# **COOLMAY HMI**

# **1-Install COOLMAY HMI soft and the very special driver :**

Install COOLMAY HMI and link the diplay like this :

- Special USB wire to the USB port of your PC
- The ethernet wire directly on the ethernet shield of your Arduino.
- Power on the display

Have a look on the peripheral devices on your PC :

- > 🕳 Lecteurs de disque
- IibusbK USB Devices

HMI RNDIS

> Microprogramme

Monitours

The device appears as USB device

In the network list, there is only other networks.

| (i.                  | SFR_AE<br>Conne<br><u>Proprié</u> | <b>EO</b><br>cté, sécurisé<br><del>ités</del> |                          |                             |                |
|----------------------|-----------------------------------|---|--------------------------|-----------------------------|----------------|
|                      |                                   |   |                          | Déco                        | nnecter        |
| <b>U</b> a           | SFR Wi<br>Ouvrir                  | Fi FON  |                          |                             |                |
| (7.                  | SFR Wi<br>Sécuris                 | Fi Mobile<br>sé                               |                          |                             |                |
| <b>B</b>             | SFR_AE<br>Ouvrir                  | EO  |                          |                             |                |
| Para<br>Modi         | mètres i<br>fier des pa           | réseau & Inte<br>aramètres, pour r            | rne <sup>:</sup><br>endi |                             | exion limitée. |
| <i>(i</i> .<br>Wi-Fi |                                   | らい<br>Mode Avion                              | (မု)<br>Poi<br>sar       | nt d'accès<br>Is fil mobile |                |

It appears as HMI RNDIS, the wifi embedded functions are disabled. You need to install the driver in order to activate the wifi embedded on your display.

## Right click, Properties :



Propriétés de : HMI RNDIS

| Général  | Pilote      | Détails  | Événements                                 |  |                                    |                        |
|--|-------------|----------|--|--|------------------------------------|------------------------|
| a de la constante de la consta | HMI RN      | DIS      |  |  |                                    |                        |
| Fournis  | seur du     | pilote : | libusbK                                    |  |                                    |                        |
| Date du  | u pilote :  |          | 30/11/2014                                 |  |                                    |                        |
| Version  | du pilot    | e :      | 3.0.7.0                                    |  |                                    |                        |
| Signataire numérique :   |             |          | USB\VID_0<br>autogenera                    | 45E&PI[<br>ted)  | D_0301 (libwo                      | li                     |
| Dét  | ails du p   | ilote    | Affichez les<br>pilote install             | Affichez les détails concernant les fichiers du<br>pilote installés. |                                    |                        |
| Mettre   | à jour le   | e pilote | Mettez à jou                               | Mettez à jour le pilote pour cet appareil.                           |                                    |                        |
| Rest   | aurer le j  | pilote   | Si le périphe<br>mise à jour<br>précédent. | érique ne<br>du pilote   | e fonctionne p<br>, réinstaller le | oas après la<br>pilote |
| Désa   | ctiver l'ap | opareil  | Désactivez                                 | l'apparei  | Ι.                                 |                        |
| Désins   | staller l'a | ppareil  | Désinstallez                               | z l'appare   | il du système                      | e (avancé).            |
|  |             |          |  |  | ОК                                 | Annuler                |

Look for the driver in the PC :

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Mettre à jour les pilotes - HMI RNDIS

Comment voulez-vous rechercher les pilotes ?

→ Rechercher automatiquement le logiciel de pilote à jour Windows va rechercher sur votre ordinateur et sur Internet le logiciel de pilote le plus récent pour votre appareil, sauf si vous avez désactivé cette fonctionnalité dans les paramètres d'installation de votre appareil.

→ Parcourir mon ordinateur à la recherche du logiciel de pilote Localisez et installez le logiciel de pilote manuellement.

|  | Annuler |
|--|---------|
| Go to the COOLMAY file you have just installed : |         |

| Mettre à jour les pilotes - HMI RNDIS   | AaBbCc AaB AaBbCc. AaBbCcDa ABbCcDa   |
|---|---|
| Rechercher des pilotes sur votre ordinateur   | Sélectionnez le dossier qui contient les pilotes de votre matériel.   |
| Rechercher les pilotes à cet emplacement :  | Vidéos ^  |
| C:\Kinco\Kinco HMIware v2.5\driver Yarcourir  | <ul> <li>Disque local (C:)</li> </ul>   |
| <ul> <li>✓ Inclure les sous-dossiers</li> <li>→ Choisir parmi une liste de pilotes disponibles sur mon ordinateur<br/>Cette liste affichera les pilotes disponibles compatibles avec l'appareil, ainsi que tous les pilotes<br/>dans la même catégorie que l'appareil.</li> </ul> | <ul> <li>AdwCleaner</li> <li>FreeStyler</li> <li>Kinco</li> <li>Micrelec</li> <li>OA30_TOOL</li> <li>PerfLogs</li> <li>Program Files (x86)</li> <li>Adobe</li> <li>Arduino</li> <li>Artistic Licence</li> </ul> |
| Suivant Annul   | CoolMay     CoolMay     CoolMay     CoolMayHMI     Examples     library   |
|   | RunDat Crouzet Automatismes Fts3PlugIn  |
|   | Dossier : CoolMayHMI  |
|   | OK Annuler  |
|   | ×   |
| <ul> <li>Mettre à jour les pilotes - HMI RNDIS</li> </ul>   |   |
| Rechercher des pilotes sur votre ordinateur   |   |
| Rechercher les pilotes à cet emplacement :  |   |

