

20/03/2024

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APP - CC100 PROJECT MANAGER

APPLICATION REV 20.01.12+
DOCUMENT REV 6.0

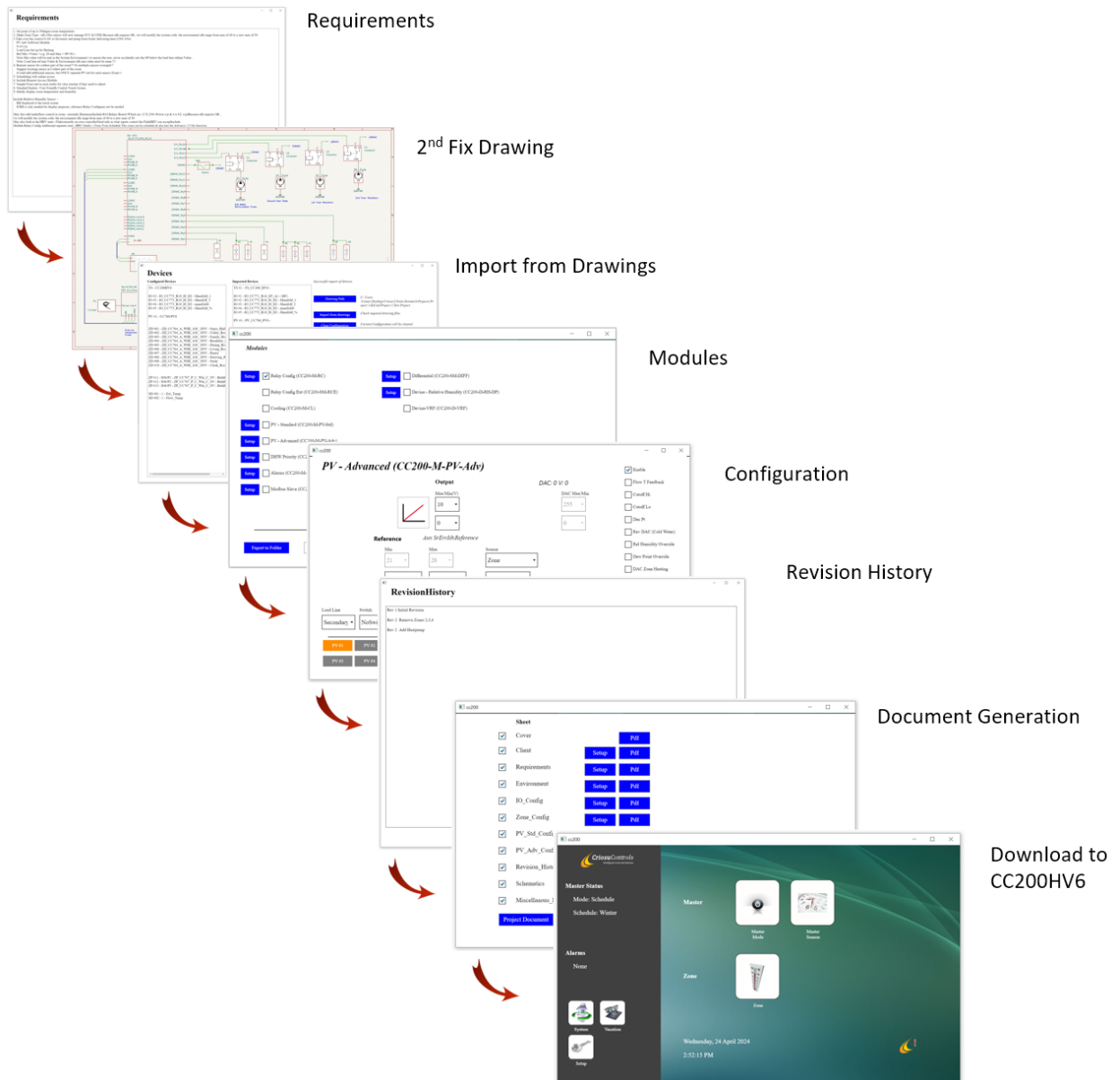
CRIOSU CONTROLS

Contents

Introduction.....	2
Create New Project.....	3
Project Drawings.....	4
Create new KiCad Drawing Project	4
KiCad Setup	5
Download KiCad Application	5
KiCad Installation.....	6
Install Criosu Controls Symbols Library	7
Set Path to KiCad Application.....	9
Drawing Page Setup	9
Sheet Limitations	11
Device Configuration.....	11
Device Control Identifiers.....	12
Digital Zones Sensors.....	Error! Bookmark not defined.
Probe Zone Sensors.....	13
RH - Relative Humidity Sensor.....	13
FCU - Fan Coil Unit.....	14
Contactor.....	15
Boiler.....	16
HIU - Heating Interface Unit.....	16
BMS - Building Management System.....	17
VRF - Variable Refrigerant Flow Unit.....	17
Generate PDF Drawing	18
Modules.....	19
Data Management.....	20
Load a Project.....	20
Copy a Project To/From a Folder	21
Desktop Configuration Screens.....	22
Access Desktop Screens.....	22
Emulation.....	24
USB to RS485 Adapter.....	24
Setup Modbus Master Com Port	24

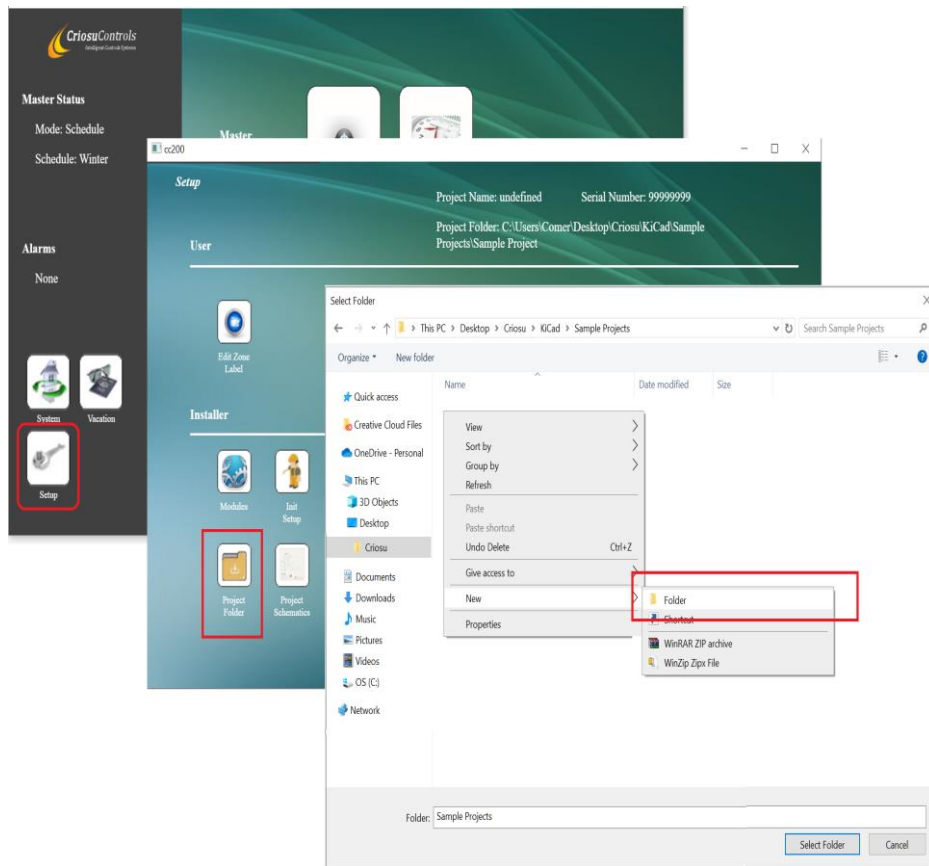
Introduction

The cc100 Project Manager application facilitates the Capture of Project Requirements, Generation of 2nd Fix Drawings, Importing from Drawing, Selection of Modules, Configuration of System, Revision History, Document Genetration and System Programming.

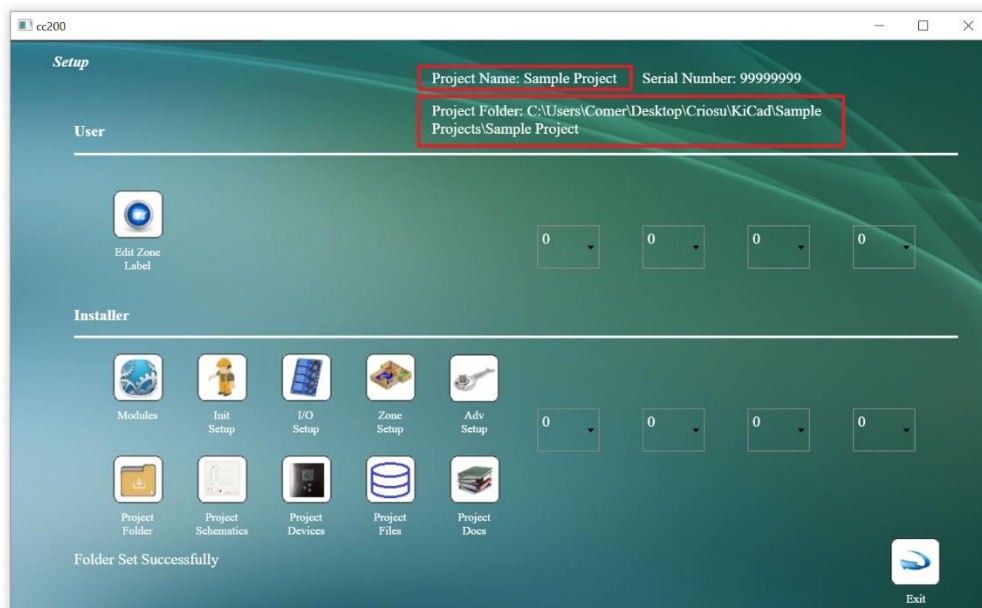


Create New Project

Press the “**Setup**” button (Home Screen) and then the “**Project Folder**” button (Setup Screen) and create a new Project Folder for the Project. Before Leaving, Press “**Select Folder**” to select the folder just created.



