

KORTEX QUATTRO IOT-2 Relay User Manual V1.5



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1 Product Overview

1.1 Overview

Support Ethernet, WiFi, RS485, CAN

10/100Mbps ethernet, Auto-MDIX, DHCP Ip, Static IP

WiFi 802.11 b/g/n, MAX 150Mbps

Digital input, can be Local Button control (SelfLock/Jogging/Delay) Support RELAY On/OFF/Jogging/Delay.

Support HTTP GET CGI, UDP, TCP Server, TCP Client

Support Modbus-RTU/ASCII/TCP/UDP/WIFI

Support Modbus-RTU Over TCP/UDP/WIFI

Support Modbus-ASCII Over TCP/UDP/WIFI

Support WEB control Support MQTT, CoAP

Support NTP, Task timer



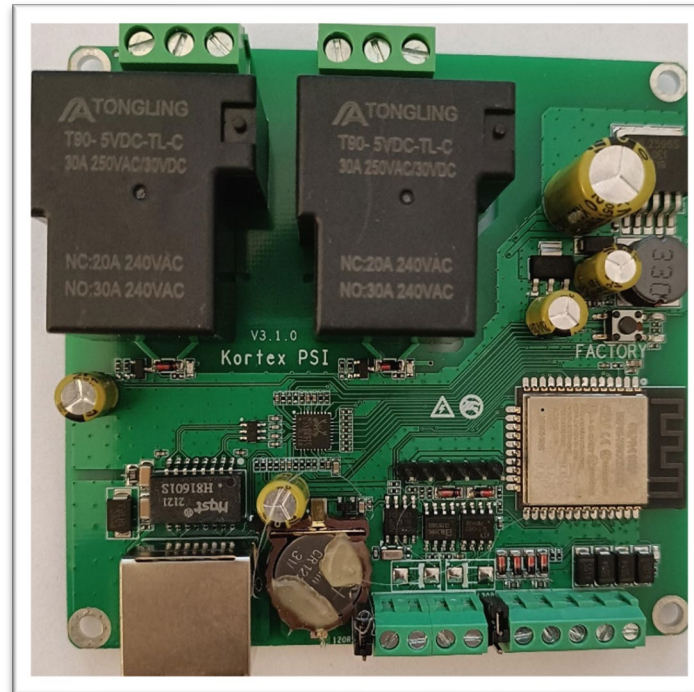
1.2 Technical Parameters

Function	Interface	RJ45/ RS485/CAN/WIFI
	Baud rate	100M/115200bps/125kbps/150Mbps
	Protocol	TCP server/client, UDP HTTP GET CGI, Modbus-RTU/ASCII/TCP/UDP/WIFI Modbus-RTU Over TCP/UDP/WIFI Modbus-ASCII Over TCP/UDP/WIFI MQTT CoAP
	Others	NTP IP Watchdog Task timer
	Relay Power	AC 250V/16A, DC 30V/16A
Output	Contacts	Normally Close (NC) Normally Open (NO)
	Delay	1~65535 seconds
	Momentary	Pull in 0.5 seconds, automatically release
	Storage temperature	-40°C to +70°C
Temperature and Humidity	Operating temperature	-20°C to +70°C
	Relative humidity (During operation)	25°C @ ≤95%, no condensation
Power	Power Specifications	12/24VDC (recommended) 12/24VAC
	Current	0 Channel: 65mA/12V 1 Channel: 0.17A/12V 2 Channels: 0.26A/12V (recommend 1A/12V) 3 Deep Sleep: 28mA/12V
	Power consumption	2 channels: 3,12W

2 Image and Size

2.1 Hardware version **>=V3.x.x**

Hole size: 3.5mm



2CH relay board

Size of relay board: 94 x 89mm

Distance of hole: 85 x 80mm

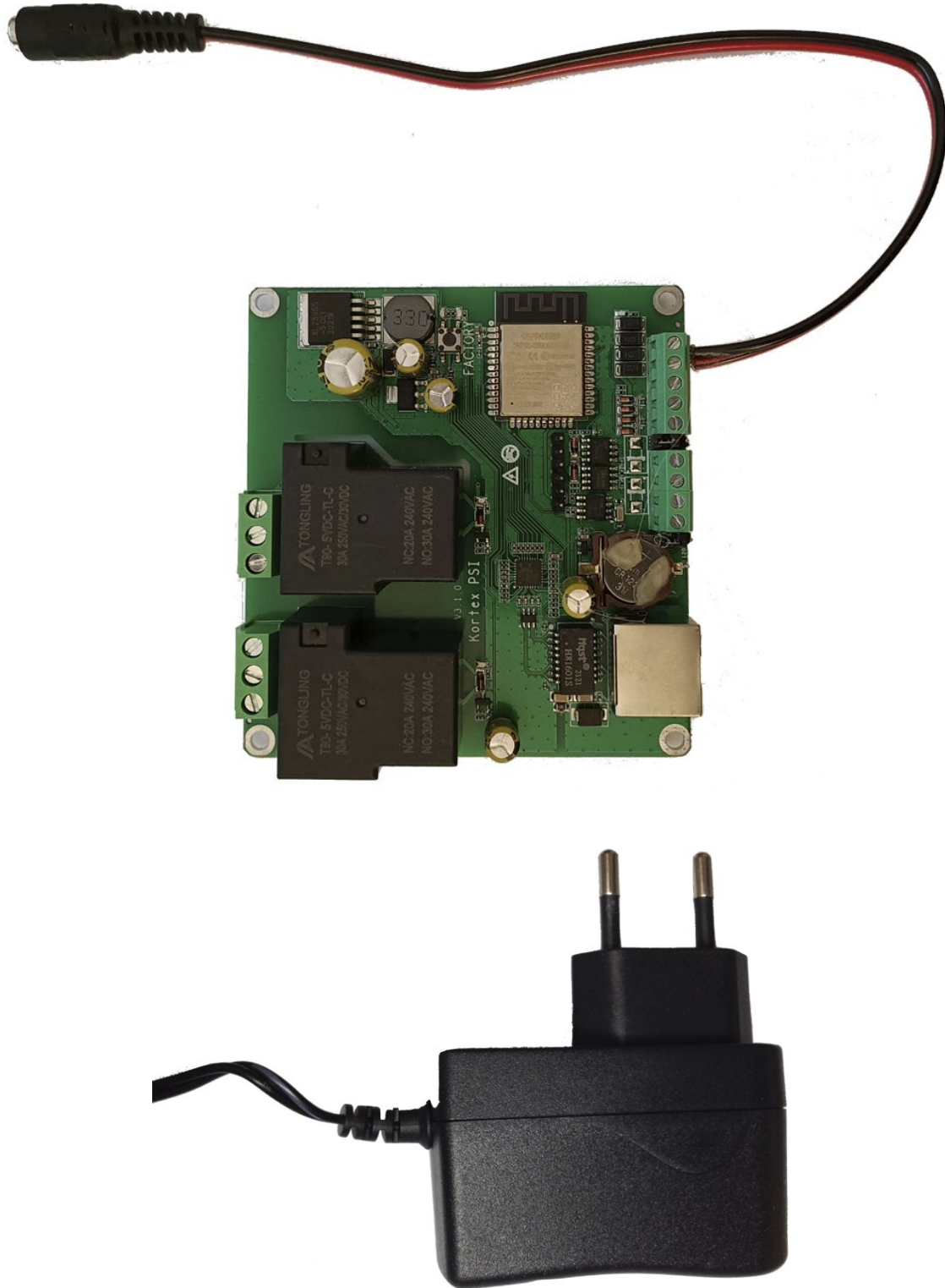
2.2 Case

The 2CH Case is ABS material, Standard **DIN35** rail installation.



