Inplay NanoBeacon™ IN100 Development Kit User Manual

NanoBeacon™

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Document Name	InPlay NanoBeacon™ IN100 Development Kit User Manual	
Part number	IN1BN-DKC0-100-C0	
Control Number	IN1EDOC-HW-IN1BN-EN-V1_0	External User
Revision	V1.0	

| Product Status	Document Content	Data Status
In Development	Target specification / MRD	Initial release
Engineering Document	Main functions and features description	Preliminary version
Official Release Document	Description of all functional features	Subject to revision and updates

This document applies to the following products:

| Document	Applicable Products	Document Status
InPlay NanoBeacon™ IN100 Development Kit User Manual	IN1BN-DKC0-100-C0	Engineering Document

1. General Description

IN1BN-DKC0-100-C0 is an InPlay NanoBeacon™ development kit that includes 3 IN100 evaluation boards and a programming board.

The development kit provides all the I/Os available on IN100 (QFN18 package) that allow users to easily connect peripheral devices such as sensors, and by connecting the RF cables using SMA, users can evaluate the RF performance more accurately. In addition, an external power supply can be selected to provide a wide range of voltages for the IN100 product or system evaluation.
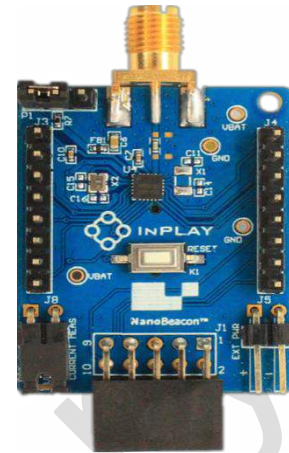
A kit contains three development boards and one programmer board.
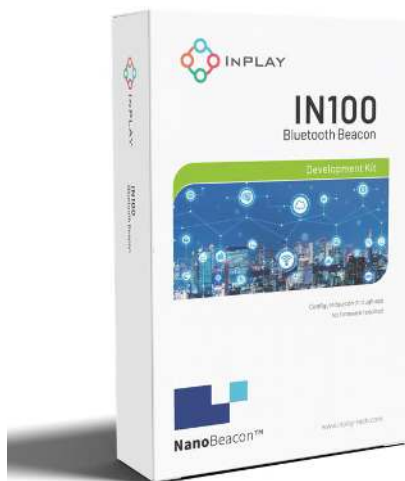
IN100 Development Board   Programmer Board

Figure 1 : Development Kit

Development Board

- NanoBeacon™ IN100 SoC chipset
- SMA Connector
- System current measurement jumper
- Power supply source selection: Coin Battery / External power supply / Programmer board

Figure 2：Development Board

Programmer Board

- OTP power switch
- 1.8V / 3.3V / No connect as power supply option for the Development Board
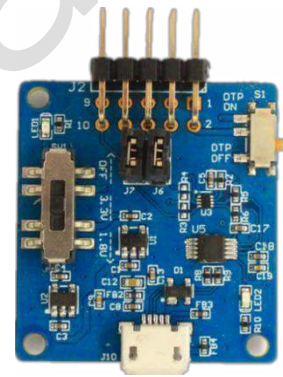- OTP memory (eFuse) burning indicator
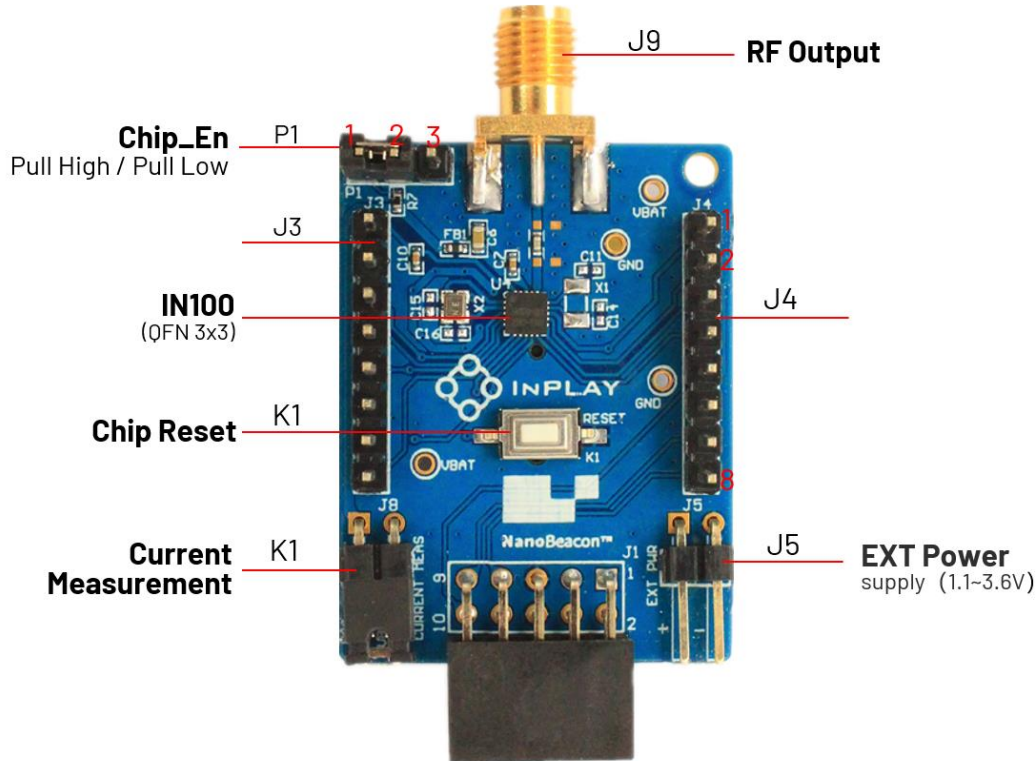
Figure 3：Programmer Board