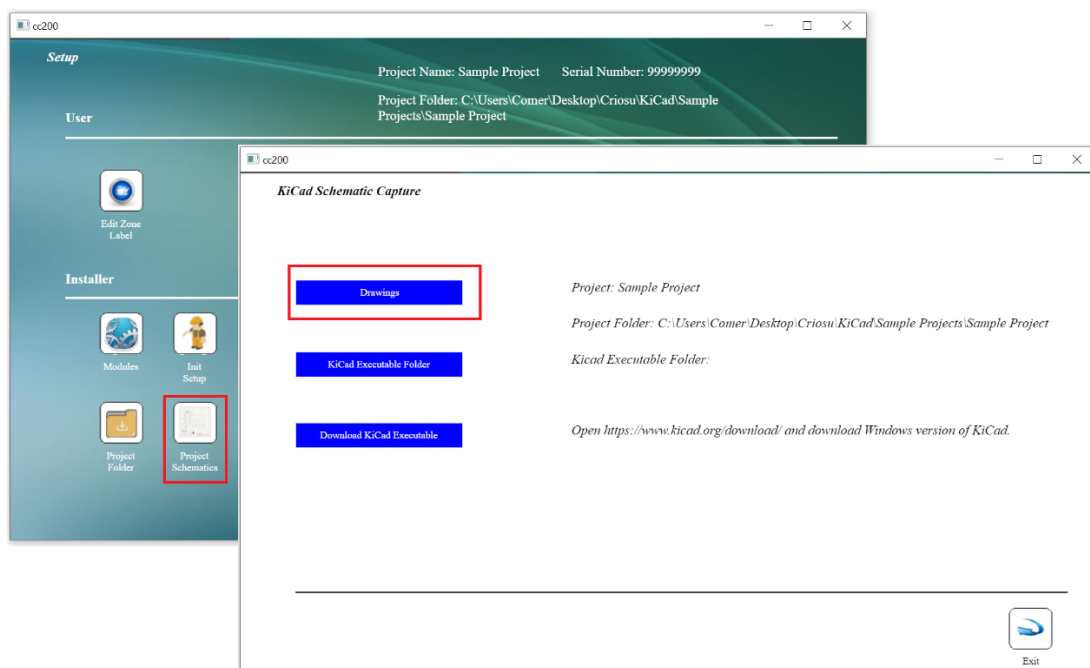
A New Project will be created.



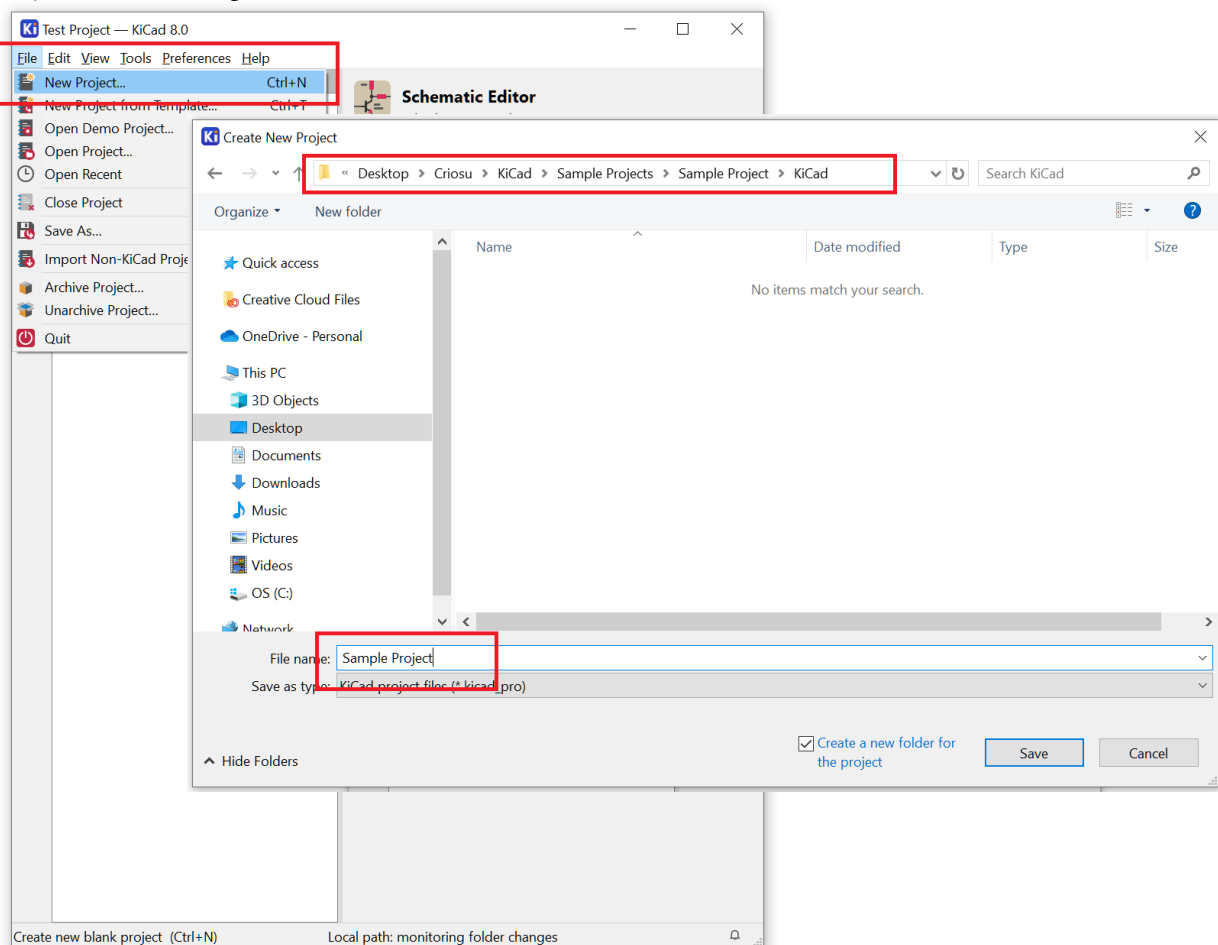
Project Drawings

Create new KiCad Drawing Project

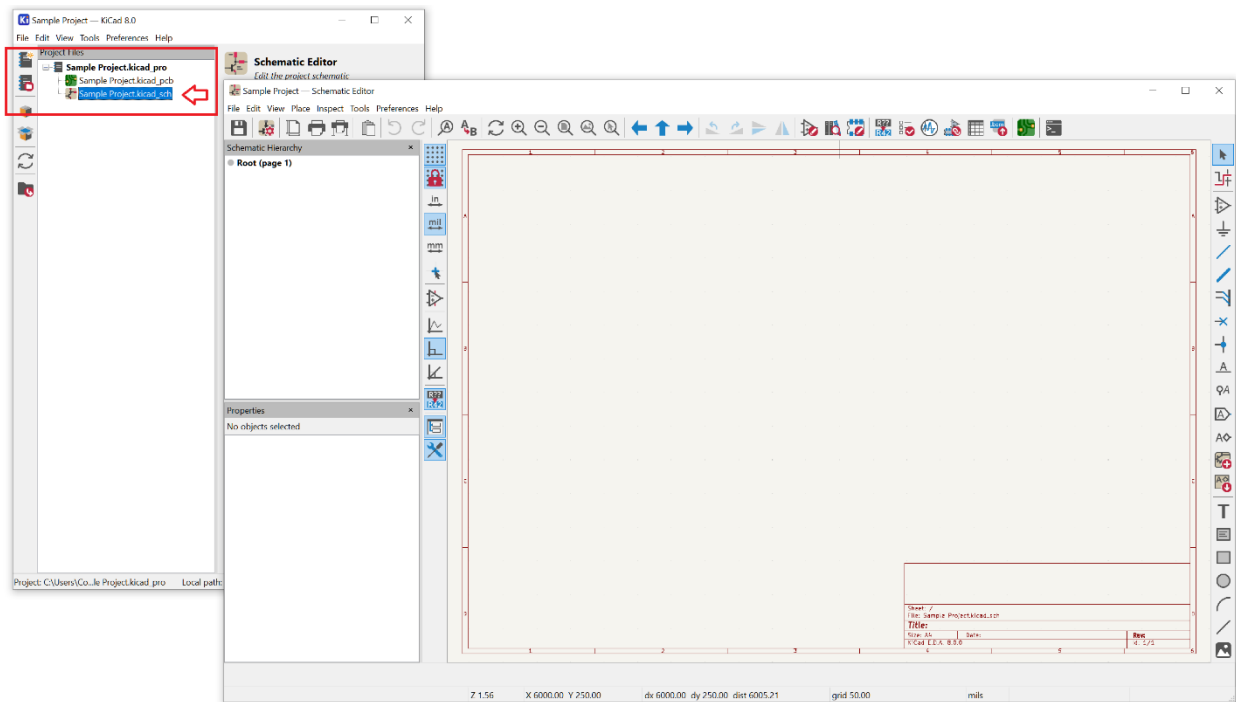
Press the **“Drawings”** button to Open the KiCad application.



Press **New Project** (Under File), go to the KiCad Folder of the Project Folder, enter the new Kicad Project Name and press enter.



