

1.0 dsPIC30F PRODUCT FAMILIES

1.1 General Purpose Family

The dsPIC30F General Purpose Family (Table 1-1) is ideal for a wide variety of 16-bit MCU embedded applications. The variants with codec interfaces are well suited for audio applications.

TABLE 1-1: dsPIC30F GENERAL PURPOSE FAMILY VARIANTS

Device	Pins	Program Memory		SRAM Bytes	EEPROM Bytes	Timer 16-bit	Input Capture	Output Compare Std. PWM	Codec Interface	A/D 12-bit 200 ksp/s	UART	SPI™	I ² C™	CAN	I/O Pins (Max.) ⁽¹⁾	Packages ⁽²⁾
		Bytes	Instructions													
dsPIC30F3014	40/44	24K	8K	2048	1024	3	2	2	—	13 ch	2	1	1	—	30	PG, PT
dsPIC30F4013	40/44	48K	16K	2048	1024	5	4	4	AC'97, I2S	13 ch	2	1	1	1	30	PG, PT
dsPIC30F5011	64	66K	22K	4096	1024	5	8	8	AC'97, I2S	16 ch	2	2	1	2	52	PT
dsPIC30F6011 ⁽³⁾ dsPIC30F6011A	64	132K	44K	6144	2048	5	8	8	—	16 ch	2	2	1	2	52	PF, PT
dsPIC30F6012 ⁽³⁾ dsPIC30F6012A	64	144K	48K	8192	4096	5	8	8	AC'97, I2S	16 ch	2	2	1	2	52	PF, PT
dsPIC30F5013	80	66K	22K	4096	1024	5	8	8	AC'97, I2S	16 ch	2	2	1	2	68	PT
dsPIC30F6013 ⁽³⁾ dsPIC30F6013A	80	132K	44K	6144	2048	5	8	8	—	16 ch	2	2	1	2	68	PF, PT
dsPIC30F6014 ⁽³⁾ dsPIC30F6014A	80	144K	48K	8192	4096	5	8	8	AC'97, I2S	16 ch	2	2	1	2	68	PF, PT

- Note 1:** Maximum I/O pin count includes pins shared by the peripheral functions.
Note 2: All 28- and 40-pin devices may be offered in ML packages in the future, depending on die size.
Note 3: This device is not recommended for new designs..

1.2 Motor Control and Power Conversion Family

These variants of dsPIC30F controllers (Table 1-2) support a variety of motor control applications such as brushless DC motors, single and 3-phase induction

motors, and switched reluctance motors. They are also well suited for Uninterrupted Power Supply (UPS), inverters, switched mode power supplies and power factor correction, and also for controlling the Power Management module in servers, telecommunication equipment and other industrial equipment.

TABLE 1-2: dsPIC30F MOTOR CONTROL AND POWER CONVERSION FAMILY VARIANTS

Device	Pins	Program Memory		SRAM Bytes	EEPROM Bytes	Timer 16-bit	Input Capture	Output Compare/Std. PWM	Motor Control PWM	A/D 10-bit 1 Msps	Quad Enc.	UART	SPI™	I ² C™	CAN	I/O Pins (Max.) ⁽¹⁾	Packages ⁽²⁾
		Bytes	Instructions														
dsPIC30F2010	28	12K	4K	512	1024	3	4	2	6 ch	6 ch	1	1	1	1	—	20	SOG, PG, ML
dsPIC30F3010	28	24K	8K	1024	1024	5	4	2	6 ch	6 ch	1	1	1	1	—	20	SOG, PG
dsPIC30F4012	28	48K	16K	2048	1024	5	4	2	6 ch	6 ch	1	1	1	1	1	20	SOG, PG
dsPIC30F3011	40/44	24K	8K	1024	1024	5	4	4	6 ch	9 ch	1	2	1	1	—	30	PG, PT
dsPIC30F4011	40/44	48K	16K	2048	1024	5	4	4	6 ch	9 ch	1	2	1	1	1	30	PG, PT
dsPIC30F5015	64	66K	22K	2048	1024	5	4	4	8 ch	16 ch	1	1	2	1	1	52	PT
dsPIC30F6015	64	144K	48K	8192	4096	5	8	8	8 ch	16 ch	1	2	2	1	2	52	PT
dsPIC30F6010 ⁽³⁾ dsPIC30F6010A	80	144K	48K	8192	4096	5	8	8	8 ch	16 ch	1	2	2	1	2	68	PF, PT

- Note 1:** Maximum I/O pin count includes pins shared by the peripheral functions.
Note 2: All 28- and 40-pin devices may be offered in ML packages in the future, depending on die size.
Note 3: This device is not recommended for new designs.

dsPIC30F

1.3 Sensor Family

The dsPIC30F Sensor Family products (Table 1-3) have features that support high-performance, low-cost embedded control applications. The 18- and 28-pin packages are designed to fit space-critical applications.

TABLE 1-3: dsPIC30F SENSOR PROCESSOR FAMILY VARIANTS

Device	Pins	Program Memory		SRAM Bytes	EEPROM Bytes	Timer 16-bit	Input Capture	Output Compare Std. PWM	A/D 12-bit 200 Ksps	UART	SPI™	I ² C™	I/O Pins (<Max.) ⁽¹⁾	Packages ⁽²⁾
		Bytes	Instructions											
dsPIC30F2011	18	12K	4K	1024	0	3	2	2	8 ch	1	1	1	12	SOG, PG
dsPIC30F3012	18	24K	8K	2048	1024	3	2	2	8 ch	1	1	1	12	SOG, PG
dsPIC30F2012	28	12K	4K	1024	0	3	2	2	10 ch	1	1	1	20	SOG, PG
dsPIC30F3013	28	24K	8K	2048	1024	3	2	2	10 ch	2	1	1	20	SOG, PG

- Note 1:** Maximum I/O pin count includes pins shared by the peripheral functions.
Note 2: All 28- and 40-pin devices may be offered in ML packages in the future, depending on die size.

1.4 Product Identification System

Figure 1-1 illustrates the part number structure.

To order or obtain information (e.g., on pricing or delivery), refer to the factory or a listed sales office (sales offices and locations are listed in the back of this document).

FIGURE 1-1: PART NUMBER STRUCTURE

