Node Location Solution Kit With TTN V1.0

© 2017 Rakwireless all rights reserved .

Mentioned in this document , the actual company and product

names, trademarks are their respective owners.

After update the new version, this document without prior notice.



Content

1. Overvi	ew	1	
2. Start U	sing	2	
2.1	Register TTN		2
2.2	Register Gateway to TTN		3
2.3	Register your device to TTN		3
2.4	Register myDevices		8
2.5	Export the data to Cayenne		9
2.6	Watch the data on the phone		13
3. Contac	t information	14	
4. Revisio	on History	15	



1. Overview

This document describes how to connect to the LoRaWAN server TTN using RAK831+Pi3 gateways with RAK811 BreakBoard.

(The RAK811 TrackerBoard and RAK811 SensorNodeBoard are the same except GPS. Hereinafter referred to as BreakBoard)

Including the following : How to register TTN account ? How to register RAK831+Pi3 gateway in TTN ? How to Add RAK811 BreakBoard Device to TTN Application Server ? How to register myDevices account ? How to import RAK811 BreakBoard data into Cayenne ? How to view data on phone via Cayenne APP ?

So let's get started !



2. Start Using

2.1 Register TTN

TTN is The Things Network, The Things Network is a proud contributor member of the LoRa Alliance, is the a LoRaWAN network solutions.

First let's open TTN home page: https://www.thethingsnetwork.org/

Then click the place pointed by the arrow. Enter register interface.

COM	MUNITIES LABS LEARN SUPPOR	RT FORUM SHOP		SIGN UP LOGIN
	Join our first global Lo	RaWAN developer conference	Get Tickets	
		THE THINGS N E T W O R K		
		GLOBAL INTE		
				1

After entering the ThingParkPartner, click Try in the upper right to enter the registration interface. After filling out the information you can use Actility.

THETHIN	HOM	CONSOLE
		THE THINGS N E T W O R K
		CREATE AN ACCOUNT
	Create a	account for The Things Network and start exploring the world of Internet of Things with us.
		RNAME will be your username — pick a good one because you will not be able to change it.
		Will be your username — pick a good one because you will not be able to change it.
	FM	NIL ADDRESS
		will occasionally receive account related emails. This email address is not public.
		SWORD at least 6 characters.
		Create account
	E	y registering an account you agree to our <u>Terms and Conditions</u> and <u>Privacy Policy</u> .



2.2 Register Gateway to TTN

In this case the LoRa gateway used is a LoRaWAN network server composed of RAK831 + Ri3 + TTN. If you want to buy RAK831 + Ri3 kit please click: <u>https://www.aliexpress.com/store/2805180</u>

If you already have the RAK831 + Ri3 kit then you can check out here to learn how to connect the RAK831 + Ri3 to the TTN.

https://www.hackster.io/naresh-krish/getting-started-with-the-rak-831-lora-gateway-and-rpi3-e3351d

If you are a Chinese customer, then you can go to the official document download center to download the Chinese version of the tutorial.

http://www.rakwireless.com/cn/download/RAK831%20LoRa%20Gateway/%E8%BD%AF%E4%BB%B6%E5%BC% 80%E5%8F%91

2.3 Register your device to TTN

After successfully connecting the RAK831 + Ri3 to the TTN, your TTN gateway interface now has its own gateway, but you still need to set up your own application. So, back to the TTN application interface, click Create a new application.

THE THINGS CONSOLE NET WORK COMMUNITY EDITION	Applications Gateways Support 🔘 chace
Applications	
APPLICATIONS	add application
lora_button LoRa_Button	ttn-handler-eu 70 B3 D5 7E D0 00 7A C1
rak811_n_868mhz RAK811-N-868MHZ	ttn-handler-eu 70 B3 D5 7E D0 00 7D FA
rak811_n_915 RAK811-N_915	ttn-handler-eu 70 B3 D5 7E D0 00 7E C7

Enter the application settings interface, follow the prompts to fill in the information:

Application ID: The unique identifier of your application on the network,(When filling in this ID, capital letters and spaces can not be used)

Description: A human readable description of your new app,(Without limitation, you can fill in any description of your application)

Application EUI: This application EUI is assigned by default for TTN. Can not be manually modified.

