



BLDC Motor MCU Series										
Part No.	VDD (V)	ROM (Bit)	RAM (Byte)	I/O	ADC	PWM	CMP.	Package	Interface	Temperature
<b>EMTF213</b>	3.0~5.5	4K*16	304	18	12bit*7 260ksps	16bit*6	2	20 TSSOP / QFN 14 TSSOP	-	-40 °C ~ 85°C
<b>EMTF551</b>	3.0~5.5	8K*16	1K*16	26	12bit*8 666ksps	16bit*8	1	24 SSOP 32 LQFP/QFN	UART/SPI/I2C	-40°C ~ 105°C
<b>EMTF650</b>	2.7~5.5	16K*16	2K*16	41	12bit*20 760ksps	16bit*8	3	48 LQFP/QFN	UART/SPI/I2C	-40°C ~ 105°C

Remark :

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WDT=Watchdog Timer

\* = Under Development

OP=Operational Amplifier

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LVR=Low Voltage Reset

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ERIC=External R Internal C

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PLL=Phase Locked Loop



F7XX series(Win™)Flash ADC Type with EEPROM (Industrial Grade)														
Part No.	VDD (V)	ROM (Bit)	RAM (Byte)	EEPROM (Byte)	I/O	Timer	ADC	PWM	LCD LED	CMP. (OP)	I/F	Package	Special Function	ICE
EM78F734N	2.2 ~ 5.5	4K*13	144	128	18	16-bit*1 8-bit*1	12-bit*8	8-bit*1 (TC3)		-	-	16 DIP/SOP/SSOP 18 DIP / SOP 20 DIP/SOP/SSOP	LVR/PDO/ TBRD/ Capture	ED734N + UBRG
EM88F752N	2.1 ~ 5.5	2K*15	304	Programmable IAP	18	8-bit*1 16-bit (Cascade)	12-bit*8	10-bit*2	LED* 14~18	-	I2C	16 DIP/SOP/SSOP 20 DIP/SOP/SSOP	LVR/PDO/ TBRD/TBWR Enhance Protect	ED752N + UBRG
EM88F758N	1.9~5.5	8K*15	560	256	42	8bit*4 16bit (cascade)	12bit*8	10bit*2	LED* 18~42	-	SPI I2C	20 SOP 28 SOP/SSOP/SKDIP 32 SOP 40 QFN 44 LQFP	LVR/LVD/BOR TBRD/TBWR Enhance Protect	ED758N + UBRG
EM88F711N (NEW)*	2.2 ~ 5.5	1K*16	112	-	12	8-bit*1	12bit*8	10bit*2		-	UART	10 MSOP 14 DIP/SOP	LVR/LVD/TBR D Enhance Protect	ED712N + UBRG
EM88F712N (NEW)*	2.2 ~ 5.5	2K*16	176	-	18	8-bit*1	12-bit*12	10bit*2		1	UART SPI	16 SOP/SSOP 20 SOP/SSOP	LVR/LVD/ TBRD Enhance Protect	ED712N + UBRG
EM88F715N (NEW)*	2.2 ~ 5.5	4K*16	304	-	26	8bit*4 16bit (cascade)	12bit*16	16bit*3		1	UART SPI I2C	20 SOP/SSOP 24 SOP/SSOP 28 SOP/SSOP	LVR/LVD/ TBRD Enhance Protect	ED715N + UBRG
EM85F765N (NEW)*	2.4 ~5.5	18K*8	1024	Programmable IAP	26	16-bit*4 RTC	12bit*19	16bit*3	LED*8	1(1)	I2C SPI UART	20 SSOP 24 SSOP 28 SSOP	LVR/LVD	ED765N + UBRG
EM85F789N (NEW)*	2.4 ~5.5	18K*8	1024	Programmable IAP	46	16-bit*4 RTC	12bit*26	16bit*3	LED8*8 LCD4*32 LCD8*28	2(1)	I2C SPI UART	48 LQFP	LVR/LVD	ED789N + UBRG