3 Interface Description

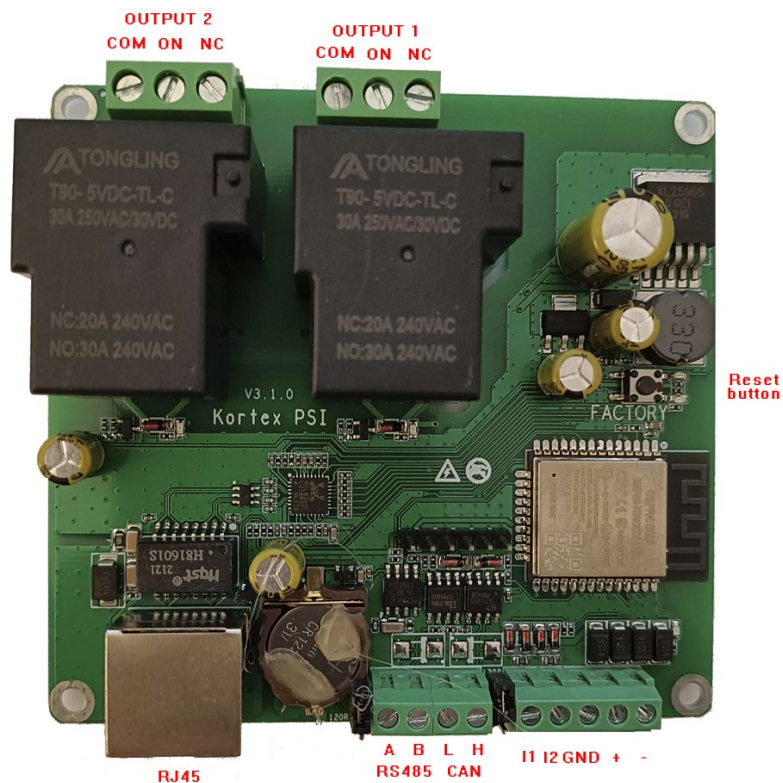
3.1 Power Supply



3.2 Function

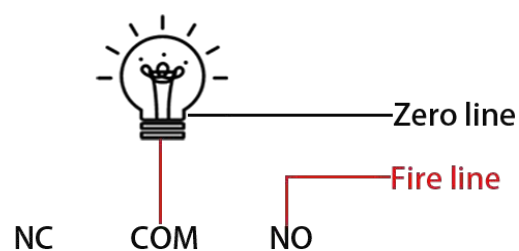
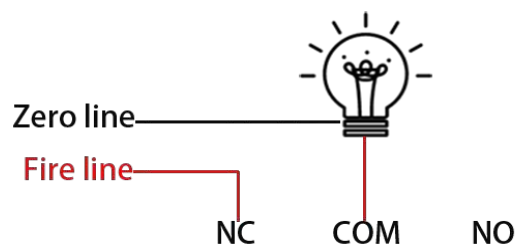
A B L H, that is means you can use RS485 and CAN.

When you use RS485, connect A and B and to use CAN, connect H and L.



3.3 Relay Contact

Connect Example: Normal Close & Normal Open



3.4 Reset to Factory

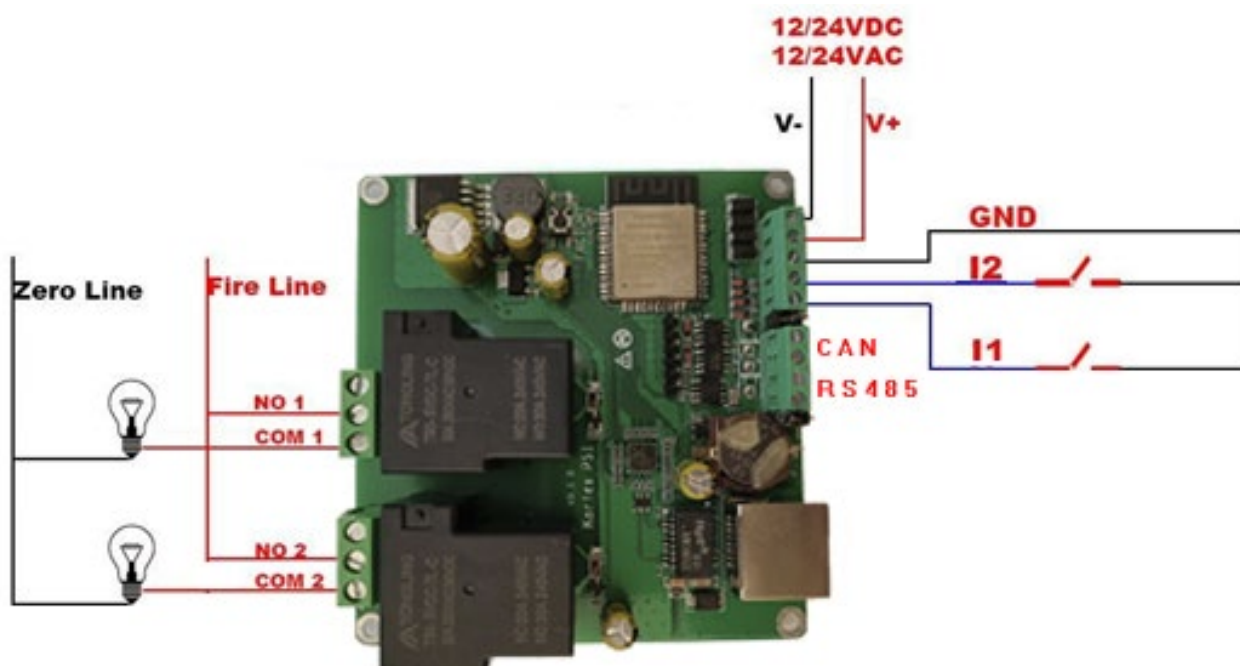
3.4.1 Hardware Version \geq V3.x.x



- 1 Power on relay board, wait 10 second.
- 2 Press "FACTORY" button (left light will ON).
- 3 Wait 5 second (right light will ON).
- 4 Release "FACTORY" button.
- 5 Relay board will reset all parameter to factory.