Handler registration: Here you can default, can also be set as your own area.

After the setup is complete, click the Add application button and an application is created.

深圳市瑞科慧联科技有限公司 Shenzhen Rakwireless Technology Co., Ltd



Applications Gateways Support 🗛 chace 🗸

Applications > Add Application

THETHINGS CONSOLE

Application ID The unique identifier of your applica	ion on the network			
rak811_breakboard				0
Description A human readable description of you	r new app			
RAK811 BreakBoard				0
Application EUI An application EUI will be issued for Handler registration Select the handler you want to regist	EUI issued b	, you can add your own in the application se y The Things Network	attings page.	
ttn-handler-eu				٥

After the app is added, you need to add the devices under the Applocation, so click the Devices button.

THE THINGS CONSOLE				Applications	Gateways S	Support	A chace	~
Applications > 🥪 rak811_breakboard								
		Overview	Devices	Payload Formats	Integrations	Data	Settings	
APPLICATION OVERVIEW								
Application ID rak811_breakboard Description RAK811 BreakBoard Created 6 minutes ago Handler ttn-handler-eu (current handler)						dor	cumentation	
APPLICATION EUIS						o <u>n</u>	nanage euis	
DEVICES					• register devic	e 🗘 man	age devices	
	₽ <u></u>) o	registered dev	vices					



Then click Register Device.	
-----------------------------	--

THE THINGS CONSOLE			Applications	Gateways	Support	A chace	• •	
Applications > is rak811_breakboard > Devices								
	Overview	Devices	Payload Formats	Integrations	Data	Settings		
DEVICES register device								
Application rak811_breakboard does not have any devices yet. Get started by registering one!								

In the device registration interface, follow the prompts to fill in the information:

Device ID: This is the unique identifier for the device in this app. The device ID will be immutable. (The ID does not support capital letters and spaces).

Device EUI: The device EUI is the unique identifier for this device on the network. You can change the EUI later.(8-byte number)

App Key: The App Key will be used to secure the communication between you device and the network.(By TTN default setting)

App EUI: Default setting.

After setting, click the register button.

		Overview	Devices	Payload Formats	Integrations	Data	Setting
REGISTER DEVICE						bulk imp	port device
Device ID This is the unique identifier for the device in	this app. The device ID will b	e immutable.					
rak811_breakboard_000020							0
Device EUI The device EUI is the unique identifier for th do C5 A8 FF EE 00 00 20 App Key The App Key will be used to secure the com		-				0	8 bytes
/	tł	his field will be generated					
App EUI							
70 B3 D5 7E D0 00 86 E2							\$



SOLUTION KIT GUIDE

Device registration is successful, you can see the device is very important three parameters, Devices EUI, App EUI, App key,(If you do not see it, click on the arrow to show it).

THE THINGS	CONSOLE COMMUNITY EDITION							Applications (Gateways S	upport	A chace	~
Applications > 😂 rak811_breakboard > Devices > 🐖 rak811_breakboard_000020												
									Overview	Data	Settings	
DEVICE	OVERVIEW											
	Application ID Device ID Activation Method Device EUI Application EUI	rak811 OTA	_brea	eakboard kboard_000020 60 C5 A8 FF EE 00 00 20 70 B3 D5 7E D0 00 86 E2	State State							
	App Key Status Frames up Frames down	• nev 0 <u>rese</u>			E 5E AC	DE 57 29 1F 86 8C 3B	fat.					

After obtaining three parameters of Devices EUI, App EUI and App key, open the ClassA project of RAK811 BreakBoard open source code and modify these three parameters. Then compile the download process.