Note: \* 2017Q1



F66x series(Win™)Flash ADC Type with EEPROM (Industrial Grade)													
Part No.	VDD (V)	ROM (Bit)	RAM (Byte)	EEPROM (Byte)	I/O	Timer	ADC	PWM	CMP. (OP)	I/F	Package	Special Function	ICE
EM78F661N	2.2 ~ 5.5	1K*13	48	128	14	8-bit*2	10-bit*6	8-bit*1 (TC3)	1	-	10 MSOP 14 SOP 16 DIP / SOP	LVR/PDO/ TBRD	UIT660N + UICE
EM78F662N	2.2 ~ 5.5	2K*13	144	128	18	8-bit*2 16-bit*1	10-bit*8	8-bit*1 (TC3)	1	-	16 DIP / SOP 18 DIP / SOP 20 DIP / SOP	LVR/PDO/ TBRD/ Capture	UIT660N + UICE
EM78F664N	2.2 ~ 5.5	4K*13	144	256	25	8-bit*3 10-bit*2 (PWM1,2) 16-bit*1	10-bit*8	8-bit*1 (TC3) 10-bit*2	1	UART SPI	24 SDIP / SOP 28 SDIP / SOP 32 QFN	LVR/PDO/ TBRD/ Capture/ Window	UIT660N + UICE
EM78F665N	2.4 ~ 5.5	4K*15	304	128	30	8-bit*2 10-bit*2 (PWMA, B)	12-bit*8	8-bit*1 (TC3) 10-bit*2	-	I2C	28 SDIP / SOP 32 QFN	LVR/PDO/ TBRD	UIT660N + UICE
EM78F668N	2.4 ~ 5.5	8K*15	304	256	40	8-bit*2 10-bit*2 (PWMA, B) 16-bit*1	12-bit*8	8-bit*1 (TC3) 10-bit*2	2	UART SPI I2C	28 SDIP / SOP 40 DIP 44 QFP	LVR/PDO/ TBRD/ Capture/ Window/ LVD	UIT660N + UICE

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F64x series(Win™)Flash GPIO Type with EEPROM (Industrial Grade)												
Part No.	VDD (V)	ROM (Bit)	RAM (Byte)	EEPROM (Byte)	I/O	Timer	PWM	CMP. (OP)	I/F	Package	Special Function	ICE
EM78F641N	2.2 ~ 5.5	1K*13	48	128	14	8-bit*2	8-bit*1 (TC3)	1	-	10 MSOP 16 DIP / SOP	LVR/PDO/TBRD	UIT660N + UICE
EM78F642N	2.2 ~ 5.5	2K*13	80	128	18	8-bit*3	8-bit*1 (TC3)	1	-	18 DIP / SOP 20 DIP/SOP/SSOP	LVR/PDO/TBRD/ Capture	UIT660N + UICE
EM78F644N	2.3 ~ 5.5	4K*13	144	256	25	8-bit*3 10-bit*2 (PWM1,2) 16-bit*1	8-bit*1 (TC3) 10-bit*2	1	SPI UART	24 SDIP / SOP 28 SDIP / SOP	LVR/PDO/TBRD/ Capture/Window	UIT660N + UICE
EM78F648N	2.4 ~ 5.5	8K*15	304	256	40	8-bit*2 10-bit*2 (PWMA, B) 16-bit*1	8-bit*1 (TC3) 10-bit*2	2	SPI UART I2C	28 SDIP / SOP 40 DIP 44 QFP	LVR/PDO/TBRD/ Capture/Window/ LVD	UIT660N + UICE

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## ADC Type MCU Series (High EFT/ESD Level)

