

## IsoUs – Ultimate Step Utility

[www.promax.it](http://www.promax.it)



The contained information in this handbook are only informative and they can be changed without warning and they must not be understood with some engagement from Promax srl. Promax srl does not assume responsibility or obligates for errors or inaccuracies that can be found in this handbook. Except how much granted from the license, no part of this publication can be reproduced, saved in a recording system or transmitted in whatever form or with any means, electronic, mechanical or recording system or otherwise without Promax srl authorization.

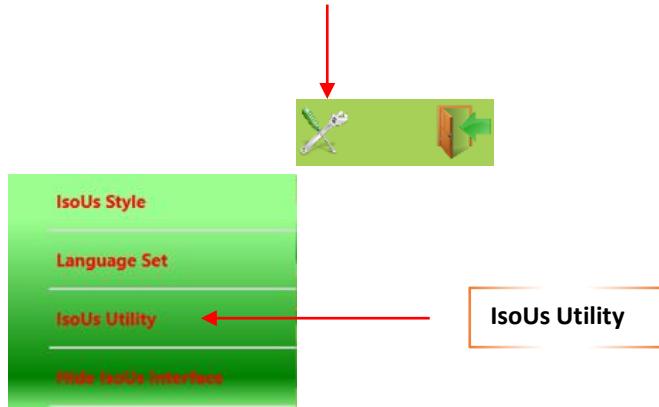
Any reference to names of society or products have only demonstrative scope and it does not allude to some real organization.

**Rev. 1.0.3 © Promax srl**

## 1. Utility

In this document are described the IsoUs “Utility”.

For Open the menu Utility, press the **BUTTON** on interface “*Configuration*” and after “*IsoUs Utility*”:



## 2. UsConfig

**UsConfig** allows to configure the CNC. With UsConfig is possible to create or modify the configuration file “**IsoUs.cfg**” that define the CNC type and all CNC parameters.

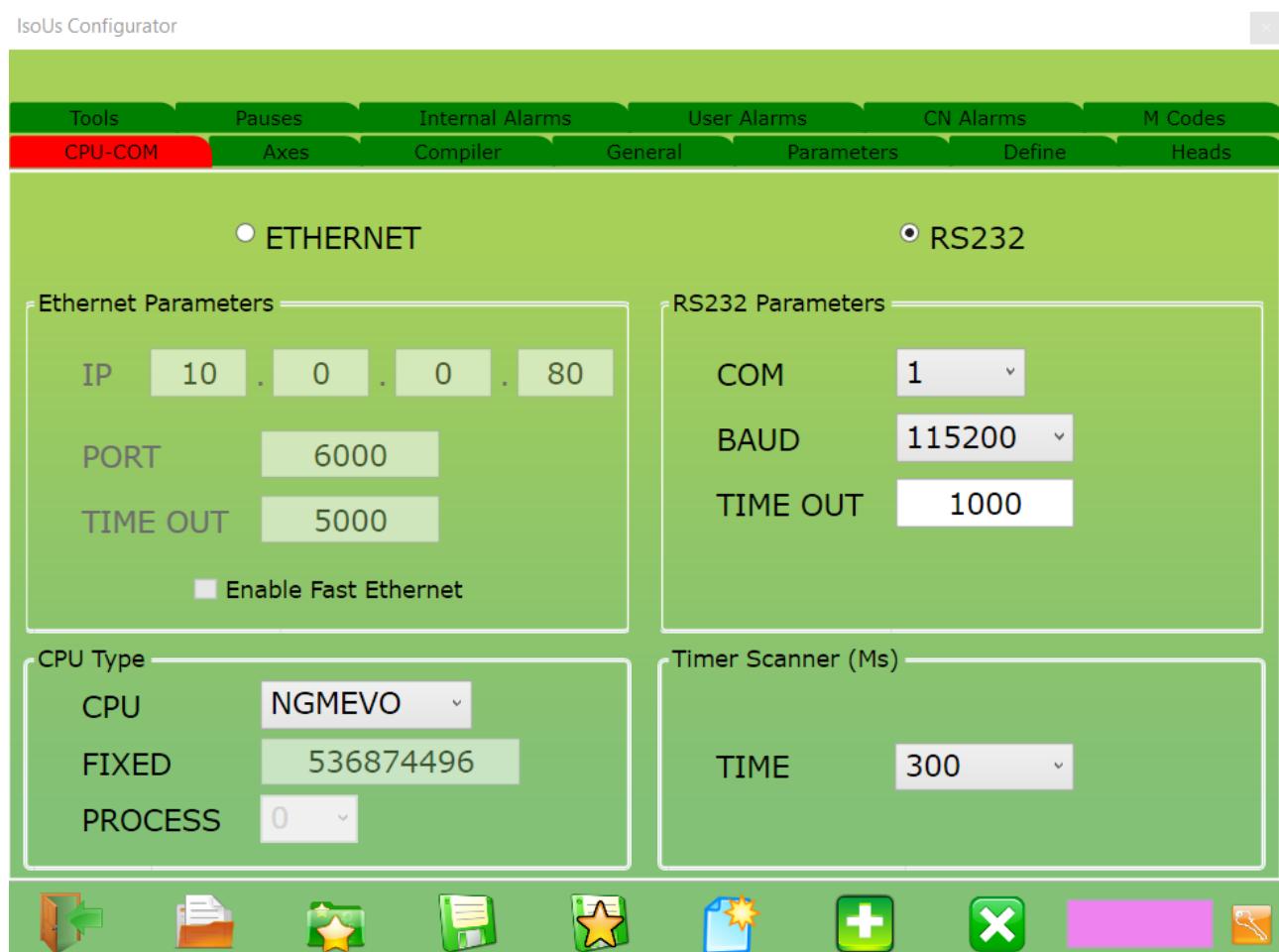
For use the same configuration in another **CN**, copy the “**IsoUs.cfg**”.

**UsConfig** can be executed also when the interface is closed by the file:



It is present in the same folder of IsoUs.

For **SAVE** or **MAKE** a new configuration, is used **PASSWORD** level 2



## 2.1 Load a Configuration

For load a configuration, press **BUTTON**:



Choose the desired configuration.

## 2.2 Import a IsoNs Configuration file

For Import a IsoNs configuration file, press **BUTTON**:



Choose the IsoNs (.cfg) file to import.

During the import process, UsConfig will ask if You want import the Nsio.cfg file (Digital I/O description). If Yes, following, open the Nsio.cfg pertinent to IsoNs.cfg imported.

## 2.3 Load Default Configuration

The **DEFAULT CONFIGURATION**, is the last configuration used by IsoUs, i.e. the last IsoUs session used in the **PC**.

Press **BUTTON**:



## 2.4 Save Current Configuration

For save the current configuration , press **BUTTON**



Choose the desired name.

## 2.5 Save Default Configuration

Press **BUTTON**:



The configuration will be saved in the file "*IsoUs.cfg*".

## 2.6 New Configuration

Press **BUTTON**:



## 2.7 Add a CNC to Current Configuration

Press **BUTTON**:



Will be added a new configuration section.



## 2.8 Remove Select CN to Current Configuration

Press **BUTTON:**



## 3. Configuration Parameters

Below are described the configuration parameters

### 3.1 CPU - COM

Tabella che comprende i parametri relativi al tipo di **CPU** utilizzata e alla tipologia di comunicazione usata con il PC.