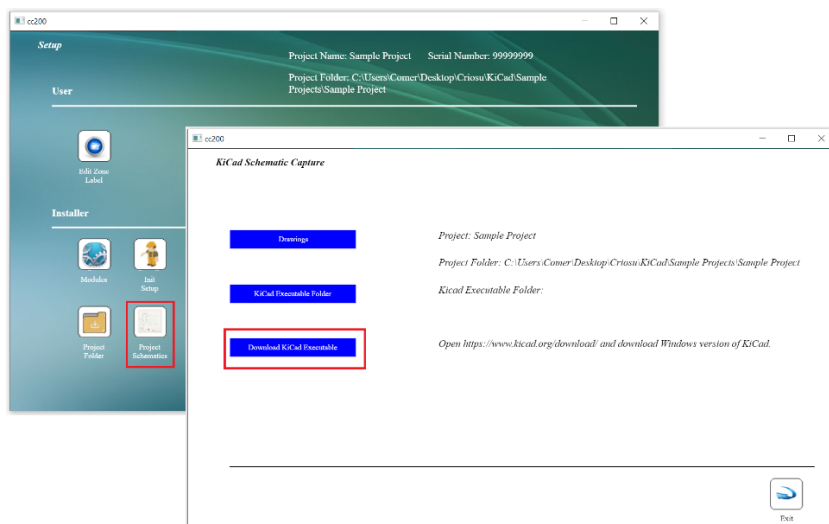
A new blank KiCad drawing Project will be created



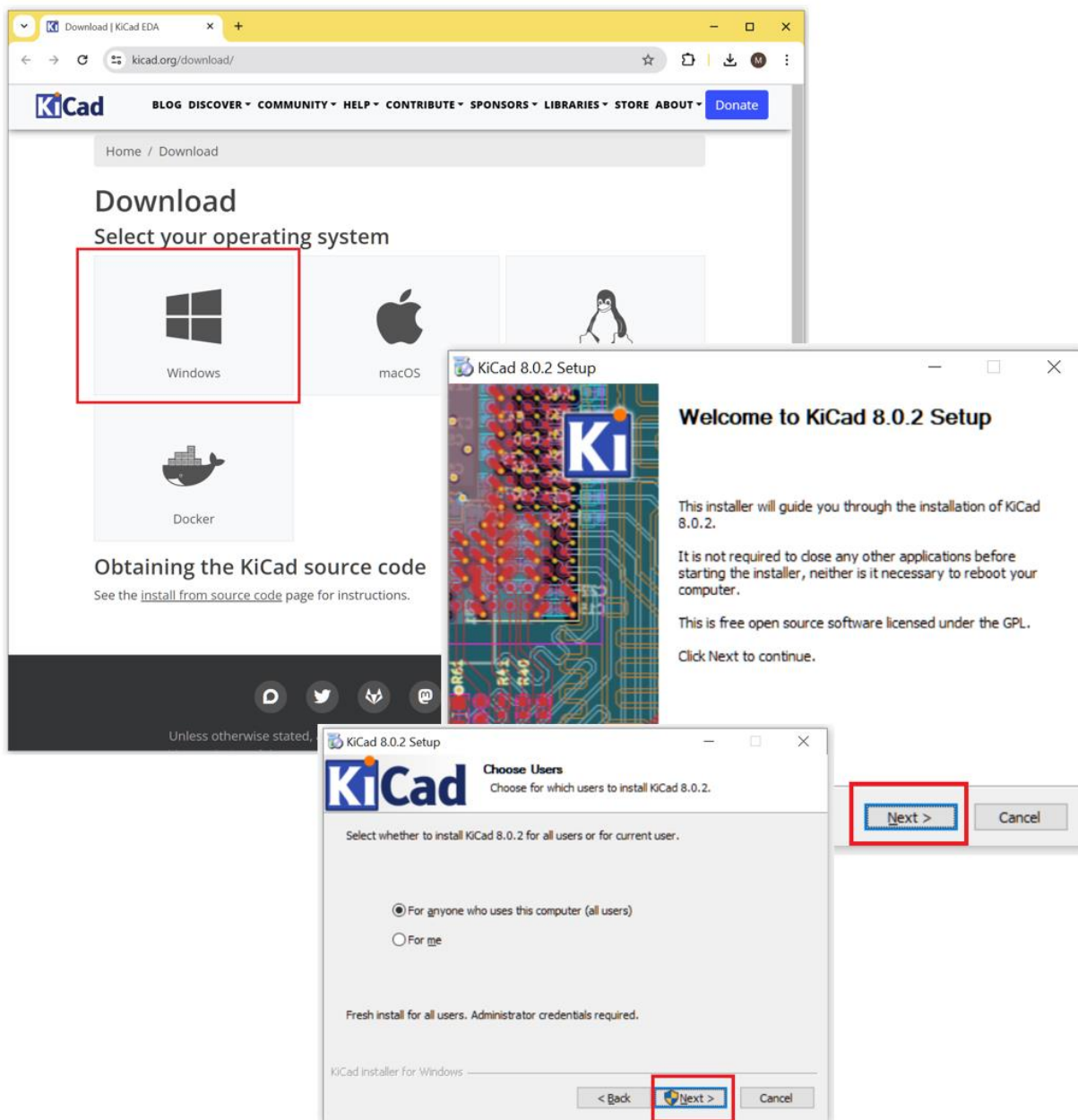
KiCad Setup

Download KiCad Application

Press “**Project Schematics**” button (Setup Screen) followed by the “**Download Kicad**” button to install the Kicad drawing application if not already installed.

