



# 701ServerSQL & 701ClientSQL Installation Guide

- Applicable to SOYAL 701 Software Version 10v2 and after -



V240318

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### **Chapter 1. Software Functions**



# File-Based & Data-Based Supported

- SOYAL 701SQL software support both File-Based and Data-Based system enabling customers select the system format per their needs.
- Data-Based system facilitated development of new applications program.



#### Access Control, Time Attendance,Lift Control,Parking Management,Central Monitoring

Beyond Access Control, Time & Attendance, the event logs can be generated as daily report, multi-days report, monthly report, salary report, time attendance report as well as Elevator Control, Car Park Control, Projects Management and Operators Authority Level Control.



#### Sending message,QR code by email

- Created QR code and attendance message be sent by email automatically.
- Comprehensive application in campus and visitor management system automatically sending email notification to designated receipients like front desk in Hostel and student parents



#### **Effortless learning**

- With unceasing innovating and following the original user design interface, logic and framework, users can learn new functions as easy as finger-clicking.
- Remaining same software structure and layout avoiding many studies and making your life easy.



# Strong R&D capability for customized design

- SOYAL R&D engineers are much experienced in offering modification of software, firmware and even hardware, who are dedicated at SOYAL more than two decades and would be lasting continously.
- Unified hardware with thousands firmware version to fit your various demand, that sometimes would need a customized software as well. SOYAL welcome small software modification.



# Complete SCADA Control function

 Pop graphic control assist your co-indstry integration in between Access control and Industrial Auto control due to universal I/O modules SOYAL provided.



#### **Cross-System Software**

- SOYAL tailored software supports all SOYAL Hardware enabling control, setting, monitoring, editing, data retrieve and more.
- One software fits all interface such as TCP/IP, Wifi, PoE, RS485, RS232, TTL, UART, no matter what SOYAL hardware you intend to add in and to scale up your system, no need to change software.



#### **Open Integration Resources**

- The open resources Protocol & SDK provided with high compatibility.
- Wide coverage with JSON, GraphQL and Julia facilitate software developers in various fields to integrate with third-party systems fast and easy.



# Web browswer distributed multiplex hardware management

- Running more than one 701Sever other than headquater helping communication efficiently with a lot of distributed hardware anywhere for simultaneous transmission of several message
- Making it flexible and efficient to control distributed hardware, enhance the stability of communication in the system.



# Unicode Global Languages Unicode Supported

- SOYAL software support Unicode
- Providing software resources file help you simply translate to any other languages



#### Capturing real time picture

- Take picture of users in real time
- Allow system crosscheck the registered user picture and real time picture to enhance security authentication.



#### The Long-Term Service Software

- SOYAL software is compatible with both legacy device 20 years ago and definitely will be supporting future hardware.
- Sustainable software service is SOYAL's commitment regardless devices installed on site are upgraded and changed.

# **Chapter 1. Software Functions**

#### 701ServerSQL



701ServerSQL

- Actual connection and communication to hardware, hardware management and setting
- Target users: System installation & maintenance personnel and network & information management personnel

# Installation Requirement

PC Minimum Requirements: 32bits CPU, 1.0GHz Speed, 521MB RAM,5GB HD Converter: Ethernet to RS-485 AR-727CM / USB to RS-485 AR-321CM Supported Operating System: Win7/Win 10/2012/2016/2018 / hyper V

**Structure** 

-File Based: personal computer/work station/Server all supported

-Data Based: distributed Multiplex Hardware Management Architecture

Capacity

Hardware Connectivity: up to 16 Area, each Area up to 254 Node ID (If connect to Control Panel, each Control Panel support up to 16 access controller as Subnode ID, each Node ID support up to 254\*16 = 4000 devices).

User Capacity: Max. user card editing capacity 20,000.

**Access right** 

Login password, Operators Authority Level Control, Automatically record operation log

#### Multi-Door Controller setting

Anti-passback / Auto open time zone / Arming mode / Active Release all doors / Auto Reset Anti-pass / Alarm when reader offline / Door Number / Duress Code / Time-Scheduled Output setting for door relay & alarm relay in / industry automation door bell for on/off duty / Parking Lot space monitoring / upload/download fingerprint data / Master code to enter programming mode / Force Open Alarm output / Auto Re-lock (anti-tracking tailgate)

IP-Based controller setting

Force Alarm, Free Zone, read/write fingerprint data lift control

Setting Client computer

Setting Client computer to share the resources of Server computer which connect with controller.