<input checked="" type="radio"/> <b>ETHERNET</b> <b>Ethernet Parameters</b> IP <input type="text" value="10"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="80"/> PORT <input type="text" value="6000"/> TIME OUT <input type="text" value="5000"/>  <input type="checkbox"/> Enable Fast Ethernet	<input checked="" type="radio"/> <b>RS232</b> <b>RS232 Parameters</b> COM <input type="text" value="1"/> BAUD <input type="text" value="115200"/> TIME OUT <input type="text" value="1000"/>
<b>CPU Type</b> CPU <input type="text" value="NGMEVO"/> FIXED <input type="text" value="536874496"/> PROCESS <input type="text" value="0"/>	<b>Timer Scanner (Ms)</b> TIME <input type="text" value="300"/>

#### 3.1.1 CPU Type

**CPU** Parameters

##### 3.1.1.1 CPU

Defines the CNC Type Used.

##### 3.1.1.2 FIXED

Address **FIXED** variable in **CN**.

##### 3.1.1.3 PROCESS

Number of process used in the CN.

This Parameters is enabled only for the CN **MULTIPROCESS** capability (NG35-NGWARP).

This parameter allows to choose the **PROCESS** number.

All CN configured in the same CPU must have different process.

Generally:

**CN 0    PROCESS 0**

**CN 1    PROCESS 1**

Etc.

### 3.1.2 Ethernet Parameters

Port **ETHERNET** parameters on **CN**.

#### 3.1.2.1 Check Ethernet

##### **ETHERNET**

Enable this check for use the **ETHERNET** link from PC to CN

#### 3.1.2.2 IP

CN IP address.

The PC must have the **ETHERNET** port configured with **STATIC IP** but with different value of CN IP

Ex:

IP CN	10.0.0.80
IP PC	10.0.0.81

#### 3.1.2.3 PORT

CN IP Port.

Default 6000.

#### 3.1.2.4 Time Out

Time Out in **Millisecond** for **ETHERNET** communications (set it with values greater **1 SECOND**).

#### 3.1.2.5 Enable Fast Ethernet

Enables the **FAST ETHERNET TRANSFER DATA**.

This option must be enabled only if necessary a processing of **BLOCK per Second** greater than di 500.  
(The CN must have a TaskPlc sample of 2 millisecond or lower).

### 3.1.3 RS232 Parameters

CN-PC **RS232** port parameters.

#### 3.1.3.1 Check RS232

##### **RS232**

Enable this check for use the **RS232** link from PC to CN

#### 3.1.3.2 COM

PC **COM NUMBER**i.

#### 3.1.3.3 Baud

Select **BAUD RATE** (default 115.200)

#### 3.1.3.4 Time Out

Time Out in **Millisecond** for **RS232** communications (set it with values greater **100 MILLISECOND**).

### 3.1.4 Timer Scanner

System Scanner Timer.

The System Scanner manages the System Events and refresh Axes Values on PC

#### 3.1.4.1 Time

Time in Milliseconds.

Recommended time:

With RS232 link time 200/300 Milliseconds

With ETHERNET link time 50/200 Milliseconds

## 3.2 Axes

Axes configured on **CN**.

Axes Definition		Time Out
AXES NUMBER	4	Enable 10000
NAME		HOMING SEQUENCE
X	<input type="checkbox"/> Rotative 360 Dgr.	2
Y	<input type="checkbox"/> Rotative 360 Dgr.	3
Z	<input type="checkbox"/> Rotative 360 Dgr.	1
A	<input type="checkbox"/> Rotative 360 Dgr.	4
B	<input checked="" type="checkbox"/> Rotative 360 Dgr.	5
C	<input type="checkbox"/> Rotative 360 Dgr.	6
U	<input type="checkbox"/> Rotative 360 Dgr.	7
V	<input type="checkbox"/> Rotative 360 Dgr.	8
W	<input type="checkbox"/> Rotative 360 Dgr.	9

### 3.2.1 Axes Definition

Axes Parameters

#### 3.2.1.1 Axes Number

Number of Axes(Min 2 Max 9)

#### 3.2.1.2 Name

Name of Axes in according on the Gcode files.

#### 3.2.1.3 Homing Sequence

Sequence of automatic Homing for homing all.

Where 1 is the first Axis to perform the homing

### 3.2.2 Time Out

Time Out manage

#### 3.2.2.1 Enable

Time Out for enable Axes

#### 3.2.2.2 Homing

Time Out for homing Axes

## 3.3 Compiler

Gcode compiler parameters.

Number of Variables Reserved for M 10	Size Code Memory (Mb) 50
Compile Options Line Number for BMC 1000	

#### 3.3.1 Number of Variables Reserved for M

Number of variables reserved for M code on CN (normally 10)

Gcode \$\_PARM\_n function.

#### 3.3.2 Compile Options

Compiler options

#### 3.3.2.1 Line Number for BMC

Number of Gcode lines for Block Mode Compile.

#### 3.3.3 Size Code Memory

Reserved memory on PC for Gcode . Normally with PC with 2 Gb RAM insert values over 100 Mb.

### 3.4 General

#### General Parameters

User Var Defined for Events	Max Override				
<input type="text" value="2"/>	<input type="text" value="1024"/>				
Digital Inputs Defined for Events	Axes Number of Decimals Showed				
<table border="1"> <tr> <td>Number</td> <td>Input</td> </tr> <tr> <td><input type="text" value="3"/></td> <td><input type="text" value="2"/> <input type="text" value="6"/>  <input type="text" value="5"/> <input type="text" value="7"/>  <input type="text" value="7"/> <input type="text" value="8"/>  <input type="text" value="4"/> <input type="text" value="9"/>  <input type="text" value="5"/> <input type="text" value="10"/></td> </tr> </table>	Number	Input	<input type="text" value="3"/>	<input type="text" value="2"/> <input type="text" value="6"/> <input type="text" value="5"/> <input type="text" value="7"/> <input type="text" value="7"/> <input type="text" value="8"/> <input type="text" value="4"/> <input type="text" value="9"/> <input type="text" value="5"/> <input type="text" value="10"/>	<input type="text" value="3"/>
Number	Input				
<input type="text" value="3"/>	<input type="text" value="2"/> <input type="text" value="6"/> <input type="text" value="5"/> <input type="text" value="7"/> <input type="text" value="7"/> <input type="text" value="8"/> <input type="text" value="4"/> <input type="text" value="9"/> <input type="text" value="5"/> <input type="text" value="10"/>				
Log File Dimension (Bytes)					
	<input type="text" value="100000"/>				

#### 3.4.1 Use Var Defined for Events

Number of **USER GENERIC** variables enabled for event generation. This parameter is used in the customized interfaces or PlugIn by the event in UsWork:

**VariableUserChanged**

If this event is not used set to **0**.

**IsoUs standard, don't use this event**

#### 3.4.2 Digital Inputs Defined for Events

Number of **DIGITAL INPUTS** enabled for event generation. This parameter is used in the customized interfaces or PlugIn by the event in UsWork:

**DigitalInputChanged**

**IsoUs standard, don't use this event**

##### 3.4.2.1 Number

Number of Digital Inputs enabled for event generation

If not used set to **0**.

