



User Manual





Tool for managing parametric controllers

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IMPORTANT WARNINGS



BEFORE INSTALLING OR HANDLING THE DEVICE PLEASE CAREFULLY READ AND FOLLOW THE INSTRUCTIONS DESCRIBED IN THIS

MANUAL.

The device that this software is dedicated to has been developed to operate risk-free and for a specific purpose, as long as:

the software is installed, programmed, run and maintained according to the instructions in this manual and by qualified personnel;

all the conditions prescribed in the installation and user manual of the appliance in question are observed.

All other uses and modifications made to the device that are not authorized by the manufacturer are considered improper.

Liability for injury or damage caused by the incorrect use of the device lies exclusively with the user.

1. PRESENTATION

ZMONITOR is the new software developed by 4-noks for managing parametric controllers.

With a simple and intuitive user interface, ZMONITOR allows the complete configuration of the parameters available to the supervisor on a wide range of 4-NOKS devices, with the ability to install and configure third-party devices.

The software can also be used to manage to record temporal parameters and save them in CSV format.

MINIMUM SYSTEM REQUIREMENTS

Hardware Requirements:

- Processor: Pentium IV 1.0 GHz or higher.
- RAM: 1 GB.
- Hard disk: at least 100 MB free.
- One free USB port for the USB GATEWAY
- One 485 port available for GATEWAY 485

-Network interface card or access to a network ETHERNET

Software Requirements:

Operating system: Microsoft ® Windows ® XP Professional SP2, Windows ® Vista, Windows 8

WARNING: you must log in as an administrator user on the computer to install the software correctly.

DEVICES TO BE MANAGED ZMONITOR

ZMONITOR permette la gestione dei parametri dei dispositivi riportati nelle tabelli seguenti.

GATEWAYS

ZC_GW_USB	2053
ZC_GW_ETH	2051
ZC_GW_485	2051

DEVICES

ZR TID	Ver. FW	Ver, Manuale
ZR PLUG	2053	
ZR SWITCH	2053	
ZR HMETER	2054	
ZR BIDCI	2053	
ZR TIDCI.D	2053	
ZR TIREL2"	2051	
ZR ES	2053	
ZR_AIC	2053	
ZR_AIV	2054	
ZED_THL	2053	
ZED_THI	2053	
ZED_TID	2053	
ZED_TIDCI	2053	
ZED_TCM	2054	
ZED_TCMR	2053	
ZED_TCMH	2053	
ZED_TCMHR	2051	
ZED_3IAC	2053	
ZED_3IACR	2053	
ZED_ICC	2053	

DEVICES THIRD PARTY

CVM-MINI	

2. INSTALLATION

WARNING: you must uninstall previous versions.Select U*ninstall* from the menu START ZMONITOR.

WARNING: Sometimes it is necessary to install the program 2 times.



The site <u>www.4-noks.com</u> find a link where you can download the latest version of the software. After downloading the zipped folder of ZMONITOR and it is opened, you have to click (as administrator) on the file "setup.exe" installation package to start the wizard process.

CAUTION: Be sure to run the setup file with Administrator privileges.



....the installer's program will ask for confirmation to proceed ... (accept the license terms)



The next window allows you to choose which folder to install the software ZMONITOR, after choosing the address in which to install the program, press the NEXT button to continue

Custom Setup Select the way yo	ou want features to be ins	talled.
Click the icons in I	he tree below to change I	he way features will be installed.
	Monitor	Main application
		This feature requires 837KB on your hard drive.
Location:	C:\Program Files (x86)\ZI	nonitor) Browse

👷 ZMonitor Setup	愛 ZMonitor Setup	
Ready to install ZMonitor	\odot	Completed the ZMonitor Setup Wizard
Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard.		Click the Finish button to exit the Setup Wizard.
Back Instal Cancel		Back Finish Cancel

...the software is automatically installed and is created on the desktop and program menus, shortcut icon for the file ZMONITOR.exe.