Setting attendance report relevant information

Time attendance base on Work Time "First and Last Records" Or "Duty Function Key", Maximum User On System, Duty Start Time, Update clock, Backup Message File, Execute another program while startup like 701Client

#### 701ClientSQL



701ClientSQL

- User operation interface included user access level, transaction record, HR operation, user card data management, and report generator
- Must connect to 701ServerSQL
- Target users: Security guard and human resource personnel

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Login password. Operators Authority Level Control, Automatically record operation log

User Card Data setting

Guard, Invalid, Valide with access mode: Card only, Card+PIN, PIN only, Finger only, QR Code only, QR Code+PIN, expiration

#### Access Control System

Area Setting / Door Group Setting / Time Zone Setting / Holiday Setting / Duty Setting / User Card Setting / Card ID Registration / User Card Copy / Set User Access to specified Doors and Time Zone

**Time Zone** 

Enable/Disable time zone, Limit the access time of entry/exit

#### **View Options**

Historical data query based on transaction date and time range and visited location and other options to quickly obtain the data

QR Code Generator

Generate QR Code based on User Card ID

#### Sending email

Email Notification for QR Code, Fire Event, Alarm Event, Student's Absent Event

# Monitoring Reader Status

check the current controller status, and perform the actions such as open door directly via PC or arm/disarm the designated controller.

#### **Export/Import**

Import/Export User Data, Setting Paramaters and Multiple messages in .txt or .csv

# Graphic Animation

Remote control, set up abnormal events indicator, enable arming and alarm output

#### **Generate Report**

Daily Transaction Log / Multiday Transaction Log / Daily Duty Report / Monthly Duty Report / Monthly Duty Report

**More Functions** 

car share multi-space parking lot management solution, support dual IP Camera to auto capture user access, crowd management control display user in area

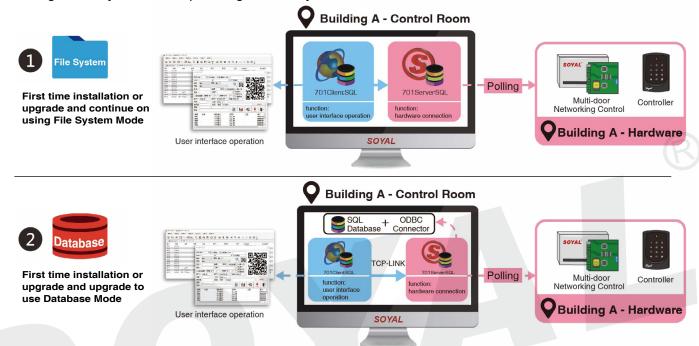


### Chapter 2. 701ServerSQL & 701ClientSQL Role and Function

Single PC Operation Mode: 701ServerSQL & 701ClientSQL Installation under same PC

User can choose Database mode or File System mode according to needs and requirement. Built-in the same operation user interface for both modes provides seamless upgrade from File System to Database easy and can be done without relearning.

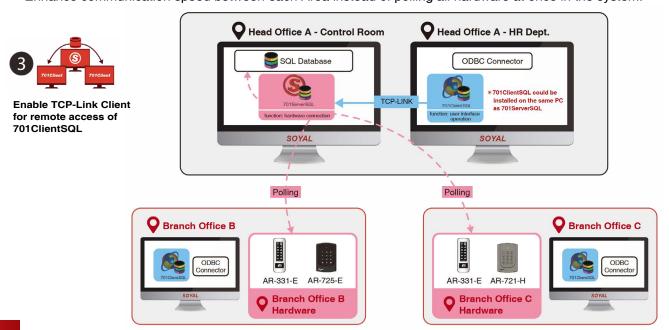
- File System: Easy to set up and maintain, suitable for small to medium scale system
- Database System: Suitable for complex exchange data and transaction, centralized system, and medium to large scale system that required higher security.



