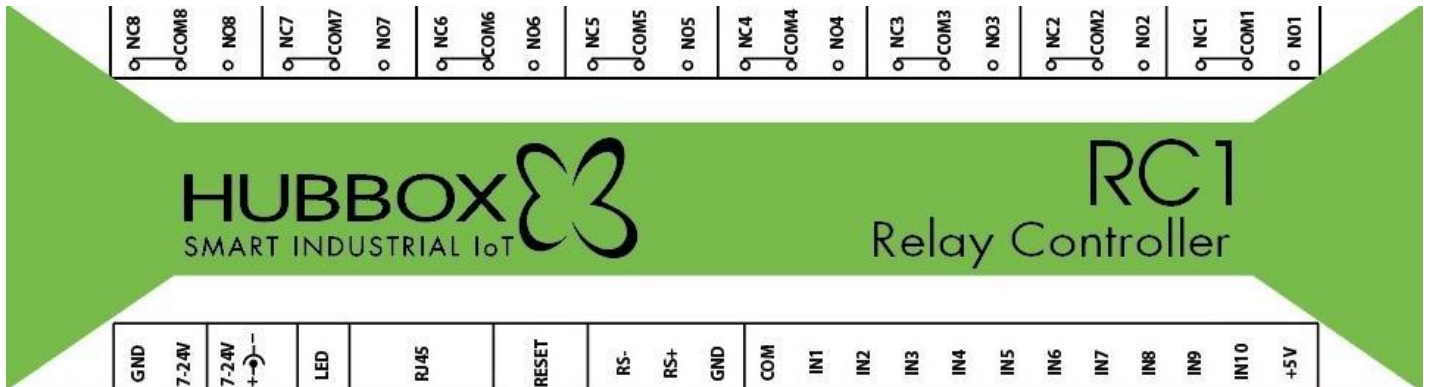


HUBBOX RC1 Relay Controller (10IN/8OUT)

MODBUS TCP - User Guide

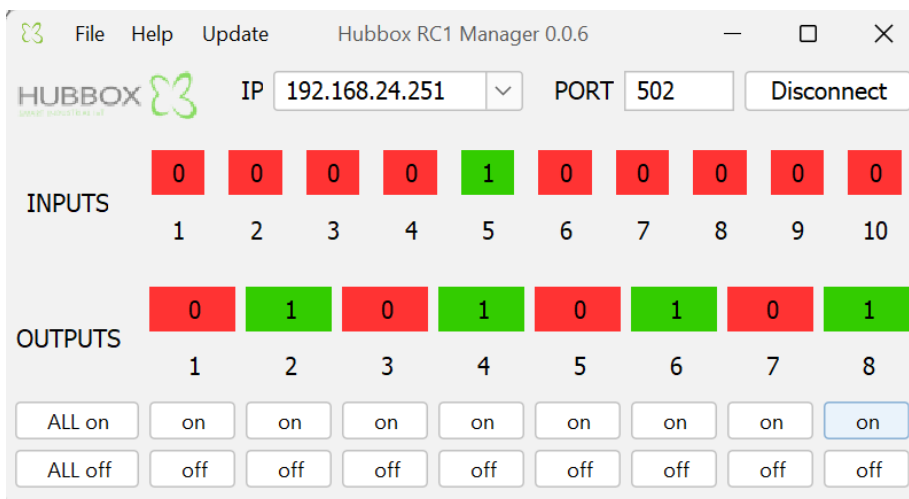


First Setup

- 1- Power Supply: DC 7~24V. DC socket or wiring terminal can be selected to input power. DC Connector Size(Outside Diameter x Inside Diameter): 5.5x2.1mm
- 2- Working Temperature Range: -40~85°C
- 3- 8 independent relay outputs. Maximum AC rating of 250V, and a maximum DC rating of 30V. Can work in two modes NO(normally open) and NC(normally closed) with shared COM input.
- 4- 10 channels of independent 5~24V DC input. In trigger mode inputs can trigger corresponding relays.
- 5- RC1 can remember the last state in case of power failure. Applies the last state when powered up.
- 6- Reset pin can be used for factory settings. Keep pressed for 10 seconds, release after green LED blinks. Default ip address is "192.168.24.251"

RC1 Configuration Manager Software

Download page: <https://www.hubbox.io/en/download>



IP : The ip address of the RC1 device you connect to. (Default 192.168.24.251)

PORT : The modbus TCP port number. (Default 502)

INPUTS : 10 digital input statuses on RC1.