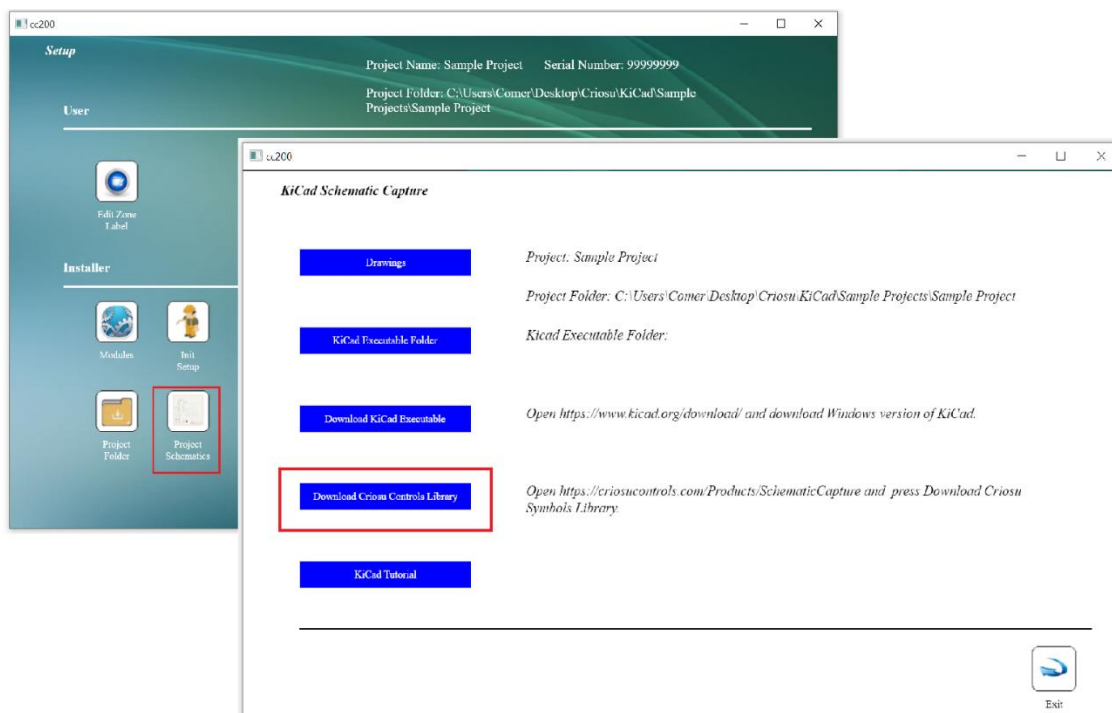


KiCad Installation

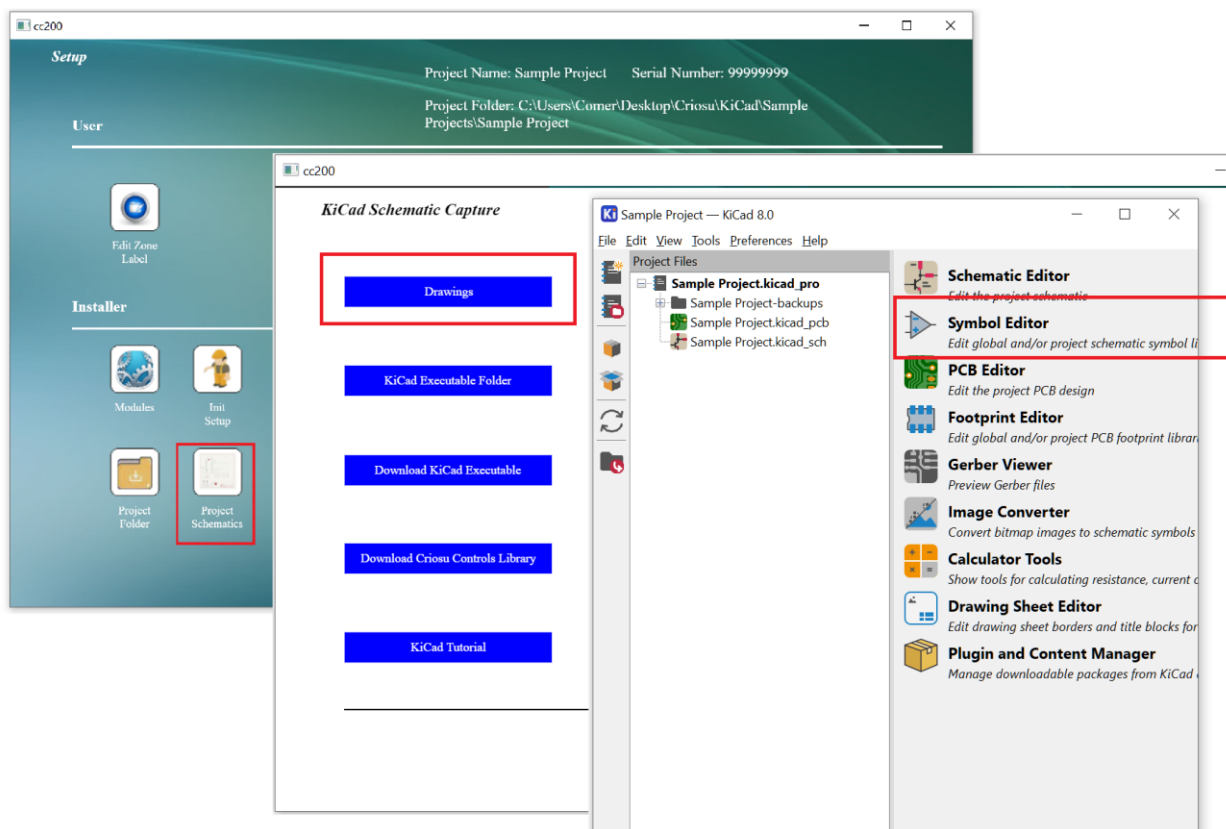


Install Criosu Controls Symbols Library

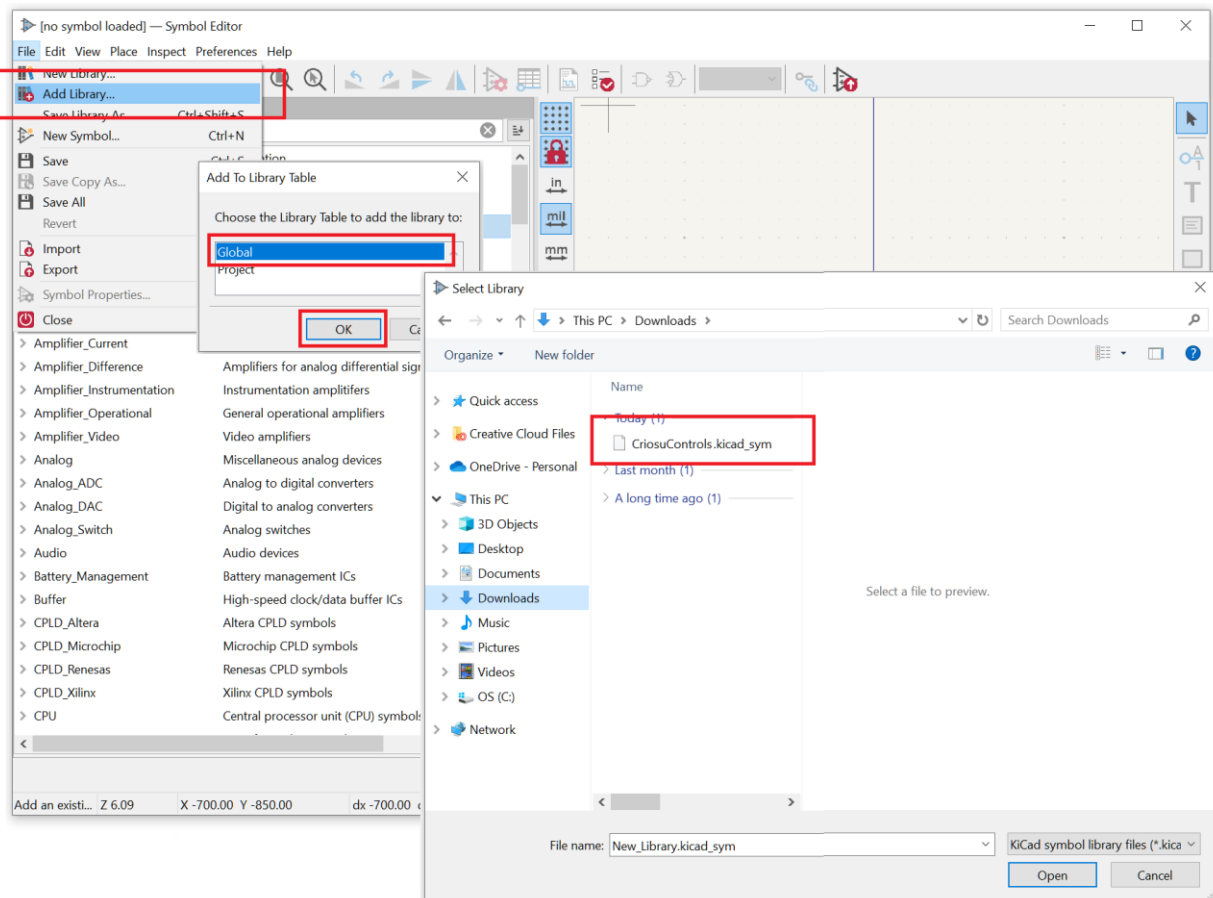
Press **“Project Schematics”** button (Setup Screen) followed by the **“Download Criosu Controls Library”** button to download library if library not already been installed.



To install the downloaded Library Press **“Project Schematics”** button (Setup Screen) followed by the **“Drawing”** button. When The Kicad application, Press the Symbols Button.

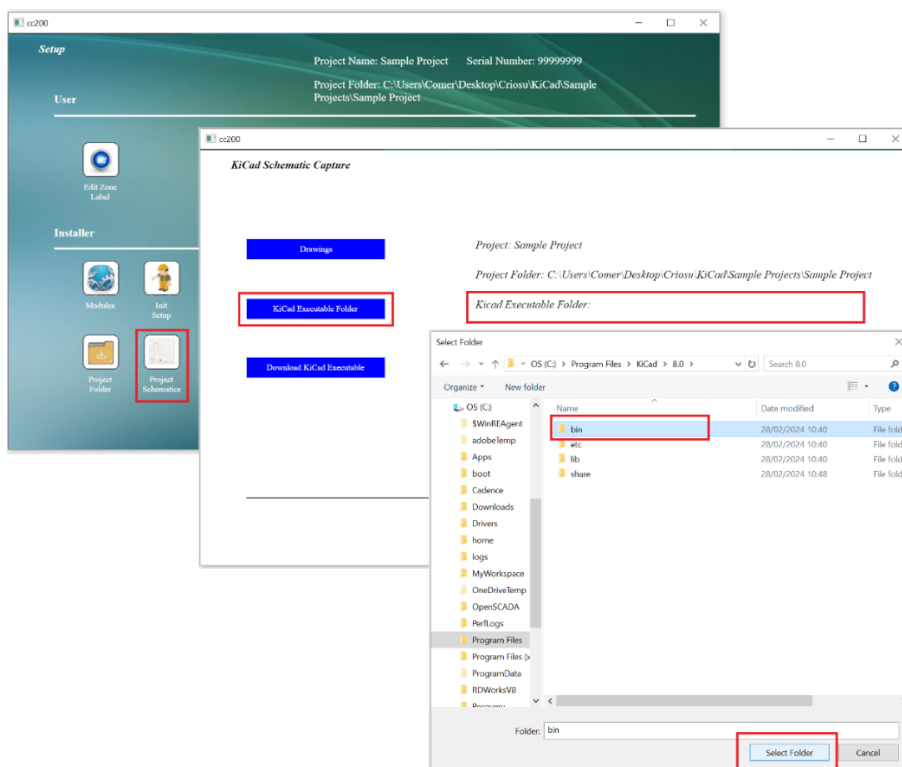


Select “**Add New Library**”, select Global and press “OK” and then do to the downloads Folder and Open “CriosuControls.kicad_sym”



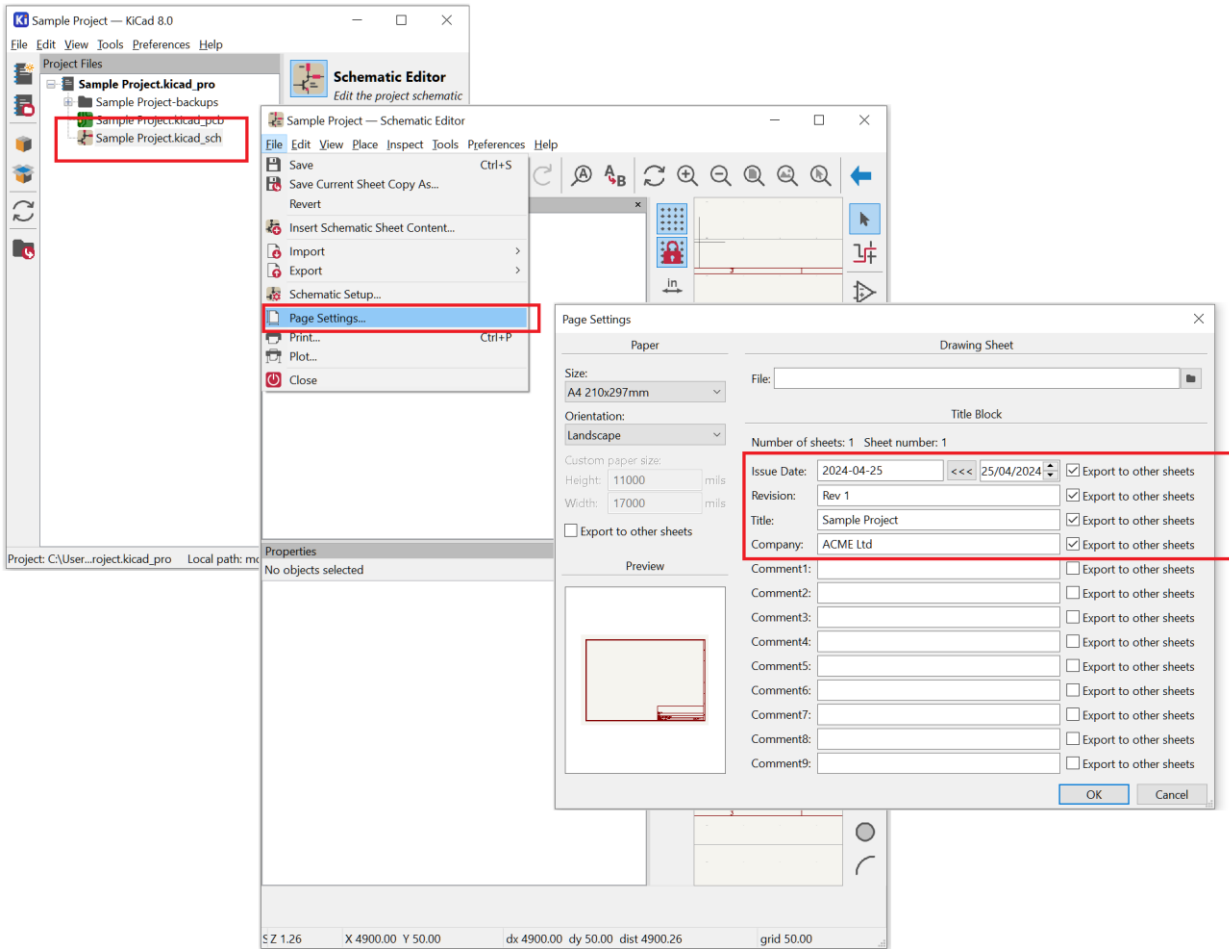
Set Path to KiCad Application

Press the **Project Schematics** button (Setup Screen) followed by the **Kicad Executable Folder** button to the path to the KiCad Executable if blank.



