
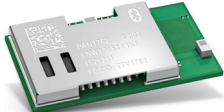




WIRELESS CONNECTIVITY

Product Leaflet

	Bluetooth® Low Energy		Bluetooth® LE & IEEE® 802.15.4	
	 NEW		 NEW	
SERIES	PAN1740A	PAN1762	PAN1780	PAN4620
STATUS	Mass Production	Mass Production	Pre-Production	Mass Production
PART NUMBER	ENW89852A1KF	ENW89853A1KF	ENW89854A1KF ENW89854A3KF (PAN1780AT)	ENWC9B01A1EF
RF CATEGORY	Bluetooth® 5.0	Bluetooth® 5.0	Bluetooth® 5.0, IEEE® 802.15.4 & NFC-A	Bluetooth® Low Energy 4.2 & IEEE® 802.15.4
SOFTWARE & DRIVER	SDK by Dialog	SDK by Toshiba	SDK by Nordic AT Command by Panasonic	SDK by NXP
INTEGRATED CIRCUIT	DA14585	TC35680	nRF52840	KW41Z
SIZE [mm]	9.0 x 9.5 x 1.8	15.6 x 8.7 x 1.9	15.6 x 8.7 x 2.0	15.6 x 8.7 x 1.9
RX SENSITIVITY [dBm]	-93 @ 1MB/s	-95 @ 1MB/s -105 @ 125kb/s	-95 @ 1Mb/s -103 @ 125kb/s	Bluetooth® LE: -95 @ 1Mb/s 802.15.4: -100 @ 250kb/s
TX POWER (MAX.) [dBm]	+0	+8	+8	+3.5
POWER SUPPLY [V]	2.2 to 3.3	1.9 to 3.6	1.7 to 5.5	1.8 to 4.2
POWER CONSUMPTION	Tx: 4.9mA, 3V @ 0dBm Rx: 4.9mA, 3V	Tx: 5.2mA, 3V @ 0dBm Rx: 5.1mA, 3V	Tx: 4.8mA, 3.3V @ 0dBm Rx: 4.8mA, 3.3V	Tx: 6.1mA, 3.6V @ 0dBm Rx: 6.8mA, 3.6V
SLEEP MODE CURRENT	Sleep Mode (Full RAM Retention): 4µA Deep Sleep Mode: 520nA	Sleep Mode (Full RAM Retention): 2.5µA Deep Sleep Mode: 50nA	Wake-on-RTC: 1.5µA Off Mode: 0.4µA	Low Power Mode: 0.67µA
INTERFACES	GPIO, UART, SPI+, I2C, ADC, 3-axis QD	GPIO, UART, SPI, I2C, ADC, PWM, Wake-Up Inputs	GPIO, UART, QSPI, I2C, I2S, ADC, PDM, PWM, NFC-A, USB2.0	UART, SPI, I2C, ADC & DAC, TSI
MICROCONTROLLER AND MEMORY	ARM® Cortex®-M0 96kB SRAM, 64kB OTP	ARM® Cortex®-M0 51kB RAM, 128kB Flash BT Stack in ROM	ARM® Cortex®-M4F 256kB RAM, 1MB Flash	ARM® Cortex®-M0+ 128kB SRAM, 512kB Flash
OPERATING TEMP. [°C]	-40 to +85	-40 to +85	-40 to +85	-40 to +85
EVALUATION KIT	ENW89852AXKF (Dongle) ENW89852AWKF (Dongle Kit)	ENW89853AXKF (Dongle) ENW89853AWKF (Dongle Kit)	ENW89854AXKF (Dongle) ENW89854AWKF (Dongle Kit) ENW89854AZKF (AT Dongle) ENW89854AYKF (AT Dongle Kit)	ENWC9B01AQEF (Daughter Board)

Applications



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Panasonic Industry Europe GmbH
wireless.connectivity@eu.panasonic.com
<http://eu.industrial.panasonic.com>

