

# APM32 Series MCU Based on ARM® Cortex® -M0+

Part No.	Frequency (MHz)	FLASH (KB)	RAM (KB)	EMMC (SDRAM)	FPU	I/Os	Vmin (V)	Vmax (V)	Timer							Analog Interface					Connectivity							Package		
									GTMR (16-bit)	GTMR (32-bit)	Advanced TMR (16-bit)	Basic TMR	Systick (24-bit)	WWDG	WWDG	RTC	ADC 12-bit Cell	ADC 12-bit channels	DAC 12-bit Cell	DAC 12-bit channels	Analog Comparator	TSC (Channels)	SPI	I2S	I2C	U(S)ART	CAN		SDIO	USB
APM32F091CBT6	48	128	32	0	0	38	2	3.6	5	1	1	2	1	1	1	1	10	1	2	2	24	2	2	2	6	1	0	0	1	LQFP48
APM32F091CUB6	48	128	32	0	0	38	2	3.6	5	1	1	2	1	1	1	1	10	1	2	2	24	2	2	2	6	1	0	0	1	QFN48
APM32F091CCT6	48	256	32	0	0	38	2	3.6	5	1	1	2	1	1	1	1	10	1	2	2	24	2	2	2	6	1	0	0	1	LQFP48
APM32F091CCU6	48	256	32	0	0	38	2	3.6	5	1	1	2	1	1	1	1	10	1	2	2	24	2	2	2	6	1	0	0	1	QFN48
APM32F091RBT6	48	128	32	0	0	52	2	3.6	5	1	1	2	1	1	1	1	16	1	2	2	24	2	2	2	8	1	0	0	1	LQFP64
APM32F091RCT6	48	256	32	0	0	52	2	3.6	5	1	1	2	1	1	1	1	16	1	2	2	24	2	2	2	8	1	0	0	1	LQFP64
APM32F091VBT6	48	128	32	0	0	88	2	3.6	5	1	1	2	1	1	1	1	16	1	2	2	24	2	2	2	8	1	0	0	1	LQFP100
APM32F091VCT6	48	256	32	0	0	88	2	3.6	5	1	1	2	1	1	1	1	16	1	2	2	24	2	2	2	8	1	0	0	1	LQFP100
APM32F072VBT6	48	128	16	0	0	87	2	3.6	4	1	1	2	1	1	1	1	16	1	2	2	24	2	2	2	4	1	0	1	1	LQFP100
APM32F072VBT6	48	64	16	0	0	87	2	3.6	4	1	1	2	1	1	1	1	16	1	2	2	24	2	2	2	4	1	0	1	1	LQFP100
APM32F072RBT6	48	128	16	0	0	51	2	3.6	4	1	1	2	1	1	1	1	16	1	2	2	18	2	2	2	4	1	0	1	1	LQFP64
APM32F072RBT6	48	64	16	0	0	51	2	3.6	5	1	1	2	1	1	1	1	16	1	2	2	18	2	2	2	4	1	0	1	1	LQFP64
APM32F072CUB6	48	128	16	0	0	37	2	3.6	5	1	1	2	1	1	1	1	10	1	2	2	17	2	2	2	4	1	0	1	1	QFN48
APM32F072CUB6	48	64	16	0	0	37	2	3.6	5	1	1	2	1	1	1	1	10	1	2	2	17	2	2	2	4	1	0	1	1	QFN48
APM32F072CBT6	48	128	16	0	0	37	2	3.6	5	1	1	2	1	1	1	1	10	1	2	2	17	2	2	2	4	1	0	1	1	LQFP48
APM32F072CBT6	48	64	16	0	0	37	2	3.6	5	1	1	2	1	1	1	1	10	1	2	2	17	2	2	2	4	1	0	1	1	LQFP48
APM32F071VBT6	48	64	16	0	0	87	2	3.6	5	1	1	2	1	1	1	1	16	1	2	2	24	2	2	2	4	0	0	0	1	LQFP100
APM32F071CUB6	48	128	16	0	0	37	2	3.6	5	1	1	2	1	1	1	1	10	1	2	2	17	2	2	2	4	0	0	0	1	QFN48
APM32F071CBT6	48	128	16	0	0	37	2	3.6	5	1	1	2	1	1	1	1	10	1	2	2	17	2	2	2	4	0	0	0	1	LQFP48
APM32F070RBT6	48	128	16	0	0	51	2.4	3.6	5	0	1	2	1	1	1	1	16	0	0	0	0	2	0	2	4	0	0	1	0	LQFP64
APM32F070CBT6	48	128	16	0	0	37	2.4	3.6	5	0	1	2	1	1	1	1	10	0	0	0	0	2	0	2	4	0	0	1	0	LQFP64