3. LANGUAGE

To change the language go to IMPOSTAZIONI or Settings menu

Impostazioni ?		ZMonitor 1.0.2	5.0	and in the local
 Refresh manuale Refresh ogni 1s Refresh ogni 2s Refresh ogni 5s Refresh ogni 10s Cambia lingua Debug 	Sala Riunioni (ZED ress Description Tipo Dispositi English Italiano	File Tools Set	ttings ? Manually refresh Refresh every 1s Refresh every 2s Refresh every 5s Refresh every 10s Change language • Debug	English Italiano

4. MAIN SCREEN

This is the screen that presents the user ZMONITOR



Legend

1	Main Menu
2	Function Keys
3	Project Area
4	Status Bar (comunication status)
5	Display area Logs
6	Status Bar

5. MAIN MENU

Provides access to the following function:



SETTINGS:

Pile Tools	Settings ? Manually refresh Refresh every 1s Refresh every 2s Refresh every 5s Refresh every 1s Change language
	Debug

6. FUNTION KEYS

Adds a device (gateway that is generic device)	-	Reset the device (the device selected)	
Delete a device (any selected devices)	*	Network Open / Close network (applies only to Gateway)	
Update the registers of all device	S	Network Setup (applies only to Gateway)	31
View level radio	" L	Disassociate network	

7. DESCRIPTION OF DEVICES

The devices that we insert in the projects are of three types:

GATEWAY		Its task is to interface between the outside world and the network of family devices ZB-Connection (is also known as co- ordinator).Exclusive product 4-noks.
End DEVICE	\bigcirc	Generic device, including third parties. ZB-Connection devices permitted or generic devices that communicate over the Bridge 485-485 4-noks (MODBUS protocol).
Bridge	a	Its task is to allow communication with peripherals modbus standard through the use of the radio network ZB-Connection.

8. DISPLAY AREA PROJECT

Each project is characterized by at least one GATEWAY and a sensor associated with him. It can add several GATEWAY also of the same type, each with a different logical ID. The display is a tree, where the nodes are composed of or GATEWAY BRIDGE.



In addition to the description of the device, in parentheses shows the address.

NOTE: BIDCI (20) means that the device is not reachable. In this case the device as described BIDCI at 20.

NOTE: GATEWAY may correspond to different addresses are the same.

ATTENZIONE: for each gateway devices associated with it cannot have identical addresses.

9. DISPLAY AREA REGISTER

Address	Description	Value	1
	Device Type		
1	Firmware Version (Major/Minor)	2051	
2	Transmission Counter	285	
3	Signal Level of the last message recei	69	
4	Battery Level (V)	3,564	
5	Light Rms(expressed in Lux)	94	
6	Temperature	21,6	
7	Light(expressed in Lux)	93	1
8	Humidity (expressed in % Relative Hu	35	1
9	Seconds passed since receiving last	4	
10	Counter of messages received from G	131	
11	Gateway message receiving instant ti	210	
12	Signal Level of the last message recei	62	1

This area is divided into three columns: Register Address, Description, Value. The types of records is divided by color. It is not allowed to add or delete records, while the column Value / Value we set records. Some settings require multiple actions on multiple records simultaneously. Some registers are read-only: Input and Input Status register (those on white background).Coil Status (on green background) and Holding Register are editable.

10. CONNECTION GATEWAY TO A PC

To create a network, the first thing is always to connect and insert a GATEWAY.

For each project can have multiple GATEWAY also of the same type, each with different logical address. For GATEWAY's connections refer to the0 instructions.



To insert a GATEWAY, in the project, select "New Project" and then

click on [1] (Add new device).

Select the type of GATEWAY (USB, Ethernet or 485), personalize it with a name and assign the logical address.

dd new device	
Add new Gateway	
Device:	ZC_GW_USB
Custom name:	ZC_GW_USB ZC_GW_ETH
Logic address:	ZC_GW_485
Protocol:	Modbus RTU
Serial port:	COM7 -
Serial speed:	🔘 9600 bps 💿 19200 bps
Cancel	Add

Select the serial port and speed. This parameter is set by four DIP switches on the board (dip #4 to OFF => 9600bps; dip # 4 to ON => 19200bps). Confirm by pressing "Add".