2. Hardware Description

Figure 4 : Programmer Board

Development board Key Connectors Definition

Designator	Function	Description		
		Pin number	Pin name	Description
J3	Connector for IOs and power	1	Reset	Connect to IN100 Chip_En pin, Pull low to disable the chip, Pull up to enable the chip
		2	VBAT	System power supply, connect to IN100 VCC pin
		3	MGPIO7	IN100 MIX signal GPIO
		4	MGPIO6	IN100 MIX signal GPIO
		5	MGPIO5	IN100 MIX signal GPIO
		6	GND	Power ground
		7	SW0	IN100 IO power switch
		8	SW1	IN100 IO ground switch

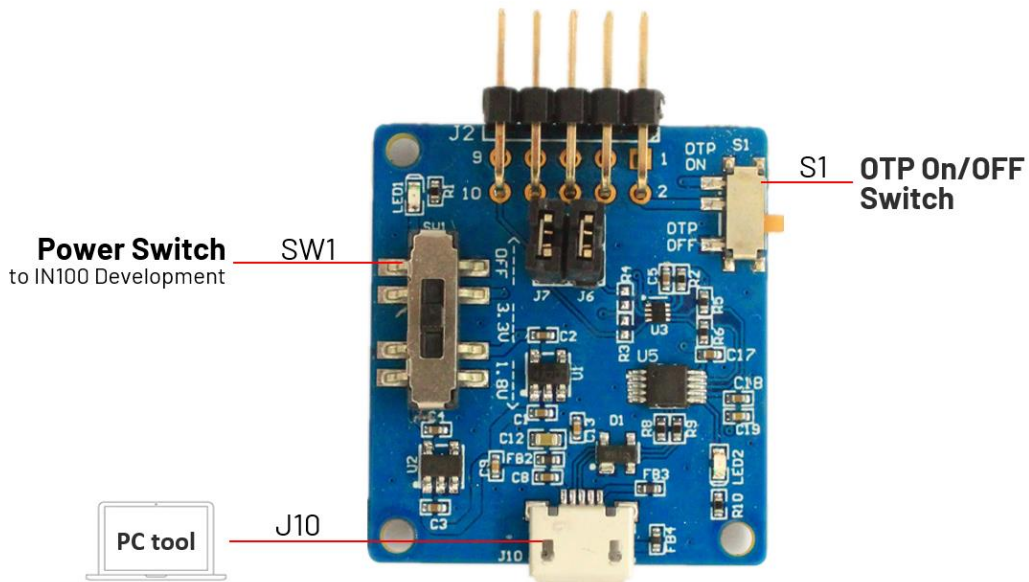|		Pin number	Pin name	Description
J4	Connector for IOs and power	1	VDDQ	OTP (eFuse) programming voltage supply
		2	MGPIO4	IN100 MIX signal GPIO
		3	GPIO3	IN100 digital signal GPIO
		4	GPIO2	IN100 digital signal GPIO
		5	GND	Power ground
		6	VBAT	System power supply, connect to IN100 VCC pin
		7	GPIO0	IN100 digital GPIO, Default is IN100 UART_RX
		8	GPIO1	IN100 digital GPIO, Default is IN100 UART_TX
J5	External power supply	External Power supply 1.1~3.6V input. When have this power supply, please keep coin battery not installed，and Programmer board SW1 switched to OFF		
J8	Current measurement	- for normal operation, jumper needs to be installed - for current measurement, remove the jumper and have ammeter connect to pin 1 and pin 2		
P1	Chip_En	- active pull-up Chip_EN pin: connect pin 1 and 2 - disable pull-down Chip_EN pin: connect pin 2 and 3		
K1	Chip Reset	Chip reset		