3.5 Input Output and Power wiring diagram

	LOW	HIGH
Hardware Version >= V3.1.0	0V	3.3V~24V

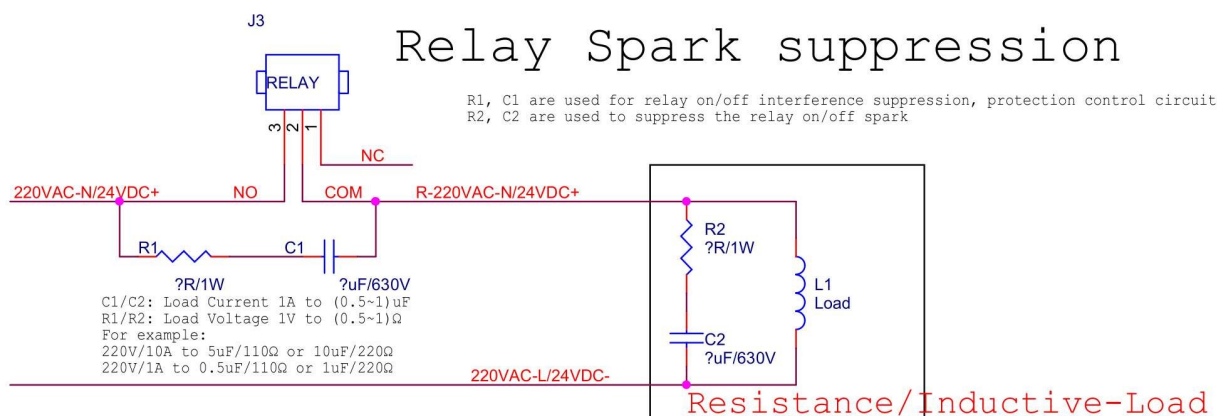


3.6 Add Spark killer and contractor

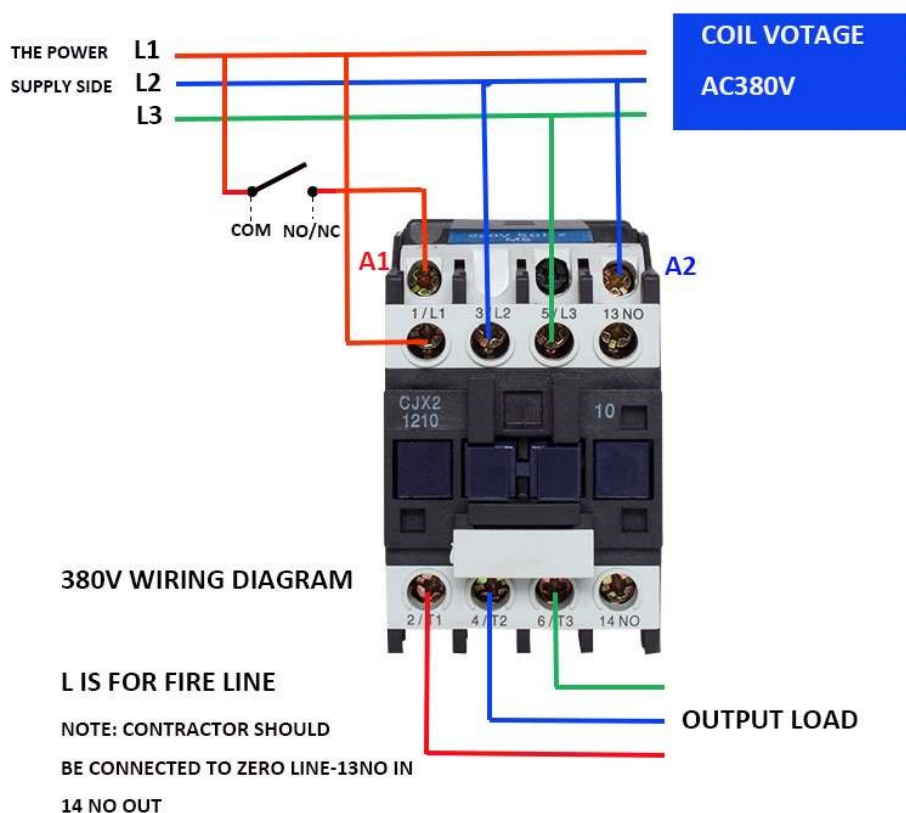
R1, C1 are used for relay on/off interference suppression, protection control circuit

R2, C2 are used to suppress the Load spark and noise when relay ON/OFF

Most of time the Load comes with the best R2+C2, so we don't need care R2 and C2



Our max current is 16A, if the current of your device is too big, suggest add a contractor.



4 Ethernet Web Page

IE is not supported, please use Firefox and Chrome.

4.1 Login

Default IP: **192.168.8.3** Username: **admin** and Password: **quattro75002**.



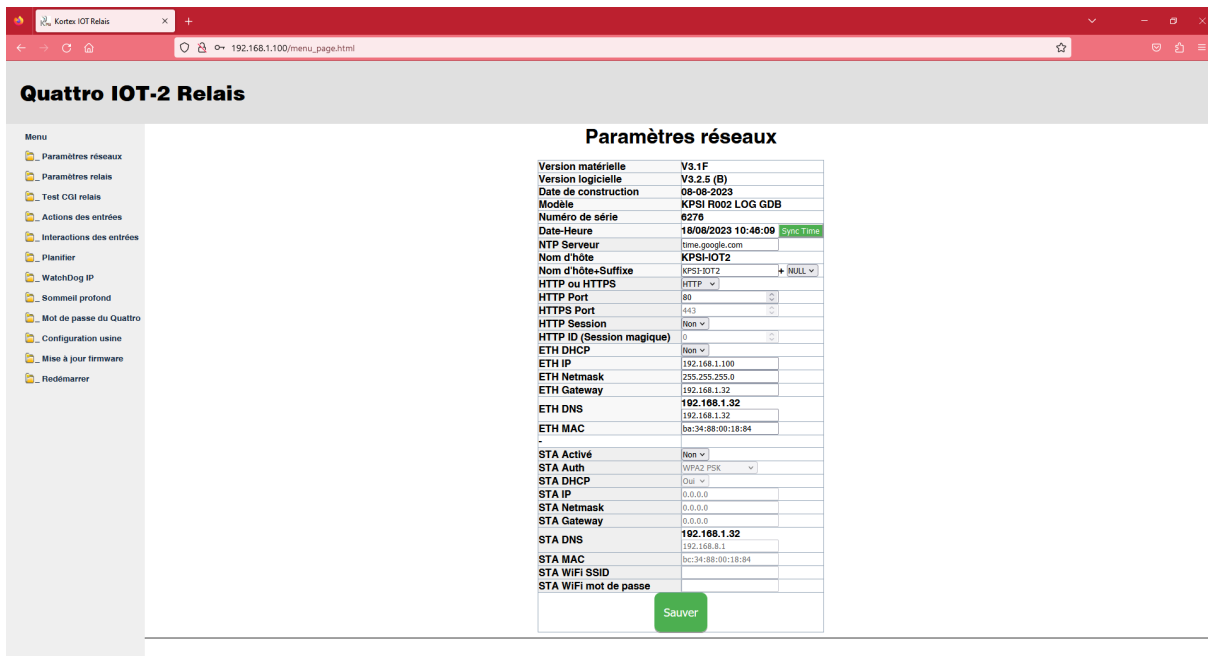
Quattro IOT-2 Relais

Nom d'utilisateur	<input type="text"/>
Mot de passe	<input type="password"/>
	<input type="button" value="Effacer"/> <input type="button" value="Connexion"/>

Kortex PSI.

4.2 Setting Network

Set network information, NTP Server on Relay setting page after click “Save” button, device will reboot.



Quattro IOT-2 Relais

Menu

- Paramètres réseaux
- Paramètres relais
- Test CGI relais
- Actions des entrées
- Interactions des entrées
- Planifier
- WatchDog IP
- Sommeil profond
- Mot de passe du Quattro
- Configuration usine
- Mise à jour firmware
- Redémarrer

Paramètres réseaux

Version matérielle	V3.1F
Version logicielle	V3.2.5 (B)
Date de construction	08-08-2023
Modèle	KPSI R002 LOG GDB
Numéro de série	6276
Date-Heure	18/08/2023 10:46:09 Sync Time
NTP Serveur	time.google.com
Nom d'hôte	KPSI-IOT2
Nom d'hôte-Suffixe	KPSI-IOT2 → NULL
HTTP ou HTTPS	HTTP
HTTP Port	80
HTTPS Port	443
HTTP Session	Non
HTTP ID (Session magique)	0
ETH DHCP	Non
ETH IP	192.168.1.100
ETH Netmask	255.255.255.0
ETH Gateway	192.168.1.32
ETH DNS	192.168.1.32
ETH MAC	ba:34:88:00:18:84
STA Activé	Non
STA Auth	WPA2 PSK
STA DHCP	Oui
STA IP	0.0.0.0
STA Netmask	0.0.0.0
STA Gateway	0.0.0.0
STA DNS	192.168.1.32
STA MAC	192.168.1.1
STA WIFI SSID	ba:34:88:00:18:84
STA WIFI mot de passe	

Sauver

Parameters:

Hardware Version: Relay board hardware version.

Software Version: Relay board firmware version.

Build Date: Date of build.

Model: KPSI R002 LOG GDB is Kortex 2CH IOT RELAY-2

Serial Number: Relay board Serial Number.

Date Time: current date and time (Need internet because of NTP).

NTP Server: NTP server get time from, suggest use pool.ntp.org

Host Name: KPSI-IOT2

Host Name + Suffix: KPSI-IOT2 + (Null, Mac, NS).

HTTP or HTTPS: choose HTTP or HTTPS.

HTTP Port: default 80.

HTTPS Port: default 443.

HTTP Session: Yes or No.

HTTP ID (Magic Session): Id number.

ETH DHCP: Ethernet IP DHCP or Static.

ETH IP: Ethernet current IP Address.

ETH Netmask: Ethernet current Netmask.

ETH Gateway: Ethernet current Gateway.

ETH DNS: Ethernet current DNS Server.

ETH MAC: Ethernet current MAC address.