APM32F051K6T6	48	32	8	0	0	25	2	3.6	5	1	1	1	1	1	1	1	10	1	1	2	18	1	1	1	2	0	0	0	1	LQFP32
APM32F051K6U6	48	32	8	0	0	27	2	3.6	5	1	1	1	1	1	1	1	10	1	1	2	18	1	1	1	2	0	0	0	1	QFN32
APM32F051K8T6	48	64	8	0	0	25	2	3.6	5	1	1	1	1	1	1	1	10	1	1	2	18	1	1	1	2	0	0	0	1	LQFP32
APM32F051K8U6	48	64	8	0	0	27	2	3.6	5	1	1	1	1	1	1	1	10	1	1	2	18	1	1	1	2	0	0	0	1	QFN32
APM32F051C6T6	48	32	8	0	0	39	2	3.6	5	1	1	1	1	1	1	1	10	1	1	2	18	1	1	1	2	0	0	0	1	LQFP48
APM32F051C6U6	48	32	8	0	0	39	2	3.6	5	1	1	1	1	1	1	1	10	1	1	2	18	1	1	1	2	0	0	0	1	QFN48
APM32F051C8T6	48	64	8	0	0	39	2	3.6	5	1	1	1	1	1	1	1	10	1	1	2	18	2	1	2	2	0	0	0	1	LQFP48
APM32F051C8U6	48	64	8	0	0	39	2	3.6	5	1	1	1	1	1	1	1	10	1	1	2	18	2	1	2	2	0	0	0	1	QFN48
APM32F051R6T6	48	32	8	0	0	55	2	3.6	5	1	1	1	1	1	1	1	16	1	1	2	18	2	1	2	2	0	0	0	1	LQFP64
APM32F051R8T6	48	64	8	0	0	55	2	3.6	5	1	1	1	1	1	1	1	16	1	1	2	18	2	1	2	2	0	0	0	1	LQFP64
APM32F030K6T6	48	32	4	0	0	26	2	3.6	4	0	1	0	1	1	1	1	10	0	0	0	0	1	0	1	1	0	0	0	0	LQFP32
APM32F030K6T7	48	32	4	0	0	26	2	3.6	4	0	1	0	1	1	1	1	10	0	0	0	0	1	0	1	1	0	0	0	0	LQFP32
APM32F030K6U6	48	32	4	0	0	26	2	3.6	4	0	1	0	1	1	1	1	10	0	0	0	0	1	0	1	1	0	0	0	0	QFN32
APM32F030K8T6	48	64	8	0	0	26	2	3.6	4	0	1	0	1	1	1	1	10	0	0	0	0	1	0	1	1	0	0	0	0	LQFP32
APM32F030C6T6	48	32	4	0	0	39	2	3.6	4	0	1	0	1	1	1	1	10	0	0	0	0	1	0	1	1	0	0	0	0	LQFP48
APM32F030C8T6	48	64	8	0	0	39	2	3.6	5	0	1	1	1	1	1	1	10	0	0	0	0	2	0	2	2	0	0	0	0	LQFP48
APM32F030R8T6	48	64	8	0	0	55	2	3.6	5	0	1	1	1	1	1	1	16	0	0	0	0	2	0	2	2	0	0	0	0	LQFP64
APM32F030CCT6	48	256	32	0	0	37	2	3.6	5	0	1	2	1	1	1	1	10	0	0	0	0	2	0	2	6	0	0	0	0	LQFP48
APM32F030RCT6	48	256	32	0	0	51	2	3.6	5	0	1	2	1	1	1	1	16	0	0	0	0	2	0	2	6	0	0	0	0	LQFP64
APM32F003F4P6	48	16	2	0	0	16	2	5.5	1	0	2	1	1	1	0	1	8	0	0	0	0	1	0	1	3	0	0	0	0	TSSOP20
APM32F003F6P6	48	32	4	0	0	16	2	5.5	1	0	2	1	1	1	0	1	8	0	0	0	0	1	0	1	3	0	0	0	0	TSSOP20
APM32F003F4U6	48	16	2	0	0	16	2	5.5	1	0	2	1	1	1	0	1	8	0	0	0	0	1	0	1	3	0	0	0	0	QFN20
APM32F003F6U6	48	32	4	0	0	16	2	5.5	1	0	2	1	1	1	0	1	8	0	0	0	0	1	0	1	3	0	0	0	0	QFN20
APM32F003F4M6	48	16	2	0	0	16	2	5.5	1	0	2	1	1	1	0	1	8	0	0	0	0	1	0	1	3	0	0	0	0	SOP20
APM32F003F6M6	48	32	4	0	0	16	2	5.5	1	0	2	1	1	1	0	1	8	0	0	0	0	1	0	1	3	0	0	0	0	SOP20
APM32F003F6P7	48	32	4	0	0	16	2	5.5	1	0	2	1	1	1	0	1	8	0	0	0	0	1	0	1	3	0	0	0	0	TSSOP20
APM32F003F6U7	48	32	4	0	0	16	2	5.5	1	0	2	1	1	1	0	1	8	0	0	0	0	1	0	1	3	0	0	0	0	QFN20