Figure 5 : Programmer Board

Key Connectors Definition

| Designator	Function	Description
J6,J7	PC UART Jumpers	Disconnect UART between IN100 and PC when jumper not installed
J10	Uart Interface	UART for external PC
S1	OTP ON/OFF	-On: eFuse programming, J2 pin2(FUSE) output 3.3V and connect to IN100 VDDQ. - OFF: J2 pin2(FUSE) will grounding and connect to IN100 VDDQ
SW1	Voltage Output	-1.8V: 1.8V output for development board; -3.3V: 3.3V output for development board; -OFF: No power supply by programmer, supplied by development board itself.

3. Schematic
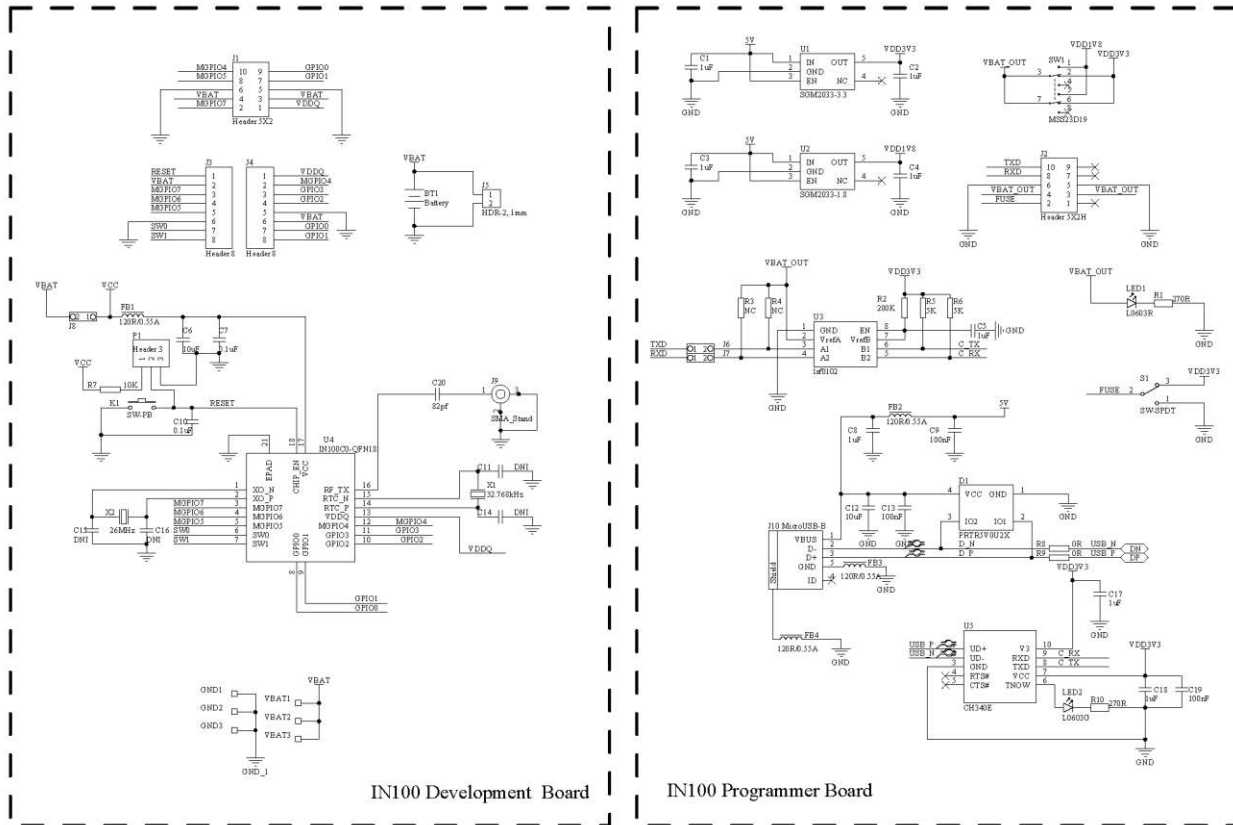
Figure 6：Development Kit Schematic

4. Revision History

Revision	Description	Update Date	Owner
V1.0	Preliminary Version	Nov 16, 2021	Eric. Xu

5. Legal Disclaimer

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