Part No.	VDD (V)	ROM (Bit)	RAM (Byte)	I/O	Timer	ADC	PWM	CMP. (OP)	I/F	Package	Special Function	ICE
EM78P301N	2.1 ~ 5.5	1K*13	80	12	8-bit*1 8-bit*2 (PWM1, 2) 10-bit*2 (PWM1, 2)	12bit* (8+1)	8-bit*2 10-bit*2	-	-	10 MSOP 14 DIP / SOP	LVD/LVR/TBRD/ High-sink	UIT300K + UICE
EM78P372N	2.1 ~ 5.5	2K*13	80	18	8-bit*1 8-bit*2 (PWM1, 2)	12bit* (8+1)	8-bit*2	1(1)	-	10 MSOP/SSOP 14 DIP / SOP 16 SOP 18 DIP / SOP 20 SSOP	LVD/LVR/TBRD/ High-sink	UIT300K + UICE
EM78P372K	2.1 ~ 5.5	2K*13	80	18	8-bit*1 8-bit*2 (PWM1, 2)	12bit* (8+1)	8-bit*2	1(1)	-	10 MSOP/SSOP 14 DIP / SOP 16 SOP / QFN 18 DIP / SOP 20 DIP/SOP/SSOP	LVD/LVR/TBRD/ High-sink/ 1/2, 1/4VDD PWM( Dead time / Complement)	UIT300K + UICE
EM78P373N	2.1 ~ 5.5	2.5K*13	80	18	8-bit*1 8-bit*2 (PWM1, 2)	12bit* (8+1)	8-bit*2	1(1)	-	16 SOP / QFN 18 DIP / SOP 20 DIP/SOP/SSOP	LVD/LVR/TBRD/HighHigh- sink/1/2, 1/4VDD PWM( Dead time / Complement)	UIT300K + UICE
EM78P374N	2.1 ~ 5.5	4K*15	304	22	8-bit*2 16-bit*3 (PWMA, B, C)	12bit* (14+2)	8-bit*1 (TC1) 16-bit*3	1(1)	I2C	18 DIP / SOP 20 DIP/SOP/SSOP 24 SOP/SSOP/SDIP	LVD/LVR/TBRD/ Buzzer/Capture/ High-sink	UIT370N + UICE
EM78P507N	2.1 ~ 3.6	6K*13	272	46	8-bit*4 16-bit*1 (TC1&TC2)	12-bit*24	8-bit*2 16-bit*1 (TC1&TC2)	-	UART SPI	44 QFP / LQFP 48 LQFP	LVD/DAC (10bits / current type)	UIT507N + UICE
EM78P143	2.1 ~ 5.5	2K*13	80	8	8-bit*3 (PWM1, 2) 8-bit*1 16-bit*1 (PWM1&PWM2)	10-bit*7	8-bit*2 16-bit*1	1	-	10 MSOP 14 SOP	LVR/LVD/TBRD	UIT143 + UICE