| Rechercher les pilotes à cet emplacement :  |                      |         |
|---|----------------------|---------|
| C:\Program Files (x86)\CoolMay\CoolMayHMI ~   | Parcourir            |         |
| ✓ Inclure les sous-dossiers   |                      |         |
|   |                      |         |
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| $\rightarrow$ Choisir parmi une liste de pilotes disponibles sur mo   | n ordinateur         |         |
| Cette liste affichera les pilotes disponibles compatibles avec l'appareil<br>dans la même catégorie que l'appareil. | , ainsi que tous les | pilotes |
|   |                      |         |
|   |                      |         |
|   |                      |         |
|   | Suivant              | Annuler |

Click on choose in a list : CoolMayHMI

#### 🗧 📱 Mettre à jour les pilotes - HMI RNDIS

-

## Choisissez le pilote de périphérique à installer pour ce matériel.

Sélectionnez le fabricant et le modèle de votre périphérique matériel et cliquez sur Suivant. Si vous avez un disque qui contient le pilote que vous voulez installer, cliquez sur Disque fourni.

| M |   |      |               |
|---|---|------|---------------|
|   | HMI RNDIS<br>Périphérique série USB                   |      |               |
|   | СооІМауНМІ  |      |               |
|   |   |      |               |
|   | Co niloto n'o nos été signé numériquement l           |      | Disque fourni |
|   | Ce pilote n'à pas ete signe numeriquement :           |      | Disque iourni |
|   |   |      |               |
| _ | Pourquoi la signature du pilote est-elle importante ? |      |               |
|   | Pourquoi la signature du pilote est-elle importante ? | Suit | vant Annuler  |

Mettre à jour les pilotes - CoolMayHMI #3

# Windows a mis à jour vos pilotes

Windows a terminé l'installation des pilotes pour cet appareil :



CoolMayHMI

ベ

> Claviers

>

> 💐 Contrôleurs audio, vidéo et jeu Contrôleurs de bus USB

> 🏣 Intel(R) Dynamic Platform and Thermal Framework

> 🍇 Contrôleurs de stockage > 👖 Entrées et sorties audio > 📇 Files d'attente à l'impression :

> Ecteurs de disque

| Événements  |  |  |  |
|---|--|--|--|
|   |  |  |  |
| CoolMay Corporation   |  |  |  |
| 21/06/2006  |  |  |  |
| 6.1.7600.16385  |  |  |  |
| Non signé numériquement   |  |  |  |
| Affichez les détails concernant les fichiers du<br>pilote installés.  |  |  |  |
| Mettez à jour le pilote pour cet appareil.  |  |  |  |
| Si le périphérique ne fonctionne pas après la<br>mise à jour du pilote, réinstaller le pilote<br>précédent. |  |  |  |
| Désactivez l'appareil.  |  |  |  |
| Désinstallez l'appareil du système (avancé).  |  |  |  |
| Fermer Annuler  |  |  |  |
| a network connector :   |  |  |  |
| -   |  |  |  |
|   |  |  |  |
|   |  |  |  |
| Location Simulator Sensor<br>ess SDIO Adapter   |  |  |  |
|   |  |  |  |

And a new network (the display's one) appears in the list as undentified network with no internet communication.

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^



Now you're able to download the sketch you'll done with CoolmayHMI software.

# 2-IP adresses settings:

You will have to work with 2 different addresses on your display :

- One is used to download the program
  - The other is made for communicate with the ethernet peripheral device (Arduino , PLC....)

#### 2-1 IP address for download :

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You must use an IP address like 222.222.222.9 because the basic address of the display is 222.222.222.222

