iWSN-121A Series Quick Start

v1.0, February 2022

Packing List

In addition to this guide, the package includes the following items:



iWSN-121A Series Module



Split-core CT x 2



Screw Driver (1C016)

Module Name	Split-core CT	Module Name	Split-core CT
iWSN-121A-160-ME	8m, Φ16mm (100A), 2 pcs	iWSN-121A-360-ME	8m, Φ36mm (400A), 2 pcs
iWSN-121A-240-ME	8m, Φ24mm (200A), 2 pcs	-	-

Technical Support

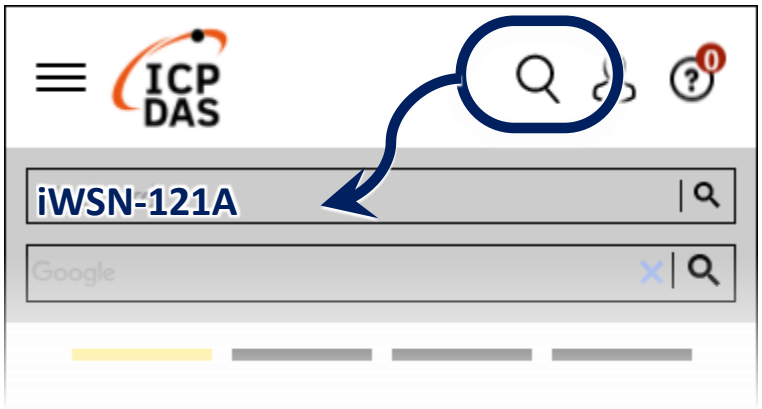
service@icpdas.com

www.icpdas.com

Resources

How to search for drivers, manuals and spec information on ICP DAS website.

- For Mobile Web



- For Desktop Web



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Warning

ICP DAS assumes no liability for any damage resulting from the use of this product. ICP DAS reserves the right to change this manual at any time without notice. The information furnished by ICP DAS is believed to be accurate and reliable. However, no responsibility is assumed by ICP DAS for its use, not for any infringements of patents or other rights of third parties resulting from its use.

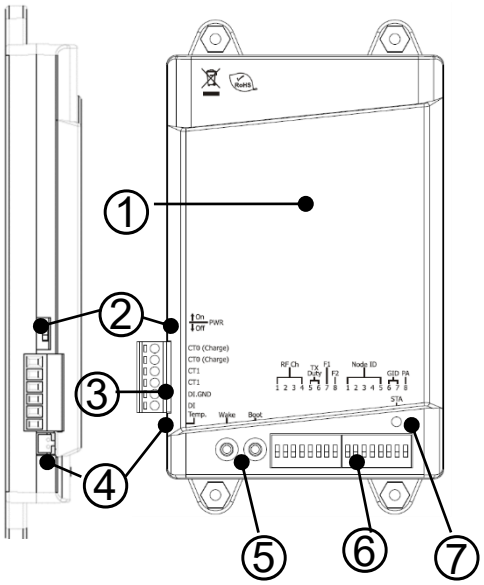
Limitation of Warranty

This warranty does not apply to defects resulting from unauthorized modification, misuse, or use for reason other than electrical power monitoring.

Product Warranty & Customer Support

ICP DAS warrants all products free from defects in material and workmanship for a period of one year from the date of shipping. During the warranty period, we will, at our position, either repair or replace any product that proves to be defective. To report any defect, please contact us. Please have the model, serial number and a detailed problem description available when you call. When returning any merchandise to ICP DAS, a return SN. Is required.

1 Appearance

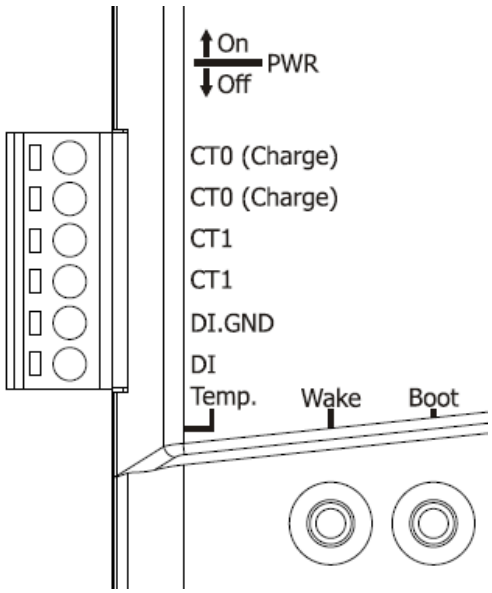


Number	Instructions
1	Build in PCB antenna
2	DIP switch of power
3	CT/DI connector
4	Thermistor interface
5	Boot and wake button
6	DIP switch of parameter setting
7	LED indicator