##### 3.4.2.2 Input

Digital Input Number on **CN** (from 0 to 255)

#### 3.4.3 Max Override

Number of divisions for OVERRIDE POTENTIOMETER.

(generally 1024) It depends by VTB application

#### 3.4.4 Axes Number of Decimal Showed

Number of **DECIMAL PLACES** showed in the Axes values.

#### 3.4.5 Log File Dimension

Log File dimension in **Bytes**.

### 3.5 Machines Parameters

CN Machines Parameters.

When the new configuration is generated, **Add Par Gen**

Add CUSTOM	REMOVE CUSTOM	Add Par GEN	Par.PID.	REMOVE ALL	POSITIONER		
Name	Description	Group	Value	CNC Addr	Type		
FEEDMAX	Max Feed mm/min	General	100000	-1	NUMERIC	1	
FEEDMIN	Min Feed mm/min	General	100	-1	NUMERIC	1	
FEEDDEF	Default Feed mm/min	General	1000	-1	NUMERIC	1	
FEEDRES	Feed Resolution	General	1000	-1	NUMERIC	1	
SPEEDMAX	Speed Max Rpm	General	3000	-1	NUMERIC	1	
SPEEDMAXSPINDLE	Rpm Spindle Max	General	3000	-1	NUMERIC	1	
SPEEDMIN	Speed Min Rpm	General	500	-1	NUMERIC	1	
SPEEDDEF	Speed Default Rpm	General	3000	-1	NUMERIC	1	
WR_SPD9	Enable Write Speed User 9	General	1	-1	NUMERIC	0	
RESQUOTE	Axes Value Resolution	General	1000	-1	NUMERIC	1	

#### 3.5.1 Parameters Properties

Is possible set some properties for customized the interface to application used.

Is recommended change only the properties of **CUSTOM PARAMETERS**.

For change double click on the desired field

Description
Max Feed mm/min



##### 3.5.1.1 Name

The **NAME** must be **UNIVOCAL**.

##### 3.5.1.2 Description

Insert your prefered description.

##### 3.5.1.3 Group

The **GROUP** identifies the **TABLE** where the parameter is inserted.

##### 3.5.1.4 Value

**DEFAULT VALUE**

##### 3.5.1.5 CN Addr

The **CN ADDR** identifies on the **CN Address** of the **PARAMETER**.

These address must be in according with the **VTB APPLICATION**. The **PID,GENERAL** and **POSITION PARAMETERS**, have already the predefined address. **NOT CHANGE THESE ADDRESSES**. The address can be changed only in the **CUSTOM PARAMETERS**. The first free address is calculated by the below formula:

$$50 * (\text{AXESNUMBER} + \text{POSITIONNUMBER} + 1)$$

Where:

**AXESNUMBER**      *Number of interpolated Axes*

**POSITIONNUMBER**      *Number of positioning Axes*

If the address inserted is **-1**, the **PARAMETER** is not transferred on the **CN**, but it is managed from the Gcode application by the functions **READ\_PARMAC** and **WRITE\_PARMAC**.

If the address inserted is **-2**, the **PARAMETER** is not transferred on the **CN**, but it is managed by Compiler from switch **IFDEF, ELSEDEF, ENDIFDEF**.

### 3.5.1.6 Type

**TYPE** identifies the type of **PARAMETER**.

Where:

<b>NUMERIC</b>	None Transformation is applied to parameter
<b>VEL</b>	Feed Transformation
<b>ACC</b>	Acceleration Transformation (mm/sec2)
<b>ABSVEL</b>	Feed Transformation (Use it and not VEL)

### 3.5.1.7 Min Val

Minimum value for the **PARAMETER**

### 3.5.1.8 Max Val

Maximum value for the **PARAMETER**

### 3.5.1.9 Psw Level

PASSWORD LEVEL

<b>0</b>	<b>Password Level 0</b>
<b>1</b>	<b>Password Level 1</b>
<b>2</b>	<b>Password Level 2</b>
<b>-1</b>	<b>NO PASSWORD IS REQUIRED</b>

### 3.5.1.10 Enum

Identifies if the parameter is type **ENUMERATIVE**.

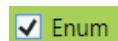
Press **BUTTON**:

...

This allows to modify the ENUMERATIVE parameters:



Enable/Disable the ENUMARTIVE value



Add an ENUMERATIVE Value



Remove the ENUMERATIVE Value selected



### Modify the ENUMERATIVE fields

Double click on the desired field and insert the new value

Test Enum	<b>0</b>
-----------	----------

### 3.5.2 Add a CUSTOM Parameter

For add a **CUSTOM PARAMETER**, press **BUTTON**:

Add CUSTOM

The parameter will be added to last position.

PAR_124	.....	General	0	250	NUMERIC	-1
---------	-------	---------	---	-----	---------	----

If the CN address inserted is -1, the **PARAMETER** is not transferred on the **CN**, but it is managed from the Gcode application by the functions **READ\_PARMAC** and **WRITE\_PARMAC**.

If the CN address inserted is -2, the **PARAMETER** is not transferred on the **CN**, but it is managed by Compiler from switch **IFDEF**, **ELSEDEF**, **ENDIFDEF**.

### 3.5.3 Remove a Selected Cutom Paramater

Press **BUTTON**:

REMOVE CUSTOM

### 3.5.4 Add General Parameters

Press **BUTTON**:

Add Par GEN

The **GENERAL PARAMETERS**, are an **ESSENTIAL PART** of the **MACHINE PARAMETERS**, therefore these must be always added. The IsoUs configurator, adds automatically the general parameters for the **AXES CONFIGURED**.

### 3.5.5 Add P.I.D. Parameters.

Press **BUTTON**:

Par P.I.D.

The P.I.D. parameters must be added only if used analog drives +/- 10V.

### 3.5.6 Remove All Parameters.

Press **BUTTON**:

REMOVE ALL

### 3.5.7 Add/Remove Positioner Parameters.

Press **BUTTON**:

POSITIONER

These Parameters must be added only if in the application are used the **AXIS POSITIONER**.



Press the button for add the parameters of the desired positioner

### **3.5.8 Move Up or Down a Parameter Selected**

Press **BUTTON**:



### 3.6 Define

This TABLET allows to declare the **DEFINITION** used in the Gcode file.

A **DEFINE**, defines in descriptive mode a value.

Ex:

**\$[O1]=1 // ON Digital Out 1**

Can Be Defined

**OUT\_1=1**

Where **OUT\_1** is a **DEFINE** that contains the description **\$[O1]**



#### 3.6.1 Add a new Define

Press **BUTTON**:

New Define

Following insert the fields, **Define Name**, **Define Description**, **Define Value**.

**Define Name** and **Define Value** are obligatory fields , **Define Description** is a description used only in the configurator application.

#### 3.6.2 Remove a Selected Define

Press **BUTTON**:

Remove Define

### 3.7 Heads

This **TABEL** configures the **HEADS PARAMETERS**. An **HEAD** is defined by the Axes position **X,Y,Z** etc. Generally is the **SPINDLE** position. IsoUs can define up to **256** heads, that are selected by Gcode function **Hn**.