STA Enable: To enable STA (station client mode to connect to an Internet box).

STA Auth: WEP, WPA2/3 PSK.

STA DHCP: Enable or Disable DHCP Yes or No.

STA IP: Relay board get IP from your Router.

STA Netmask: WIFI Netmask.

STA Gateway: WIFI Gateway.

STA DNS: WIFI DNS Server.

STA MAC: WIFI MAC address.

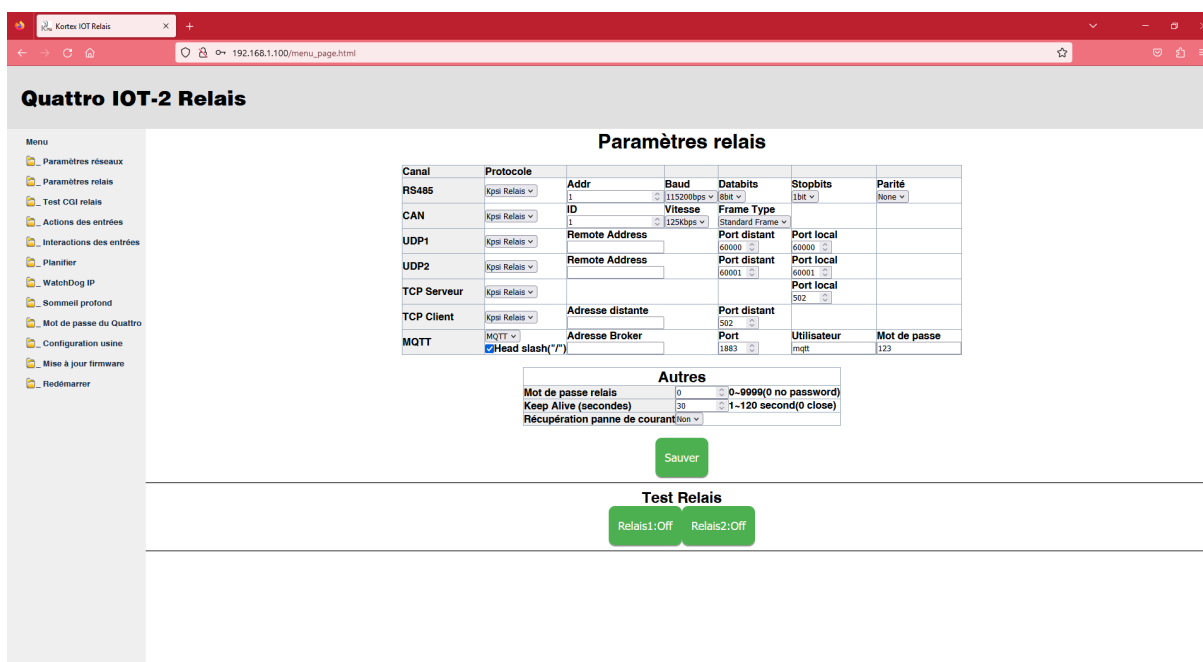
STA WiFi SSID: Your Router WiFi Name, Relay board will access to your router.

STA WiFi password: Your Router WiFi Password, Relay board will access to your router.

4.3 Relay Parameters

Set control interface parameter of relay board on the Relay parameters page and test relay

After click “Save” button, device will reboot Protocol refers to [programming manual_en.pdf](#).



Canal	Protocole	Addr	Baud	Databits	Stopbits	Parité
RS485	Kpsi Relais	1	115200bps	8bit	1bit	None
CAN	Kpsi Relais	ID	Vitesse	Frame Type		
UDP1	Kpsi Relais	Remote Address	Port distant	Port local		
UDP2	Kpsi Relais	Remote Address	Port distant	Port local		
TCP Serveur	Kpsi Relais		Port distant	Port local		
TCP Client	Kpsi Relais	Adresse distante	Port distant			
MQTT	MQTT	Adresse Broker	Port	Utilisateur	Mot de passe	

Autres

Mot de passe relais: 0 (0-9999(0 no password))

Keep Alive (secondes): 30 (1-120 second(0 close))

Récupération panne de courant: Non

Sauver

Test Relais

Relais1:Off Relais2:Off

Channel Parameter:

RS485: RS485 protocol, addr, baudrate, databits, stopbits, parity config Protocol: Kpsi Relais
Baudrate:1200 bps, 2400 bps, 4800 bps, 9600 bps, 19200 bps, 38400 bps, 57600, 115200 bps.

CAN: CAN protocol, ID, Speed config Protocol: Kpsi Relais.

ETH-UDP1: Ethernet UDP1 protocol, Remote Server Address, Remote Server Port, Local Port config Protocol: Kpsi Relais

ETH-UDP2: Ethernet UDP2 protocol, Remote Server Address, Remote Server Port, Local Port config Protocol: Kpsi Relais

ETH-TCP Server: Ethernet TCP Server protocol, Local Port config Protocol: Kpsi Relais

ETH-TCP Client: Ethernet TCP Client protocol, Remote Server Address, Remote Server Port config Protocol: Kpsi Relais.

ETH-MQTT: Ethernet MQTT protocol, Broker Address, Broker Port, Broker Username, Broker Password config Protocol: MQTT (without tls)

Other Parameter:

Relay Password: use for checking control is valid, only correct password control relay board.

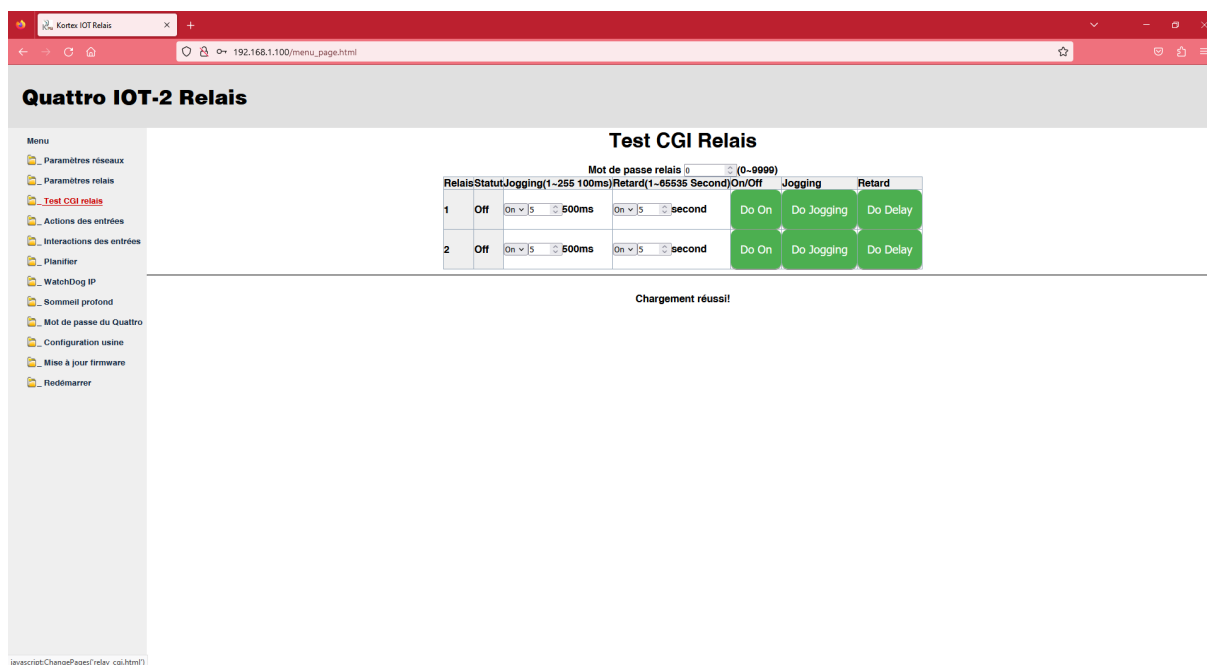
Keep Alive Second: send relay status to server with every “Keep Alive Second”, **only protocol**

Kpsi Relais have Keep Alive Second Jogging Time: Jogging time, default is 500ms, 1=100ms what is Jogging: ON then delay 500ms OFF, or OFF then delay 500ms ON.