| $\leftarrow \rightarrow \uparrow \uparrow$ | 💐 « Réseau et Internet 🕨 Centre Réseau et partage   | ✓ ♥ Rechercher  | P    |
|--|---|---|------|
| Fichier Edition Af                         | fichage Outils  | 🗆 📑 🗸 🖌 🗎 İ 🗙 🗸 🖃   |      |
| Page d'accueil d<br>configuration          | du panneau de Afficher les informations de base de votre connexions   | réseau et configurer des  |      |
| Modifier les carte                         | État de Etherent 2 V<br>Propriétés de Ethernet 3  | ×   |      |
| Modifier les<br>partage avai               | Gestion de réseau Partage   | d'accès : Internet<br>exions : Wi-Fi (SFR_AEE0)                                     |      |
| Options de multimédia                      | Co Propriétés de : Protocole Internet version 4 (TCP/IPv4) >  | <   |      |
|  | Général         Ce       Les paramètres IP peuvent être déterminés automatiquement si votre réseau le permet. Sinon, vous devez demander les paramètres IP appropriés à votre administrateur réseau.         O Obtenir une adresse IP automatiquement         © Utiliser l'adresse IP suivante :         Adresse IP :       222 . 222 . 222 . 9         Masque de sous-réseau :       255 . 255 . 0         Passerelle par défaut : | réseau<br>accé cou VPN, ou configurez un routeu<br>pu accédez à des informations de | r ou |
| Voir aussi<br>Options Inte<br>Pare-feu Wir | Obtenir les adresses des serveurs DNS automatiquement OUtiliser l'adresse de serveur DNS suivante : Serveur DNS préféré :   |   |      |
| ) éléments                                 | Serveur DNS auxiliaire :  | S Ordinateur  |      |
|  | Valider les paramètres en quittant Avancé   |   |      |
|  | OK Annuler  |   |      |

## 2-2 IP address for communication with other devices : Open COOLMAYHMI soft

| 🙎 CoolMayHMI - [ C:\Users\bts\D    | esktop\ESSAImodbus\E                 | SSAImodbus.OP6      | ]                             |                                     |                   |          |             | _ | Ø | $\times$ |
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|                                    | Réseau                               |                     |                               |                                     |                   |          |             |   |   |          |
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|                                    |                                      | Types de fichiers : | OP6?? (*.OP6)                 |                                     | •                 | Annuler  |             |   |   |          |
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| And open the hol                   | me made sk                           | etch IP s           | earch :                       |                                     |                   |          |             |   |   |          |

Welcome to CoolMayHMI Edit



You will use this sketch to read/write the LAN settings of the display :



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| сти 1234 1234 1234 1234               | E Backg trans | Elem type: LW 🔹 ?              | Password input/Sh      Direct upper I |
| GIW 1251 1251                         | Left: 263 🚖   | RegisterLW <mark>8220 拿</mark> | C IndirectMaxL₩                       |
| 1Ø Fun Key                            | Top: 108      | Data type: 16 Bit 💌            | C IndirectMinLW                       |
|                                       | Property      | Set format                     | Ctrl reg                              |
|                                       | Wide: 42      | Bit num: 4 🜩 Borde 3D          | ✓ Register0x 0 ÷                      |
|                                       | High: 22      | Decimal: 0 🜩 Font: 8X16        | ▼ Ctr1 fun No Use ▼                   |
|                                       | Backg:        | NoticeSet Aligr Midd           | ✓ Cond exe Show **** ✓                |
|                                       | Prosp:        | 🗆 Password Grade Ordi          | nar - Turn Color:                     |
|                                       |               |                                | Confirm(Y) Cancel(N)                  |

| 🙎 1:Window1 🗖 🗖 🖾   | Function key attribute  | ×   |
|---|---|---|
| IP adr 1234 1234 1234 1234<br>MSK 1234 1234 1234 1234<br>GTW 1234 1234 1234 1234<br>10<br>10<br>Fun Key | Position<br>Locked<br>Left: 201 •<br>Top: 145 •<br>Property<br>Wide: 112 •<br>High: 81 •<br>Backg | Basic<br>Transpar Languag Fun Key<br>Touch effec<br>Visible Ctrl Languag FunKey<br>Basic functi<br>Set format<br>Bord 1uxury<br>Font 8x16<br>Aligr Midd<br>Eff. {Level:Ger<br>BMP: NULL<br>Use BMP Size<br>Confirm(Y) Cancel(N) |

## Now network settings :



I choose 192.168.0.144 for the Arduino (the slave)