Add Head		Remove Head					
H	Name	Offset X	Offset Y	Offset Z	Offset A	Offset B	Offset C
0	Head 1	500	153	331	0	0	0
1	Head 2	3000	0	0	0	0	0
2	Head 3	500	153	331	0	0	0
3	Head 4	20	136000	4000	200	2	0
4	Head 5	30	137000	5000	300	3	0
5	Head 6	1200	220	120	0	0	0
6	Head 7	0	0	0	0	0	0
7	Head 8	0	0	0	0	0	0
8	Head 9	0	0	0	0	0	0
9	Head 10	500	225.5	241.5	0	0	0

#### 3.7.1 Head Parameters

The first 9 parameters (Offset) are used by **Hn**.

The other parameters can be read by function **\$[Hn]**, wher n is the parameter index

INDEX	PARAMETER
0	Offset X
1	Offset Y
2	Offset Z
3	Offset A
4	Offset B
5	Offset C
6	Offset U
7	Offset V
8	Offset W
9	User 1
10	User 2
11	User 3
12	User 4
13	User 5
14	User 6
15	User 7
16	User 8
17	User 9
18	User 10
19	User 11

**3.7.1.1 *Name***

Not used in this version

**3.7.1.2 *Offset***

This property indicates the head offset (X,Y,Z... Axes) from **MACHINE ORIGIN** (Homing)

**3.7.1.3 *User***

User generic parameters. These parameters can be read by **\$[Hn]**.

**3.7.2 *Add a New HEAD***

Press **BUTTON**:

A green rectangular button with a thin white border. Inside, the text "Add Head" is centered in a white, sans-serif font.**3.7.3 *Remove the Selected HEAD***

Press **BUTTON**:

A green rectangular button with a thin white border. Inside, the text "Remove Head" is centered in a white, sans-serif font.

### 3.8 Tools

This **TABEL** configures the **TOOLS**. IsoUs can define up to **256** heads, that are selected by Gcode function **Tn**.

Add Tool		Remove Tool					
T	Name	Diameter	length	Speed Rpm	Tool Nr. Clone	User 1	User 2
0	Name Tool 1	12345	4444	6000	0	0	0
1	Name Tool 2	15.456	120.24	6000	0	0	0
2	Name Tool 3	876.123	12.987	6000	0	0	0
3	Name Tool 4	4000	44000	6000	0	0	0
4	Name Tool 5	14.55	55000	6000	0	0	0
5	Name Tool 6	12.33	66000	6000	0	0	0
6	Name Tool 7	7000	77000	6000	0	0	0
7	Name Tool 8	8000	88000	6000	0	0	0
8	Name Tool 9	9000	99000	6000	0	0	0
9	Name Tool 10	10000	110000	6000	0	0	0

#### 3.8.1 Tool Parameters

The first 4 parameters (DIAMETER, LENGTH, SPEED, CLONE) are used by **Tn**.

The other parameters can be read by function **\$[Un]**, wher n is the parameter index

INDEX	PARAMETER
0	Diameter
1	Length
2	Speed rpm
3	Clone
4	User 1
5	User 2
6	User 3
7	User 4
8	User 5
9	User 6
10	User 7
11	User 8
12	User 9
13	User 10
14	User 11
15	User 12
16	User 13
17	User 14
18	User 15
19	User 16

#### 3.8.2 Add a new Tool

Press **BUTTON:**

Add Tool

#### 3.8.3 Remove Selected Tool

Press **BUTTON:**

Remove Tool

### 3.9 Pause

This TABLE defines the **CODE of PAUSE**. IsoUs defines the **STANDARD** code and other codes can be added and these are activated by **G80**.

Ex:

**G80 Xcode**

Where **Code** is the defined code (the codes from 0 to 2 are **STANDARD** ).

- 0      Pause from STEP MODE
- 1      Pause from Break Point
- 2      Pause from BUTTON

Add Code		Remove Code
Pause Code	Description	
0	PAUSE STEP MODE	
1	PAUSE BREAK POINT	
2	PAUSE BUTTON	

#### 3.9.1 Add a new Code

Press **BUTTON**:

Add Code

#### 3.9.2 Remove selected Code

Press **BUTTON**:

Remove Code

### 3.10 Internal Alarms

This **TABLE** defines the **INTERNAL ALARMS** managed by IsoUs.

Is not possible add or remove these alarms, only the description can be changed.

Alarm Code	Description
1	Timer not available
2	Variable not available
3	Variable Fixed not available
4	Digital OUT not available
5	Analog OUT not available
6	Time Out Home Axis
7	Machine Parameter not available
8	Ruturn without Gosub
9	Digital INPUT not available
10	Analog INPUT not available
11	Encoder channel not available

### 3.11 User Alarms

This **TABLE** defines the **USER ALARMS** managed by IsoUs.

These alarms can be called by **ERROR code**, where:

Code is the number of alarm defined

Add Alarm		Remove Alarm
Alarm Code	Description	
0	New Alarm 1	
1	New Alarm 2	

#### 3.11.1 Add a new Alarm Code

Press **BUTTON**:

Add Alarm

Input Description

#### 3.11.2 Remove Selected Alarm

Press **BUTTON**:

Remove Alarm

### 3.12 Cn Alarms

This **TABLE** defines the **CN ALARMS** managed by IsoUs.

These alarms code, must be defined in the **VTB APPLICATION**

These can be **ALLARMS** and stop the Gcode execution, or **WARNING**, and generate only a message

Add Alarm		Remove Alarm	
Alarm Code	Description	E/W	
1	NEGATIVE SOFTWARE LIMIT AXIS X	<input type="checkbox"/>	Warning
2	POSITIVE SOFTWARE LIMIT AXIS X	<input type="checkbox"/>	Warning
3	NEGATIVE SOFTWARE LIMIT AXIS Y	<input type="checkbox"/>	Warning
4	POSITIVE SOFTWARE LIMIT AXIS Y	<input type="checkbox"/>	Warning
5	NEGATIVE SOFTWARE LIMIT AXIS Z	<input type="checkbox"/>	Warning
6	POSITIVE SOFTWARE LIMIT AXIS Z	<input type="checkbox"/>	Warning
7	NEGATIVE SOFTWARE LIMIT AXIS A	<input type="checkbox"/>	Warning
8	POSITIVE SOFTWARE LIMIT AXIS A	<input type="checkbox"/>	Warning
9	NEGATIVE SOFTWARE LIMIT AXIS B	<input type="checkbox"/>	Warning
10	POSITIVE SOFTWARE LIMIT AXIS B	<input type="checkbox"/>	Warning

#### 3.12.1 Add a new Alarm

Press **BUTTON**:

Add Alarm

Select the flag **WARNING**.

#### 3.12.2 Remove Selected Alarm

Press **BUTTON**:

Remove Alarm

### 3.13 M Codes

This TABLE defines the **M STANDARD CODES** managed by IsoUs.

Is not possible add a new M CODE, but only the code number can be changed.