Power Failure Recovery Relay: relay status will restore after re-power.

4.4 Relay CGI Test

Relay CGI test



Quattro IOT-2 Relais

Test CGI Relais

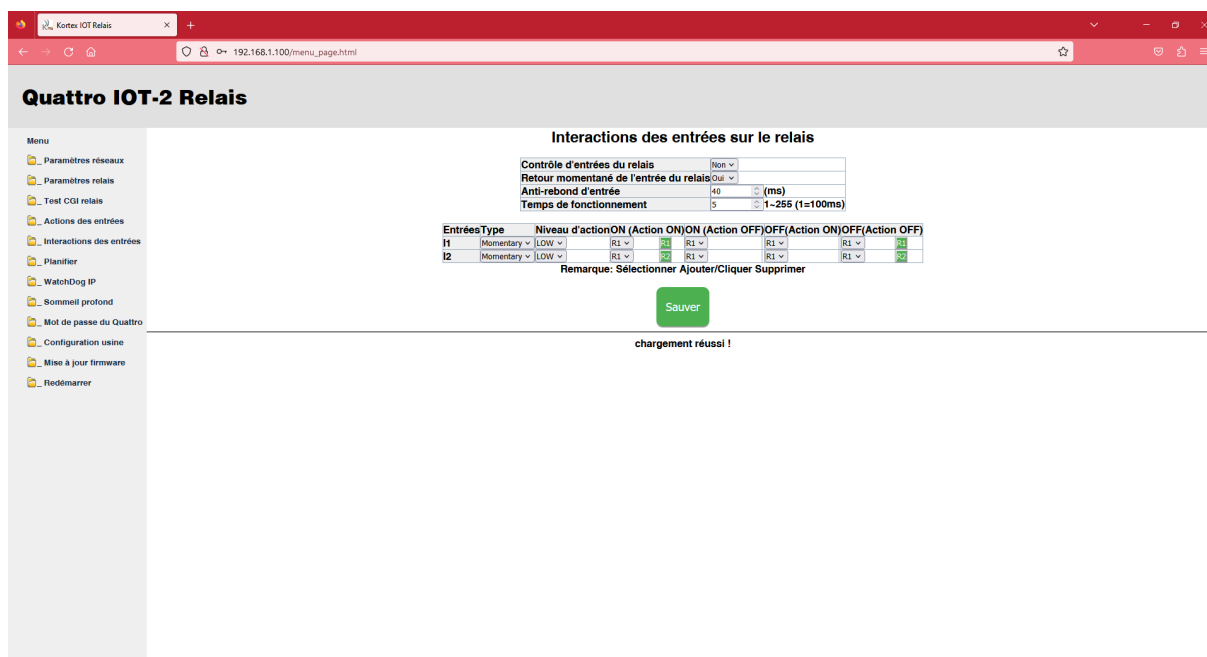
Mot de passe relais (0-9999)

Relais	Statut	Jogging(1-255 100ms)	Retard(1-85535 Second)	On/Off	Jogging	Retard
1	Off	On 5 500ms	On 5 second	Do On	Do Jogging	Do Delay
2	Off	On 5 500ms	On 5 second	Do On	Do Jogging	Do Delay

Chargement réussi!

4.5 Input Link Relay

Select R1~R2, means you add the relay to link with Input, Click the green button R1~R2 means delete relay.



Quattro IOT-2 Relais

Interactions des entrées sur le relais

Contrôle d'entrées du relais (Non)

Retour momentané de l'entrée du relais (Oui)

Anti-rebond d'entrée (40 ms)

Temps de fonctionnement (5 1-255 (1=100ms))

Entrées	Type	Niveau d'action	ON (Action ON)	ON (Action OFF)	OFF (Action ON)	OFF (Action OFF)
I1	Momentary	LOW	R1	R1	R1	R1
I2	Momentary	LOW	R1	R2	R1	R1

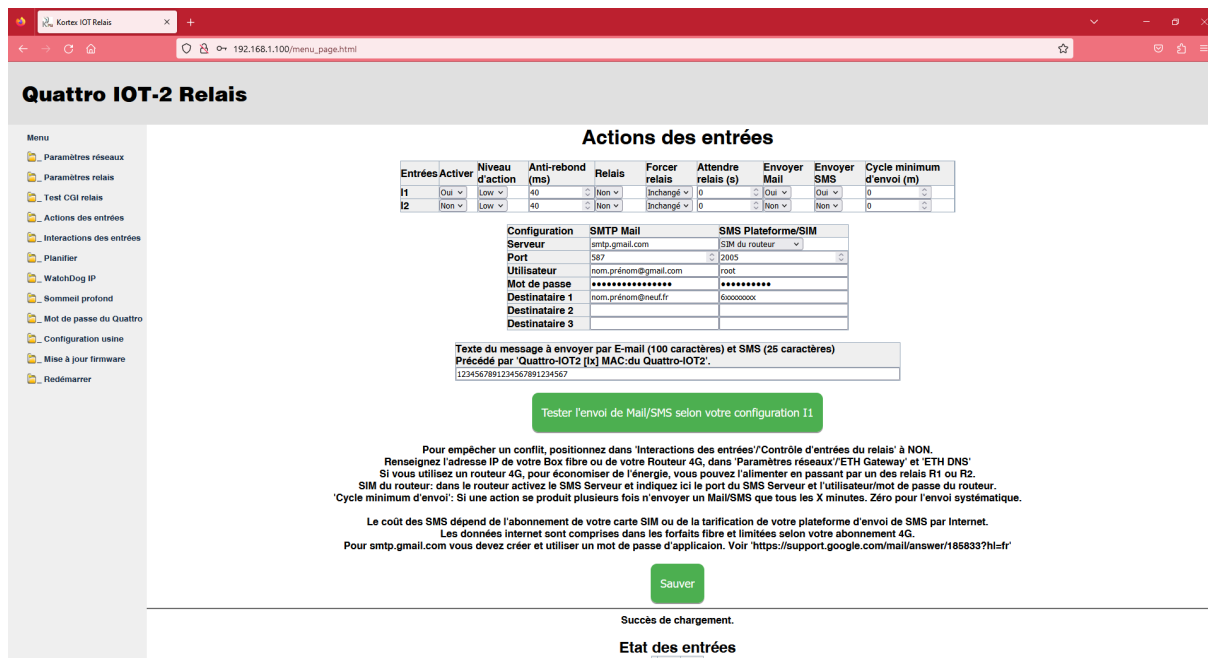
Remarque: Sélectionner Ajouter/Cliquer Supprimer

Sauver

chargement réussi!

4.6 Input action

Select I1~I2, means you add the Input to action, Click the green button to test or save.



Quattro IOT-2 Relais

Actions des entrées

Entrées	Activer	Niveau d'action	Anti-rebond (ms)	Relais	Forcer relais	Attendre relais (s)	Envoyer Mail	Envoyer SMS	Cycle minimum d'envoi (m)
I1	Oui	Low	40	Non	Inchangé	0	Oui	Non	0
I2	Non	Low	40	Non	Inchangé	0	Non	Non	0

Configuration

SMTP Mail	SMS Plateforme/SIM
Serveur	smtp.gmail.com
Port	587
Utilisateur	nom.prénom@gmail.com
Mot de passe	*****
Destinataire 1	nom.prénom@neuf.fr
Destinataire 2	
Destinataire 3	

Texte du message à envoyer par E-mail (100 caractères) et SMS (25 caractères)
Précédé par 'Quattro-IOT2 [tx] MAC:du Quattro-IOT2'.