| P PRM   |  |  |  |   |           |
|---|--|--|--|---|-----------|
| om. set   | Network  | set  | Alarm/Other Figure/L   | anguage   |           |
| Genera  | 1  |  |  |   |           |
| HMI PRM   | :  M   | 11603  | 7H (320*240 · F  | HMI Match Select T  | able      |
| Usb Disl  | k Dat P  | Permi  | s.: Super 💌 🗆  | Link2 Use   |           |
| Linkl   | Sot III  | <b>`</b>   |  |   |           |
| Port:   | Ethern   | et •   | Device t Modbus S1   | ave (TCP/IP)  | •         |
|   |  | _  | Timeout: 200 ms  | Equipmen 1  |           |
| Remote F  | 502  | -  | Remote H 192.168.  | .0 .144   |           |
| Attempts  | 58   |  | Fast Read 4x0  | Data len  | <b>^</b>  |
|   |  |  |  | <u> </u>  |           |
| Port.   | Set up   |  | Device t Mitcubich   | 1 FX2N  |           |
| Pata:   | 0600   |  | Timeout: 200 mg  | Equipmont   |           |
| ChaoleDit   | 19000  |  | Timeout, 200 ms  |   | -         |
| 1 000/611   | Tran a se  | _  | Det Bite 7 h   |   |           |
|   | Even   | -  | Dat Bits 7 b   | Stop bit 1 b  |           |
| Attempts  | 8<br>where to d  | downlo   | Dat Bits 7 b<br>Fast Read D:0<br>Confirm<br>ad the skestch : 222.222.2   | Data leng<br>Data leng<br>Car<br>Data leng<br>Data leng   | nce:      |
| Attempts<br>he address  | where to a   | downlo   | Dat Bits 7 b<br>Fast Read D:0<br>Confirm<br>ad the skestch : 222.222.2<br>arm/Other Figure/Lang  | Stop bit 1 b<br>Data leng<br>Data leng<br>Can<br>22.222<br>uage   | nce:<br>× |
| Attempts<br>he address<br>PRM<br>m. set Na<br>RS485/C   | where to o<br>twork se   | downlo   | Dat Bits 7 b<br>Fast Read D:0<br>Confirm<br>ad the skestch : 222.222.2<br>arm/Other Figure/Lange<br>ti com.  | Stop bit 1 b<br>Data leng<br>Data leng<br>Can<br>22.222<br>uage   | nce:<br>× |
| Attempts<br>he address<br>PRM<br>m. set Na<br>RS485/C   | where to o<br>where to o<br>where to o<br>where to o<br>where to o<br>where to o   | downlo<br>et Ala<br>Mul  | Dat Bits 7 b<br>Fast Read D:0<br>Confirm<br>ad the skestch : 222.222.2<br>arm/Other Figure/Langu<br>ti com.<br>ard V Extded com  | Stop bit 1 b<br>Data leng<br>Data leng<br>Data leng<br>(Y) plication Can<br>22.222<br>uage  | nce:<br>× |
| Attempts<br>he address<br>PRM<br>m. set No<br>RS485/C<br>Cntrlr I<br>Ex. mode   | where to o<br>where to o<br>where to o<br>where to o<br>twork se<br>AN_Bus<br>D addr<br>Start I  | downlo<br>et Ala<br>Mul<br>Standa  | Dat Bits 7 b<br>Fast Read D:0<br>Confirm<br>ad the skestch : 222.222.2<br>arm/Other Figure/Langu<br>ti com.<br>ard - Extded com.<br>Each ID add  | Stop bit 1 b<br>Data leng<br>Data leng<br>(Y) plication Can<br>22.222<br>uage<br>ID swi35 ms t<br>tur, reg 100  | nce:      |
| Attempts<br>he address of<br>PRM<br>m. set No<br>RS485/C<br>Cntrlr I<br>Ex. mode<br>MultiHMI  | where to o<br>where to o<br>where to o<br>where to o<br>twork se<br>AN_Bus<br>D addr<br>StartI<br>Share  | downlo   | Dat Bits 7 b<br>Fast Read D:0<br>Fast Read D:0<br>Confirm<br>ad the skestch : 222.222.2<br>arm/Other Figure/Langue<br>ti com.<br>T Extded com.<br>Each ID add  | Stop bit 1 b<br>Data leng<br>(Y) plication Car<br>22.222<br>uage<br>ID swi35 ms t<br>tr. reg 100 v  | nce:      |