	akBoard\Keil\classA\classA.uvprojx - µvision	
File Edit View Project Flash Debug P		
P		
🔗 🖾 🕮 🥔 📇 🛛 🗱 RAK811_breakboa		
Project 📮 🖪	i2c-board.c RegionAS923.c main.c sx1276-board.c LoRaM	lac.c 🚺 sx1276-board.h 🗋 Commissioning.h 🗋 lis3dh.c 🦉 startup_stm321151xb.s 🗋 board.c 🗋 board.h 🗋 i2c.c 🗾 👻 🗙
Project: classA	28	
😑 💭 RAK811_breakboard	29 🛱 /* !	
e 🦢 app	30 * IEEE Organizationally Unique Identifier (O	
🕢 📄 main.c	31 * \remark This is unique to a company or orga	inization
🖨 🦢 boards\RAK811BreakBoard	32 - */	
adc-board.c	33 #define IEEE_OUI	0x60, 0xC5, 0xA8
board.c	34 35 🗆 /*!	
gpio-board.c	35 □/*! 36 * Mote device IEEE EUI (big endian)	
gps-board.c	37 *	
a i2c-board.c	38 * \remark In this application the value is au	tomatically generated by calling
e intc-board.c	39 * BoardGetUniqueId function	comatically generated by calling
e i spi-board.c	40 - */	
sx1276-board.c	41 #define LORAWAN_DEVICE_EUI	{ IEEE_OUI, 0×FF, 0×EE, 0×00, 0×00, 0×20 }
uart-board.c boards\RAK811BreakBoard\cr	42	
boards\KAK811BreakBoard\cr	43 🛱 /*!	
system_stm32l151xb.s	44 * Application IEEE EUI (big endian)	
boards\mcu\stm32\STM32L1	45 - */	· · · · · · · · · · · · · · · · · · ·
B - stm32l1xc_hal.c	46 #define LORAWAN_APPLICATION_EUI	{ 0x70, 0xB3, 0xD5, 0x7E, 0xD0, 0x00, 0x86, 0xE2 }
stm32l1xx_hal_adc.c	47	//70b3d57ef00046a4 70B3D57E D0007DFA
stm32l1xc_hal_adc_cc stm32l1xc_hal_adc_ex.c	48 🖻 /* !	
stm32l1xc_hal_doc_ex.c stm32l1xc_hal_doma.c	49 * AES encryption/decryption cipher application	in key
stm32l1xx_hal_gpio.c		
stm3211x_hal_i2c.c	51 #define LORAWAN_APPLICATION_KEY 52	<pre>{ 0x19, 0xA1, 0xE6, 0xF6, 0x77, 0xC4, 0xBE, 0x5E, 0xAC, 0xDE, 0x57, 0x29, 0x1F, 0x86, //a6b08140dae1d795ebfa5a6dee1f4dbd 09A503D6256F9EF612A15181F583880A</pre>
stm32l1xc_hal_pwr.c	53 ⊡ /*!	//acbwo14wdae1d/95ebta5acdee1t4dbd
stm3211x hal pwr.c	54 * Current network ID	
stm32l1xc_hal_rcc.c	55 - */	
stm32l1xc_hal_rcc_ex.c	56 #define LORAWAN NETWORK ID	(uint32 t)0
strib2lixchild(cc_ck) strib2lixchild(cc_ck) strib2lixchild(cc_ck)	57	
	58 🖂 /*!	
stm32l1xc_hal_spi.c	59 * Device address on the network (big endian)	
stm32l1xc_hal_spi.ex.c	60 *	
stm32l1xx hal uart.c	61 * \remark In this application the value is au	
<u> </u>	62 * a pseudo random generator seeded wi	th a value derived from 🔶
🔄 🔄 Project 🎯 Books 🚯 Functi 🛛 🗛 Templ	• · · · · · · · · · · · · · · · · · · ·	
Build Output		I 🗃
Erase Done.		
Programming Done. Verify OK.		
Application running		
Flash Load finished at 16:22:04		
		* JLink Info: ROMTbl 0 [5]: FFF42000, CID: B1059000 J-LINK / J-TRACE Cortex L38 C33 CAP NUM SCRL OVR R/W





After the program download is complete, reset the RAK811 BreakBoard device, you can see the following information

in the serial port of the device's Micro USB interface.