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2 Wire and Buttons

Switch	Instructions	
PWR	ON	Power on
	OFF	Power off



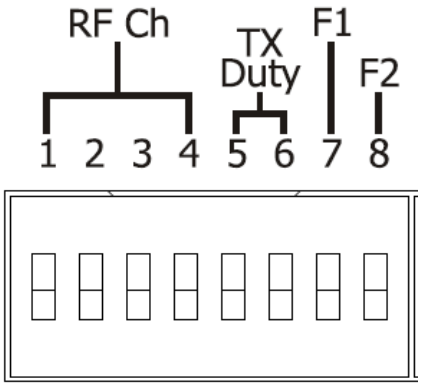
Pin	Name	Instructions
6	CT0(Charge)	Split-core CT pin, no directionality, support measuring and charging function
5	CT0(Charge)	
4	CT1	Split-core CT pin, no directionality, only measuring function
3	CT1	
2	DI.GND	DI connect pin
1	DI	

Interface	Instructions
Temp.	Thermistor Interface

Button	Instructions
Wake	Manually wake up
Boot	After press 1~3 seconds, the LED light will be on for 1 second and then extinguished. At this time, the boot is completed.

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3 Communication parameter



Name	Instructions
F2	Reserved
F1	
TX Duty (RF transmit duty) ■ : ON □ : OFF	

Period	Pin	
	5	6
1 sec	□	□
10 sec	■	□
30 sec	□	■
60 sec	■	■

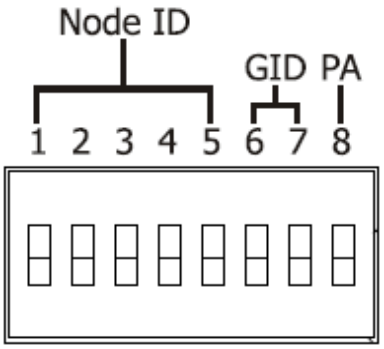
RF Ch
(RF Channel)

■ : ON

□ : OFF

Ch	Pin				Ch	Pin			
	1	2	3	4		1	2	3	4
0	□	□	□	□	8	□	□	□	■
1	■	□	□	□	9	■	□	□	■
2	□	■	□	□	A	□	■	□	■
3	■	■	□	□	B	■	■	□	■
4	□	□	■	□	C	□	□	■	■
5	■	□	■	□	D	■	□	■	■
6	□	■	■	□	E	□	■	■	■
7	■	■	■	□	F	■	■	■	■

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<table>
<tr><th>Name</th><th>Instructions</th></tr>
<tr><td>PA</td><td>Factory Only</td></tr>
<tr><td>GID
(Group ID)

■： ON
□： OFF</td><td>
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<tr><th rowspan="2">Group</th><th colspan="2">Pin</th></tr>
<tr><th>6</th><th>7</th></tr>
<tr><td>0</td><td>□</td><td>□</td></tr>
<tr><td>1</td><td>■</td><td>□</td></tr>
<tr><td>2</td><td>□</td><td>■</td></tr>
<tr><td>3</td><td>■</td><td>■</td></tr>
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</td></tr>
<tr><td>Node ID