# Multi PC Operation Mode: 701ServerSQL installed in the main PC, 701ClientSQL installed in office branch for user interface operation

Software version 10.2 and after, under database mode supports 701ServerSQL in single PC connecting to 701ClientSQL in multi-PC. multi-PC only required to install 701ClientSQL and ODBC Connector. What to expect from this features:

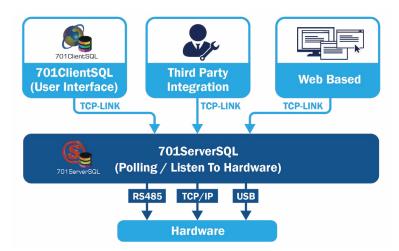
- Multi-PC function must be under Database Mode.
- For branch office or small office that only required single or few units of controller, communication through PC locally is not required and preparing one unit of computer is also unnecessary as the event logs and user card data is programmable in another branch office or headquarter.
- Enhance communication speed between each Area instead of polling all hardware at once in the system.



# Chapter 2. 701ServerSQL & 701ClientSQL Role and Function

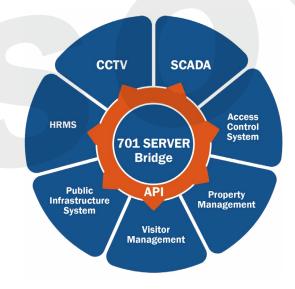
#### Connection between 701ServerSQL, 701ClientSQL, and Hardware

Starting from Version 10.2 and after, SOYAL software has TCP-LINK feature that serve as Communication Bridge between 701ClientSQL to 701ServerSQL and third party integration, web based to 701ServerSQL.



# 701ServerSQL as a Communication Gateway for Integration with Third Party System

Serves as a connection bridge to third party system with SOYAL devices, the use of 701ServerSQL is as a Communication Gateway to convert XML, JSON, Modbus command into communication language recognized by SOYAL devices which is SOYAL communication protocol language.





More Detail



### First time installation or update 701 Software

Due to the new features, user can now choose three different options on using 701 Software





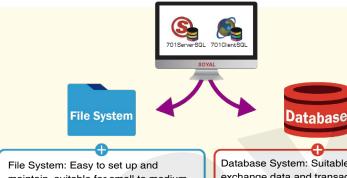
First time installation or upgrade and continue on using File System Mode



First time installation or upgrade and upgrade to use **Database Mode** 



**Enable TCP-Link Client for** remote access of 701ClientSQL



maintain, suitable for small to medium scale system

Default.wrk Default.wrk01
Default.wrk02 Default.wrk03 2020/5/22 下午 0... WRK 楊克 2021/2/22 下午 0... WRK01 檔案 2021/2/22 下午 0... WRK02 檔案 2021/2/22 下午 0... WRK03 檔案

Database System: Suitable for complex exchange data and transaction,

scale system that required higher security

centralized system, and medium to large

 Before get into further details and step by step, here is the difference between File System Mode and Database Mode

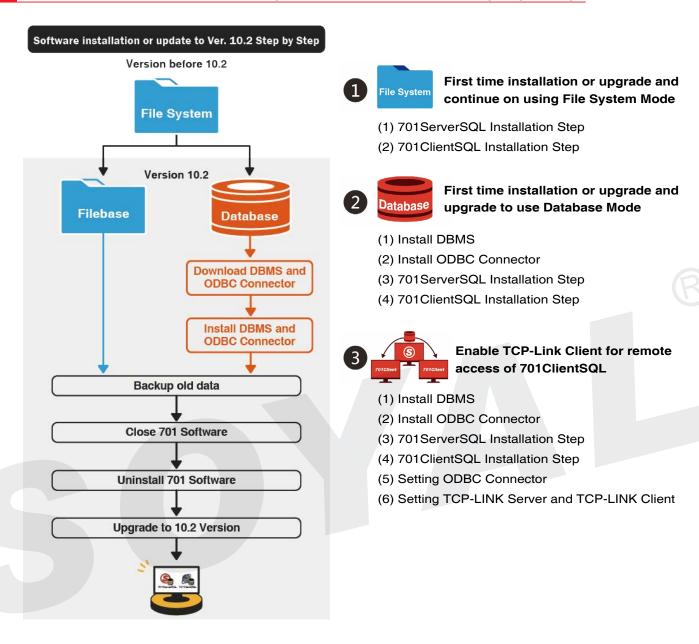
#### SOYAL 701ServerSQL and 701ClientSQL Installation Difference Table