Drawing Page Setup

Select the “Project” (**KiCad Home Screen**), select “Page Setup” (Schematic Editor) and enter the Issue Date, Revision, Title, and Company Name. Check the boxes for fields that are to be exported too other sheets

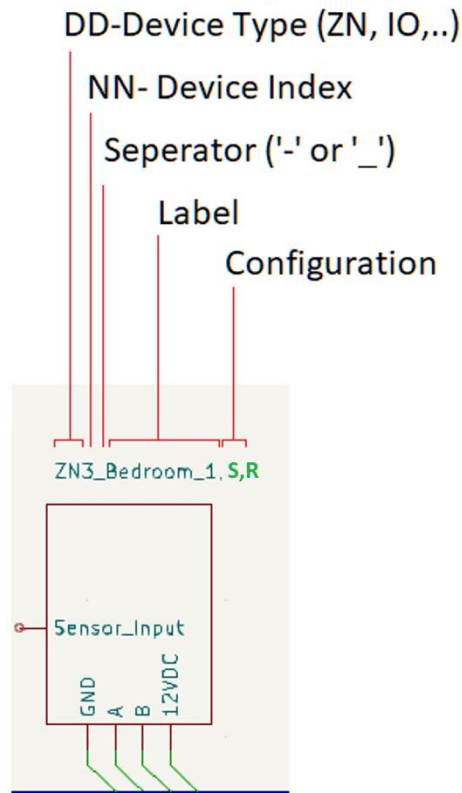


Sheet Limitations

Each sheet may only have one IO module and one PV Module

Device Configuration

A device may be configured by editing the device label.

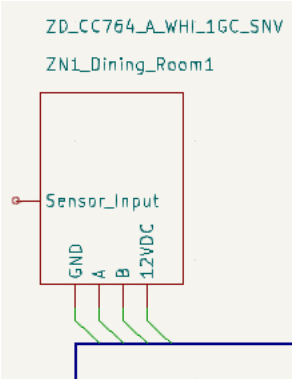


The **Device Index** is appended immediately following the Device Type (ZD – Digital Zone Sensor, ZP – Probe Zone Sensor etc.

The **Device Label** follows the Device Index separated by dash (“-”) or underscore (“_”).

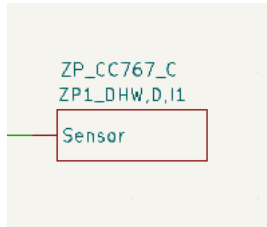
The comma delimited Device Configuration follows the Device label. For instance, the configuration “,S,R” in “ZN3_Bedroom_1,S,R” configures the zone as the Radiator type and as a Sleeping type Zone.

Configuration is case sensitive. Configuration controls text must upper case.

Device	Configuration Control																												
<p><i>ZD – Zone Digital Sensors</i></p> <p>ZD_CC763_A_WHI_WM_SNV ZD_CC764_S_MCR_1GF_SNV ZD_CC764_S_BSS_1GC_SNV ZD_CC764_S_WHI_1GC_SNV ZD_CC764_S_BLK_1GC_SNV ZD_CC764_A_WHI_1GC_SNV ZD_CC764_A_WHI_WM_SNV ZD_CC764_A_WHI_WM_SNV ZD_CC765_S_BSS_1GF_SV ZD_CC765_C_Whi_1GC_SV</p> 	<p>ZNn_label,Mn,Rn,Tt,Ss</p> <table border="1" data-bbox="826 392 1428 1294"> <tr> <td>ZNn</td> <td>Zone n (1-16)</td> </tr> <tr> <td>label</td> <td>Label</td> </tr> <tr> <td>Mn</td> <td>IO Module n (1-8)</td> </tr> <tr> <td>Rn</td> <td>Relay n (1-16)</td> </tr> <tr> <td>Tt</td> <td>Zone Type <table border="1" data-bbox="965 763 1414 992"> <tr> <td>t</td> <td></td> </tr> <tr> <td>U</td> <td>UFH (Default)</td> </tr> <tr> <td>R</td> <td>Radiator</td> </tr> <tr> <td>D</td> <td>DHW</td> </tr> <tr> <td>E</td> <td>Electric UFH</td> </tr> </table> </td> </tr> <tr> <td>Ss</td> <td>Schedule Living or Sleeping <table border="1" data-bbox="965 1144 1399 1294"> <tr> <td>s</td> <td>Scheule</td> </tr> <tr> <td>L</td> <td>Living (Default)</td> </tr> <tr> <td>S</td> <td>Sleeping</td> </tr> </table> </td> </tr> </table>	ZNn	Zone n (1-16)	label	Label	Mn	IO Module n (1-8)	Rn	Relay n (1-16)	Tt	Zone Type <table border="1" data-bbox="965 763 1414 992"> <tr> <td>t</td> <td></td> </tr> <tr> <td>U</td> <td>UFH (Default)</td> </tr> <tr> <td>R</td> <td>Radiator</td> </tr> <tr> <td>D</td> <td>DHW</td> </tr> <tr> <td>E</td> <td>Electric UFH</td> </tr> </table>	t		U	UFH (Default)	R	Radiator	D	DHW	E	Electric UFH	Ss	Schedule Living or Sleeping <table border="1" data-bbox="965 1144 1399 1294"> <tr> <td>s</td> <td>Scheule</td> </tr> <tr> <td>L</td> <td>Living (Default)</td> </tr> <tr> <td>S</td> <td>Sleeping</td> </tr> </table>	s	Scheule	L	Living (Default)	S	Sleeping
ZNn	Zone n (1-16)																												
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s	Scheule																												
L	Living (Default)																												
S	Sleeping																												

ZP - Probe Zone Sensors

ZP_CC767_P_C_Whi_C_SV
 ZP_CC767_P_S_BSS_F_SV
 ZP_CC767_T_S_MCR_F_SNV
 ZP_CC767_C

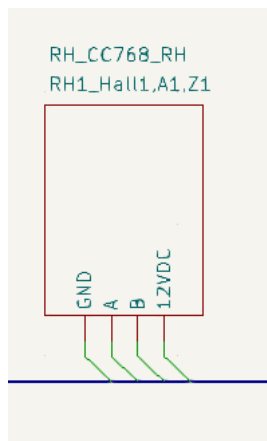


ZNn_label,Mn,In,Tt,Ss,Rn

ZNn	Zone n (1-16)										
label	Label										
Mn	IO Module n (1-8)										
In	Sensor Input n (1-8)										
Rn	Relay n (1-16)										
Tt	Zone Type <table border="1" data-bbox="965 689 1412 918"> <tr> <td>t</td> <td></td> </tr> <tr> <td>U</td> <td>UFH (Default)</td> </tr> <tr> <td>R</td> <td>Radiator</td> </tr> <tr> <td>D</td> <td>DHW</td> </tr> <tr> <td>E</td> <td>Electric UFH</td> </tr> </table>	t		U	UFH (Default)	R	Radiator	D	DHW	E	Electric UFH
t											
U	UFH (Default)										
R	Radiator										
D	DHW										
E	Electric UFH										
Ss	Schedule Living or Sleeping <table border="1" data-bbox="965 1064 1396 1220"> <tr> <td>s</td> <td>Scheule</td> </tr> <tr> <td>L</td> <td>Living (Default)</td> </tr> <tr> <td>S</td> <td>Sleeping</td> </tr> </table>	s	Scheule	L	Living (Default)	S	Sleeping				
s	Scheule										
L	Living (Default)										
S	Sleeping										

RH - Relative Humidity Sensor

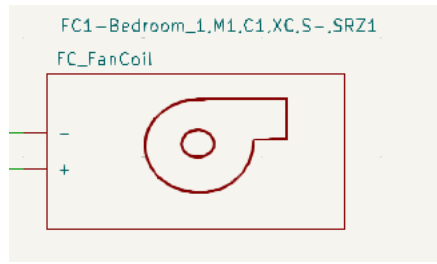
RH_CC768_RH



ZNn_label,An

ZNn	Relative Humidity Sensor Zone n
Label	label
An	Slave Address n

FCU - Fan Coil Unit



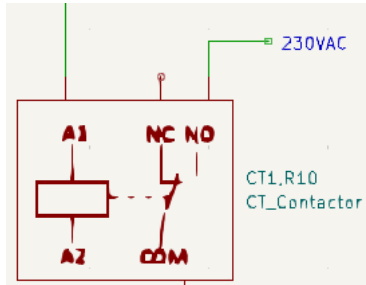
Module: CC200-SM-PV_ADV

FCn_label,Mn,Cn, Xx,Ln,Ss

FCn	Fan Coil n (1-16)						
Label	label						
Mn	PV Module n (1-5)						
Cn	PV Channel n (1-8)						
Xx	Switch s <table border="1" style="margin-left: 20px;"> <tr> <td>x</td> <td></td> </tr> <tr> <td>N</td> <td>No Switch</td> </tr> <tr> <td>C</td> <td>Cooling <u>Secondary Load Line:</u> 1. "Ss" sets Reference 2. DAC Hi: 10 DAC Lo: 10 3. Ref Lo: SP Ref Hi: Sp+DB+F3 </td> </tr> </table>	x		N	No Switch	C	Cooling <u>Secondary Load Line:</u> 1. "Ss" sets Reference 2. DAC Hi: 10 DAC Lo: 10 3. Ref Lo: SP Ref Hi: Sp+DB+F3
x							
N	No Switch						
C	Cooling <u>Secondary Load Line:</u> 1. "Ss" sets Reference 2. DAC Hi: 10 DAC Lo: 10 3. Ref Lo: SP Ref Hi: Sp+DB+F3						
Ln	Load Line <table border="1" style="margin-left: 20px;"> <tr> <td>N</td> <td></td> </tr> <tr> <td>0</td> <td>Primary</td> </tr> <tr> <td>1</td> <td>Secondary</td> </tr> </table>	N		0	Primary	1	Secondary
N							
0	Primary						
1	Secondary						
Ss	Source s: <table border="1" style="margin-left: 20px;"> <tr> <td>s</td> <td></td> </tr> <tr> <td>Z</td> <td>Zone</td> </tr> <tr> <td>H</td> <td>Hottest Zone</td> </tr> </table>	s		Z	Zone	H	Hottest Zone
s							
Z	Zone						
H	Hottest Zone						
Zn	Zone n (1-32)						

