
PIC16F676	1792	64	128	1x Compare, 8x 10-bit A/D	–	–
PIC16F684	3584	128	256	2x Compare, 8x 10-bit A/D	–	Enhanced Capture Compare PWM
18/20-Pin PIC Microcontrollers						
PIC16F716	3584	128	–	4x 8-bit A/D	–	Enhanced Capture Compare PWM
PIC16F627A/628A	1792/3584	224/224	128/128	2x Compare	–	Capture Compare PWM
PIC16F818/819	1792/3584	128/256	128/256	5x 10-bit A/D	I ² C™, SPI Interface	Capture Compare PWM



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Additional Information

Application Notes:

- AN764 - *Implementing Temperature-Based Variable Fan Speed Control in NLX Power Supplies*, DS00764
- AN768 - *Redundant Fan Systems Using the TC647 Fan Manager*, DS00768
- AN770 - *Linear Voltage Fan Speed Control Using Microchip's TC64X Family*, DS00770
- AN771 - *Suppressing Acoustic Noise in PWM Fan Speed Control Systems*, DS00771
- AN772 - *Speed Error in PWM Fan Control Systems*, DS00772
- AN893 - *Low-cost Bidirectional Brushed DC Motor Control using the PIC16F684*, DS00893

Technical Briefs:

- TB063 - *An Integrated Fan Speed Control Solution Can Lower System Costs, Reduce Acoustic Noise, Power Consumption and Enhance System Reliability*, DS91063
- TB064 - *Intelligent Thermal Management Using Brushless DC Fans*, DS91064

Design Guides:

- *Fan Control Function Pack Design Guide* - This 8-page booklet gives diagrams and design examples for a number of applications that extend fan life, reduce acoustic noise, minimize power consumption and increase system uptime. (DS21835)
- *PICmicro® CCP and ECCP Tips 'n Tricks* - The ECCP and CCP modules on the PIC® microcontrollers are capable of performing a wide variety of tasks. This document describes some of the basic guidelines to follow when using these modules in each mode, as well as give suggestions for practical applications. (DS41214)

Demonstration/Evaluation Boards and User Guides:

Microchip offers a number of boards, along with User Guides, to help evaluate device families. Contact your local Microchip Sales Office for more information.

- TC642 Fan Control Demo Board - This fan control circuit board allows the user to quickly evaluate and prototype Microchip's TC64X and TC64XB Pulse Width Modulation (PWM) Fan Control ICs. (User's Guide, DS21401)
- TC642 Fan Control Evaluation Board - This fully assembled 4" x 6" circuit board allows the user to evaluate and prototype fan control circuits based on Microchip's TC64X and TC64XB DC brushless fan controllers. (User's Guide, DS21403)
- TC650 Fan Control Demo Board - An evaluation tool that allows the user to quickly prototype fan control circuits based on Microchip's TC650 or TC651 Pulse Width Modulation (PWM) Fan Control ICs. (User's Guide, DS51304)
- TC652 Fan Control Demo Board - An evaluation tool that allows the user to quickly prototype fan control circuits based on Microchip's TC652 or TC653 Pulse Width Modulation (PWM) Fan Control ICs. (User's Guide, DS21506)
- TC670 Fan Speed Sensor Demo Board - An evaluation tool that provides an optimal way to evaluate the TC670 integrated fan speed sensor. (User's Guide, DS51273)

General:

- *2006 Product Line Card*, DS00890
- *Microchip Product Selector Guide*, DS00148
- *Stand-Alone Analog and Interface Solutions*, DS21060

Samples/Purchasing Information

- Online Sampling: www.sample.microchip.com
- Online Purchasing: www.microchipdirect.com
- Technical Training: www.microchip.com/training



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www.microchip.com/analog

Visit our web site for additional product information and to locate your local sales office.

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