Mode	File System Mode	Databa	se Mode	
	1. Controller Connection		Controller Connection	
Functions	Daily & Multiday Time and Attendance Report     3. User Data Edit	Without Daily & Multiday Time and Attendance Report	With Daily & Multiday Time and Attendance Report	Parameter Setting
Multi-PC	Single PC	Single PC	Single PC	Support Multi-PC
701ServerSQL	Required	Required	Required	Not required
701ClientSQL	Required	Not required	Required	Required
SCADA Graphic Animation	Support	Non support	Support	Support
Database Engine (MariaDB x64) (MySQL x64)	Not required	Required (not required to add database)	Required (not required to add database)	Not required
ODBC Connector (x32-bit Version)	Not required	Required	Required	Required



More Detail

#### Software installation or update to Ver. 10.2 Step by Step



### Software Preparation before Upgrade to Ver. 10.2

#### 1-Download DBMS And ODBC Connector

\*Continue using file base system does not required to download ODBC Connector Detail step by step refer to <a href="Page 11: 1- Install DBMS">Page 11: 1- Install DBMS</a>

#### 2-INSTALL DBMS AND ODBC Connector

\*Continue using file base system does not required to download ODBC Connector Detail step by step refer to <a href="Page 11: 1- Install DBMS">Page 11: 1- Install DBMS</a>



#### 3-Back Up DATA

Creating a back-up data is necessary to avoid data from lost during the upgrade especially for .msg files (transaction log) and user data (default.xx)

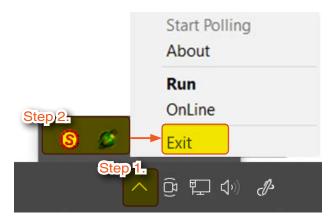


Step 1. Copy 701 Server folder and paste into Drive D, Desktop, or any hard drive that will be safely stored. Step 2. Copy 701 Client folder and paste into Drive D, Desktop, or any hard drive that will be safely stored.

- Full version about backup data could be found in the step-
- Backup and Restore 701 Server and Client from old PC to new PC
- When upgrading to Database Mode, the old data that is recorded on file system mode will still save under file system format. Once you upgrade into the database, all of old data will automatically transferred to database and cannot be converted back to file system data. For event log (msg files), you required to do 'Message Import' manually from 701ServerSQL to convert the data from file system into database format.
- If you want to preserve the old data under file system format, make a copy and stored in a safe place (refer to STEP 3. BACK UP DATA)
- Data that is remain on file system base even after upgrade to database mode:
  - 1. time attendance report such as DUTY file
  - 2. lift and floor data
  - 3. fingerprint and face data
- Upgrade from Windows XP to Windows 10, all of the data must be copy and directly paste to C:\Program Files (x86)

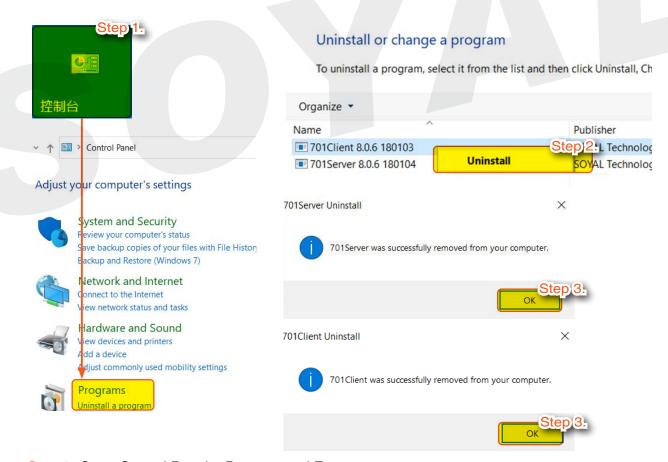
#### 4-Close 701 Software

Before uninstall and updating new software, make sure 701ServerSQL and 701ClientSQL is properly closed and not under running condition.