COM Settings Data receive SAVAGE V4.2.3 PontNum COM41 = BaudR 115200 = DPaily NONE = Data B 8 = StopB 1 = ex_EUI: 60 C5 A8 FF EE 00 00 20 AppEui: 70 B3 D5 TE D0 00 86 E2 AppEui: 70 B3 D5 TE D0 00 86 E2 DrAA Join Start OTAA Join Start OTAA Join Start Data from file Seecive to file Bate from file Auto checkum Auto checkum Auto checkum Auto checkum Auto checkum Auto checkum Come IDD0 2 ERXD @ 3TXD @ 4DIE • 5GND • 6DSR • 7RIS • 8CTS • 9RI• IDD0 2 ZRXD @ 3TXD @ 4DIE • 5GND • 6DSR • 7RIS • 8CTS • 9RI• Send IDD0 2 ZRXD @ 3TXD @ 4DIE • 5GND • 6DSR • 7RIS • 8CTS • 9RI•	••	CommUart Assistant	→ - □ ×	
Baudf 115200 DPady NONE DataB Selected LoraWAN 1.0.2 Region: EU868 TAA: Descriptions Image: Close Close Char Join Start OTAA Join Start TAA Join Start OTAA Join Start Recv Options Receive to file Receive as hex Debug2: latitude: 0.000000, longitude: 0.000000, altitudeGps: -1 Save Clear Save clear input Send as hex Period [5000 ms] Locd Load Clear		Data receive	SAVAGE V4.2.3	
DPaily NONE Dtails Image: Selected Lorana 1.0.2 Kegton: E0000 Dtail Image: Selected Lorana 1.0.2 Kegton: E0000 Dtail Image: Selected Lorana 1.0.2 Kegton: E0000 StopB Image: Selected Lorana 1.0.2 Kegton: E0000 StopB Image: Selected Lorana 1.0.2 Kegton: E0000 Image: Selected Lorana 1.0.2 Kegton: E0000 Class OTA: Dew_EUI: 60 CS A8 FF EE 00 00 20 AppKey: 19 At EB FE 70 7 C4 EB SE AC DE 57 29 1F 86 8C 3B OTAA Join Start OTAA Join Start DtA Join Start OTAA Join Start Recev Options Image: Debug]: latitude: 0.000000, longitude: 0.000000, altitude@ps: -1 Recev in a shex Pause receive Save Clear Send options Image: Debug 3.TXD @ 4.DTE \$ 5GND \$ 6.DSR \$ 7.ETS \$ 8.CTS \$ 9.RI\$ Incode Low Image: Debug 3.TXD \$ 4.DTE \$ 5.GND \$ 6.DSR \$ 7.ETS \$ 8.CTS \$ 9.RI\$	PortNum COM41 🖃	RAK311 BreakBoard soft version: 1.0.2		
OTAX: DataB 8		Selected LoraWAN 1.0.2 Region: EU868		
DataB 8	DPaity NONE 🔽			
StopB	DataB 8 🖃			
Image: Close AppKey: 19 Al E6 F6 T7 T4 EE SE AC DE 57 29 1F 86 8C 38 OTAA Join Start OTAA Join Start Image: Close OTAA Join Start Send Options Image: Close Image: Close Ima	StopP 1	-		
Image: Close OTAA Join Success [Debug]: latitude: 0.000000, longitude: 0.000000, altitudeGps: -1 Receive to file Auto linefeed Show timestamp Receive as hex Pause receive Save Clear Send Options Data from file Auto clear input Send as hex Period 5000 ms Load Clear				
Recv Options Receive to file Auto linefeed Show timestamp Receive as hex Pause receive Save Clear Send Options Auto checksum Auto clear input Send as hex Period [5000 ms] Load Clear	🔶 Close			
Receive to file Auto linefeed Show timestamp Receive as hex Pause receive Save Clear Send Options Data from file Auto checksum Auto checksum Auto clear input Send as hex Period 5000 ms Load Clear Send			os: -1	
Auto linefeed Show timestamp Receive as hex Pause receive Save Clear Send Options Data from file Auto checksum Auto checksum Auto clear input Send as hex Period 5000 ms Load Clear Send	-			
Show timestamp Receive as hex Pause receive Save Clear Send Options Data from file Auto checksum Auto clear input Send as hex Period 5000 ms Load Clear Send	-			
Receive as hex Pause receive Save Clear Data from file Auto checksum Auto clear input Send as hex Period 5000 ms Load Clear				
Pause receive Save Clear Send Options Data from file Auto checksum Auto clear input Send as hex Period 5000 ms Load Clear Send			1	
Save Clear Send Options Data from file Auto checksum Auto clear input Send as hex Period 5000 ms Load Clear Send				
Send Options Data from file Auto checksum Auto clear input Send as hex Period 5000 ms Load Clear Send				
Data from file Auto checksum Auto clear input Send as hex Period 5000 ms Load. Clear Clear	Save <u>Clear</u>			
Auto checksum Auto clear input Send as hex Period 5000 ms Load. Clear Clear	Send Options			
Auto clear input Send as hex Period 5000 ms Load Clear Clear	🔲 Data from file			
□ Send as hex 1.DCD ◆ 2.RXD ◆ 3.TXD ◆ 4.DTR ◆ 5.GND ◆ 6.DSR ◆ 7.RTS ◆ 8.CTS ◆ 9.RI ◆ □ Period 5000 ms	🔲 Auto checksum			
Period 5000 ms Load Clear Send				
Load Clear Send		1.DCD ● 2.RXD ● 3.1XD ● <u>4.DTH</u> ● 5.GND ● 6.DSR ● <u>7.RTS</u> ●	8.CTS	
Load Ulear	Period 5000 ms		Sand	
💓 Ready! TX:0 RX:10588	Load Clear		Jenu	
	🍯 Ready!	* TX:0 RX:1058	8 Reset	