## APM32 Series MCU Based on ARM® Cortex® -M3

Part No.	Frequency (MHz)	FLASH (KB)	RAM (KB)	EMMC (SDRAM)	FPU	I/Os	V <sub>in</sub> (V)	V <sub>max</sub> (V)	Timer							Analog Interface					Connectivity						Package				
									GP <sub>TM</sub> R (16-bit)	GP <sub>TM</sub> R (32-bit)	Advanced <sub>TM</sub> R (16-bit)	Basic <sub>TM</sub> R (16-bit)	Systick (24-bit)	IWDG	WWDG	RTC	ADC 12-bit Cell	ADC 12-bit channels	DAC 12-bit Cell	DAC 12-bit channels	ADC 12-bit channels	Analogue Comparator	TSC (Channels)	SPI	I2S	I2C		USART	CAN	SDIO	USB
APM32F101R4T6	36	16	6	0	1	51	2	3.6	3	0	1	0	1	1	1	1	2	10	0	0	0	0	2	0	2	3	0	0	0	0	LQFP64
APM32F101R6T6	36	32	10	0	1	51	2	3.6	3	0	1	0	1	1	1	1	2	10	0	0	0	0	2	0	2	3	0	0	0	0	LQFP64
APM32F101R8T6	36	64	20	0	1	51	2	3.6	3	0	1	0	1	1	1	1	2	10	0	0	0	0	2	0	2	3	0	0	0	0	LQFP64
APM32F101RBT6	36	128	20	0	1	51	2	3.6	3	0	1	0	1	1	1	1	2	10	0	0	0	0	2	0	2	3	0	0	0	0	LQFP64
APM32F101V8T6	36	64	20	0	1	80	2	3.6	3	0	1	0	1	1	1	1	2	10	0	0	0	0	2	0	2	3	0	0	0	0	LQFP100
APM32F101VBT6	36	128	20	0	1	80	2	3.6	3	0	1	0	1	1	1	1	2	10	0	0	0	0	2	0	2	3	0	0	0	0	LQFP100
APM32F101RCT6	36	256	32	0	1	51	2	3.6	4	0	2	2	1	1	1	1	16	2	2	0	0	3	0	2	3+2	0	0	0	0	LQFP64	
APM32F101RDT6	36	384	48	0	1	51	2	3.6	4	0	2	2	1	1	1	1	16	2	2	0	0	3	0	2	3+2	0	0	0	0	LQFP64	
APM32F101RET6	36	512	48	0	1	51	2	3.6	4	0	2	2	1	1	1	1	16	2	2	0	0	3	0	2	3+2	0	0	0	0	LQFP64	
APM32F101VCT6	36	256	32	0	1	80	2	3.6	4	0	2	2	1	1	1	1	16	2	2	0	0	3	0	2	3+2	0	0	0	0	LQFP100	
APM32F101VDT6	36	384	48	0	1	80	2	3.6	4	0	2	2	1	1	1	1	6	2	2	0	0	3	0	2	3+2	0	0	0	0	LQFP100	
APM32F101VET6	36	512	48	0	1	80	2	3.6	4	0	2	2	1	1	1	1	16	2	2	0	0	3	0	2	3+2	0	0	0	0	LQFP100	
APM32F101ZCT6	36	256	32	1	1	112	2	3.6	4	0	2	2	1	1	1	1	16	2	2	0	0	3	0	2	3+2	0	0	0	0	LQFP144	
APM32F101ZDT6	36	384	48	1	1	112	2	3.6	4	0	2	2	1	1	1	1	16	2	2	0	0	3	0	2	3+2	0	0	0	0	LQFP144	
APM32F101ZET6	36	512	48	1	1	112	2	3.6	4	0	2	2	1	1	1	1	16	2	2	0	0	3	0	2	3+2	0	0	0	0	LQFP144	