| Attempts<br>he address<br>PRM<br>m. set No<br>RS485/C<br>Cntrlr I<br>Ex. mode<br>MultiHMI   | where to o<br>where to o<br>where to o<br>twork se<br>AN_Bus<br>D addr<br>StartI<br>Share  | downlo<br>et Ala<br>Mul<br>Standa  | Dat Bits 7 b<br>Fast Read D:0<br>Fast Read D:0<br>Confirm<br>ad the skestch : 222.222.2<br>arm/Other Figure/Langu<br>ti com.<br>ard C Extded com.<br>Canada Com.<br>Confirm<br>ad the skestch : 222.222.2<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm<br>Confirm | Stop bit 1 b<br>Data leng<br>Data leng<br>Data leng<br>Car<br>22.222<br>uage<br>ID swi35 ms t<br>tr. reg 100 T  | nce:      |
| Attempts<br>Attempts<br>PRM<br>m. set No<br>RS485/C<br>Cntrlr I<br>Ex. mode<br>MultiHMI<br>Stherne  | where to o<br>where to o<br>where to o<br>where to o<br>where to o<br>stwork se<br>AN_Bus<br>D addr<br>StartI<br>Share<br>t sett   | downlo<br>at Ala<br>Mul<br>Standa<br>DFF<br>ings   | Dat Bits 7 b<br>Fast Read D:0<br>Fast Read D:0<br>Confirm<br>ad the skestch : 222.222.2<br>arm/Other Figure/Langu<br>ti com.<br>ard C Extded com.<br>Each ID add<br>Constant<br>System<br>Constant<br>Confirm  | Stop bit 1 b<br>Data leng<br>Data leng<br>Data leng<br>Can<br>22.222<br>uage<br>ID swi35 ms t<br>tr. reg 100 t<br>n Time Syn.   | nce:      |
| Attempts<br>Attempts<br>m. set No<br>RS485/C<br>Cntrlr I<br>Ex. mode<br>MultiHMI<br>Stherne<br>Remote I   | where to o<br>where to o   | downlo<br>et Ala<br>Standa<br>DFF<br>ings  | Dat Bits 7 b<br>Fast Read D:0<br>Fast Read D:0<br>Confirm<br>ad the skestch : 222.222.2<br>arm/Other Figure/Lang<br>ti com.<br>ard C Extded com.<br>Com.<br>System<br>222.222<br>Auto s  | Stop bit 1 b<br>Data leng<br>Data leng<br>Data leng<br>Car<br>22.222<br>uage<br>ID swi35 ms t<br>tr. reg 100 t<br>n Time Syn.<br>ync function   | nce:      |
| Attempts<br>Attempts<br>m.set No<br>RS485/C<br>Cntrlr I<br>Ex.mode<br>MultiHMI<br>Stherne<br>Remote I<br>Remote I   | where to o<br>where to<br>where to<br>wher | obert Ala<br>Mul<br>Standa<br>DFF<br>ings<br>2 222   | Dat Bits 7 b<br>Fast Read D:0<br>Fast Read D:0<br>Confirm<br>ad the skestch : 222.222.2<br>arm/Other Figure/Lang<br>ti com.<br>ard C Extded com.<br>Card Each ID add<br>Card Card Card Card<br>Card Card Card Card Card Card Card<br>Card Card Card Card Card Card Card Card  | Stop bit 1 b<br>Data leng<br>Data leng<br>Data leng<br>Car<br>22.222<br>uage<br>ID swi35 ms t<br>tr. reg 100 t<br>n Time Syn.<br>ync function<br>terval (Hq12 t<br>Data leng  | nce:      |
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| Attempts<br>Attempts<br>PRM<br>m. set Ne<br>RS485/C<br>Cntrlr I<br>Ex. mode<br>MultiHMI<br>Etherne<br>Remote I<br>Remote I<br>Remote I<br>Remote I<br>Remote I                | where to or<br>where  |  | Dat Bits 7 b<br>Fast Read D:0<br>Fast Read D:0<br>Confirm<br>ad the skestch : 222.222.2<br>arm/Other Figure/Lang<br>ti com.<br>ard • Extded com.<br>Each ID add<br>• Each ID add<br>• System<br>222.222<br>222.222<br>222.222<br>T Auto s<br>Syn. in<br>FromReg<br>*Take 6 co  | Stop bit 1 b   ■ Data leng0   n (Y) plication Car   22.222   uage   ID swi35 ms • t   ID swi35 ms • t   Ir. reg 100 •   n Time Syn. ync function terval (Hq12 • gister 4x 200 • onsecutive reg HH: MM: SS Y         | nce:      |
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## Now, Compile :