LCD Type MCU Series													
Part No.	VDD (V)	ROM (Bit)	RAM (Byte)	I/O	Timer	LCD (LED)	ADC	PWM	CMP. (OP)	I/F	Package	Special Function	ICE
EM78468B	2.1 ~ 5.5	4K*13	272	28	8-bit*5 (PWM)	4*32	-	8-bit*1	-	-	64 QFP / LQFP	IR	UIT468N + UICE
EM78P468B	2.1 ~ 5.5	4K*13	272	28	8-bit*5 (PWM)	4*32	-	8-bit*1	-	-	44 QFP / LQFP 64 QFP / LQFP 64B QFP	IR	UIT468N + UICE
EM78P468K	2.1 ~ 5.5	4K*13	272	28	8-bit*5 (PWM)	4*32	-	8-bit*1	-	-	64 QFP / LQFP 44 QFP / LQFP 48 LQFP	IR	UIT468N + UICE
EM78P468R <b>(NEW)</b>	2.1~3.3	4.25K*13	272	27	8-bit*5 (PWM)	4*32 (27)	-	8-bit*1 1 DeadTime PWM(10bit)	-	-	64 QFP / LQFP 44 QFP / LQFP 48 LQFP	IR,LED Drive, LCD Regulator	UIT468R + UICE
EM78P468S <b>(NEW)</b>	2.1 ~ 5.5	4.25K*13	272	28	8-bit*5 (PWM)	4*32 (28)	-	8-bit*1 1 DeadTime PWM(10bit)	-	-	64 QFP / LQFP 44 QFP / LQFP 48 LQFP	IR,LED Drive	UIT468R + UICE
EM78470N	1.9 ~ 3.6	4K*13	272	25	8-bit*4 (PWM)	4*17	-	8-bit*1	-	-	44 LQFP	IR/LVR/TBRD/ LCALL/ LJMP/ Lpower	UIT468NB + UICE
EM78P469	2.3 ~ 5.5	8K*13	656	33	8-bit*4 (PWM)	4*40	-	8-bit*1	-	-	44 QFP / LQFP 64B QFP 64 LQFP	IR	UIT469 + UICE
EM78P468NB	2.1 ~ 5.5	4K*13	272	28	8-bit*4 (PWM)	4*32	-	8-bit*1	-	-	64 QFP / LQFP 64B QFP	IR/LVR/TBRD/ LCALL/ LJMP/ Lpower	UIT468NB + UICE
EM78P470N	2.1 ~ 5.5	4K*13	272	25	8-bit*4 (PWM)	4*17	-	8-bit*1	-	-	44 QFP / LQFP	IR/LVR/TBRD/ LCALL/ LJMP/ Lpower	UIT468NB + UICE

LCD Type MCU Series													
Part No.	VDD (V)	ROM (Bit)	RAM (Byte)	I/O	Timer	LCD (LED)	ADC	PWM	CMP. (OP)	I/F	Package	Special Function	ICE
EM78P520N	2.3 ~ 5.5	8K*13	256	43	8-bit*3 8-bit*1, 16-bit*1 (TC1&TC2)	8*23	12-bit*12	8-bit*2 16-bit*1 (TC1&TC2)	-	UART SPI	32 SDIP / SOP 44 QFP / LQFP 48 LQFP	LVR/LVD/ Buzzer/Capture/ Watch timer	UIT520N + UICE
EM78P516N <b>(NEW)</b>	2.1 ~ 5.5	6k*13	272	28	8-bit*4 (PWM)	4*32 (28)	12bit* (15+1)	8-bit*1	-	-	44 QFP / LQFP 48 LQFP 64 QFP / LQFP	IR	ED516N + UBRG
EM78P528N	2.1 ~ 5.5	8K*15	560	45	8-bit*3 8-bit*1, 16-bit*1 (TC1&TC2)	8*23	12bit* (15+1)	8-bit*3 8-bit*1(TC3) 16-bit*1 (TC1&TC2)	-	UART SPI I2C	44 QFP / LQFP 48 LQFP	LVR/LVD/ Buzzer/Capture/ Watch timer/ TBRD/ High-sink/ High-drive	UIT400N + UICE