## APM32 Series MCU Based on ARM® Cortex® -M4

Part No.	Frequency (MHz)	FLASH (KB)	RAM (KB)	SDRAM	FPU	I/O	Voltage	Timer							Analog Interface					Connectivity						Security			Package		
								GP <sub>TM</sub> R (16-bit)	GP <sub>TM</sub> R (32-bit)	Advanced <sub>TM</sub> R (16-bit)	Basic <sub>TM</sub> R	Systick	IWDG	WWDG	RTC	ADC 12-bit Cell	ADC 12-bit channels	DAC 12-bit channels	FSMC	SPI	I2S	I2C	USART	CAN	SDIO	OTG_FS USB	Ethernet	AES/DES/TDES		BN/SM2/SM3/SM4	
APM32F407GT6	168	1024	192+4	1	1	140	1.8~3.6	8	2	2	2	1	1	1	1	3	24	2	1	3	2	3	4+2	2	1	1	1+1	1	0	1	LQFP176
APM32F407IET6	168	512	192+4	1	1	140	1.8~3.6	8	2	2	2	1	1	1	1	3	24	2	1	3	2	3	4+2	2	1	1	1+1	1	0	1	LQFP176
APM32F407ZGT6	168	1024	192+4	1	1	114	1.8~3.6	8	2	2	2	1	1	1	1	3	24	2	1	3	2	3	4+2	2	1	1	1+1	1	0	1	LQFP144
APM32F407ZET6	168	512	192+4	1	1	114	1.8~3.6	8	2	2	2	1	1	1	1	3	24	2	1	3	2	3	4+2	2	1	1	1+1	1	0	1	LQFP144
APM32F407VGT6	168	1024	192+4	1	1	82	1.8~3.6	8	2	2	2	1	1	1	1	3	16	2	1	3	2	3	4+2	2	1	1	1+1	1	0	1	LQFP100
APM32F407VET6	168	512	192+4	1	1	82	1.8~3.6	8	2	2	2	1	1	1	1	3	16	2	1	3	2	3	4+2	2	1	1	1+1	1	0	1	LQFP100
APM32F407RGT6	168	1024	192+4	1	1	51	1.8~3.6	8	2	2	2	1	1	1	1	3	16	2	0	3	2	3	4+2	2	1	1	1+1	0	0	1	LQFP64
APM32F407RET6	168	512	192+4	1	1	51	1.8~3.6	8	2	2	2	1	1	1	1	3	16	2	0	3	2	3	4+2	2	1	1	1+1	0	0	1	LQFP64
APM32F417GT6	168	1024	192+4	1	1	140	1.8~3.6	8	2	2	2	1	1	1	1	3	24	2	1	3	2	3	4+2	2	1	1	1+1	1	1	1	LQFP176
APM32F417IET6	168	512	192+4	1	1	140	1.8~3.6	8	2	2	2	1	1	1	1	3	24	2	1	3	2	3	4+2	2	1	1	1+1	1	1	1	LQFP176
APM32F417ZGT6	168	1024	192+4	1	1	114	1.8~3.6	8	2	2	2	1	1	1	1	3	24	2	1	3	2	3	4+2	2	1	1	1+1	1	1	1	LQFP144
APM32F417ZET6	168	512	192+4	1	1	114	1.8~3.6	8	2	2	2	1	1	1	1	3	24	2	1	3	2	3	4+2	2	1	1	1+1	1	1	1	LQFP144
APM32F417VGT6	168	1024	192+4	1	1	82	1.8~3.6	8	2	2	2	1	1	1	1	3	16	2	1	3	2	3	4+2	2	1	1	1+1	1	1	1	LQFP100
APM32F417VET6	168	512	192+4	1	1	82	1.8~3.6	8	2	2	2	1	1	1	1	3	16	2	1	3	2	3	4+2	2	1	1	1+1	1	1	1	LQFP100
APM32F405ZGT6	168	1024	192+4	1	1	114	1.8~3.6	8	2	2	2	1	1	1	1	3	24	2	1	3	2	3	4+2	2	1	1	1+1	0	0	1	LQFP144
APM32F405VGT6	168	1024	192+4	1	1	82	1.8~3.6	8	2	2	2	1	1	1	1	3	16	2	1	3	2	3	4+2	2	1	1	1+1	0	0	1	LQFP100
APM32F405RGT6	168	1024	192+4	1	1	51	1.8~3.6	8	2	2	2	1	1	1	1	3	16	2	0	3	2	3	4+2	2	1	1	1+1	0	0	1	LQFP64
APM32F415ZGT6	168	1024	192+4	1	1	114	1.8~3.6	8	2	2	2	1	1	1	1	3	24	2	1	3	2	3	4+2	2	1	1	1+1	0	1	1	LQFP144
APM32F415VGT6	168	1024	192+4	1	1	82	1.8~3.6	8	2	2	2	1	1	1	1	3	16	2	1	3	2	3	4+2	2	1	1	1+1	0	1	1	LQFP100
APM32F415RGT6	168	1024	192+4	1	1	51	1.8~3.6	8	2	2	2	1	1	1	1	3	16	2	0	3	2	3	4+2	2	1	1	1+1	0	1	1	LQFP64