- Step 1. Click [Show hidden icons] on the right bottom side of the desktop.
- Step 2. You will see 701ServerSQL and 701ClientSQL software icon > right click > select Quit

#### 5-Uninstall Old Software



- Step 1. Go to Control Panel > Program and Features
- Step 2. Uninstall both 701ServerSQL and 701ClientSQL by right click
- Step 3. after finished uninstall, press OK

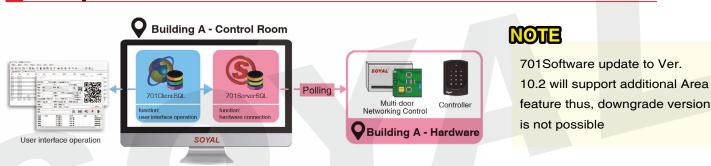


#### 6-Upgrade To 10.2 Version

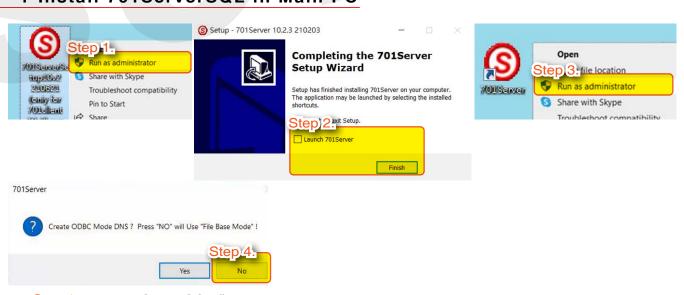


- Step 1. Obtain SOYAL 10.2 software by downloading it from SOYAL website (required authorization from SOYAL or distributor to logged in)
- Step 2. Install both 701ServerSQL and 701ClientSQL (further detail please refer to CHAPTER 2 Part 1&2

# Function 1. First time installation or upgrade and continue on using File System Mode



#### 1-Install 701ServerSQL in Main PC



- Step 1. Run 701ServerSQL files and select [Run as administrator]
- Step 2. Install 701ServerSQL, At the very end of the installation completion, untick [Launch 701ServerSQL] and select [Finish]
- Step 3. After completing installation, the first time running 701ServerSQL select [Run as administrator] (Do not double click to run the software)
- Step 4. First time running 701ServerSQL, it will provides two options YES for Database Mode (required ODBC Mode DNS setting) or NO for file system Mode. For this option, select [No]

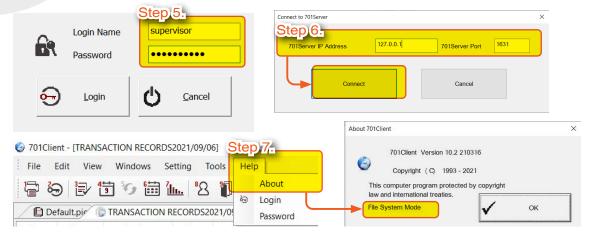


- Step 5. When login 701ServerSQL for the first time, please enter the default Login Name and password as below: Login Name: supervisor; Password: supervisor
- Step 6. When logged in to 701ServerSQL, select [Help] > [About] it will display the [File System Mode] indicated data will be stored on path C:\Program Files (x86)\701ServerSQL

#### 2-Install 701ClientSQL in Main PC



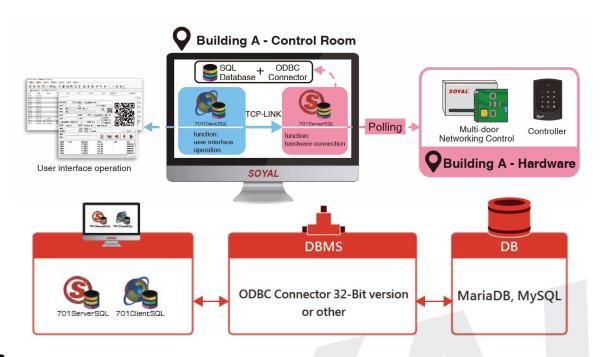
- Step 1. Run 701ClientSQL files and select [Run as administrator]
- Step 2. Install 701ClientSQL, At the very end of the installation completion, untick [Launch 701ServerSQL] and select [Finish]
- Step 3. After completing installation, the first time running 701ClientSQL select [Run as administrator] (Do not double click to run the software)
- Step 4. First time running 701ClientSQL, it will provides two options YES for Database Mode (required ODBC Mode DNS setting) or NO for file system Mode. For this option, select [No]



- Step 5. When login 701Client for the first time, please enter the default Login Name and password as below: Login Name: supervisor; Password: supervisor
- Step 6. First time running 701ClientSQL under filebase mode, software will ask a connection to 701ServerSQL. 701ServerSQL IP Address enter 127.0.0.1 (host PC) / 701ServerSQL Port enter 1631, Then click [Connect]
- Step 7. When logged in to 701ClientSQL, select [Help] > [About] it will display the [File System Mode] indicated data will be stored on path C:\Program Files (x86)\701ClientSQL



# Function 2. First time installation or upgrade and upgrade to use Database Mode



### NOTE

· How to Transfer Setting Parameters & Relevant Data Back to File System Mode from Database Mode?