In the TTN interface, you can also see the device to join the request and reply.

Applications > @ rak811_breakboard > Devices > @ rak811_breakboard_000020 > Data Overview Data Settings APPLICATION DATA II pause III Filters uplink downlink activation ack error 16:34:31 0 0 payload: [not provided]	Overview Data Settings APPLICATION DATA II pause in clear Filters uplink downlink activation ack error time_counter_port time_counter_port	NETWOR		OLE							Applications	Gateways	Support	A chace
APPLICATION DATA II Dause in clear Filters uplink downlink activation ack error time counter port 16:34:31 0 0 payload: [not provided]	APPLICATION DATA le processo des la construction ack error Filters uplink downlink activation ack error time counter port 16:34:31 0 0 payload: [not provided]	Applications	5 > 🥪 ra	ak811_break	kboard > [Devices > 📰 rak	:811_breakt	ooard_00002	20 > Data					
Filters uplink downlink activation ack error time counter port 16:34:31 0 0 payload: [not provided]	Filters uplink downlink activation ack error time counter port 16:34:31 0 0 payload: [not provided]											Over	view Data	Settings
Filters time counter port 16:34:31 0 0 payload: [not provided]	Filters time counter port 16:34:31 0 0 payload: [not provided]	APPLIC	CATION	DATA									II pa	use 🛍 <u>clear</u>
▲ 16:34:31 0 0 payload: [not provided]	▲ 16:34:31 0 0 payload: [not provided]	Filters				ack error								
	* 16:34:26 dev addr: 26 01 2CD0 app euit 70 B3D5 7E D0 00 86 E2 dev euit 60 C5 A8 FF EE 00 00 20	▲ 1¢				payload: [not	provided]							
		+ 10	6:34:26			dev addr: 26	012CD0	app eui: 70	B3 D5 7E D0	00 86 E2	dev eui: 60 C	5 A8 FF EE 0	0 00 20	





myDevices is an Internet of Things solutions company. They created Cayenne – the world's first drag-and drop IoT project builder. Cayenne enables engineers, makers, network operators and system integrators to quickly and easily develop and deploy IoT solutions across a wide variety of verticals.

First let's open myDevices home page: <u>https://mydevices.com/</u>

Then click the SIGN UP FREE button at the top right to start registering.