# GW88 Series BLE 4.2 SoC

Part No.	Frequency (MHz)	FLASH (KB)	Data RAM (KB)	I/Os	Vmin (V)	Vmax (V)	Max TX Power (dBm)	RX Sensitivity (dBm)	TX Current (mA@0dBm)	RX Current (mA@0dBm)	Sleep Mode Current (uA)	Deep Sleep Mode Current (uA)	Operating Temperature (°C, T)	Timer			Analog Interface			Connectivity							Package			
														Low Speed TM(32bit)	High Speed TM(16bit)	WDT(16bit)	RTC	GPADC 10bit Cell	GPADC 10bit channels	GPADC 10bit channels	SPI(master)	I2C(master)	USART	PWM	Quadrature Decoder	ISO7816		Infrared emitting & receiving	Infrared emitting & receiving	Keyscan decoder (8 columns)
GW8811KEU6	64	512	24	21	1.8	3.6	+4	-94	4.8	2.8	2.7	1	-40~+85	4	1	1	1	1	4+1	2	2	2	6	Yes	Yes	Yes	Yes	8*20	128bit	QFN32
GW8811CEU6	64	512	32	32	1.8	3.6	+4	-94	4.8	2.8	2.7	1	-40~+85	4	1	1	1	1	8+1	2	2	2	6	Yes	Yes	Yes	Yes	8*20	128bit	QFN48

## Product Selection Guide

<b>AP/G</b>	<b>M</b>	<b>32</b>	<b>F</b>	<b>103</b>	<b>T</b>	<b>4</b>	<b>T</b>	<b>6</b>
<b>Brand</b> Geehy	<b>M:MCU</b> W:Wireless	<b>Family</b> 32:32 bit 88:BLE Soc	<b>F</b> <b>Product type</b> A Auto grade E Enhanced F Foundation L Ultra-low-power S Standard T Touch sensing W Wireless	<b>Specific features (3 digits)</b> 030 Entry-level 103 Foundation 407 High-performance and DSP with FPU L072 Ultra-low-power	<b>Pin count (pins)</b> D 14 Y 20 F 20 E 24&25 G 28 K 32 T 36 H 40 S 44 C 48&49 U 63 R 64&66 J 72 M 80 O 90 V 100 Q 132 Z 144	<b>Code size (Kbytes)</b> 0 1 1 2 2 4 3 8 4 16&8 5 24 6 32 7 48 8 64 9 72 A 96 or 128* B 128 Z 192 C 256 D 384 E 512 F 768 G 1024	<b>Packaging</b> B Plastic DIP* D Ceramic DIP* G Ceramic QFP H LFBGA/TFBGA I UFBGA Pitch 0.5** J UFBGA Pitch 0.8** k UFBGA Pitch 0.65** M Plastic S0 P TSSOP Q Plastic QFP T QFP U QFN Y WLCSP	<b>Temperature range</b> 6 and A -40 to +85°C 7 and B -40 to +105°C 3 and C -40 to +125°C D -40 to +150°C
			<b>22</b> <b>Specific features</b> 11 BLE 4.2 22 BLE 5.1	<b>Auto grade</b> 8 48 9 64 A 80				

# TECHNOLOGY INSPIRED.

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# PRODUCT SELECTION GUIDE

32-bit APM32 General Microcontroller  
GW88 Series Low Energy BLE SoC

Based on ARM® Cortex® M0+/M3/M4 CPU