The message recorded in Database Mode is non reversible, we cannot read the message from 701ClientSQL with File System Mode. The recommendation is using Export to Text File Function to record the relevant data as txt or excel file via 701ClientSQL.

The introduction about Export to Text File Function please refer to 701ClientSQL Manual 7.1 Export to Text File

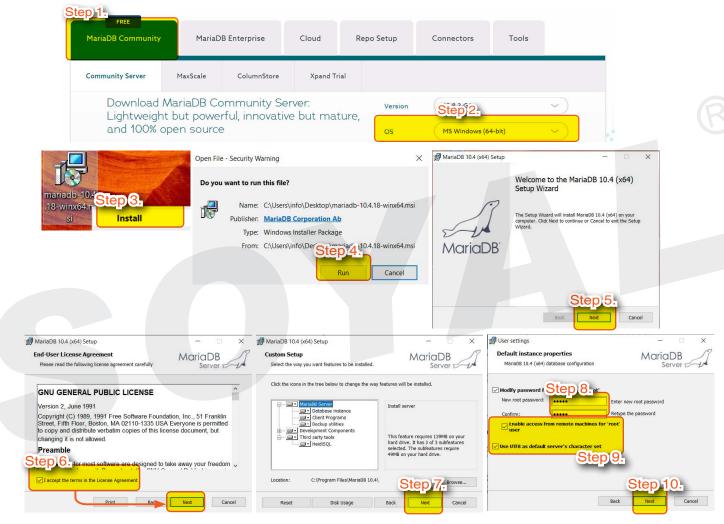
User data, Parameter Setting and etc. can use Import/Export Function to get back from Database Mode. The introduction about Import/Export Function please refer to 701ClientSQL Manual 3. Backup

- User interface of database and its operation is the same like file base system, but all the data is saved on the database.
- When upgrading to Database Mode, the old data that is recorded on file system mode will still save under file system format. Once you upgrade into the database, all of old data will automatically transferred to database and cannot be converted back to file system data. For event log (msg files), you required to do
- 'Message Import' manually from 701ServerSQL to convert the data from file system into database format.
- If you want to preserve the old data under file system format, make a copy and stored in a safe place (refer to Chapter 1 STEP 3. BACK UP DATA)
- Data that is remain on file system base even after upgrade to database mode:
  - 1.time attendance report such as DUTY file
  - 2.lift and floor data
  - 3.fingerprint and face data
- Upgrade from Windows XP to Windows 10, all of the data must be copy and directly paste to C:\Program Files (x86)

#### 1-Install DBMS

701 Software offer compatibility with Database Software such as MariaDB, MySQL, and SQLite. We will demonstrate using MariaDB as an example.

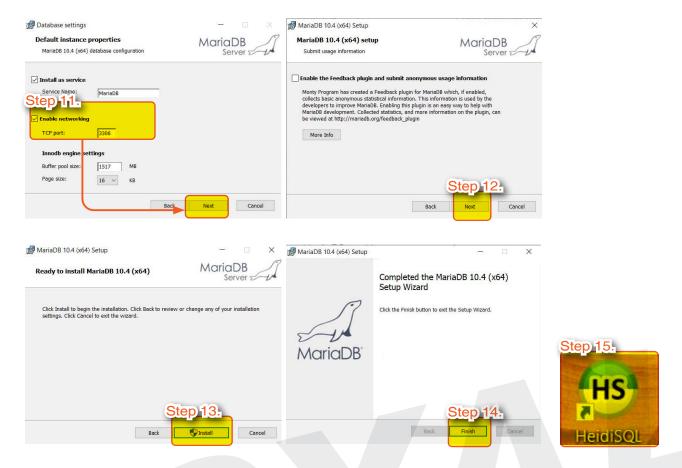
- Please choose Win32 or Win64 to download and install according to your operating system and download the version MariaDB version 10.3 and after
- This software can't be put in the SOYAL CD. Customers can only download it from the original website to meet the requirements of open source.
- Example we use mariadb-10.4.18-winx64.msi for installation steps demonstration