1234567891234567891234567

Tester l'envoi de Mail/SMS selon votre configuration I1

Pour empêcher un conflit, positionnez dans 'Interactions des entrées'/'Contrôle d'entrées du relais' à NON.
Renseignez l'adresse IP de votre Box fibre ou de votre Routeur 4G, dans 'Paramètres réseaux'/'ETH Gateway' et 'ETH DNS'.
Si vous utilisez un routeur 4G, pour économiser de l'énergie, vous pouvez l'alimenter en passant par un des relais R1 ou R2.
SIM du routeur: dans le routeur activez le SMS Serveur et indiquez ici le port du SMS Serveur et l'utilisateur/mot de passe du routeur.
'Cycle minimum d'envoi': Si une action se produit plusieurs fois n'envoyer un Mail/SMS que tous les X minutes. Zéro pour l'envoi systématique.

Le coût des SMS dépend de l'abonnement de votre carte SIM ou de la tarification de votre plateforme d'envoi de SMS par Internet.
Les données Internet sont comprises dans les forfaits fibre et limitées selon votre abonnement 4G.
Pour smtp.gmail.com vous devez créer et utiliser un mot de passe d'application. Voir 'https://support.google.com/mail/answer/185833?hl=fr'

Sauver

Succès de chargement.

Etat des entrées

To prevent a conflict, set 'Input interactions'/'Relay input control' to NO.

Enter the IP address of your Fiber Box or your 4G Router, in 'Network Parameters'/'ETH Gateway' and 'ETH DNS'.

If you are using a 4G router, to save energy, you can power it through one of the R1 or R2 relays.

Router SIM: in the router activate the SMS Server and indicate here the port of the SMS Server and the username/password of the router.

'Minimum sending cycle': If an action occurs several times, only send a Mail/SMS every X minute. Zero for systematic sending.

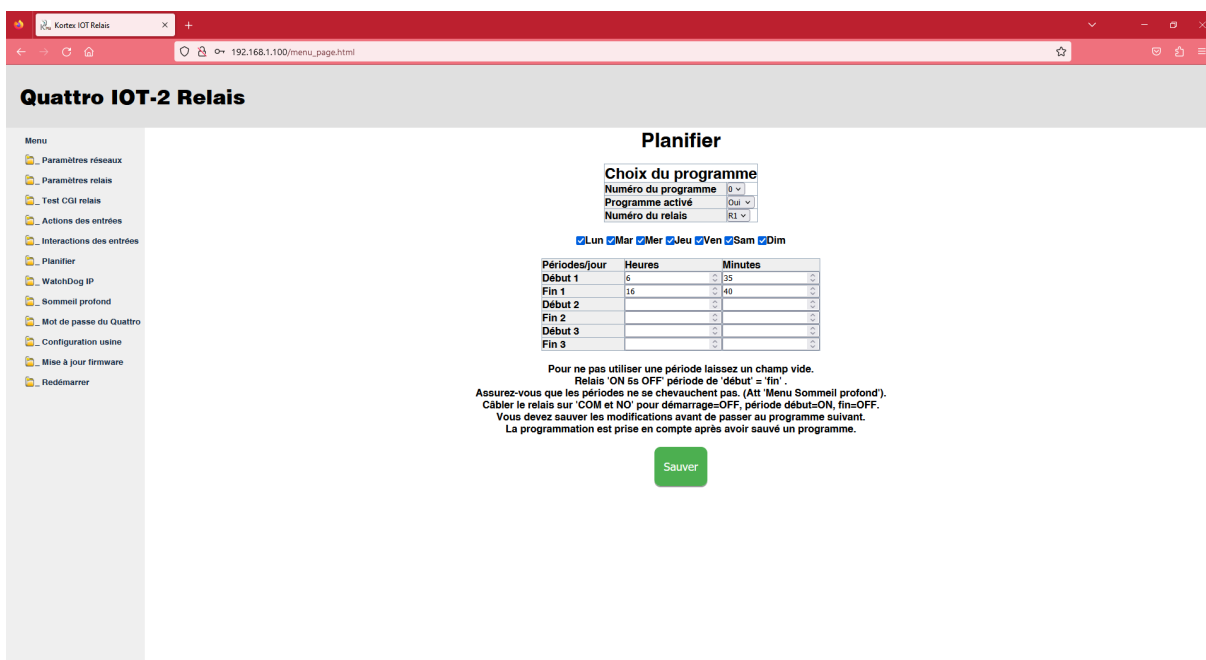
The cost of SMS depends on your SIM card subscription or the pricing of your platform for sending SMS over the Internet.

Internet data is included in the fiber packages and limited according to your 4G subscription.

For smtp.gmail.com you must create and use an application password. See 'https://support.google.com/mail/answer/185833?hl=fr'.

4.7 Plan

Plan program relay task by Day. To not use a period, leave a blank field. Relay 'ON 5s OFF' if period of 'start' = 'end'. Make sure the periods do not overlap. Wire the relay to 'COM and NO' for start=OFF, period start=ON, end=OFF. You must save changes before proceeding to the next program. Programming is taken into account after saving a program.



Quattro IOT-2 Relais

Planifier

Choix du programme

Numéro du programme: 8
 Programme activé: Oui
 Numéro du relais: R1

☒ Lun ☒ Mar ☒ Mer ☒ Jeu ☒ Ven ☒ Sam ☒ Dim

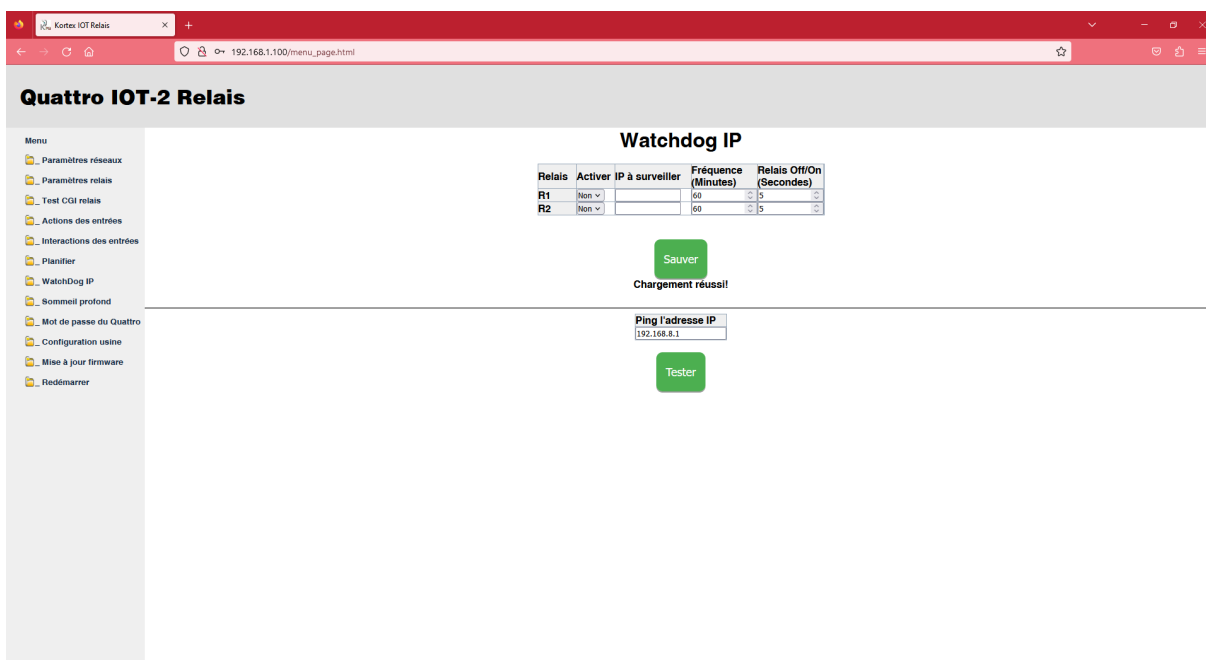
Périodes/jour	Heures	Minutes
Début 1	6	35
Fin 1	16	40
Début 2		
Fin 2		
Début 3		
Fin 3		

Pour ne pas utiliser une période laissez un champ vide.
 Relais 'ON 5s OFF' période de 'début' = 'fin'.
 Assurez-vous que les périodes ne se chevauchent pas. (Att 'Menu Sommeil profond').
 Câbler le relais sur 'COM et NO' pour démarrage=OFF, période début=ON, fin=OFF.
 Vous devez sauvegarder les modifications avant de passer au programme suivant.
 La programmation est prise en compte après avoir sauvegardé un programme.