Connection PC-USB Gateway

In the case of USB Gateway set the logical address, communication port and speed.

The logical address is set on the dip switches on the board (they are the first 3 dip and addresses range from 1 to 7).

Add new device	
Add new Gateway	
Device:	ZC_GW_USB
Custom name:	GATEWAY
Logic address:	1 (1-7)
Protocol:	Modbus RTU
Serial port:	•
Serial speed:	9600 bps ○ 19200 bps
Cancel	Add

Confirm by clicking on the Add.



Connection PC-Gateway 485

In the case of 485 GATEWAY set the logical address, communication port and speed.

Add new device		
Add new Gateway		
Device:	ZC_GW_485 -	
Custom name:	GATEWAY	
Logic address:	1 (1-7)	
Protocol:	Modbus RTU	
Serial port:	COM7 -	
Serial speed:	🔘 9600 bps 💿 19200 bps	
Cancel	Add	

The logical address is set on the dip switches on the board (they are the first 3 dip and addresses range from 1 to 7).

Confirm by clicking on the Add.

Connection PC-GATEWAY ETHERNET

In the case of ETHERNET GATEWAY is important to know its address or rather its TCP HOST.

Add new device	
Add new Gateway	
Device:	ZC_GW_ETH •
Custom name:	GATEWAY
Logic address:	1 (1-7)
Protocol:	Modbus TCP
Tcp Host:	192.168.1.1
Tcp Port:	502
Cancel	Add

The TCP PORT remains the "502".

Confirm by clicking on the Add.

Add

11. JOIN DEVICES

Select the node to insert GATEWAY devices associated with this network.



CAUTION: Each device associated with a Gateway must have unique address.

Getting Started

The gateway must have created a network. Read the instructions for the gateway or giving the

Set Network command **Letter** .It is recommended that the Automatic selection.

Set network	
 Automatically chose Set network param 	se network parameters neters
Channel	12
PID	4868
Extended PID	9618856747522725972
	Cancel OK

Confirm with OK.

NOTE 1: Devices should be entered one at a time unless their address is not selectable via DIP or keyboard (such as TCM). The risk is to have devices with the same address (you will have conflicts about the data).

JOIN

NOTE 2: To join the devices push the button aboard the Gateway, or using the "Open / Close



. Remember to close the network using the same command.

Make sure that the device is entered into the network: as a test, the gateway has a single flashing LED.

Select the just joined device, from the dropdown menu. Identify a meaningful name to the

Aggiungi nuovo dispositivo		
Aggiungi dispositivo a GATEWAY (ZC_GW_USB ID=1)		
Dispositivo:	ZED_THI •	
Nome visualizzato:	THI Sala Riunioni	
Indirizzo logico:	66 (16-127)	
Annulla	Aggiungi	

device. Write the logical address. Confirm by Add button

Add

Refer to the instructions to locate and then to assign an address

Note: do not leave any device with address 16 or 127. This is because when you want to add another device you will have a data conflict.

At this point the display area will be populated registers its values.

Important: it is useful to stimulate the device to a reception of the data, otherwise you have to wait the reception of the next packet

THI Sala Riunioni (ZED_THI ID=66)			
Address	Description	Value	
0	Tipo Dispositivo		
1	Versione Firmware (Major/Minor)	2051	
2	Contatore dei messaggi trasmessi dal dispositivo	125	
3	Livello segnale radio dell'ultimo messaggio ricevuto dal dispositivo	47	
4	Livello di Batteria (in millesimi di volt)	3,528	
6	Temperatura (in decimi di grado centigrado)	22,5	
8	Umidità (espressa in % Umidità Relativa)	50	
9	Secondi passati dalla ricezione dell'ultimo messaggio	4	
10	Contatore dei messaggi ricevuti dal Gateway	112	
11	Istante di ricezione messaggio da parte del Gateway (100*ore+minuti)	44	
12	Livello del segnale radio dell'ultimo messaggio ricevuto dal gateway (dB+100)	55	
13	Indirizzo del Gateway	24626	
0	Password di comando (1)	0	
1	Tempo di trasmissione (espresso in secondi)	20	

Now you can add another device.