GPIO Type MCU Series (High EFT/ESD Level)										
Part No.	VDD (V)	ROM (Bit)	RAM (Byte)	I/O	Timer	PWM	CMP. (OP)	Package	Special Function	ICE
EM78P153K	2.1 ~ 5.5	1K*13	32	11 I/O & 1I	8-bit*1	-	-	10 SSOP 14 DIP / SOP	LVR	UIT153S + UICE
EM78P151 <b>(NEW)</b>	2.0~5.5	1K*13	52	5 I/O & 1I	8-bit*1	-	-	6 SOT-23 8 DIP / SOP	LVR	UIT151 + UICE
CK68P150 <b>(NEW)</b>	2.0~5.5	1K*13	52	5 I/O & 1I	8-bit*1	-	-	6 SOP-23 8 DIP / SOP	High Drive / Sink	UIT151 V2.0 + UICE
EM78P173N	2.1 ~ 5.5	1K*13	48	12	8-bit*1	-	-	10 MSOP 14 DIP / SOP	LVD/LVR	UIT300K + UICE
EM78P156K	2.1 ~ 5.5	1K*13	48	12	8-bit*1	-	-	18 DIP / SOP 20 SSOP	LVR	UIT456E + UICE
EM78P176N	2.1 ~ 5.5	1K*13	48	18	8-bit*1	-	-	18 DIP / SOP 20 DIP / SSOP	LVD/LVR	UIT300K + UICE
EM78P224N	2.1 ~ 5.5	4K*15	176	30	8-bit*2	8-bit*1 (TC1)	-	28 DIP / SKDIP 28 SOP / SSOP 32 DIP / SOP	LVD/LVR/PDO/ Capture/ Buzzer High-sink	UIT370N + UICE
EM78P163N	2.1 ~ 5.5	1K*13	48	14	8-bit*1(TCC) 10-bit*1(PWM)	10-bit*1	1-4ch	14 DIP / SOP 16A SOP 16 DIP	TBRD	UIT163 + UICE
EM78P134N	2.0 ~ 5.5	1K*13	48	8	8-bit*1(TCC) 10-bit*1(PWM)	10-bit*1	1-3ch	10 MSOP	LVR/TBRD	UIT163 + UICE

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Part No.	VDD (V)	ROM (Bit)	RAM (Byte)	I/O	Timer	PWM	CMP. (OP)	Package	Special Function	ICE
EM78447S	2.3 ~ 5.5	4K*13	148	24	8-bit*1	-	-	28 SOP / SSOP 32 DIP / SOP / SDIP	-	UIT447 + UICE
EM78P451S	2.3 ~ 5.5	4K*13	140	33	8-bit*2	-	-	24 SSOP 40 DIP 44 QFP	-	UIT451 + UICE

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EM78P349N	2.3 ~ 5.5	2K*13	176	25	8-bit*1, 10-bit*3 (PWM1, 2, 3)	12-bit*15	10-bit*3	-	-	24 DIP / SOP 28 DIP / SOP	LVD/LVR/ LCALL/ LJMP	UIT349 + UICE
EM78P366N	3.0 ~ 5.5	4K*13	208	22	8-bit*1, 10-bit*1	12-bit*12	10-bit*1	4(1)	-	20 SOP 24 QFN/DIP/SOP 24 SSOP	EPWM/ DPWM	UIT366N + UICE
EM78P418N	2.1 ~ 5.5	4K*13	144	21	8-bit*1, 10-bit*3 (PWM1, 2, 3)	12-bit*8	10-bit*3	1(1)	-	18 DIP / SOP 20 DIP / SOP 24 SDIP/SOP/SSOP		UIT418N + UICE
EM78P5840N	2.2 ~ 5.5	4K*13	144	22	8-bit*2, 10-bit*2 (PWM1, 2)	10-bit*8	10-bit*2	-	-	18 DIP / SOP 20 DIP / SOP 24 DIP / SOP / SDIP		UIT5840 + UICE
EM78P809N	2.1 ~ 5.5	8K*13	144	22	8-bit*3, 10-bit*1	10-bit*8	8-bit*1 (TCC4)	-	UART SPI	28 DIP / SOP 28 SSSOP	Capture / PDO	UIT809 + UICE
EM78P458/459	2.3 ~ 5.5	4K*13	84	16	8-bit*1, 10-bit*2 (PWM1, 2)	8-bit*8	10-bit*2	1(1)	-	18 DIP / SOP 20 DIP / SOP 24 SDIP		UIT458 + UICE
EM78458/459	2.3 ~ 5.5	4K*13	84	16	8-bit*1 10-bit*2 (PWM1, 2)	8-bit*8	10-bit*2	1(1)	-	20 DIP / SOP 24 DIP / SOP		UIT458 + UICE

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