CT - Contactor

CTx_label, Rn, TNm, TFm, Zn, TT

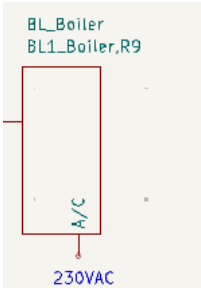


CTx_label, Mn, Rn, TNm, TFm, ZFf, ZNn, SYf

CTn	Contactor n																								
Label	label																								
Mn	IO Module n (1-8)																								
Rn	Relay n (1-16)																								
TNm	Timer ON minutes (0-59)																								
TFm	Timer OF minutes (0-59)																								
ZFf	Zone Control Flag <table border="1" data-bbox="1018 840 1406 1444"> <thead> <tr> <th>f</th> <th>Flag</th> </tr> </thead> <tbody> <tr> <td>0/HT</td> <td>Heating (Default)</td> </tr> <tr> <td>1/CL</td> <td>Cooling</td> </tr> <tr> <td>2/F1</td> <td>Fan 1</td> </tr> <tr> <td>3/F2</td> <td>Fan 2</td> </tr> <tr> <td>4/F3</td> <td>Fan 3</td> </tr> <tr> <td>5/HC</td> <td>Heating & Cooling</td> </tr> <tr> <td>6/SSH</td> <td>Schedule</td> </tr> <tr> <td>7/RH</td> <td>Relative Humidity</td> </tr> <tr> <td>8/CH1</td> <td>Channel 1</td> </tr> <tr> <td>9/CH2</td> <td>Channel 2</td> </tr> <tr> <td>10/DIFF</td> <td>Differential</td> </tr> </tbody> </table>	f	Flag	0/HT	Heating (Default)	1/CL	Cooling	2/F1	Fan 1	3/F2	Fan 2	4/F3	Fan 3	5/HC	Heating & Cooling	6/SSH	Schedule	7/RH	Relative Humidity	8/CH1	Channel 1	9/CH2	Channel 2	10/DIFF	Differential
f	Flag																								
0/HT	Heating (Default)																								
1/CL	Cooling																								
2/F1	Fan 1																								
3/F2	Fan 2																								
4/F3	Fan 3																								
5/HC	Heating & Cooling																								
6/SSH	Schedule																								
7/RH	Relative Humidity																								
8/CH1	Channel 1																								
9/CH2	Channel 2																								
10/DIFF	Differential																								
ZNn	Zone number n (1-16)																								
SFf	System type Flag <table border="1" data-bbox="1018 1653 1406 1986"> <thead> <tr> <th>f</th> <th>Flag</th> </tr> </thead> <tbody> <tr> <td>0/UFHHT</td> <td>UFH</td> </tr> <tr> <td>1/RADHT</td> <td>Radiators</td> </tr> <tr> <td>2/DHWHT</td> <td>DHW</td> </tr> <tr> <td>3/BOILER</td> <td>Boiler</td> </tr> <tr> <td>4/MF</td> <td>Manifold</td> </tr> <tr> <td>5/SYSHT</td> <td>System Heating</td> </tr> </tbody> </table>	f	Flag	0/UFHHT	UFH	1/RADHT	Radiators	2/DHWHT	DHW	3/BOILER	Boiler	4/MF	Manifold	5/SYSHT	System Heating										
f	Flag																								
0/UFHHT	UFH																								
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2/DHWHT	DHW																								
3/BOILER	Boiler																								
4/MF	Manifold																								
5/SYSHT	System Heating																								

		6/SYSCL	System Cooling
		7/SYSCLR	
		8/SYSEHT	Electric UFH
		9/CLOVOH	
	Refer to IO Config Manual		

Boiler

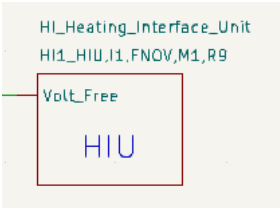


BLn_label,Mn,Rn,TNm,TFm

CTn	Contactor n
Label	label
Mn	IO Module n (1-8)
Rn	Relay n (1-16)
TNm	Timer ON minutes (0-59)
TFm	Timer OF minutes (0-59)

HIU - Heating Interface Unit

HI_Heating_Interface_Unit

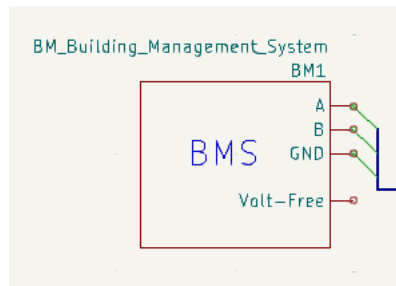


Module: **CC200-SM-RLY_ADV**

HIIn_label,Mn,In

<i>Un</i>	<i>HIU (Heating Interface Unit) n</i>	
<i>Label</i>	<i>label</i>	
Mn	IO Module n (1-8)	
In	Input n (1-5)	
FNf	Input Function	
	f	
	OV	Override Module n (Mn), Relay n (Rn)
	EN	Enable Module n (Mn), Relay n (Rn)
Mn	Module n	
Rn	Relay n	

BMS - Building Management System



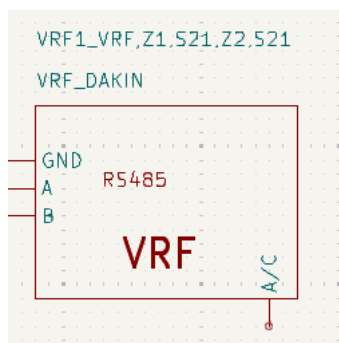
Module: CC200-SM-BMS

BMn_label,Mn,In

BMn	BMS(Building Management System) n	
Label	label	
Mn	IO Module n (1-8)	
In	Input n (1-5)	
FNf	Input Function	
	f	
	OV	Override Module n (Mn), Relay n (Rn)
	EN	Enable Module n (Mn), Relay n (Rn)
Mn	Module n	
Rn	Relay n	

VRF - Variable Refrigerant Flow Unit

VRF_DAKIN
 VRF_INTERSISBOX_FJ_RC_MBS_1
 VRF_PROCON_IP50
 VRF_PROCON_MELCOMENS_MINI_A1
 M



VRn_label,Zn,Sp[,Zn...]

Zn must be the first parameter

VRn	VR(Variable Refrigerant Flow Unit) n
Label	label
Zn	Zone n (1-32)
Sp	Setpoint p (16-32)
	If not set then use the CC200 zone Setpoint

Generate PDF Drawing

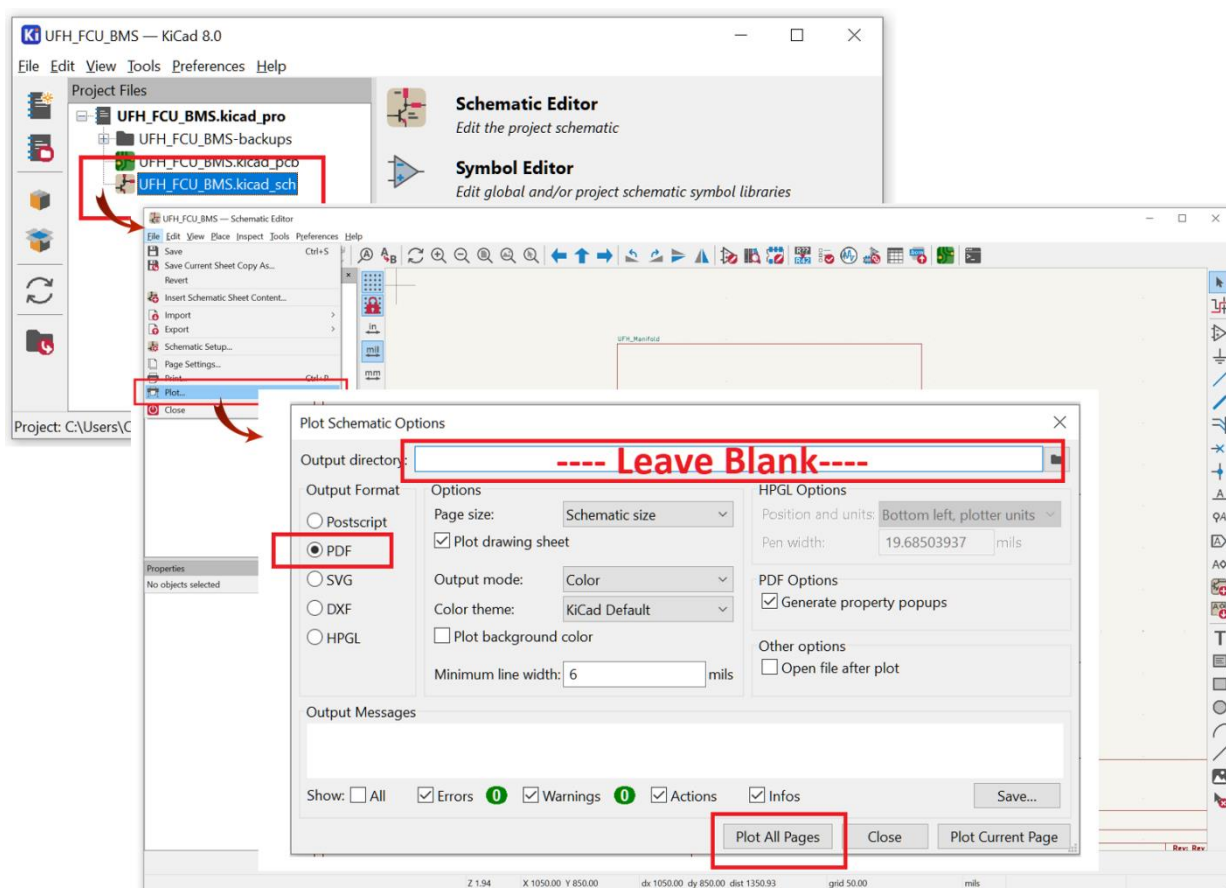
Press the Project Drawing button (in the example below it is “UFH_FCU_BMS_sch”) and from the File Menu select Plot.

In the Plot Dialog, select “Pdf”. Do not select an output director. The cc100 application will reference the default output directory.

Press “Plot All Pages.”