All projects My Pi Project +				Submit Project
Overview Scheduling O1	Triggers & Alerts			
Damo Board		Demo Board	🖮 🧔 Demo Board	
Processor		Memory	Storage	
Live m h d w tmo 3mo 6mo	i 1y			
40				
30	C:		MI J TM	Disk
	Simplify the	Connected Wo	rid™	3.7 GB / 14.6 G
20	Quickly design, prote	otype, and commercialize IoT solu		3.7 GB / 14.6 G
20	Quickly design, prote			
20	Quickly design, proto	otype, and commercialize IoT solu		3.7 GB / 14.6 G
20 10 14-57:53 14-57:54 Dame Blanct	Quickly design, prote 14-3755 14-3755 14-3755 14 Gene floord BMP180	otype, and commercialize IoT solu (45756 14-5756 GET STARTED		3.7 GB / 14.6 G
20 10 14-57:53 14-57:54 Dame Blanct	Quickly design, proto 163736 163735 163735 16 Demo Based BMP180 P 73.69	otype, and commercialize IoT solu		3.7 GB / 14.6 G
20 10 14-37-53 14-57-54 Dense Based Laminosity Sensor	Quickly design, prote 14-3755 14-3755 14-3755 14 Gene floord BMP180	otype, and commercialize IoT solu (45756 14-5756 GET STARTED		3.7 GB / 14.6 G
20 10 14-57:53 14-57:54 Dame Blanct	Quickly design, proto 163736 163735 163735 16 Demo Based BMP180 P 73.69	otype, and commercialize IoT solu (45756 14-5756 GET STARTED		3.7 GB / 14.6 G

In accordance with the requirements, fill in the information, you can create a myDevices account.

ြြု my Devices	IOT IN A BOX™	CAYENNE ~	IOT READY™	MARKETPLACE	SIGN IN	SIGN UP FREE	
----------------	---------------	-----------	------------	-------------	---------	--------------	--

Sign Up for Cayenne

First Name	Last Name		
Email Address	Password		
I agree to the myDevices Cayenne terms.			
GET STAR	TED FREE		



2.5 Export the data to Cayenne

After registering myDevices account, log in to your account and you will see your Cayenne Dashboard. Since the device we want to add is a LoRa device, select the LoRa icon Click.

tep 1: Choose a device to start a p	-		A
	Contraction of the second seco		Cayenne API
Raspberry Pi	Arduino	LoRa	Bring Your Own Thing
Need One?	Need One?	What's This?	What's This?
•••			
All Devices			

After entering, first select the left LoRaWAN network provider, here select TheThingsNetwork. Next, select the sensor device, so choose the device: Cayenne LPP.

Cayenne Powered by myDevices	+ Create new proj		ැබ ල ද ද ද ස Create App Submit Project Community Docs User Menu
Add new Q Netvox Technology Lig Netvox Technology Mo	DEVICES Single Board Computers MicroControllers	Abeeway MasterTracker Low Power Industrial GPS Tracker	LPP Cayenne Low Power Payload
Image: Second Structure Image: Second Structure Image: Second Structure Image: Second Structure <td>Sensors V Actuators V</td> <td>AcSiP EK-S76SXB S76S EVB in X-Bee Form > Factor</td> <td>Cayenne LPP DevEUI</td>	Sensors V Actuators V	AcSiP EK-S76SXB S76S EVB in X-Bee Form > Factor	Cayenne LPP DevEUI
~	Extensions	AcSiP S76S > LoRa development board	Activation Mode Already Registered
	Actility Everynet Kerlink Loriot	Adeunis Demonstrator Temperature, Accelerometer, GPS	Location This device moves
	machineQ Objenious OrbiWise	Adeunis Field Test Device	
	Pixel Networks Sagemcom Semtech Senet	Adeunis Pulse Water, gas, electricity & heat > meters	
Q Search Devices	Stream Swisscom The Things Network	Adeunis Sensors Analog Sensor	

COPYRIGHT © SHENZHEN RAKWIRELESS TECHNOLOGY CO., LTD ETDX1711281242



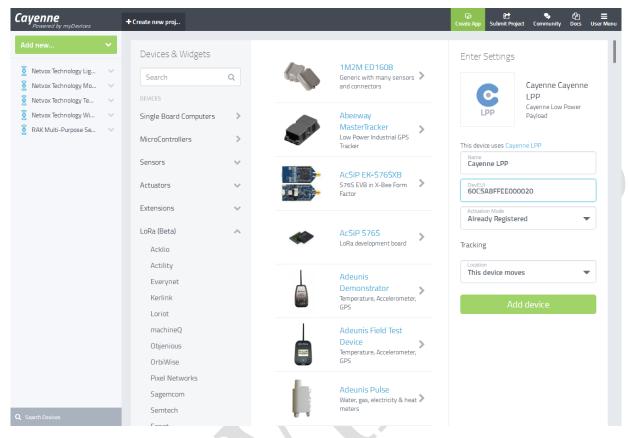
深圳市瑞科慧联科技有限公司 Shenzhen Rakwireless Technology Co., Ltd