■： ON
□： OFF</td><td>
<table>
<tr><th rowspan="2">Node</th><th colspan="5">Pin</th><th rowspan="2">Node</th><th colspan="5">Pin</th></tr>
<tr><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th></tr>
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<tr><td>1</td><td>■</td><td>□</td><td>□</td><td>□</td><td>□</td><td>17</td><td>■</td><td>□</td><td>□</td><td>□</td><td>■</td></tr>
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<tr><td>13</td><td>■</td><td>□</td><td>■</td><td>■</td><td>□</td><td>29</td><td>■</td><td>□</td><td>■</td><td>■</td><td>■</td></tr>
<tr><td>14</td><td>□</td><td>■</td><td>■</td><td>■</td><td>□</td><td>30</td><td>□</td><td>■</td><td>■</td><td>■</td><td>■</td></tr>
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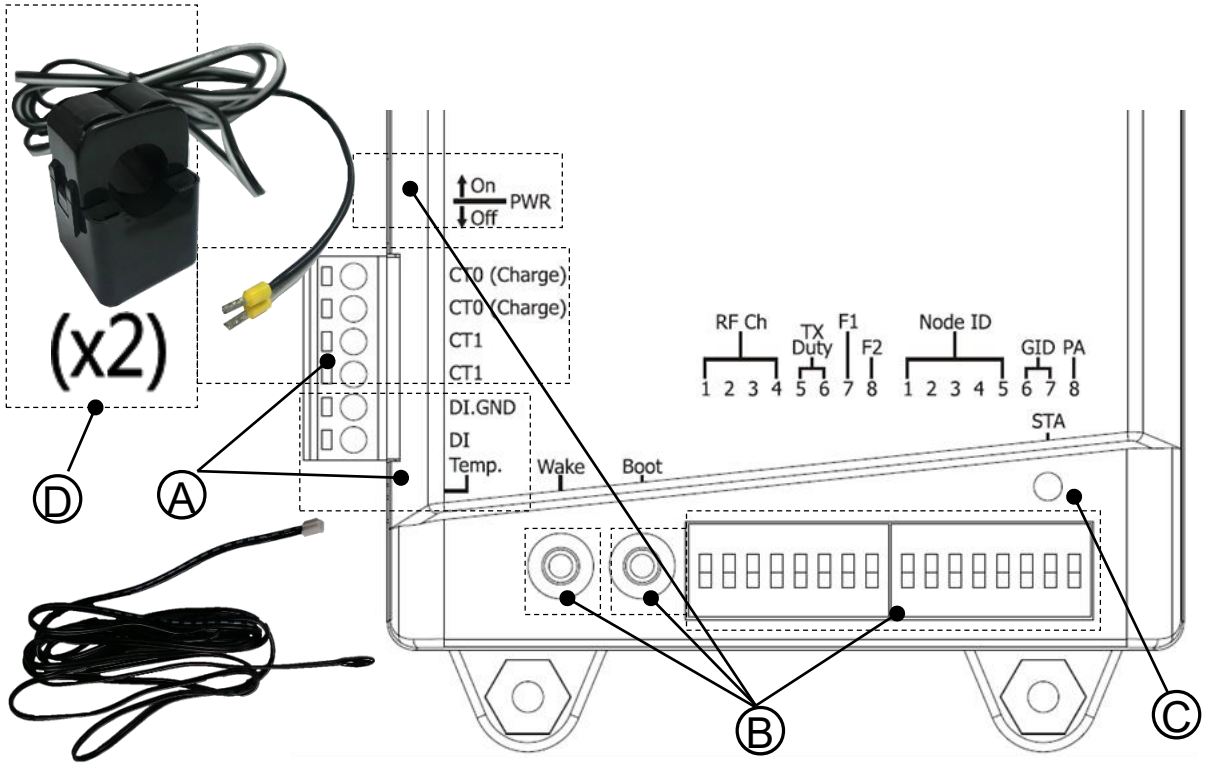
4 LED indicator

Module provide a LED indicator. The table below will explain the LED status indicator.

Indicators	Status	Instructions
STA	Blink continuous	Illegal Node ID, please set the Node ID to 1~31, and then power on.
	Blink once	Low battery power. 1. Please confirm whether the CT is lock into the “CT” pin of the module and bucked to the wire for charging. 2. If have any questions, please contact technology support.
	Blink twice	Component status is abnormal. 1. Reconnect and re-power the unit. 2. If have any questions, please contact technology support.
	Blink three times	Unable to confirm sensor type. 1. Reconnect and re-power the unit. 2. If have any questions, please contact technology support.

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5 Boot Steps



A. Please confirm the CT is locked into the module, and “DI and Temp.” is connected DI device and Thermistor. (If there is no DI device or Thermistor, the “DI and Temp.” don’t be connected.)

B. Adjusting DIP switch, set the parameter of communication and switch “PWR” to OFF. And then switch “PWR” to ON after press “Wake” and “Boot” buttons for 5 seconds.

C. When power on, if “STA” will light on for 1 second and off, this mean boot complete. If “STA” do not be lighted, please press “Boot” for 1~3 seconds, and confirm “STA” will light on for 1 second and off. Finally, press “Wake” once, confirm “STA” blink once, and then let CT bucked to the wire for charging.

D. Connect the CT to the cable to be measured. The buckle has no directionality, but after the buckle, you must confirm that the opening is completely closed.

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Before the CT be buckled



After the CT be buckled



Confirm the opening is completely closed

Note：

1. If you need to remove the terminal lines, always detach the CT before removing the CT terminal lines. Otherwise the CT may develop open-circuit secondary voltages which may be hazardous to personnel or damaging to the CT or equipment connected in the secondary circuit.
2. The external CT's are fragile, please handle with care.
3. The current input of the iWSN-121A series only supports the factory-attached CT.
4. To install CT's correctly, please ensure the CT lines sequences is right before clip the CT's onto the power cable of the monitoring equipment.
5. Please select the appropriate size CT for different size monitoring equipment cables: power line diameter <Φ24 using 200A CT, Φ36 using 400A CT.
6. The maximum current value cannot exceed the CT rating.

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