Sauver

4.8 Watchdog IP

When Enable IP Watchdog function, R1 or R2 relay ON, when the "Watch IP" offline depending the ping interval in Minutes. Relay R1 or R2 will be OFF/ON during value in seconds.



Quattro IOT-2 Relais

Watchdog IP

Relais	Activer	IP à surveiller	Fréquence (Minutes)	Relais Off/On (Secondes)
R1	Non		60	5
R2	Non		60	5

Sauver

Chargement réussi!

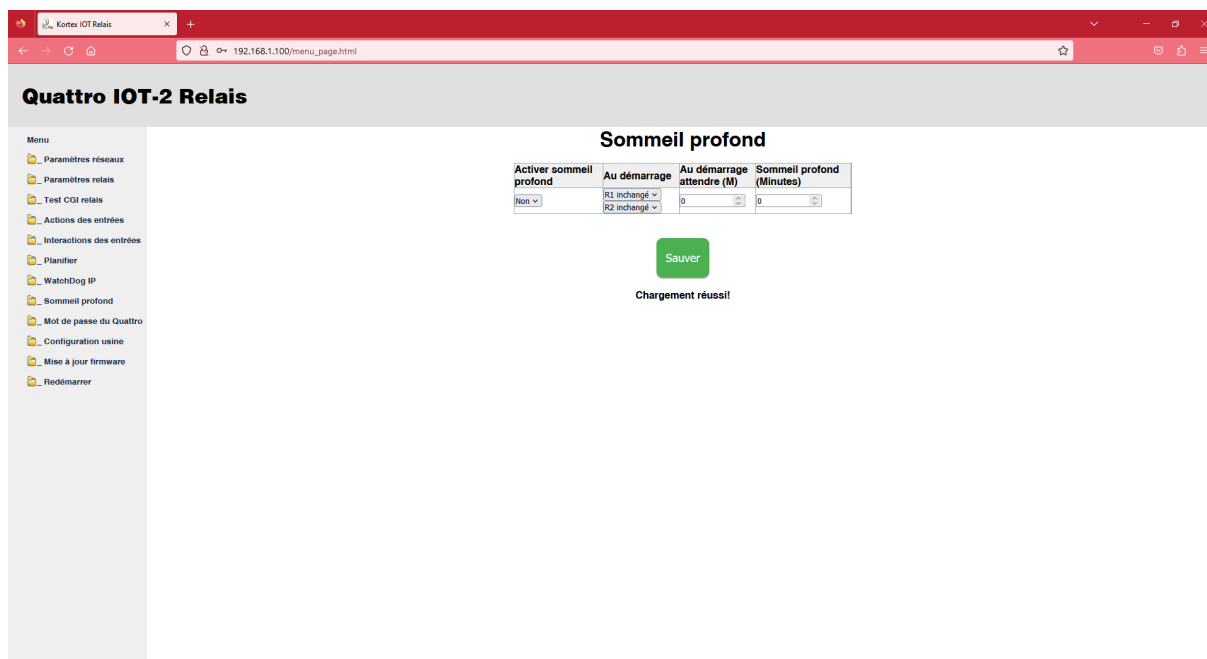
Ping l'adresse IP

192.168.8.1

Tester

4.9 Deep Sleep

Allow you to go on an idle mode during a period of time in order to reduce the consumption.
The idle mode begins at the time you define after the boot.



Quattro IOT-2 Relais

Sommeil profond

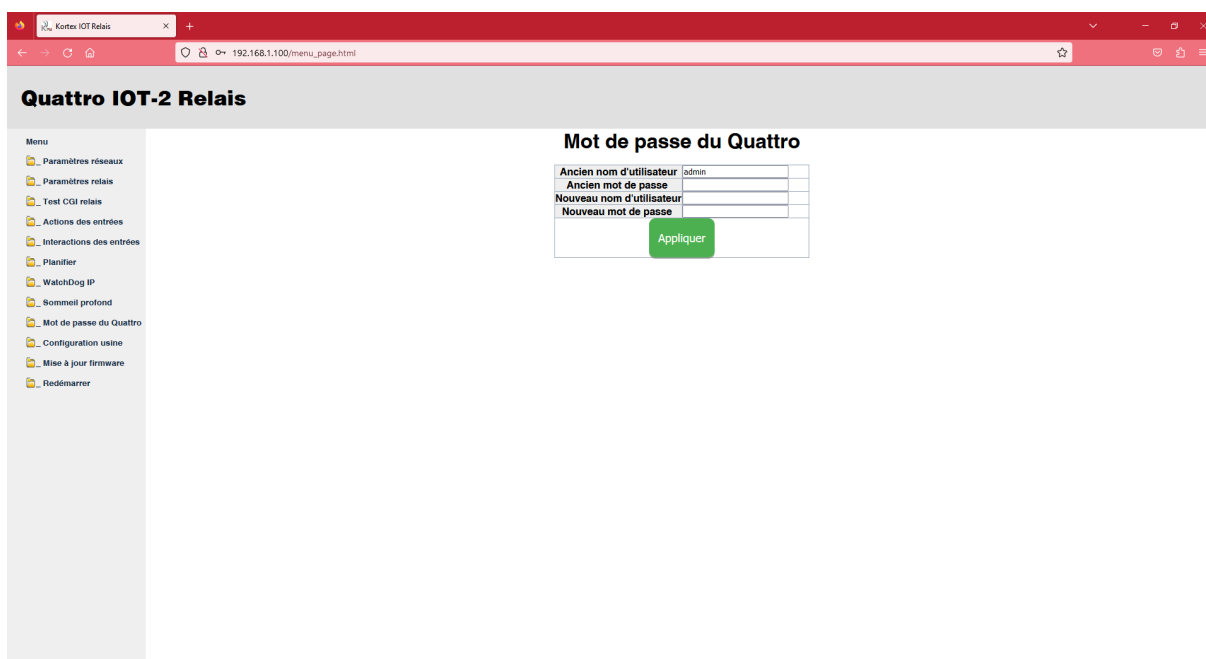
Activer sommeil profond	Au démarrage	Au démarrage attendre (M)	Sommeil profond (Minutes)
Non	R1 inchangé	0	0
	R2 inchangé		

Sauver

Chargement réussi!

4.10 Reset User

Allow you to change the login and password.



