

								
Part Number		DA14699/7/5/1	DA14683	DA14682	DA14586	DA14585	DA14531/0	DA14531MOD
Product Description		The world's most advanced wireless microcontroller product family	Single-chip high-security Bluetooth 5 solution with expandable memory		Small size, low power and most integrated Bluetooth 5 SoC		The world's smallest and lowest power Bluetooth 5.1 System-on-Chip which enables the next 1billion IoT devices	The DA14531 SmartBond TINY™ Module, based on the world's smallest and lowest power Bluetooth 5.1 system-on-Chip,
TYPE	SoC	●	●			●	●	
	SiP			●	●			
	Module							●
TECHNOLOGY	Bluetooth® LE	5.2	5.0	5.0	5.0	5.0	5.1	5.1
	2.4 GHz proprietary	●						
CORE SYSTEM	CPU	96MHz Arm Cortex-M33 Floating Point DSP Extension	96MHz Arm Cortex-M0	96MHz Arm Cortex-M0	16MHz Arm Cortex-M0	16MHz Arm Cortex-M0	16MHz Arm Cortex-M0+	16MHz Arm Cortex-M0+
	RAM	512kB 384kB (691)	128kB	128kB	96kB	96kB	48kB	48kB
	ROM	128kB	128kB	128kB	128kB	128kB	144kB	144kB
	OTP	4kB	64kB	64kB	64kB	64kB	32kB	32kB
	Flash	QSPI Flash	QSPI Flash	1024kB	256kB	SPI Flash	SPI Flash	128kB
Crystals		32MHz±32kHz	32/16MHz±32kHz	32/16MHz±32kHz	16MHz±32kHz	16MHz±32kHz	32MHz	32MHz
	POWER	Internal DCDC	Buck	Buck	Buck	Buck&Boost	Buck&Boost	Buck&Boost/-
External System Power Rails		2x1.8V, 1x3.3V	2x1.8V, 1x3.3V	2x1.8V, 1x3.3V				
Charger		●/●/●/-	●	●				
SECURITY	AES / SHA	256 / 512	256 / 512	256 / 512	128	128	128	128
	ECC / TRNG	●/●	●/●	●/●			-/●	-/●
	Secure Key Handling	●	●	●				
RADIO	Frequency	2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz
	Tx Power	6dBm	0dBm	0dBm	0dBm	0dBm	2.5dBm	2.2dBm
	Rx Sensitivity	-97dBm	-94dBm	-94dBm	-93dBm	-93dBm	-94dBm	-94dBm
PERIPHERALS	UART/SPI/I2C	3 / 2 / 2	2 / 2 / 2	2 / 2 / 2	2 / 1 / 1	2 / 1 / 1	2 / 1 / 1	2 / 1 / 1
	QSPI XiP	2/2/2/1	1	1				
	On-the-fly decryption	●	-	-				
	USB FS/HS	1/-	1/-	1/-				
	Timers/PWM/RTC	4/4/1	3/3	3/3	4/2	4/2	3/2/1	3/2/1
	I2S,PCM/PDM	8CH / 2CH	8CH / 2CH	8CH / 2CH	8CH / 2CH	8CH / 2CH		
	LCD	●/●/●/-						
	Keyboard / QDEC / IR		●/●/●	●/●/●	●/●/-	●/●/-	●/●/-	●/●/-
	ADC	8CH 10b 8CH 14b	8CH 10b	8CH 10b	4CH 10b	4CH 10b	4CH 10b	4CH 10b
	LED driver	2/2/-/-	3	3				
	Temperature sensor	●	●	●			●	●
	Other	Haptics / Motor Controller						
APPLICATIONS	Appliances	●	●	●	●	●	●	●
	Asset Tracking	●			●	●	●	●
	Beacons				●	●	●	●
	Consumer Electronics	●	●	●	●	●	●	●
	Direction finding	●						
	Gaming and AR/VR	●	●	●				
	Industrial Automation				●	●	●	●
	Medical and Healthcare	●	●	●	●	●	●	●
	MESH networks	●	●	●				
	PC Peripherals	●	●	●	●	●	●	●
	Smart Home and Building	●	●	●	●	●	●	●
	Wearables	●	●	●	●	●	●	
	Wireless Ranging (WiRa)	●						
	Smart door-locks	●	●	●				
IoT sensors	●	●	●	●	●	●	●	
PACKAGES	Type#Pins (#GPIO)	VFBGA100 (55)	WL CSP53 (21)	AQFN60 (31)	QFN40 (24)	WL CSP34 (14)	WL CSP17 (6)	MOD16 (9)
	Dimensions	5x5 mm (699/697)	3.41x3.01 mm AQFN60 (37)	6x6 mm	5x5 mm	2.40x2.66 mm QFN40 (25)	1.7x2.05 mm (531 only)	12.5x14.5 mm
Operating Temperature		-40 to 85 C	-40 to 85 C	-40 to 85 C	-40 to 85 C	-40 to 85/105 C	-40 to 85 C	-40 to 85 C
Supply Voltage Range		2.4 to 4.75V	1.7 to 4.75V	1.7 to 4.75V	0.9 to 3.3V	0.9 to 3.3V	1.1 to 3.3V	1.8 to 3.3V
DEVELOPMENT KITS		DA14695 PRO DA14695 USB	DA14683 PRO DA14683 USB	DA14683 PRO DA14683 USB	DA14585 PRO DA14585 BASIC	DA14585 PRO DA14585 BASIC	DA14531/0 PRO DA14531 USB	DA14531MOD PRO