OUTPUTS : 8 relays on RC1. ON and OFF buttons control each relay.

File / Device Configuration :

Hubbox RC1 Settings

IP 192 168 24 251

Subnet 255 255 255 0

Gateway 192 168 24 254

MAC

Input Mode normal trigger

Output Mode remember last state reset

HW version 1905

SW version 2111

SAVE CANCEL FACTORY RESET REBOOT

IP : Change the IP Address of the RC1 device. Default ip: 192.168.24.251

Subnet : Change the Subnet mask

Gateway : Change the Gateway address.

MAC : Change the MAC address of RC1 device.

Input Mode

1) **Normal** : Default option, inputs does not affect output relays.

2) **Trigger** : Input is forwarded to output relay.

Output Mode

1) **Remember Last State** : In case of a power failure state of relays are stored. And restored when powered on.

2) **Reset**: In case of a power failure relays states resets to "off"

HW Version : Hardware version

SW Version : Software version

SAVE : Save the changes.

CANCEL : Cancel changes and close

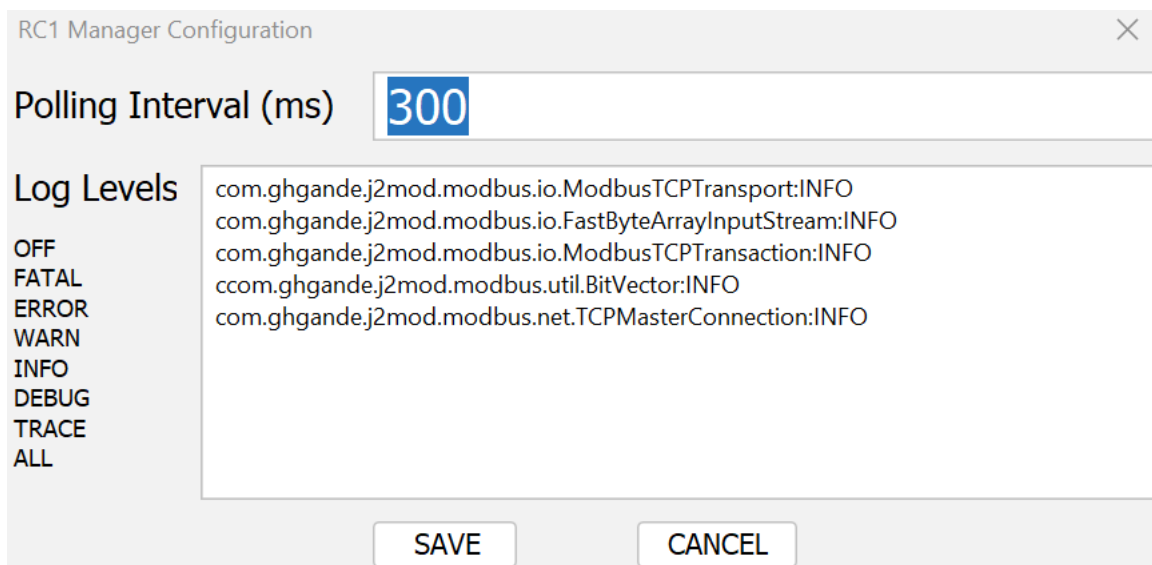
FACTORY RESET : Fabrika ayarlarına geri çevirir.

REBOOT : Restarts the device.