12. ADDING THIRD PARTY DEVICE through BRIDGE-485 DEVICE

In addition to the ZB-CONNECTION radio devices, you can insert third-party devices if connected through a 4-noks BRIDGE. In particular, devices with MODBUS protocol 485. The gateway node must enter a BRIDGE. The Bridge must be configured through their DIP switches on the board, and the only setting parameters are communication (Baud Rate, Parity, and Stop bits).

There are no addresses to be set.

-	Add new device Add device to GATEWAY (ZC GW USB ID=2)		After deciding to enter a BBIDGE
	Device: Custom name: Logic address:	ZR_BRIDGE BRIDGE 1 (1-127)	set him a name and a logical address. The latter is not important for the purposes o network, but only to be able to identify
	Cancel	Add	Click on add Add

At this point, we have created another node on the network. For example

Select to add a device and give the command add new.

Ora lo selezioniamo per aggiungere un dispositivo e diamo il commando aggiungi nuovo

dispositivo LILI. In questa nuova finestra scegliamo un dispositivo che eventualmente era stato creato precedentemente nella stessa sessione di esecuzione dell'applicativo,

Add new device		
Add device to BRIDGE (ZR_BRIDGE ID=1)		
Select an existing device or digit a new name		
Device:	CUSTOM_DEV1 -	
Custom name:	IR33	
Logic address:	33 (1-255)	
Cancel	Add	

Oppure scegliamo la voce CUSTOM_DEV, e gli diamo un nome e il suo indirizzo logico.

La voce CUSTOM_DEV ci aiuterà per inserire un dispositivo uguale in un altro indirizzo. In pratica a questo dispositivo saranno associati i registri che saranno aggiunti.

Ora procedere alla definizione dei suoi registri.

L'area dei registri risulta vuota. Utilizzare il comando Aggiungi registro e riempire l'area.

🚅 Add register	Remove register
Add register	
Add device to CUSTOM D	<u>EV1</u>
Register type:	Input Register 👻
Register address:	33
Description:	PROBE #1
Cancel	ОК

Scegliere il tipo di registro, il suo indirizzo e la sua descrizione.

Dare l'OK	ОК
Dale I OIX.	

IMPORTANTE: i registri vanno immessi progressivamente partendo dal primo.

L'inserimento dei registri è utile. Infatti uno stesso dispositivo potrà essere selezionato in un secondo tempo senza dover riconfigurare tutti i registri.

🕒 ZMonitor 1.0.2	and the second second	4.	
File Tools Settings ?			
📲 🗱 😋 🎇 IR33 (33):			
Nuovo progetto	IR33 (CUSTOM_DEV1 ID=33)	🚅 Add register	📄 💥 Remove register
	Address Description		Value
BRIDGE (1)	0 Probe #1		0
IR33 (33)	1 Droho #2		0

IMPORTANTE: salvare il progetto.

Nel momento in cui inseriamo un dispositivo uguale è sufficiente scegliere lo stesso ,assegnarli un altro nome con un indirizzo diverso e i registri saranno ripresi

In questo documento il dispositivo scelto è CUSTOM_DEV1.

NOTA: la configurazione dei registri non viene esportata nei nuovi progetti.

CUSTOM_DEV1 -
IR33 num 2
34 (1-255)

Come si vede a lato si è ripreso il CUSTOM_DEV1, è stato dato un altro nome e il suo indirizzo.

Dopo aver dato il comando aggiungi, sono stati ripresi i registri impostati in precedenza (vedi immagine sotto).

