



# Modbus Address Mapping Table

Version 1.0.0 Aug 2021

## iWSN-1902-TC-IP65



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## Important Information

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If you encounter any problems while operating this device, feel free to contact us via mail at: [service@icpdas.com](mailto:service@icpdas.com).

# 1. iWSN-2200 Series Modbus Address Mapping Table

**[Note 1]:** The length of the data that can be polled to iWSN-2200 at one time is up to 72 words (Uint16/int16).

PLC address (Base1)	Protocol address (Base0)	Function code	Property	Data type	Description	Remarks
40001 30001	0 (0x0000)	03, 04	R	Uint16	The firmware version of iWSN-2200.	The value divided by 10 is the version. Ex: 11/10=1.1=version 1.1.
40002 30002	1 (0x0001)	03, 04	R	Uint16	The module name of iWSN-2200	Value ranges 0~65535 ° Value 2(0x02): iWSN-2200-R1 ° Value 2200(0x0898): iWSN-2200 or iWSN-2200-E ° Other values: reserved.
40003 30003	2 (0x0002)	-	-	-	Reserved.	-
40004 30004	3 (0x0003)	03, 04	R	Uint16	The wireless linking status of iWSN sensor, node ID 31 to 16. [Note] About wireless disconnection check value please refer to PLC	Bit15~bit0 corresponds to node ID 31 to 16. 1: Good Linking ° 0: Disconnecting link.

					address 40007~40008.	
40005 30005	4 (0x0004)	03, 04	R	Uint16	The wireless linking status of iWSN sensor, node ID 15 to 1. [Note] About wireless disconnection check value please refer to PLC address 40007~40008.	Bit15~bit1 corresponds to node ID 15 to 1. Bit0: fix 1. 1: Good Linking ° 0: Disconnecting link.
40006 30006	5 (0x0005)	03, 04	R	Uint16	The count value of the time synchronization command received.	[High byte] Reserved, fix 0.
		06	W		Reboot iWSN-2200.	[Low byte] Value ranges 0~255 ° 0x0001: Reboot ° Other values: reserved.
40007 30007	6 (0x0006)	03, 04, 06	R, W	Uint16	[High word] iWSN sensor wireless disconnection check value. The iWSN-2200 will follow the RF transmission duty cycle of iWSN sensor to check whether the RF	Value ranges 1~4294967295 (0x00000001~0xFFFFFFFF), unit: times. [Read] Default 8640 (0x000021C0) ° [Write] After writing, the reboot takes effect.

					package be receiving, if iWSN-2200 receive RF packages loss counter over than this value, then iWSN-2200 will judge to wireless disconnection.	
40008 30008	7 (0x0007)	03, 04, 06	R, W	Uint16	[Low word] iWSN sensor wireless disconnection check value. The iWSN-2200 will follow the RF transmission duty cycle of iWSN sensor to check whether the RF package be receiving, if iWSN-2200 receive RF packages loss counter over than this value, then iWSN-2200 will judge to wireless disconnection.	
40009 30009	8 (0x0008)	-	-	-	Reserved.	-

40010 30010	9 (0x0009)	-	-	-	Reserved.	-
40011 30011	10 (0x000A)	03, 04, 16	R, W	Uint16	The time of iWSN-2200. [Note 1] External timing correction is required. The correction method is Modbus master timing transmission station number 32 (0x20),	Hour, value range 0~23 °
40012 30012	11 (0x000B)	03, 04, 16	R, W	Uint16	command code 16 (0x10),	Minute, value range 0~59 °
40013 30013	12 (0x000C)	03, 04, 16	R, W	Uint16	time data packet with address 10~13, iWSN-2200 will only receive and will not respond. [Note 2] Because iWSN-2200 only supports 31 sensors at most, there will be no module response from station number 32, so station number 32 is used as a broadcast	Second, value range 0~59 °
40014 30014	13 (0x000D)	03,04, 16	R, W	Uint16		Millisecond, value range 0~999 °

					command.	
40015~ 40100 30015~ 30100	14~99 (0x000E~ 0x0063)	-	-	-	Reserved.	-



## 2. iWSN Sensor Modbus Address Mapping Table

**[Note 1]:** The length of the data that can be polled to iWSN-2200 at one time is up to 72 words (Uint16/int16).

**[Note 2]:** The high byte of protocol address is node ID, and the low byte of protocol address is address mapping. The range of address mapping table in iWSN sensor node ID 1 to 31 as bellow.

iWSN sensor Node ID	The range of address mapping (Hexadecimal)	The range of address mapping (Decimal , Base 0)	The range of address mapping (Decimal , Base 1)
1	0x0141~0x016C	321~364	40322~40365 30322~30365
2	0x0241~0x026C	577~620	40578~40621 30578~30621
...	...	...	...
30	0x1E41~0x1E6C	7745~7788	47746~47789 37746~37789
31	0x1F41~0x1F6C	8001~8044	48002~48045 38002~38045