If the code number is equal to -1, the M is disabled

#### WARNING

**DO NOT INSERT EQUAL CODES**

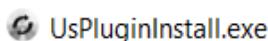
M Code (-1) Disable	M Type
-1	STOP
-1	ERROR
8	GOBLOCK
-1	PAUSE
-1	GOPAUSE
12	GORETRACE
-1	GOSTART
-1	GOEND

- |           |  |
|-----------|--|
| STOP      | M code called when a <b>STOP</b> Gcode is invoked  |
| ERROR     | M code called when a <b>ERROR-ALARM</b> Gcode is invoked   |
| GOCLOCK   | Codice della <b>M</b> che viene richiamato quando è invocata una <b>RIPARTENZA da BLOCCO</b>         |
| PAUSE     | M code called when a <b>PAUSE</b> Gcode is invoked   |
| GOPAUSA   | M code called when a <b>START FROM PAUSE</b> Gcode is invoked  |
| GORETRACE | M code called when a <b>START FROM RETRACE</b> Gcode is invoked                                      |
| GOSTART   | M code called when a <b>START</b> Gcode is invoked   |
| GOEND     | M code called when a <b>END</b> Gcode is invoked (program terminate regularly without stop or error) |

## 4. UsPluginInstall

**UsPluginInstall** allows to install or remove the IsoUs PlugIn.

**UsPluginInstall** can be executed also when the interface is closed by the file:



It is present in the same folder of IsoUs.

The **PASSWORD** level **2** is required

PlugIn Installer

Plugin	Enabled	AutoRun	Tool Bar
HOMING	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0
ORIGINS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
Parameters	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3
Go Block	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
RETRACE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4
POS.MAN.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5
IO TEST	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
MHM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10
Points	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7
Spindle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8
Tools	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-1
A.F.L.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9

## 4.1 Plugin Property

The Plugin has two property can be activated or deactivated.

### 4.1.1 Enabled

**ENABLED** defines if the Plugin is enabled.

If this property is not activated, the Plugin is not loaded.

### 4.1.2 Autorun

**AUTORUN** defines if the Plugin must be showed when IsoUs is executed.

The Plugin that need an automatic execution (ex : **RECOVERY**), managed this property, by itself

### 4.1.3 ToolBar

IsoUs allows to insert the plugin buttons in **3 TOOLBARS** divided in 15 positions

This field contains the position of the button is inserted (see [ToolBars](#)).

If the value is -1 the button is inserted in the Plugin Window

## 4.2 Save Current Configuration

Press **BUTTON:**



The new configuration is available from next IsoUs start

## 4.3 Remove Selected Plugin

Press **BUTTON:**



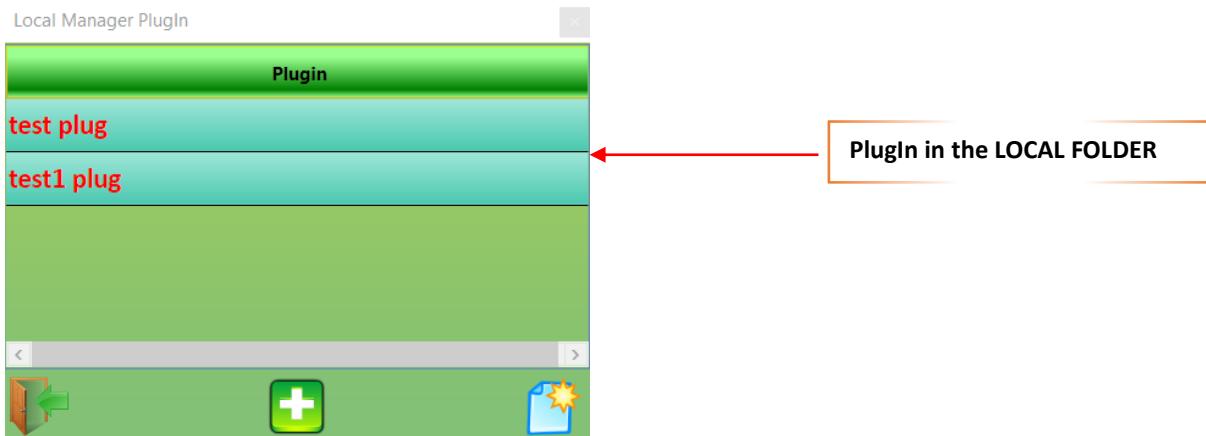
The Plugin selected will be removed from the LIST, but it will remain in the LOCAL FOLDER

## 4.4 Add a new Plugin

Press **BUTTON:**



Choose the Plugin from the Local Folder



#### 4.4.1 Add a Plugin from Local Folder

In the Local Folder are present the Plugin previously [REMOVED](#).

Selected the Plugin and press **BUTTON**:



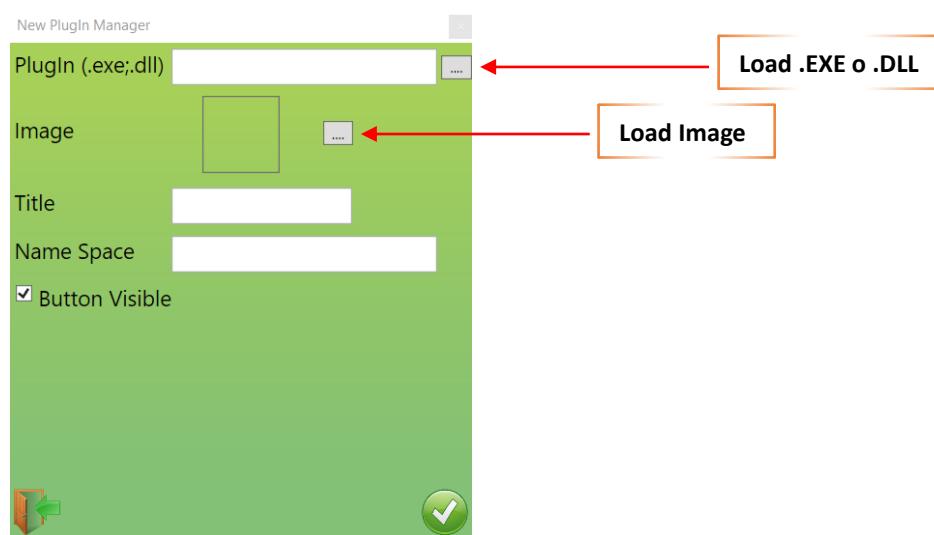
#### 4.4.2 Add a New Custom Plugin

A Custom Plugin is generated by a Visual Studio Project

Press **BUTTON**:



Insert Parameter



##### 4.4.2.1 Plugin (.exe;.dll)

Choose Plugin .EXE or DLL.

##### 4.4.2.2 Image

Choose the image (optional only if the button is visible).

##### 4.4.2.3 Title

Insert the title showed in the **BUTTON** (if visible)

##### 4.4.2.4 Name Space

Insert the NAME SPACE of Visual Studio Project.

##### 4.4.2.5 Button Visible

Button Visible.

##### 4.4.2.6 Save Data

Press **BUTTON**:



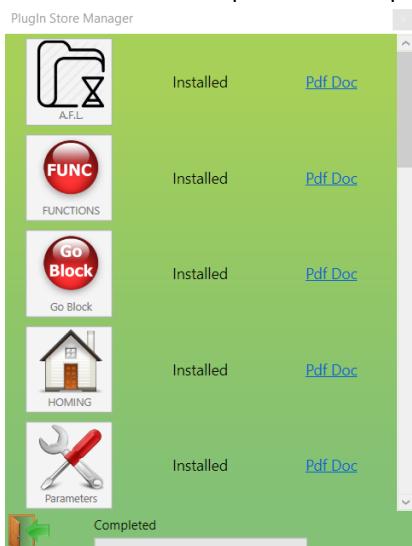
## 4.5 Add a Plugin from Promax Store

From the **PROMAX STORE**, can be installed the new Plugin, press **BUTTON**:



For this function, is necessary an **INTERNET CONNECTION**

From this function is possible also update the existing Plugin, or download the **PDF DOCUMENTATION**



**INSTALLED** The Plugin is already installed

**UPDATE** The Plugin is already installed but a new version is available

**NEW** The Plugin is not installed

For **Update** or install a new Plugin press the the **BUTTON** (Ex.)