2 ZMonitor 1.0.2				
File Strumenti Impostazioni ?				
📲 💢 😋 🗽 IR33 num 2 (34):				
Nuovo progetto	IR33 num 2 (CUSTOM_DEV	'1 ID=34)	🚅 Aggiungi registro	👷 Rimuovi registro
B GATEWAY (2)	Address Description			Value
🖳 💇 sala riunioni (24)	0 Probe#1			
🗎 🍊 BRIDGE (6)	1 Probe #2			0
(R33 (33)				
IR33 num 2 (34)				

13. AUTOMATIC DEVICE SCAN (only GATEWAY MODBUS RTU)

From the Tools menu choose the command "Automatic devices scan"

ZMonitor 1.0.2		Add new device Automatic devices sca	n
Add new device Add new device Remove device Refresh all rgisters Show signal levels	GATE	Protocol: Serial port Device: Cust	Modbus RTU COM17 •
Automatic devices scan	0 1 2 3 4	Start scan	Cancel
elect the serial port and begir	n with	Start scan	

Add new device Automatic devices scan				
Protocol: Serial port:		Modbus RTU COM7 •		
Device: ZC_GW_USB	Custom name: GATEWAY	Logic address: ID=2 (19200bps)		
Start scar	n Ca	ancel OK		

Select the device, and click OK. It will create a node.

The seek finds only GATEWAY Modbus RTU connect by the door that we have selected.

From seek are excluded GATEWAY ETHERNET.

LOG FUNCTION

It's possible to generate a LOG file for the different registers.

The output file is an .CSV.

Select the output file to be created, the device and its registers. Also choose the period upgrade. Start the LOG. The generated file is a simple text file formatted

Start Log Logged registers refresh Output file:	time (sec.):	
GATEWAY (2) BRIDGE (6) CVM_MINI_1 (87) IR33 (33)	 0 Device Type 1 Firmware Version (Major/Minor) 2 Transmission Power (dB+100) 3 Network Channel (11::26) 4 Network Panld (0 :: 32767) 5 Seconds from reset 6 Counter of messages received from reset 7 Number of used agent slots (number of sensors) 8 Device network address 	*
Deselect all	Number of selected registers:	
	Cancel Start Log	

14. SAVE PROJECT

To save your work, click "Save Project" from the File menu. The filename extension will .zmx



15. OPEN PROJECT

Jobs saved are obtained with "Open Project" from the File menu



16. TUTORIAL

Turn on Relay (on ZR-PLUG-M device)

Example: To close the relay contact, go to the register described as "the electrical load is ON "and set to" YES ". If the relay was set to OFF then it will be activated.

5	Contatore (parte bassa)		0
6	Contatore (Parte alta)		🔘 Si
0	Attivazione della Password di comando	Il carico elettrico è impostato su ON	◎ No
1	Il carico elettrico è impostato su ON		Invia 🚺 🗉
la	IL COMPANY AND A MARKED AN OFF		bl-

To open the relay contacts move to the register described as "Electrical load is set OFF "and set its value to" YES " $\,$

You can know the status of the relay, the register described as "output state (0=off, 1=On)

7		0
5	I dati misurati sono salvati in memoria non-volatile	0
	Stato uscita (0=off; 1=on)	On
1	Stato Stand-by Killer (1=On/0=Off)	Off

Impostazione soglie temperatura (esempio su TCM)

To set the activation type of operation HOT, change the value of register described as Set_Caldo (°C or °F). The entered value admits the decimal point.

3	Valore massimo permesso per i set-point (°C o °F)		32,0
4	Isteresi_Caldo (*C o *F)		18.0
5	Isteresi_Freddo (*C o *F)	Set_Caldo (°C o °F))	
	Set_Caldo (*C o *F))		Invia 🔀
7	Set_Freddo (°C o °F)		20,0

17. **REFRESH Register**

With this setting is' can enable the automatic refresh the settings menu. In This data is updated. The validity of the data depends on the time of transmission each device.

ZMonitor 1.0.2		
File Tools	Settings ? Manually refresh Refresh every 1s Refresh every 2s Refresh every 5s Refresh every 10s	I _1 (C∀ Descri
	Change language Debug	Voltage Current

NOTE: in the case of networks with many devices can be delays in updating.

18. DEBUG

With this command, you can intercept the communication with its description of every single packet.



19. COSA FARE IN CASO DI

Problema	Causa probabile	Cosa fare
dispositivo non raggiungibile	dispositivo non raggiungibile	assicurarsi che il dispositivo sia acceso, oppure attendere la trasmissione successiva

For any suggestions or problem please send an email to:

info@4-noks.com

4-noks reserves the right modify or change its products without prior warning

NOTE

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