**For example, iWSN sensor node ID 1:**

PLC address (Base1)	Protocol address (Base0)	Function code	Property	Data type	Description	Remarks
40322~40331 30322~30331	321~330 (0x0141~0x014A)	-	-	-	Reserved.	-
40332 30332	331 (0x014B)	03, 04	R	Uint16	<div> [High byte]  Automatic response time period of iWSN sensor. </div> <div> [Low byte]  The receiving signal strength of </div>	<div> (Bit7~Bit6)  00: Bit0~Bit5 mean the unit is second.  01: Bit0~Bit5 mean the unit is minute.  10: Bit0~Bit5 mean the unit is hour.  11: Reserved. </div> <div> (Bit5~Bit0)  Refer the unit of Bit7 and Bit6 to define the time scale.  Value 1 to 63: Mean 1~63 unit of time.  Value 0: Reserved. </div> <div> Value ranges 0~255.  The higher the value, the better the signal. </div>

					iWSN-2200.	
40333 30333	332 (0x014C)	03, 04	R	Uint16	[High byte] The firmware version of iWSN sensor.	Value ranges 10~255. Ex: value 10 = v1.00, value 254 = v25.40.
					[Low byte] The serial number of wireless package.	Value ranges 0~15.
40334 30334	333 (0x014D)	03, 04	R	Uint16	[High byte] The module code of iWSN sensor.	Value ranges 0~255. Please refer to <a href="#">module code table</a> .
					[Low byte] The module code of extension module.	Value ranges 0~255. Please refer to <a href="#">module code table</a> .
40335 30335	334 (0x014E)	03, 04	R	Uint16	The power status of battery.	Value104 (0x68): 100~41% ◦ Value 103 (0x67): 40~11% ◦ Value 102 (0x66): 10~1% ◦ Value 101 (0x65): < 1% ◦

40336 30336	335 (0x014F)	03, 04	R	Uint16	The measurement temperature of the K-type thermocouple in channel 0.	The value range is 0~1500, and the value divided by 10 is °C, There are 4 kinds of values represent 4 kinds of states Value 65535 (0xFFFF): The thermocouple wiring is open.
40337 30337	336 (0x0150)	03, 04	R	Uint16	The measurement temperature of the K-type thermocouple in channel 1.	Value 8192 (0x2000): Exceeds the upper limit of 150°C. Value 4096 (0x1000): Lower than the lower limit of 0°C. The value is equal to the cold junction temperature: the thermocouple wiring is short-circuited or the thermocouple and the cold junction reach thermal equilibrium.
40338 30338	337 (0x0151)	03, 04	R	Uint16	Cold junction temperature, this is the ambient temperature of the module	The value divided by 10 is °C.

					installation location.	
40339~40365 30339~40365	338~364 (0x0152~0x016C)	-	-	-	Reserved.	-

### 3. iWSN Sensor Module Code and Expansion Module Code

Module Code	Module Name	Type	Power Supply	Charging Method	Can be expanded?
0 (0x00)	iWSN-1110X	SCT x 1	Rechargeable Battery	CT Charging	Yes
1 (0x01)	iWSN-1120X	SCT x 1 RCT x 1			
2 (0x02)	iWSN-1010X	SCT x 1	DC+10~+30V	-	
100 (0x64)	iWSN-1131	SCT x 3, Thermistor x 1	Rechargeable Battery	CT Charging	No
101 (0x65)	iWSN-1121-DI	SCT x 2 Thermistor x 1 DI dry contact x 1			
141 (0x8D)	iWSN-1510X	(Connect to expansion module)	Rechargeable Battery	CT Charging or DC+3V Charging	Yes
142 (0x8E)	iWSN-1511X	Thermistor x 1			
144 (0x8F)	iWSN-SOS-RB	Emergency Button x 1	Disposable battery	-	No
144 (0x90)	iWSN-SOS-PB	Emergency Button x 1			
145 (0x91)	iWSN-SOS-PB-IP65	Emergency Button x 1 (Waterproof Type)			
146 (0x92)	iWSN-SOS-PB-PT	Emergency Button x 1			

		(Portable Type)			
170 (0xAA)	iWSN-1902-TC-IP65	K-type thermocouple x 2	Disposable battery	-	No

Expansion Module Code	Module Name	Type	Support Module
0 (0x00)	iWSN-750P	SCT x 5	iWSN-11xxX
32 (0x20)	iWSN-757P	SCT x 5 Thermistor x 7	
33 (0x21)	iWSN-010	Temperature and Humidity x 1	iWSN-15xxX
34 (0x22)	iWSN-012	TVOC/CO2 x 1	
35 (0x23)	iWSN-101	CO x 1	
36 (0x24)	iWSN-901	IR (Single Point) x 1	
37 (0x25)	iWSN-964	IR (Array) x 1	
38 (0x26)	iWSN-201	Vibration (single axis) x 1	
39 (0x27)	iWSN-203	Vibration (three axes) x 1	
255 (0xFF)	No expansion module connected	-	-