Quattro IOT-2 Relais

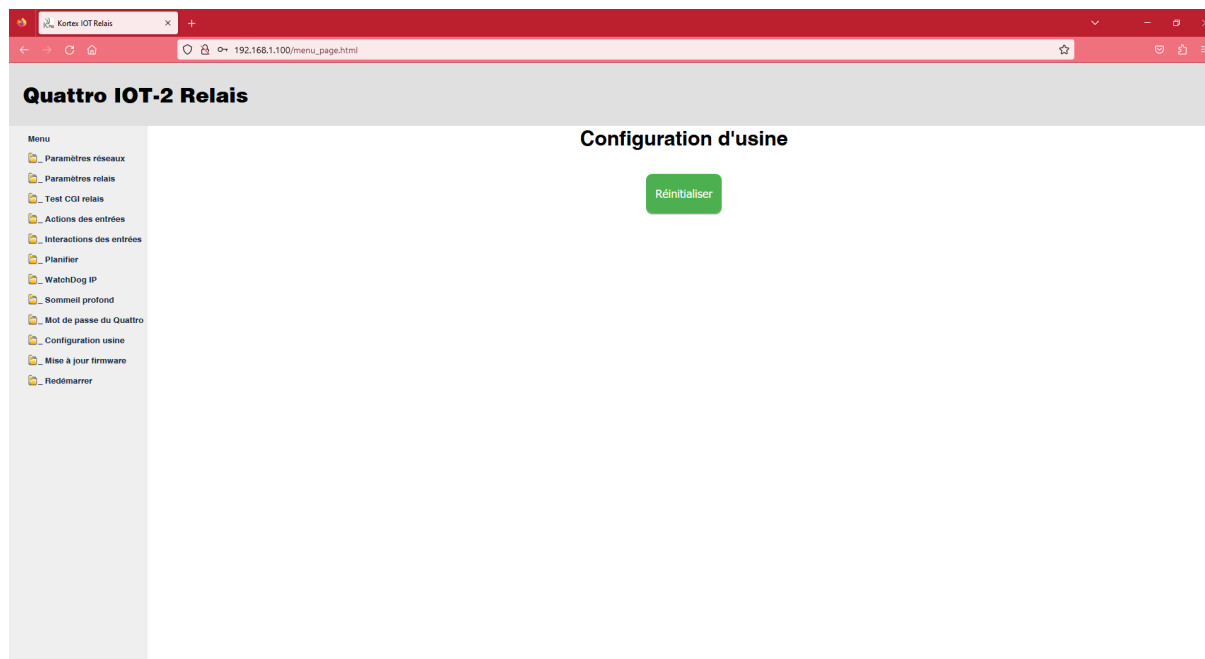
Mot de passe du Quattro

Ancien nom d'utilisateur	admin
Ancien mot de passe	
Nouveau nom d'utilisateur	
Nouveau mot de passe	

Appliquer

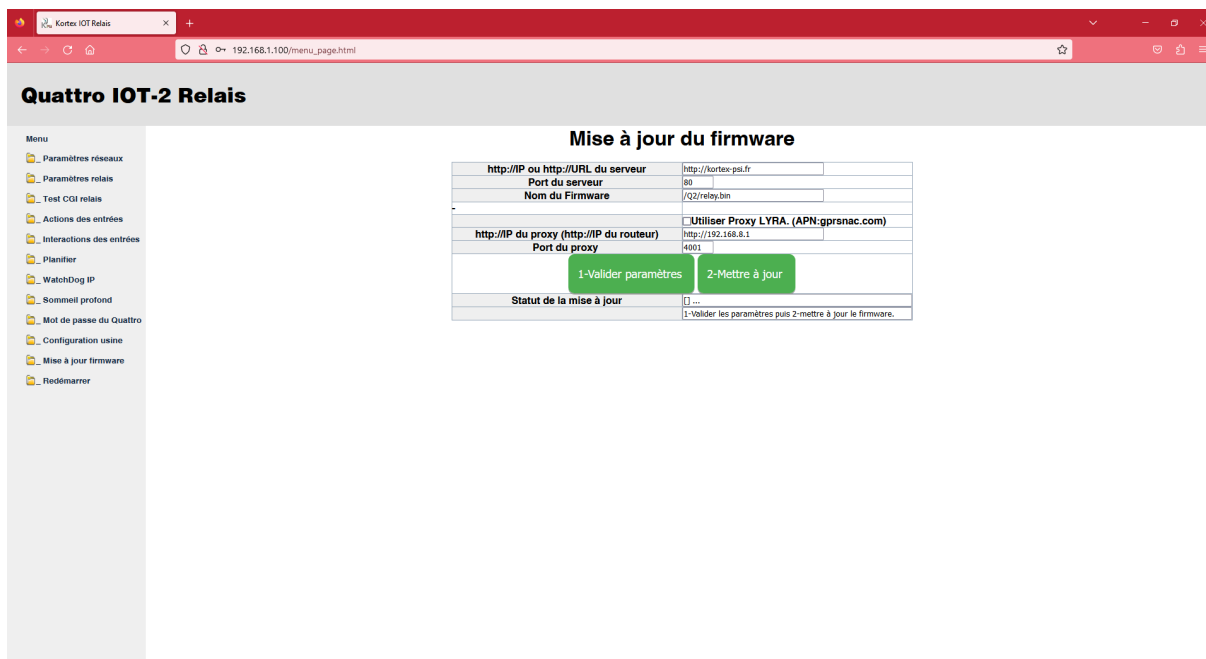
4.11 To Factory

Allow you to do a factory setting.



4.12 Firmware Upgrade

The firmware is located on Internet Kortex Servers.



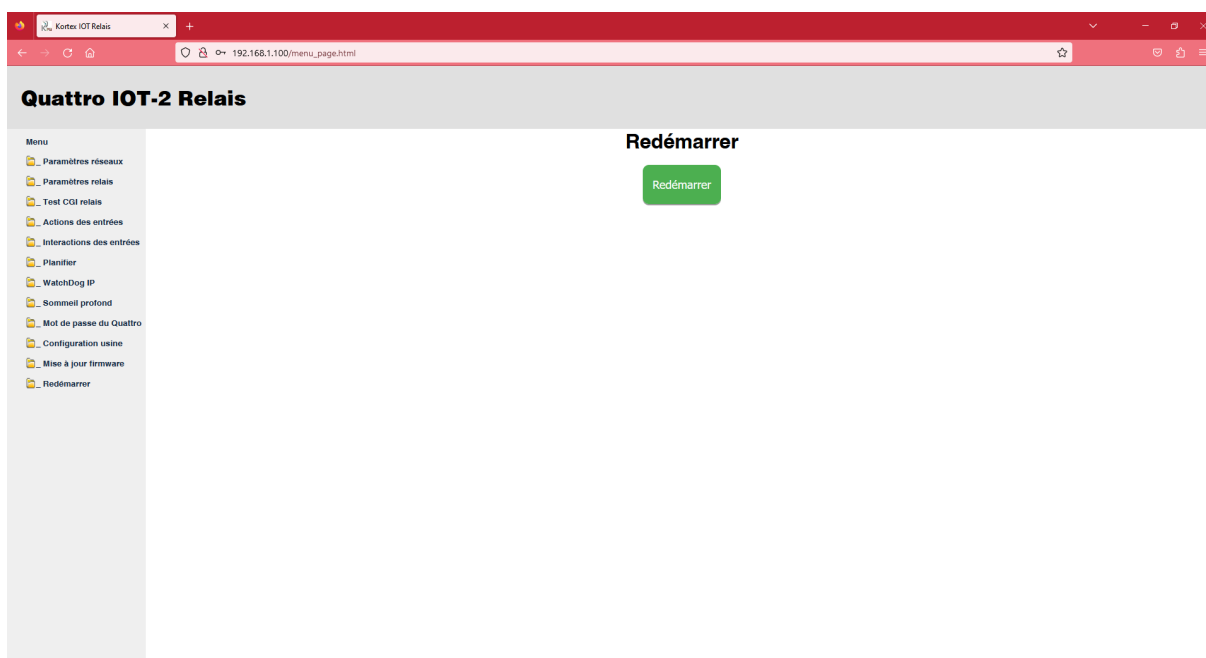
Quattro IOT-2 Relais

Mise à jour du firmware

http://IP ou http://URL du serveur	http://kortex-psi.fr
Port du serveur	80
Nom du Firmware	/Q2/relay.bin
Utiliser Proxy LYRA. (APN:gprsnc.com)	
http://IP du proxy (http://IP du routeur)	http://192.168.8.1
Port du proxy	4001
<div>1-Valider paramètres</div> <div>2-Mettre à jour</div>	
Statut de la mise à jour	1-Valider les paramètres puis 2-mettre à jour le firmware.

4.13 Reboot

Allow you to reboot the device.



Quattro IOT-2 Relais

Redémarrer

Redémarrer

CONTACTS



Address

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Tel: +33(0)1 34 04 37 60

Sales Support

Sales support is available at the following email address: contact@kortex-psi.fr.

Technical Support

0 820 6 9 0 0 4 2

Service 0,12 € / min
 + prix appel

Technical support can be accessed at the following email address: technique@kortex-psi.fr.

Documentation

KORTEX PSI strives to constantly improve the understanding and proper use of its product documentation. Constructive feedback from users is significant for KORTEX PSI. Please send your comments and suggestions regarding the documentation to: technique@kortex-psi.fr.