WIRELESS CONNECTIVITY

Product Leaflet


SERIES	Bluetooth® Dual Mode		Wi-Fi® & Bluetooth® LE	Wi-Fi®
	PAN1026A	PAN1326C2	PAN9026	PAN9420
STATUS	Mass Production	Mass Production	Mass Production	Mass Production
PART NUMBER	ENW89837A5KF	ENW89823A5KF	ENWF9202A1EF (EU) ENWF9201A1EF (US) ENWF9203A1EF (CA) ENWF9208A1EF (Multi-region)	ENW49C02A3KF (EU) ENW49C01A3KF (US/CA)
RF CATEGORY	Bluetooth® 4.2 Dual Mode (BR, Bluetooth® LE)	Bluetooth® 4.2 Dual Mode (BR, EDR, Bluetooth® LE)	Wi-Fi® Radio 2.4 GHz & 5.0 GHz 802.11 a/b/g/n & Bluetooth® 5.0 (BR, EDR, LE)	Wi-Fi® Embedded 802.11 b/g/n
SOFTWARE & DRIVER	HCI (SPP & GATT) SDK by Toshiba	HCI Init Script by TI	HCI Linux Drivers by Marvell	AT Command by Panasonic
INTEGRATED CIRCUIT	TC35661-551	CC2564C	88W8977	88MW300
SIZE [mm]	15.6 x 8.7 x 1.9	9.0 x 9.5 x 1.8	17.5 x 10.0 x 2.6	29.0 x 13.5 x 2.66
RX SENSITIVITY [dBm]	-88 @ 1MB/s	-90 @ 1MB/s	-98 @ 1M-DSSS	-97 @ 1M-DSSS
TX POWER (MAX.) [dBm]	+4	+8	+17 @ IEEE 802.11b	+16 @ IEEE 802.11b
POWER SUPPLY [V]	2.7 to 3.6	1.7 to 4.8	1.8 to 3.3	3.0 to 3.6
POWER CONSUMPTION	ACL, DH1: 46mA, 3.3V	40mA, 3.3V @ 8dBm 20mA, 3.3V	Tx: 240mA, 2.2V 802.11b @ 11Mb/s Rx: 20µA, 2.2V @ 802.11b/g/n	Tx: 170mA, 3.3V 802.11b @ 11Mb/s Rx: 75mA, 3.3V @ 802.11b
SLEEP MODE CURRENT	Sleep Mode: 2mA	Deep Sleep Mode: 105 µA	Power Down Mode: 150µA	Power Down Mode: <1mA
INTERFACES	GPIO, UART	GPIO, UART, PCM	SDIO 3.0, HS UART, PCM	2x UART
MICROCONTROLLER AND MEMORY				2MB Flash for Web Content
OPERATING TEMP. [°C]	-40 to +85	-40 to +85	-30 to +85	-40 to +85
EVALUATION KIT	ENW89837AXKF (Dongle) ENW89837AUKF (Dongle Kit)	ENW89819AYKF (EMK)	ENWF9201AYEF (Dongle Kit) ENWF9201AXEF (i.MX)	ENW49C01AYKF (EMK) ENW49C01AXKF (Arduino Shield)


Panasonic Wireless Connectivity solutions encompass a wide range of technologies, with a focus on helping design engineers increase their product's speed-to-market.

The product portfolio covers all of today's latest communication protocols with ready-to-use modules for Bluetooth® Low Energy and Classic. Panasonic offers Bluetooth® Low Energy in combination with all important short range RF technologies: Wi-Fi® (2.4GHz & 5GHz), IEEE® 802.15.4 and NFC-A.

Engineered with design simplicity in mind, Panasonic's Wireless Solutions allow design engineers to quickly extend wireless communication into their feature set.

Connected
by Panasonic Industry







PAN1762
Bluetooth® 5.1 E

The PAN1762 is a Panasonic Bluetooth® 5.1 Low Energy module based on the Toshiba TC35661 single-chip controller.

NOW AVAILABLE!

Design and specification are subject to change without notice.

- > Ask Panasonic for technical specification before purchase and/or use.
- > If there is any doubt regarding the safety of this product, kindly inform Panasonic immediately for technical consultation.
- > Qualification of all products: CE, FCC, IC, Bluetooth® QDID if applicable.
- > Different software/profile options available.

Panasonic Industry Europe GmbH
wireless.connectivity@eu.panasonic.com
<http://eu.industrial.panasonic.com>