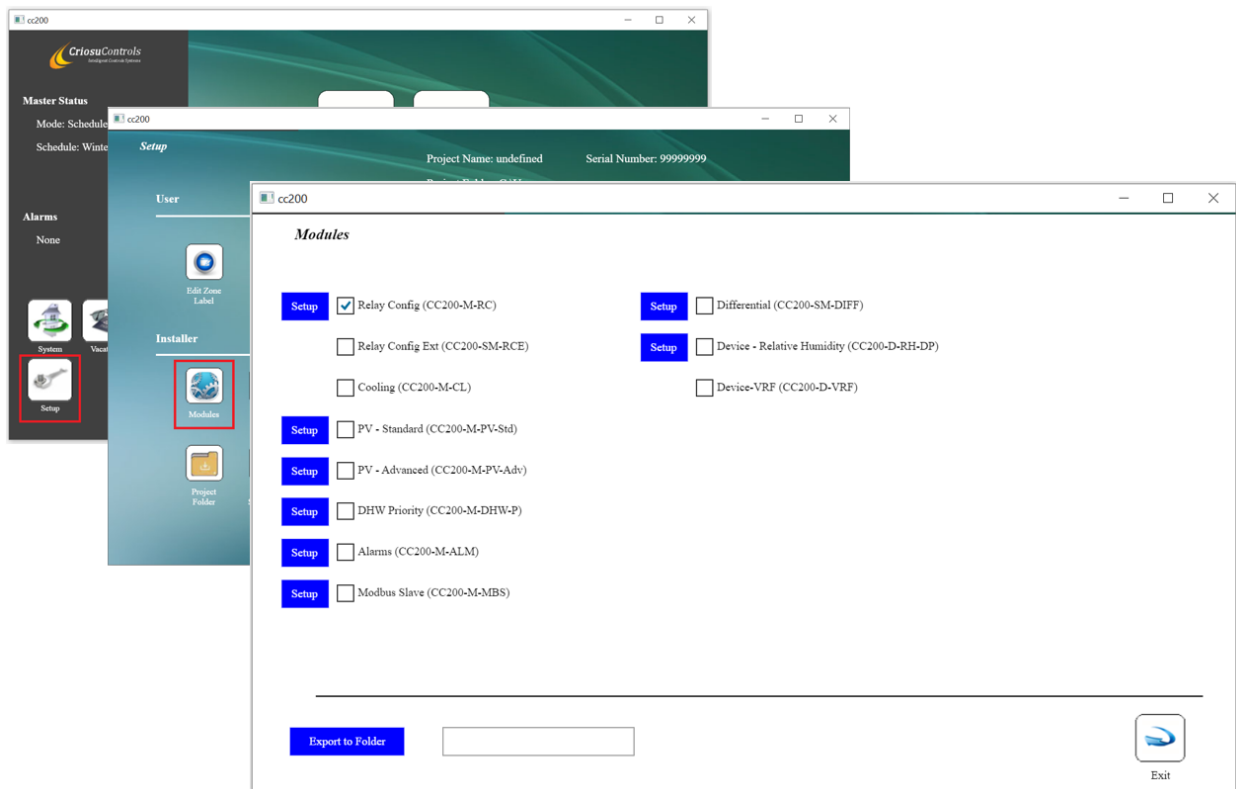
The output pdf will be saved in the Project Kicad Directory.

In this example the path is ../UFH_FCU_BMS/Kicad/UFH_FCU_BMS.pdf.



Modules

Press the “Setup” button followed by “Modules” button.



Modules must be registered when Dat files are downloaded to the cc200HV6.

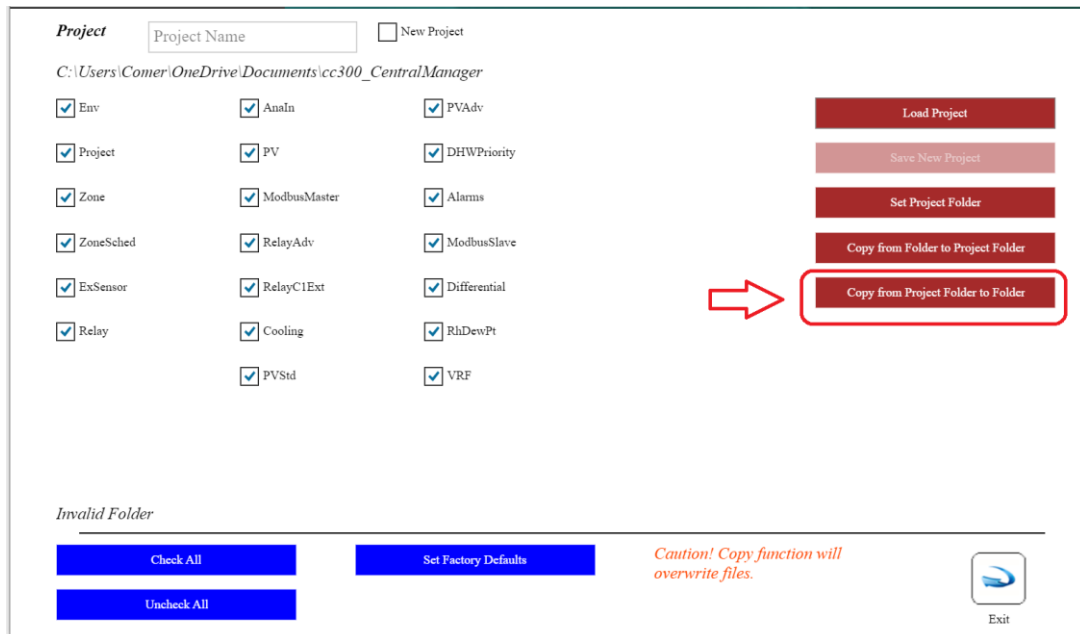
Data Management

Load a Project

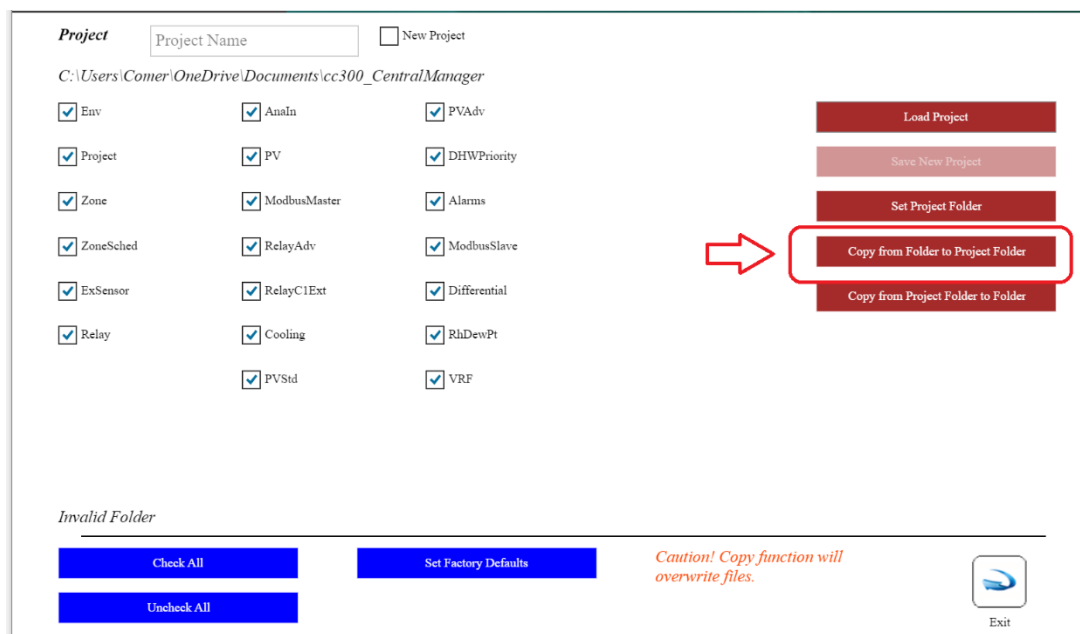
Step	Description
1	<p>Set the Project Folder. This will be location of the Project folder. A dialog box will open allowing you to select the required Project Folder.</p> 
2	<p>Press Load Project.</p> 

Copy a Project To/From a Folder

Press “Copy Project Folder to Folder” to copy the presently loaded Project to a Folder.



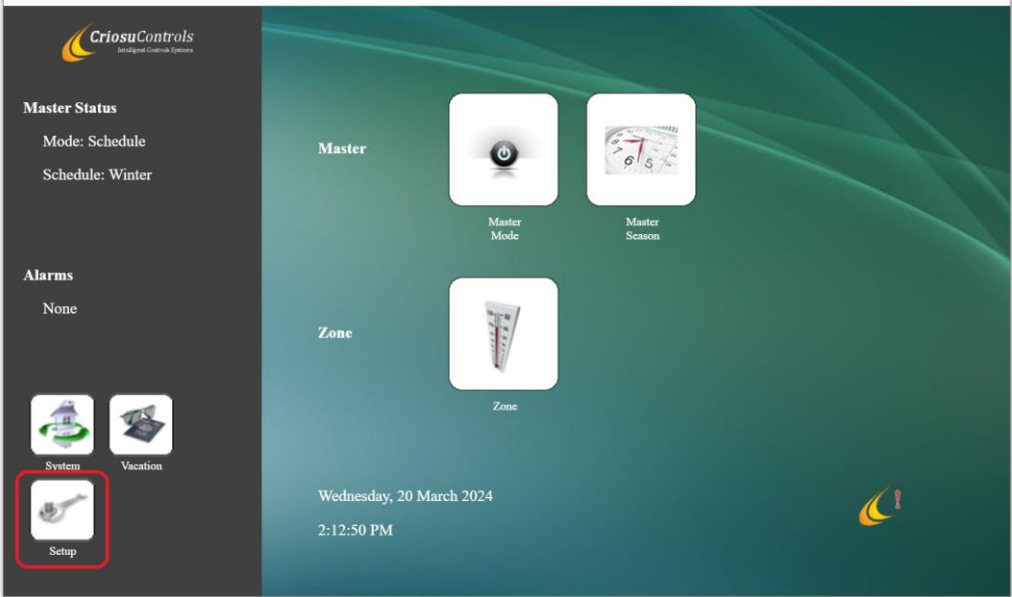

Press “Copy from Folder to Project Folder” to copy [Load] from a Folder to presently loaded Project.