| Арр | lication( <u>A</u> ) | Debug(L)           | Individu | ы        |
|-----|----------------------|--------------------|----------|----------|
|     | Compile( <u>C</u> )  |                    | F5       | h        |
| 1   | Download(            | <u>)</u> )         | F6       |          |
|     | Set working          | PRMS(W)            | . F7     | •        |
| 2   | Batch modi           | fy( <u>P</u> )     | F8       |          |
| Б.  | Set keyboar          | d PRMS( <u>F</u> ) |          |          |
| ľ   | Initial Acer(        | D                  |          |          |
| ٢   | Clock Acer(          | 0)                 |          |          |
| #   | Sub Acer( <u>S</u> ) |                    |          |          |
| =   | Target file p        | ath( <u>H</u> )    |          |          |
| 2   | Save and ba          | ckup( <u>B</u> )   |          |          |
| 쒭   | Gallery( <u>L</u> )  |                    |          |          |
| 1   | Sound libra          | ry(U)              |          |          |
| 6   | Product lice         | ense(P)            |          |          |
| a,  | ICM(M)               |                    |          |          |
| one | e and gene           | rated in x         | xx.hw6   | under c: |
| Cod | MayHM                |                    |          | X        |
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Size:54.422 KB

OK

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|---------------------|-----|-----------------------|------------------|---------------------|---------|
|                     | ^ [ | Nom                   | Modifié le       | Туре                | Taille  |
| 📌 Accès rapide      |     |                       |                  |                     |         |
| 🔜 Bureau            | *   | 📕 AdwCleaner          | 17/05/2020 18:56 | Dossier de fichiers |         |
|                     | *   | 📜 FreeStyler          | 29/02/2020 16:05 | Dossier de fichiers |         |
|                     |     | 📜 Kinco               | 17/02/2020 13:49 | Dossier de fichiers |         |
| Documents           | ×   | Micrelec              | 20/03/2020 09:08 | Dossier de fichiers |         |
| 🛌 Images            | *   | OA30_TOOL             | 29/09/2019 06:05 | Dossier de fichiers |         |
| 🐛 Disque local (C:) |     | PerfLogs              | 17/05/2020 01:40 | Dossier de fichiers |         |
| ESSAImodbus         |     | 📜 Program Files (x86) | 15/04/2020 11:46 | Dossier de fichiers |         |
| IPsearch            |     | 📜 Programmes          | 30/05/2020 09:27 | Dossier de fichiers |         |
| 👌 Musique           |     | EST_TOOL              | 29/09/2019 06:04 | Dossier de fichiers |         |
|                     |     | 📜 Utilisateurs        | 07/11/2019 09:00 | Dossier de fichiers |         |
| OneDrive            |     | 📜 WCH.CN              | 06/10/2019 16:37 | Dossier de fichiers |         |
| la Ce PC            |     | 📜 Windows             | 28/05/2020 12:37 | Dossier de fichiers |         |
| E Bureau            |     | 🧇 GUIBuild            | 01/06/2020 15:21 | Fichier HW6         | 55 Ko   |
|                     |     | ip.tmp                | 01/06/2020 11:39 | Fichier TMP         | 2 Ko    |
|                     |     | ✓ 🇇 IPsearch          | 01/06/2020 15:21 | Fichier HW6         | 55 Ko   |
| 🔚 Images            |     |                       |                  |                     |         |

Now you are able to download the sketch :



## Right click :

| GIUpdate V5.906          |                | ×  |    |
|--------------------------|----------------|--|----|
| OP HMLIP: 222.222.222.22 | 22             | ~ 0  |    |
| OP HMI LR: Local ~ Remo  | te router star | t por 500  |    |
| OP TIM Up: No ∨ □Aut     | o download     | Select target file (H)                                 | F2 |
| Auto set IP, please wait | 01/06/2020 1   | Network card information(P)<br>Set network card IP (S) | F1 |
| Fun Key                  |                | Open network connection(O)<br>WIN10 ?????? (W)         |    |
|                          |                | Language selection(L)                                  | >  |

Select the just generated file : GIUpdate V5.906 X OP HMI IP: 222.222.222.222  $\sim$ 0 Remote router start por 500 OP HMI LR: Local ~ OP TIM Up: No ~ Auto download **ä** Down. Filename C:\IPsearch.hw6 IP not set, now automatically set... 01/06/2020 15:33:11

Select the network where to download (created when driver update)

| GIUpdate V5.906  |  |   | ×   |   |
|--|--|---|---|---|
| OP HMI IP:   | 222.222.222.22   | 22  | ~ 0   |   |
| OP HMI LR:   | Local ~ Remo   | ote router s  | tart por 500  |   |
| OP TIM Up:   | No ~ 🗆 Au  | to download   | 诸 Down.   |   |
|  | SSAlmodbus bw6   |   | Select target file (H)  | F2  |
| Filenam  | SSAIITIOUDUS.TWO   |   | Network card information(P)   | F1  |
|  |  |   | Set network card IP (S)   |   |
| Get Device Info  | rmation  | 01/06/202   | Open network connection(O)  |   |
|  |  |   | WIN10 ?????? (W)  |   |
|  |  |   | Language selection(L)   | >   |
| Select the wlan of the   | e display ·  |   |   |   |
| <ul> <li>Connexions réseau</li> <li>Connexions réseau</li> <li>Fichier Edition Affichage</li> <li>Organiser          <ul> <li>Désactive</li> <li>Nom</li> </ul> </li> <li>CoolMayHMI #3</li> </ul> | seau et Internet > Connexions résea<br>Avancé Outils<br>r ce périphérique réseau Diagn | au > ostiquer cette connexion  Statut GIUpdate V5.906 OP HMI IP: 222.2 OP HMI LR: Local OP TIM Up: No Filenam (C:\ESSAlmo Get Device Information. | <ul> <li>Rechercher dans : Connexions P</li> <li>Rechercher dans : Connexions P</li> <li>Rechercher dans : Connexions P</li> <li>Nom du périphérique</li> <li>Nom du périphérique</li> <li>22.222.222</li> <li>Remote router start p</li> <li>Auto download</li> <li>Auto download</li> <li>Odbus.hw6</li> <li>01/06/2020 15:31:23</li> </ul> | A Reche<br>a Reche<br>a Reche<br>a Remp<br>Sélect<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modifie<br>Modi |
| C 2 élément(s) 1 élément s   | sélectionné  |   |   | >   |
|  |  |   | Sidinatedi  |   |

Down :

| GIUpdate V5.906   | ×   |
|---|---|
| OP HMHP:  | 222.222.222.222 ~ 0   |
| OP HMI LR:  | Local ~ Remote router start por 500   |
| OP TIM Up:  | No ~ 🗆 Auto download 🏠 Down.  |
| Filenam(C:\\  | Psearch.hw6   |
| Update succes   | sl 01/06/2020 15:45:07  |
| Success.  | 0   |
| IOI       IOOS         IOI       IOOS         IIISh(U.S.A)]       IIIISh(U.S.A)]         Flef       Edite         Management(M)       View(V)         IIIISh       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII |   |
| 77 P Taper ici pour rechercher  | No Recent Event       c       □         O       II       II       II       III       III       IIII       IIIIII       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII |

It displays what you seen on your display screen : more easy than on the real screen to change settings



#### On the real screen :

| -             | moste a l |           |
|---------------|-----------|-----------|
| IP adr        | 192       | 168 0 85  |
| MSK           | 255       | 255 255 0 |
| GTW           | 192       | 168 0 1   |
|               | 关         | Fun Key   |
|               |           |           |
| Puch Euro Koy | (         | coolmay   |

| 返回《以            | 大网  | )/CANELI  | ]      |  |
|-----------------|-----|-----------|--------|--|
| 以太网参数<br>以太网功能: |     | 使用        | Etherr | net function : allow                         |
| 远程更新hw6:        | 197 | 允许<br>168 | Remo   | te update : allow                            |
| IF地址·<br>子网掩码:  | 255 | . 255 . 2 | 55 .   | 192.168.0.85<br>255.255.255.0<br>192.168.0.1 |
| 默认网关:           | 192 | . 168 .   | ΰ.     |  |
| Coo             | Ima | Ŋ         |        |  |

Push YES twice and the lan address is memorized.



# <u>3-HMI example : modbus TCP between COOLMAY HMI and Arduino board :</u> <u>3-1 The dashboard :</u>

I created a simple dashboard with : -lights -switch -pushbutton -meter -digital panel meter It appears like this :



## The settings of each items :

| 1* +11 (E1   🗢 🔶 |  |  |  |
|------------------|--|--|--|
| 1:Window1        | Lamp Attribute   |  | ×  |
| I:Window1        | Attribute      I:Window1      Lamp Attribute      Position      Locked      Left: 22      Top: 26      Property      Wide: 32      ♥ | Monitor reg<br>Chann connLink 1 •<br>Elem typ: 4x • ?<br>Register4x 10 • 0 •<br>Show<br>Type:Round • Array nu1 | Ctrl reg<br>□ Visibil cont<br>Register0x: 8208 •<br>Array in 0 •:  |
|                  | High: 32 🔶   | Positive lo C Negative le NoF1ash  | ir - Font: 8X16 -  |
|                  | OFF:   | Status1: OFF<br>Status2:   |  |
|                  | ON:  | ON   |  |
|                  |  |  | $\hline \begin{array}{c} \text{Confirm}(\underline{Y}) \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \end{array} \\ \hline \begin{array}{c} \text{Cancel}(\underline{\mathbb{N}}) \\ \hline \end{array} \\ \hline \end{array}$ |

| 🚅 1:Window1 | Lamp Attribute  |   | ×   |
|-------------|---|---|---|
| 1:Window1   | Lamp Attribute  Position Locked Left: 94 Top: 27 Top: 27 Wide: 32 High: 32 OFF: 0N: | Monitor reg<br>Chann connLink 1 •<br>Elem typ: 4x • ?<br>Register4x 20 • 0 •<br>Show<br>Type:Round • Array nu1<br>• Positive lo • Negative   NoFlash<br>Status1: OFF<br>Status2: ON | Ctrl reg Visibil cont Register0x: 8208 Array in 0 |
|             |   |   | Confirm( <u>Y</u> ) Cancel( <u>N</u> )            |

| 🛃 1:Window1 💿 💿 | Bit operation button   |   | ×  |
|-----------------|--|---|--|
| OFF             | Bit operation button  Position  Locked  Left 168  Top: 8  Property  Property |   | Function<br>C SetON C SetOFF<br>C Keep type C Alternatin<br>Min.Press 0.0 Sec<br>First Confirm |
| 1234            | Property<br>Wide: 108 •<br>High: 56 •<br>Font: 8X16 •<br>Aligr Midd •        | Ctrl register<br>☐ Visibil cont<br>☐ Write addr.and addr. differen<br>WriteToRegister0x: 20 € | Protect Password GradeOrdinary Confirm(Y) Cancel(N)  |

| 1:Window1 | Bit operation button |  | ×                         |
|-----------|----------------------|--|---------------------------|
|           | Position             | Control Outline Text Set. *              |                           |
| OFF       | Locked               | Register                                 | Function                  |
|           | Left 12              | Chann connLink 1 💌                       | C SetON C SetOFF          |
|           | Top: 92              | Elem typ: 4x • ?<br>Register4x20 • . 0 • | Keep type     Alternating |
|           |                      |  | Min.Press 0.0 ▼ Sec       |
|           | Property             |  | First Confirm             |
|           | Wide:55              | Ctrl register                            | Protect                   |
|           | High:25              | □ Visibil cont                           | Password                  |
|           | Font:8X16 💌          | □ Write addr.and addr. differen          | Grade Ordinary -          |
|           | Aligr Midd 💌         | WriteToRegister0x: 0                     |                           |
|           |                      |  |                           |
|           |                      |  | Confirm(Y) Cancel(N)      |