File / App Settings :

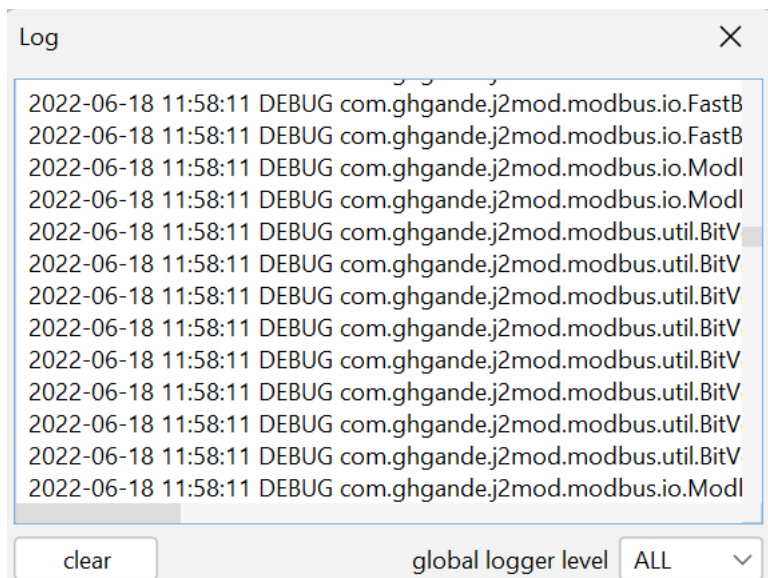
Polling Intervals (ms) : Time to wait between requests from Manager Application to RC1

Log Levels : Logging levels



The image shows a dialog box titled "RC1 Manager Configuration". It has a close button (X) in the top right corner. The "Polling Interval (ms)" field contains the value "300". The "Log Levels" section on the left lists: OFF, FATAL, ERROR, WARN, INFO, DEBUG, TRACE, and ALL. The main text area contains the following log levels: com.ghgande.j2mod.modbus.io.ModbusTCPTransport:INFO, com.ghgande.j2mod.modbus.io.FastByteArrayInputStream:INFO, com.ghgande.j2mod.modbus.io.ModbusTCPTransaction:INFO, ccom.ghgande.j2mod.modbus.util.BitVector:INFO, and com.ghgande.j2mod.modbus.net.TCPMasterConnection:INFO. At the bottom, there are "SAVE" and "CANCEL" buttons.

Log : Log records of Manager Application



The image shows a dialog box titled "Log" with a close button (X) in the top right corner. The main text area displays a list of log entries, all with the timestamp "2022-06-18 11:58:11" and the level "DEBUG". The log entries are: com.ghgande.j2mod.modbus.io.FastB, com.ghgande.j2mod.modbus.io.FastB, com.ghgande.j2mod.modbus.io.Modl, com.ghgande.j2mod.modbus.io.Modl, com.ghgande.j2mod.modbus.util.BitV, com.ghgande.j2mod.modbus.util.BitV, com.ghgande.j2mod.modbus.util.BitV, com.ghgande.j2mod.modbus.util.BitV, com.ghgande.j2mod.modbus.util.BitV, com.ghgande.j2mod.modbus.util.BitV, com.ghgande.j2mod.modbus.util.BitV, com.ghgande.j2mod.modbus.util.BitV, com.ghgande.j2mod.modbus.io.Modl. At the bottom, there is a "clear" button, a "global logger level" label, and a dropdown menu currently set to "ALL".

HUBBOX RC1 – “Update” Menu

Auto Check Updates : If checked, the Manager Application checks software updates automatically.

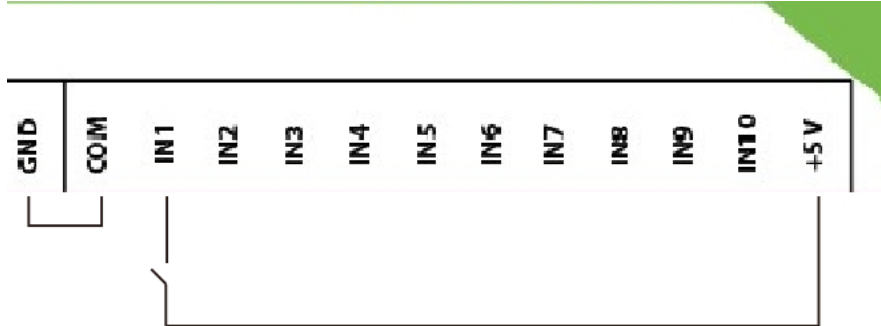
Update : Manual check for a software update.