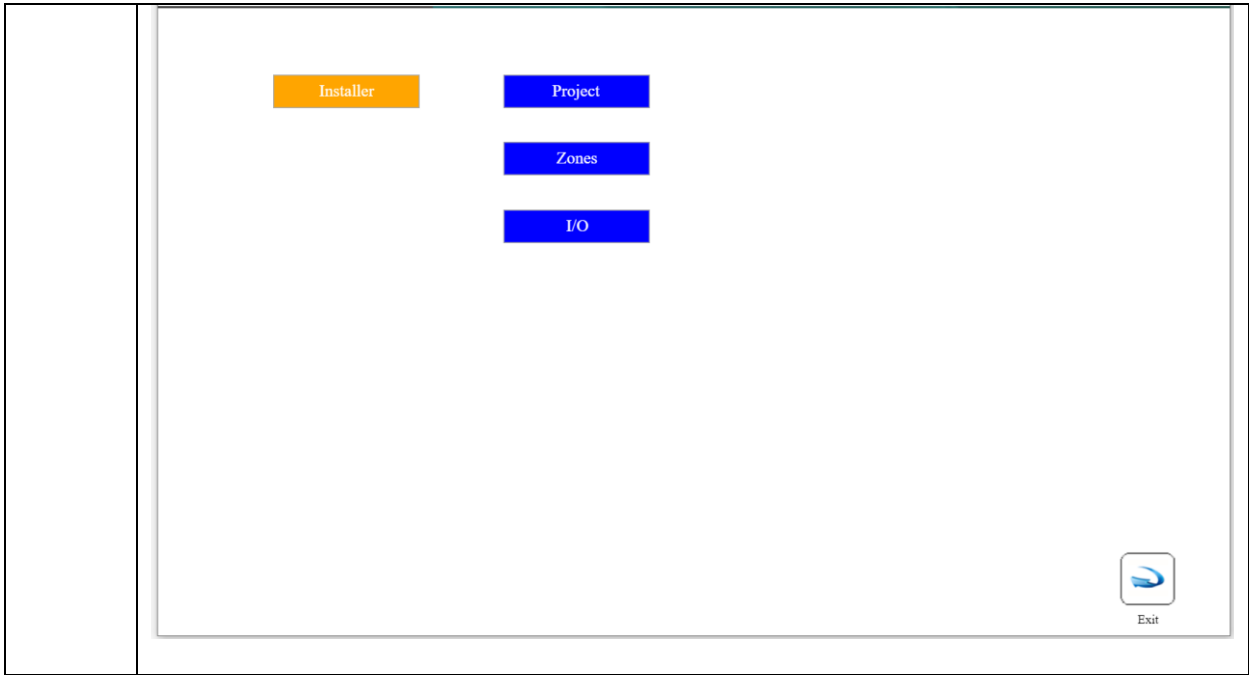


Desktop Configuration Screens

Additional Desktop Screens are available to expedite configuration.

Access Desktop Screens

Step	Description
1	<p>Press Setup button to view the Setup Screen</p>  <p>The screenshot shows the CrisuControls Master Status interface. On the left, there is a dark sidebar with the following sections: 'Master Status' (Mode: Schedule, Schedule: Winter), 'Alarms' (None), and three buttons: 'System', 'Vacation', and 'Setup'. The 'Setup' button is highlighted with a red rectangular box. The main area shows 'Master' mode with 'Master Mode' and 'Master Season' buttons, and a 'Zone' section with a 'Zone' button. At the bottom, it displays the date 'Wednesday, 20 March 2024' and time '2:12:50 PM'.</p>
2	<p>Press the Desktop Setup button to view the Extended Desktop Screen.</p>  <p>The screenshot shows the 'Setup' screen. At the top right, it displays 'Serial Number: 99999999' and 'Project Name: undefined'. Below this is a 'User' field with a horizontal line. There is an 'Edit Zone Label' button. Under the 'Installer' section, there is a row of buttons: 'Modules', 'Init Setup', 'I/O Setup', 'Zone Setup', 'Project Dat Files', 'Adv Setup', 'System Devices', and 'Desktop Setup'. The 'Desktop Setup' button is highlighted with a red rectangular box. An 'Exit' button is located at the bottom right.</p>
3	



Emulation

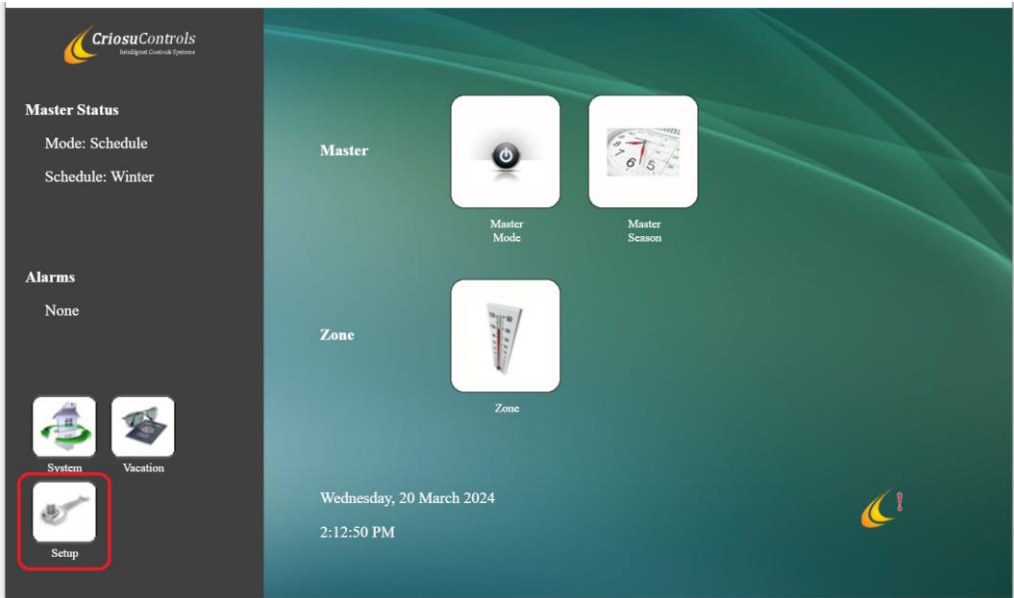
A system may be run from the Desktop attaching a USB to RS485 Adapter and Setting up the Com Port.

USB to RS485 Adapter

Refer to *Products/Interfaces/ I-ADP-USB-RS485* on CriosuControls.com site



Setup Modbus Master Com Port

Step	Description
1	<p>Press Setup button to view the Setup Screen</p> 

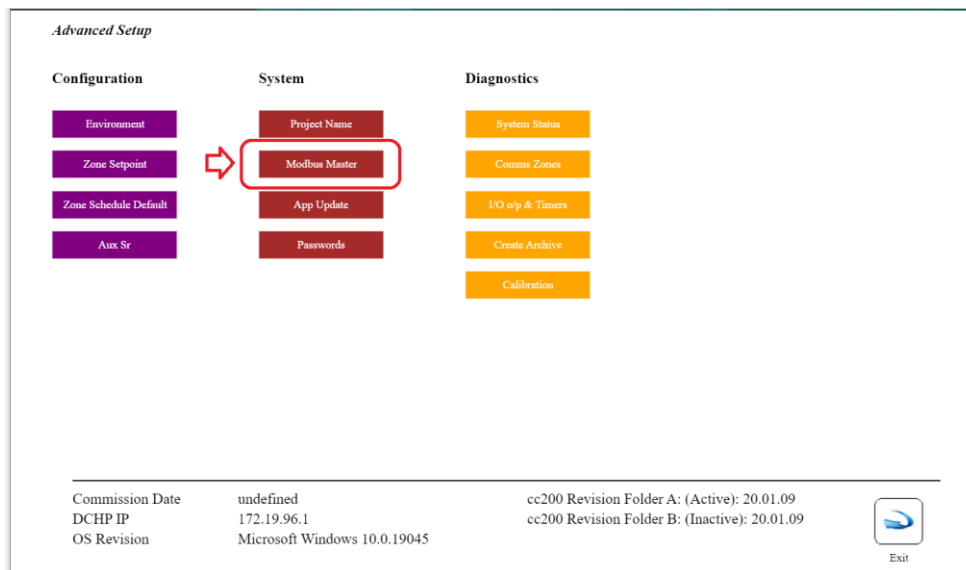
2

Press the **Adv Setup** button to view the Advanced Setup Screen.



3

Press the Modbus Master button



4

Press Port Setup

Modbus Master Registers

Idx	Slr	FC	Reg	Data	Device	Parm	Idx	Label	En	Edit
1	31	3	0		Undef			Undef	x	Edit
2	31	3	0		Undef			Undef	x	Edit
3	31	3	0		Undef			Undef	x	Edit
4	31	3	0		Undef			Undef	x	Edit
5	31	3	0		Undef			Undef	x	Edit
6	31	3	0		Undef			Undef	x	Edit
7	31	3	0		Undef			Undef	x	Edit
8	31	3	0		Undef			Undef	x	Edit
9	31	3	0		Undef			Undef	x	Edit
10	31	3	0		Undef			Undef	x	Edit
11	31	3	0		Undef			Undef	x	Edit
12	31	3	0		Undef			Undef	x	Edit
13	31	3	0		Undef			Undef	x	Edit
14	31	3	0		Undef			Undef	x	Edit
15	31	3	0		Undef			Undef	x	Edit
16	31	3	0		Undef			Undef	x	Edit
17	31	3	0		Undef			Undef	x	Edit
18	31	3	0		Undef			Undef	x	Edit
19	31	3	0		Undef			Undef	x	Edit
20	31	3	0		Undef			Undef	x	Edit

Regs 1-20 Regs 21-40 Regs 41-60 Regs 61-80 Port Setup Monitor Comm Status

Regs 81-100 Regs 101-120 Regs 121-140 Regs 141-160 Exit

5 Detach the current Com Port if incorrect.

Com Port

Baud Rate: Baud_9600
 Parity: None
 Data Bits: DataBits_8
 Stop Bits: One


Port: COM1 Detach

Enable Port

Exit

Do not change the Default Com Port setting.

6 Attach the Correct Com Port

	<p><i>Com Port</i></p> <p>Baud Rate Baud_9600 ▾</p> <p>Parity None ▾</p> <p>Data Bits DataBits_8 ▾</p> <p>Stop Bits One ▾</p> <p>Port</p> <p><input checked="" type="checkbox"/> Enable Port</p> <p>Attach</p> <p>COM1 COM1 COM3 COM4</p> <p> Exit</p>
7	A system can to the Desktop. It will emulate the cc200HV5