## 4.6 Move a Plugin in the BAR

Press **BUTTON**:



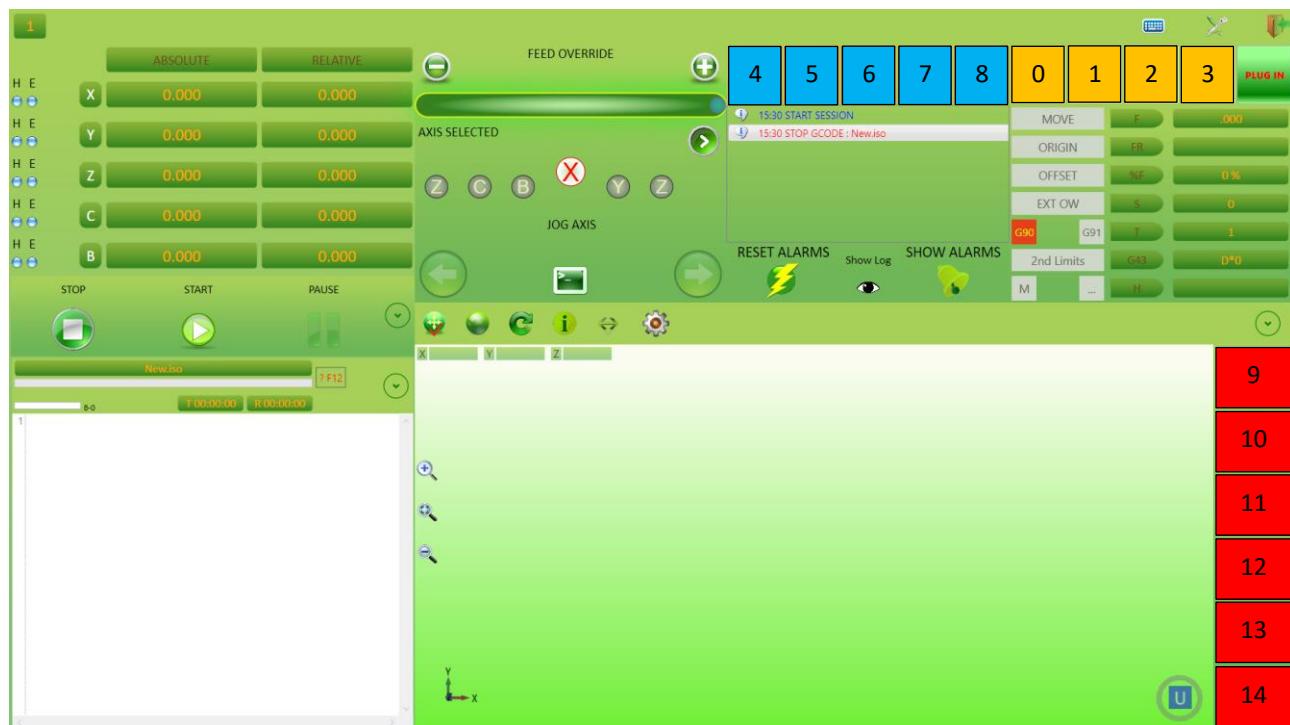
The selected plugin will be moved **UP** or **DOWN** in the Plugin BAR

## 4.7 ToolBars

There are 3 different Toobars.

These can contain the Plugin buttons.

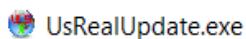
The toolbar positions are identified from 0 to 14:



## 5. UsRealUpdate

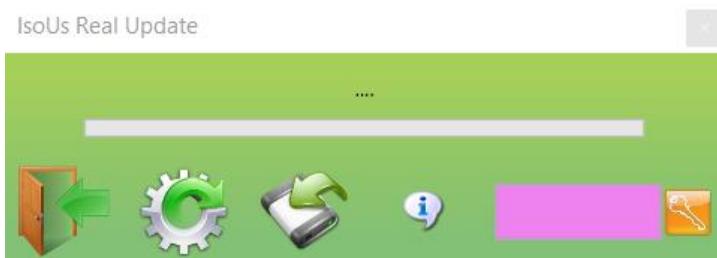
**UsRealUpdate** allows to Update IsoUs

**UsRealUpdate** can be executed also when the interface is closed by the file:



It is present in the same folder of IsoUs.

The **PASSWORD** level **2** is required



**UsRealUpdate** makes always a BackUp copy before to update IsoUs. Is possible recovery the BackUp copy for return back to previous version.

### 5.1 Check New Version

Press **BUTTON**:



If the new versions files will be present

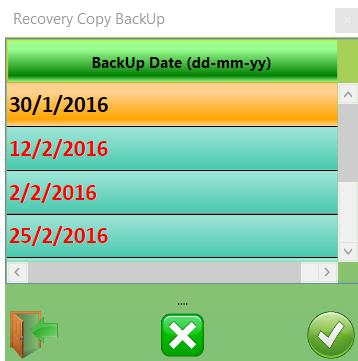
Name	Old Revision	New Revision
UsCommands.dll	1.0.0.1	1.0.0.11
UsGcodeEditor.dll	1.0.0.1	1.0.0.12

Press **BUTTON OK** for update IsoUs

The new products, will be installed to new IsoUs start.