RC1 MODBUS TCP Table

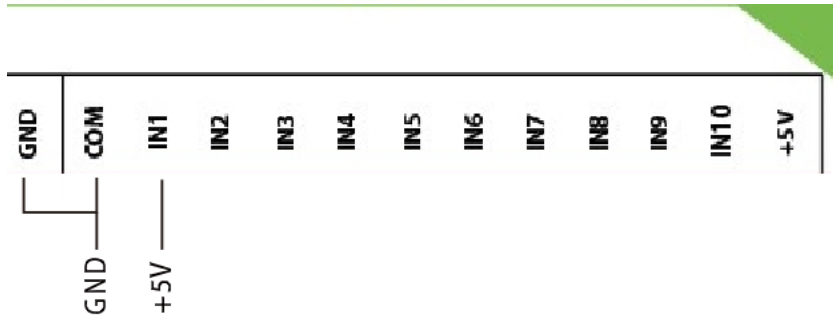
Read Function Code	Write Function Code	Adres	type	Coils - output role	Read Write
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	1	bool	Out 1	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	2	bool	Out 2	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	3	bool	Out 3	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	4	bool	Out 4	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	5	bool	Out 5	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	6	bool	Out 6	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	7	bool	Out 7	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	8	bool	Out 8	R/W
				Discrete inputs - input	
01 : Read Coils(0x)		10001	bool	Input 1	R
01 : Read Coils(0x)		10002	bool	Input 2	R
01 : Read Coils(0x)		10003	bool	Input 3	R
01 : Read Coils(0x)		10004	bool	Input 4	R
01 : Read Coils(0x)		10005	bool	Input 5	R
01 : Read Coils(0x)		10006	bool	Input 6	R
01 : Read Coils(0x)		10007	bool	Input 7	R
01 : Read Coils(0x)		10008	bool	Input 8	R
01 : Read Coils(0x)		10009	bool	Input 9	R
01 : Read Coils(0x)		10010	bool	Input 10	R
				Holding Registers	
03 : Read Holding Register (4x)		40001	uint16	HW version	R
03 : Read Holding Register (4x)		40002	uint16	Software version	R
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40003	uint16	0: success, 1: Fault, 2:FactoryReset(slow flash), 3:ApplyConfigSetting, 4:Reboot (fast flash)	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40004	uint16	IP 3	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40005	uint16	IP 2	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40006	uint16	IP 1	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40007	uint16	IP 0	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40008	uint16	Subnet 3	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40009	uint16	Subnet 2	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40010	uint16	Subnet 1	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40011	uint16	Subnet 0	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40012	uint16	Gateway 3	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40013	uint16	Gateway 2	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40014	uint16	Gateway 1	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40015	uint16	Gateway 0	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40016	uint16	MAC 5	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40017	uint16	MAC 4	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40018	uint16	MAC 3	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40019	uint16	MAC 2	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40020	uint16	MAC 1	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40021	uint16	MAC 0	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40022	uint16	input mode 0:default 1:trigger	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40023	uint16	0:out volatile 1:out non volatile	R/W

Input and Output Wiring and Usage

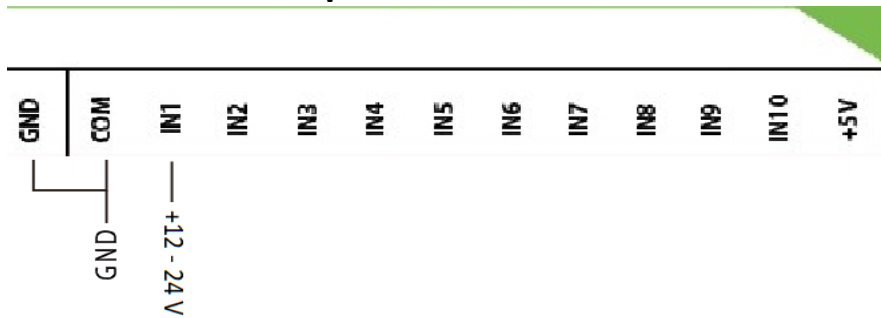
1. Digital input button or trigger relay



2. 5V input



3. 12V – 24V input



4. Relay wiring