- Step 1. Download the installation from database (using MariaDB as example, please download from MariaDB Official Website)
- Step 2. Select 64-bit version and download
- Step 3. Install MariaDB
- Step 4. Select [Run]
- Step 5. Select [Next]
- Step 6. End-User License Agreement

  Accept the License Agreement by ticking [I accept the terms in the License Agreement] and select [Next]
- Step 7. Custom Setup Select [Next]
- Step 8. Enter [New root password] and [Confirm] as admin. This password is used for connection to database, please do not forget this password.
- Step 9. Then tick 'Enable access from remote machine for 'root' user' and 'User UTF8 as default server's character set'
- Step 10. Select [Next]



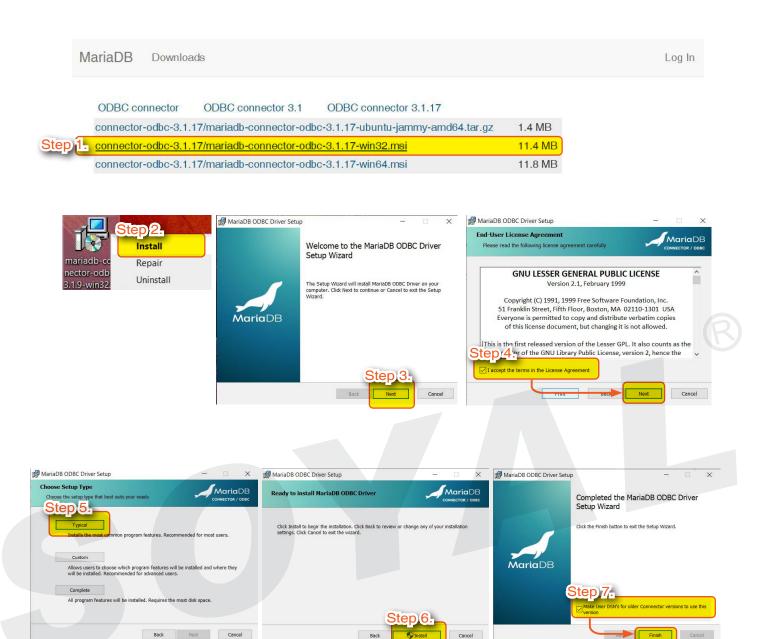


- Step 11. Enter TCP Port '3306' (note: if you have installed other software that also required connection to database, please note the TCP Port value cannot have the same value as 701ServerSQL)
- Step 12. Select 'Next'
- Step 13. Select 'Install' to start installation of MariaDB
- Step 14. Select 'Finish' to finish installation
- Step 15. When installing MariaDB, HeidiSQL will also be included as a bundle. That is why, on your desktop HeidiSQL shortcut is automatically created.

#### 2-Install ODBC Connector

To establish connection between 701ServerSQL and 701Client SQL, ODBC Connector is required. 701 Software offer compatibility with Database Software such as MariaDB, MySQL, and SQLite. We will demonstrate using MariaDB as an example and the ODBC Connector of MariaDB is MariaDB Connector/ODBC

- No matter what is your operation system either Win64 / Win32, please download ODBC Connector of Win32.
- This software can't be put in the SOYAL CD. Customers can only download it from the original website to meet the requirements of open source.
- Example we use mariadb-connector-odbc-3.1.17-win32.msi for installation steps demonstration



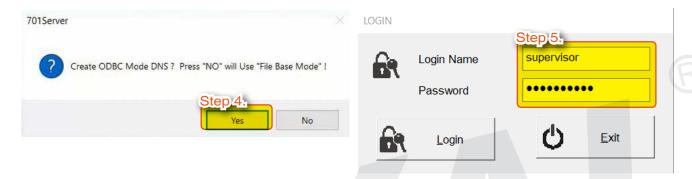
- Step 1. Please download the 32-bit version of the installation from the database. (Using MariaDB as an example, please download it from the <u>official website of MariaDB</u>.)
- Step 2. Install MariaDB ODBC Connector
- Step 3. Select 'Next'
- Step 4. End-User License Agreement

  Accept the License Agreement by ticking [I accept the terms in the License Agreement] and select [Next]
- Step 5. Select [Typical]
- Step 6. Select [Install] to start installation of MariaDB ODBC Connector
- Step 7. Tick option [Make User DSN's for older Connector version to use this version] and click [Finish] to finish installation