| 🚨 1:Window1 🗖 🗖 🔀 | ]   |   |   |   |
|-------------------|---|---|---|---|
|                   | Instrument attribute  |   |   | ×   |
|                   | Instrument attribute<br>Position<br>Locked<br>Left: 91 •<br>Top: 62 •<br>Property<br>Wide: 228 •<br>High: 105 •<br>Outer •<br>Backg • | Reg/scale<br>Chann connLink 1 •<br>Elem typ: 4x • ?<br>Register4x 42 •<br>Main scale <sup>5</sup> •<br>Position data/Target/Scope<br>Ø Display coordir<br>Ø Display the targe<br>Target a <sup>50</sup> •<br>Target p •<br>Target | Full q    Zero q    Show u    The se    Display range r    % ar<    v reg33 ↓    igh r<33 ↓ | ×<br>uota 160 \$<br>uota 1 \$<br>nit KW<br>cond 3 \$ nt. :<br>Scale mark<br>© Display scale m:<br>Bit num: 3 \$<br>Decimals 0 \$<br>Maximum 160 \$<br>Minimum 10 \$ |
|                   |   |   |   |   |

| 2 1:Window1 | Digital display attribute   |  | ×   |
|-------------|---|--|---|
|             | Position<br>Locked<br>Left: 3 •<br>Top: 168 •<br>Property<br>Wide: 173 •<br>High: 67 •<br>Backg | Basic<br>Show forma Register •<br>Chann conn Link 1 •<br>Elem typ: 4x • ?<br>Register4x: 41 •<br>Data type: 16 Bit •<br>Display digit 5 •<br>Decimals: 0 • | Figure bl <sup>2</sup><br>Pen secti <sup>5</sup> h<br>Signed number<br>Backg Transpa<br>Off:<br>On: |
|             |   | C  | Confirm(Y) Cancel(N)  |

|             | Reg attribute   | ×  |
|-------------|---|--|
| 2 1:Window1 | Position  | Reg  |
|             | Locked  | Chann conn Link 1 • Set permiss Signed Zero lea  |
|             | Backg trans   | Elem type: 4x · ? © Direct under 1   |
| OFF 40 120  | Left: 197 主   | Register4x 40 C IndirectMax4x 65535  |
| Kw 160      | Top: 172  | Data type: 16 Bit  C IndirectMin4x   |
| 1234        | Property<br>Wide: 103 🔶<br>High: 59 🔶<br>Backg: 💌<br>Prosp: 💌 | Set format       Ctrl reg         Bit num:       4       Borde3D       Register0x       0         Decimal:       •       Font:       12X24       Ctrl funNo       Use         NoticeSet       Aligr       Midd       Cond       exe       Show"****         Password       Grade       Ordinar       Turn Color:       • |
|             |   | Confirm(Y) Cancel(N)   |

# 3-2 The Arduino sketch :

| Light §  |          |
|--|----------|
| <pre>#include <spi.h></spi.h></pre>  | ^        |
| <pre>#include <ethernet.h></ethernet.h></pre>  |          |
| #include "Mudbus.h"  |          |
| Mudbus Mb;<br>//Function codes 1(read coils), 3(read registers), 5(write coil), 6(write register)<br>//signed int Mb.R[0 to 125] and bool Mb.C[0 to 128] MB_N_R MB_N_C<br>//Port 502 (defined in Mudbus.h) MB_PORT   |          |
| <pre>void setup() {     uint8_t mac[] = { 0x90, 0xA2, 0xDA, 0x00, 0x51, 0x06 };     uint8_t ip[] = { 192, 168, 0, 144 };     uint8_t gateway[] = { 192, 168, 0, 1 };     uint8_t subnet[] = { 255, 255, 255, 0 };     Ethernet.begin(mac, ip, gateway, subnet);     //Avoid pins 4,10,11,12,13 when using ethernet shield     delay(5000); //Time to open the terminal     pinMode(7, OUTPUT);     pinMode(9, OUTPUT); }</pre> | > <      |
| <pre>void loop() {     Mb.Run();     //Analog inputs 0-1023     //Mb.R[9] = 15;     Mb.R[10] = 1;     digitalWrite(7, Mb.R[20]);     Mb.R[40] = 6666;     Mb.R[41] = 12345;     Mb.R[42] = 90; }</pre>   | <b>,</b> |
| Be carefull : the modbus address under arduino ide is the same on the display : there is no usual offset.  | ·        |

Example : Mb.R[40] on Arduino is readable by 40040 on the screen.

# 3-3 Security on the network :

There is no settings on WPA,PSK key what ever.... on this screen. The only way to be safe, after yours downloads, is to disconnect the USB wire of the screen : then the wlan disapears of the list :



Your system still works.