You can see the need to fill in some of the parameters of the device, described in detail below:

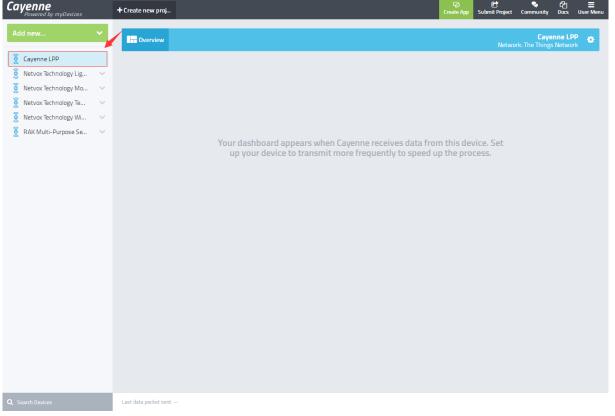
DevEUI: The DevEUI is a unique device 64-bits identifier. This parameter can be acquire in TTN.

Activation Mode: The Default setting Already Registered.

Location: Set according to your equipment.



Finally click Add Device, the device is added successfully. Next you need to set the parameters of the TTN interface.



SOLUTION KIT GUIDE

深圳市瑞科慧联科技有限公司 st Shenzhen Rakwireless Technology Co., Ltd

Return to the TTN application interface, Click Integrations and click Add.

	INGS CONSOLE	TION				Applicati	ons Gatewa	ys Support	\Lambda chace	~
	Applications > 🤤 rak81	L_breakboard > Inte	grations							
				Overview	Devices	Payload Formats	Integrations	Data Sc	ttings	
	INTEGRATIONS							add integ	ration	
			There are no integrations t <u>Get start</u> e	for application rai		ard.				
Then you c	can see the Cay	enne interfa	ce.click it.							
	ORK CONSOLE	ION				Applicat	ions Gatewa		A chace	~
	Applications > 🤤 rak811	_breakboard > Inter	grations							
				Overview	Devices	Payload Formats	Integrations	Data So	ettings	
	ADD INTEGRATION	l.								
	Þ	Cayenne		EVENT THE	2</th <th></th> <th></th> <th>OpenSensors.io</th> <th></th> <th></th>			OpenSensors.io		
	AllThingsTalk Maker v2.5.2 AllThingsTalk	Cayenne v2.4.0 myDevices	Storage v2	/RYTHNG .5.2 /RYTHNG	HTTP Integratio v2.5.1 The Things Industrics B.V.	v2.4.0	igs T	penSensors 2.5.0 he Things idustries B.V.		

After entering the setting interface, the Process ID can fill in any name,eg: lora_button. The Access Key is set defaylt key..then click Add Integrations. So Cayenne is added.

THINGS CONSOLE COMMUNITY E	DITION					Applicatio	ons Gateway		ort 🗭
Applications > 🥪 rak8	1_brcakboard >	Integrations							
				Overview	Devices	Payload Formats	Integrations	Data	Settings
ADD INTEGRATIO	N								
	Cayenne	(v2.4.0)							
	myDevices	n prototype and	l commercialize lo1	T solutions with m	vDevices Ca	(CDDC			
	quickiy design	i, prococype and		i solucions manni	, benees ou				
	documentatio	n							
Cayenne	<u>documentatio</u>	n							
Cayenne Process ID The unique identifier of									
Process ID									0
Process ID The unique identifier of	the new integration								٥
Process ID The unique identifier of rak811_breakboard Access Key	the new integration								•
Process ID The unique identifier of rak811_breakboard Access Key The access key used for	the new integration								
Process ID The unique identifier of rak811_breakboard Access Key The access key used for	the new integration								
Process ID The unique identifier of rak811_breakboard Access Key The access key used for	the new integration						Cancel	Add into	\$