## 5.2 BackUp Copies

Press **BUTTON:**



### 5.2.1 Recovery

Select a BackUp copy and press **BUTTON:**



### 5.2.2 Remove a Copy Copia

Select a BackUp copy and press **BUTTON:**



## 5.3 About Products Installed

press **BUTTON:**



## 6. UsPassWordManager

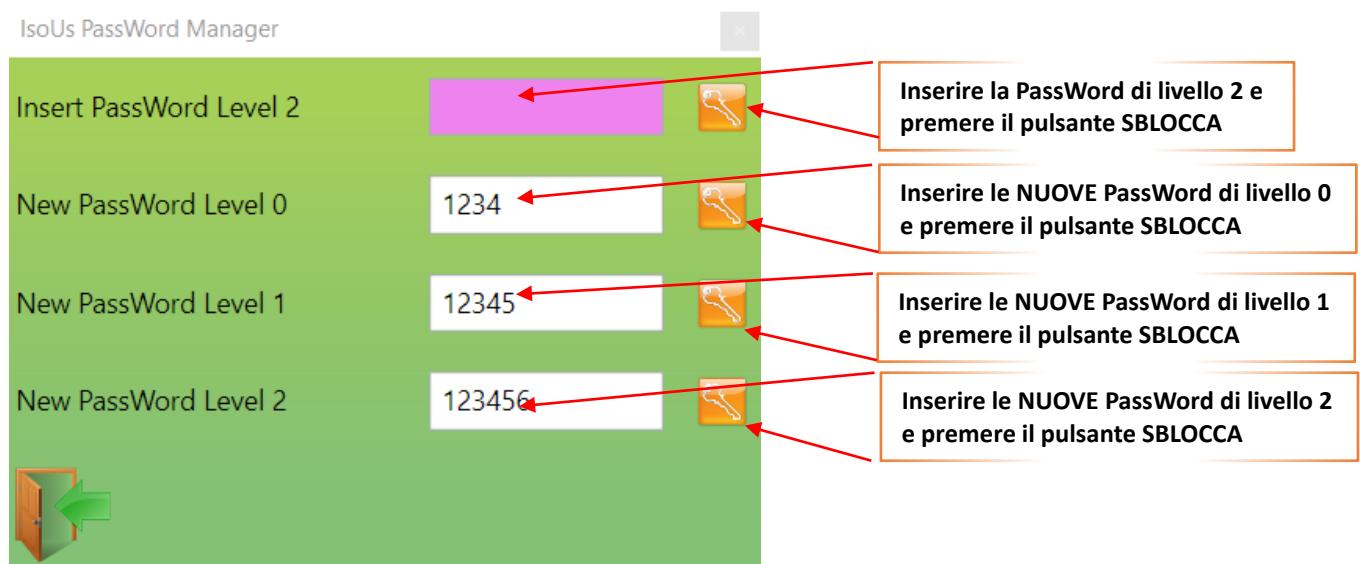
**UsPassWordManager** permette l' inserimento delle **PassWord** di IsoUs.

**UsPassWordManager** può anche essere eseguito a parte, cioè anche al di fuori dell' interfaccia di IsoUs, lanciando il file:



Presente nella stessa cartella di installazione di IsoUs.

Per **LA GESTIONE DELLE PASSWORD** è necessaria la **PASSWORD** di livello **2**



Inizialmente, le PassWord inserite verranno mostrate negli appositi campi.

### PASSWORD DI DEFAULT

*Livello 0 → 684618*

*Livello 1 → 684619*

*Livello 2 → 684620*

## 7. UsToolBarConfig

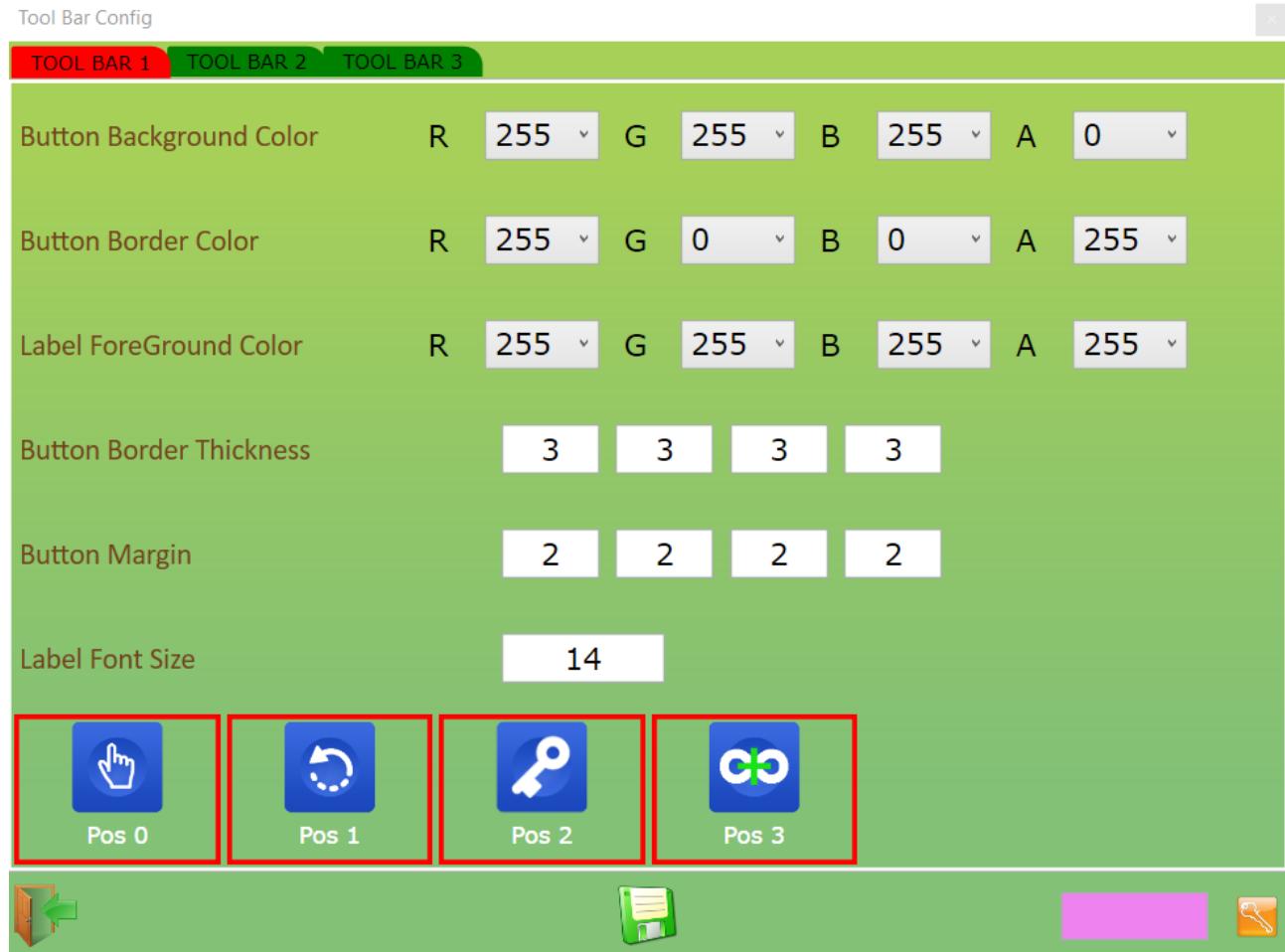
*UsToolBarConfig* to configure the IsoUs Tool Bars.

*IsoUs* can use 3 tool bars identified with position from 0 to 14 (see [ToolBars](#))

*UsToolBarConfig* customize the Buttons property inside the tool bars.

Is possible the following operation:

- a) Customize the Image
- b) Customize the Back Ground Color
- c) Customize Dimension and Label Color
- d) Customize Dimension, Color and Button Border



## 7.1 Tool Bars Configuration

Each Tab , **Tool Bar 1**, **Tool Bar 2** and **Tool Bar 3**, allows to configure the Buttons inside the relative Tool. The Tool Bars can display a different number of Buttons:

Tool Bar 1	4 Buttons
Tool Bar 2	5 Buttons
Tool Bar 3	6 Buttons

### 7.1.1 Colors Configuration

The colors are represented with **4 channels**

A,R,B,G where:

- A Trasparency Chanel, lower values higher trasparency .Value 0 total transparency
- R Chanel RED
- B Chanel BLUE
- G Chanel GREEN

With RGB channels is possible to set many colors

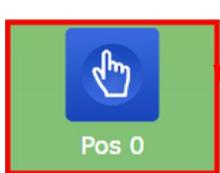
### 7.1.2 Back Ground Color

Back Ground Button Color



### 7.1.3 Border Color

Button Border Color



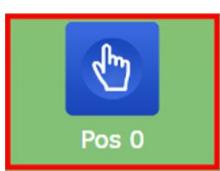
### 7.1.4 Label ForeGround Color

Label Fore Ground Color



### 7.1.5 Button Border Thickness

Button Border Thickness **Left,Up,Right,Bottom**

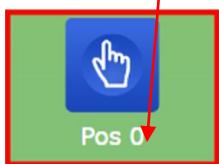


### 7.1.6 Button Margin

Button Margin **Left,Up,Right,Bottom**

### 7.1.7 Label Font Size

Label Font Size



### 7.1.8 Load a custom image in the Button

Is possible to customize an image inside the Button

This isn't mandatory, if none image is loaded, the system will use the default image



Left Click on the button for open the Windows browser and choose the new image  
For a correct representation, the image must be in PNG format with transparency and a dimension Max 128x128 pixel

### 7.1.9 Save the configuration

The Button  save the new configuration(Must be insert the Level 2 Password)  
The new configuration will activate at next IsoUs start up

## Index

<b>1. UTILITY .....</b>	<b>3</b>
<b>2. USCONFIG.....</b>	<b>4</b>
2.1 LOAD A CONFIGURATION.....	5
2.2 IMPORT A IsoNs CONFIGURATION FILE .....	5
2.3 LOAD DEFAULT CONFIGURATION .....	5
2.4 SAVE CURRENT CONFIGURATION .....	5
2.5 SAVE DEFAULT CONFIGURATION.....	5
2.6 NEW CONFIGURATION.....	5
2.7 ADD A CNC TO CURRENT CONFIGURATION.....	5
2.8 REMOVE SELECT CN TO CURRENT CONFIGURATION.....	7
<b>3. CONFIGURATION PARAMETERS .....</b>	<b>7</b>
3.1 CPU - COM .....	7
3.1.1 CPU Type.....	7
3.1.1.1 CPU.....	7
3.1.1.2 FIXED .....	7
3.1.1.3 PROCESS .....	7
3.1.2 Ethernet Parameters .....	8
3.1.2.1 Check Ethernet.....	8
3.1.2.2 IP.....	8
3.1.2.3 PORT.....	8
3.1.2.4 Time Out.....	8
3.1.2.5 Enable Fast Ethernet.....	8
3.1.3 RS232 Parameters .....	8
3.1.3.1 Check RS232 .....	8
3.1.3.2 COM.....	8
3.1.3.3 Baud .....	8
3.1.3.4 Time Out.....	8
3.1.4 Timer Scanner .....	9
3.1.4.1 Time.....	9
3.2 AXES.....	9
3.2.1 Axes Definition .....	9
3.2.1.1 Axes Number .....	9
3.2.1.2 Name .....	9
3.2.1.3 Homing Sequence.....	9
3.2.2 Time Out .....	10
3.2.2.1 Enable.....	10
3.2.2.2 Homing .....	10
3.3 COMPILER.....	10
3.3.1 Number of Variables Reserved for M .....	10
3.3.2 Compile Options .....	10
3.3.2.1 Line Number for BMC .....	10
3.3.3 Size Code Memory .....	10
3.4 GENERAL .....	11
3.4.1 Use Var Defined for Events.....	11
3.4.2 Digital Inputs Defined for Events.....	11
3.4.2.1 Number .....	11
3.4.2.2 Input .....	11
3.4.3 Max Override .....	11
3.4.4 Axes Number of Decimal Showed .....	11
3.4.5 Log File Dimension .....	11
3.5 MACHINES PARAMETERS .....	12
3.5.1 Parameters Properties .....	12
3.5.1.1 Name .....	12
3.5.1.2 Description .....	12
3.5.1.3 Group.....	12
3.5.1.4 Value.....	12

3.5.1.5	CN Addr .....	12
3.5.1.6	Type .....	13
3.5.1.7	Min Val.....	13
3.5.1.8	Max Val .....	13
3.5.1.9	Psw Level .....	13
3.5.1.10	Enum .....	13
3.5.2	Add a CUSTOM Parameter .....	14
3.5.3	Remove a Selected Cutom Paramater.....	14
3.5.4	Add General Parameters .....	14
3.5.5	Add P.I.D. Parameters.....	14
3.5.6	Remove All Parameters.....	14
3.5.7	Add/Remove Positioner Parameters.....	14
3.5.8	Move Up or Down a Parameter Selected.....	15
3.6	DEFINE.....	16
3.6.1	Add a new Define .....	16
3.6.2	Remove a Selected Define .....	16
3.7	HEADS.....	17
3.7.1	Head Parameters.....	17
3.7.1.1	Name .....	18
Not used in this version .....		18
3.7.1.2	Offset.....	18
3.7.1.3	User .....	18
3.7.2	Add a New HEAD .....	18
3.7.3	Remove the Selected HEAD .....	18
3.8	TOOLS.....	19
3.8.1	Tool Parameters .....	19
3.8.2	Add a new Tool.....	19
3.8.3	Remove Selected Tool .....	19
3.9	PAUSE.....	20
3.9.1	Add a new Code .....	20
3.9.2	Remove selected Code .....	20
3.10	INTERNAL ALARMS.....	21
3.11	USER ALARMS.....	22
3.11.1	Add a new Alarm Code.....	22
3.11.2	Remove Selected Alarm .....	22
3.12	CN ALARMS.....	23
3.12.1	Add a new Alarm.....	23
3.12.2	Remove Selected Alarm .....	23
3.13	M CODES.....	24
4.	USPLUGININSTALL .....	25
4.1	PLUGIN PROPERTY.....	26
4.1.1	Enabled .....	26
4.1.2	Autorun.....	26
4.1.3	ToolBar .....	26
4.2	SAVE CURRENT CONFIGURATION .....	26
4.3	REMOVE SELECTED PLUGIN .....	26
4.4	ADD A NEW PLUGIN.....	26
4.4.1	Add a Plugin from Local Folder .....	27
4.4.2	Add a New Custom Plugin.....	27
4.4.2.1	Plugin (.exe;.dll) .....	27
4.4.2.2	Image.....	27
4.4.2.3	Title.....	27
4.4.2.4	Name Space .....	27
4.4.2.5	Button Visible .....	27
4.4.2.6	Save Data .....	27
4.5	ADD A PLUGIN FROM PROMAX STORE .....	28
4.6	MOVE A PLUGIN IN THE BAR.....	28
4.7	TOOLBARS .....	29
5.	USREALUPDATE .....	30

5.1	CHECK NEW VERSION.....	30
5.2	BACKUP COPIES .....	31
5.2.1	Recovery .....	31
5.2.2	Remove a Copy Copia .....	31
5.3	ABOUT PRODUCTS INSTALLED .....	31
6.	USPASSWORDMANAGER.....	32
7.	USTOOLBARCONFIG.....	33
7.1	TOOL BARS CONFIGURATION .....	34
7.1.1	Colors Configuration .....	34
7.1.2	Back Ground Color .....	34
7.1.3	Border Color.....	34
7.1.4	Label ForeGround Color .....	34
7.1.5	Button Border Thickness .....	34
7.1.6	Button Margin .....	34
7.1.7	Label Font Size .....	35
7.1.8	Load a custom image in the Button .....	35
7.1.9	Save the configuration .....	35