COPYRIGHT © SHENZHEN RAKWIRELESS TECHNOLOGY CO., LTD ETDX1711281242



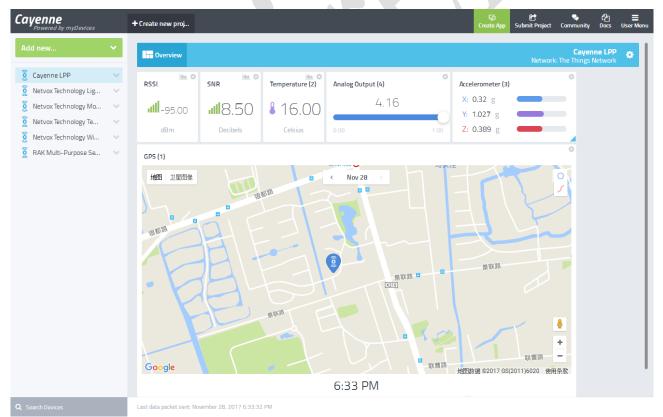
深圳市瑞科慧联科技有限公司 Shenzhen Rakwireless Technology Co., Ltd

SOLUTION KIT GUIDE

However, at this time, Cayenne does not recognize the data format, so you also need to set the Payload Formats. Click to enter the Payload Formats interface and select Payload Format as the Cayenne LPP.

	GS CONSOLE R K COMMUNITY EDITION			Applicat	ions Gateway	ys Sup	port P	chace	~
Ар	oplications > 🥥 rak811_brcakboard > Payload Formats								
		Overview	Devices	Payload Formats	Integrations	Data	Settings		
	PAYLOAD FORMATS								
	Payload Format The payload format sent by your devices								
	Cayenne LPP						¢		
					Ca	incel	savc		
						1			

The TTN Cayenne is set up, After waiting for the device to be positioned, you will see in the Cayenne interface as shown below:



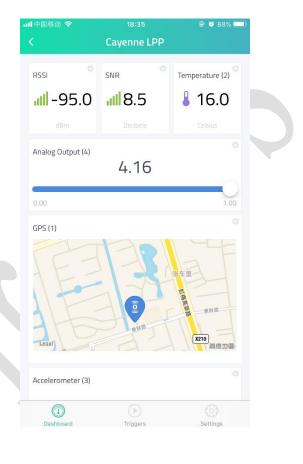
(This is the RAK811 TrackerBoard Data information, the RAK811 SensorNodeBoard will not have GPS data.)



2.6 Watch the data on the phone

After the data has been successfully imported into the Cayenne, you can view the sensor data on your phone just by downloading the Cayenne mobile app. Mobile APP supports IOS and Android platform. If you are an Apple phone, go to the Apple Store and search for Cayenne. If you are an Android phone, go to Google Store and search for Cayenne. (If you are a Chinese user, may not be able to access these, then you may need to VPN proxy). The usage method of mobile phone APP is similar to the webpage, and will not be described in detail.

ull 中国移动 🗢	18:35	88% 1
Ξ	Devices	+
Netvox Technology T	emperature & Humidit	y Sensor >
Netvox Technology N	Notion Detector	>
Cayenne LPP		>
Netvox Technology L	ight Sensor	>
RAK Multi-Purpose S	Sensor	>
Netvox Technology V	Vindow & Door Sensor	>





3. Contact information

Shanghai

FAE mailbox:allan.jin@rakwireless.com Tel : 185-1082-5762 Address: Room B205, Green light kechuang garden, 2588 Lane, Hongmei South road, Minhang District, Shanghai

Shenzhen

FAE mailbox: steven.tang@rakwireless.com

Tel : 0755-26506594

Fax: 0755-86152201

Address: Room 802, Yongfu building, No.1s06, Yongfu road, Baoan District , Shengzhen



4. Revision History

Version	Date	Change	Author
V1.0	2017-11-28	First release	Chace