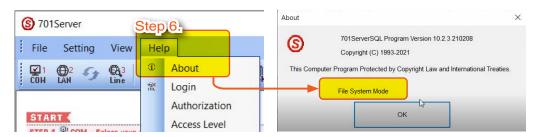
#### 3-Install 701ServerSQL in Main PC





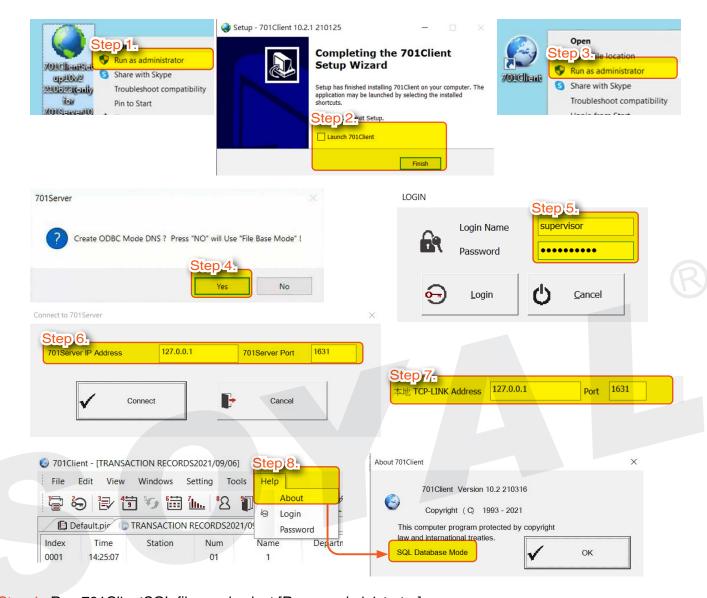
- Step 1. Run 701ServerSQL files and select [Run as administrator]
- Step 2. Install 701ServerSQL
  - At the very end of the installation completion, untick [Launch 701ServerSQL] and select [Finish]
- Step 3. After completing installation, the first time running 701ServerSQL select [Run as administrator] (Do not double click to run the software)
- Step 4. First time running 701ServerSQL, it will provides two options YES for Database Mode (required ODBC Mode DNS setting) or NO for file system Mode. For this option, select [YES]
- Step 5. When login 701ServerSQL for the first time, please enter the default Login Name and password as below:

Login Name: supervisor Password: supervisor



Step 6. When logged in to 701ServerSQL, select [Help] > [About] it will display the [SQL Database Mode] indicated data will be stored on database.

#### 4-Install 701ClientSQL in Main PC



- Step 1. Run 701ClientSQL files and select [Run as administrator]
- Step 2. Install 701ClientSQL. At the very end of the installation completion, untick [Launch 701ServerSQL] and select [Finish]
- Step 3. After completing installation, the first time running 701ClientSQL select [Run as administrator] (Do not double click to run the software)
- Step 4. First time running 701ClientSQL, it will provides two options YES for Database Mode (required ODBC Mode DNS setting) or NO for file system Mode. For this option, select [Yes]
- Step 5. When login 701Client for the first time, please enter the default Login Name and password as below:

  Login Name: supervisor
  - Password: supervisor
- Step 6. First time running 701ClientSQL under database mode, software will ask a connection to 701ServerSQL. 701ServerSQL IP Address enter 127.0.0.1 (host PC) / 701ServerSQL Port enter 1631. Then click 'Connect'
- Step 7. Enter TCP-LINK must follow "Local TCP-LINK Address" of 701ServerSQL's COM setting (IP Address and Port must be the same)
- Step 8. When logged in to 701ClientSQL, select [Help] > [About] it will display the [SQL Database Mode] indicated data will be stored on database



### Function 3. Install 701ServerSQL in the main PC only, 701ClientSQL in other PCs.



### NOTE

• This features required connection to the internet. Step below is how to know your PC's IP Address:



- Step 1. Search for [Command Prompt]
- Step 2. Enter [ipconfig] and press [Enter]
- Step 3. IPv4 Address is your PC's IP address. In this example, 192.168.1.82 is the IP Address.

#### 1-Install DBMS

Refer to Chapter 3 STEP 1. Install DBMS

#### 2-Install ODBC Connector

Refer to Chapter 3 STEP 2. Install ODBC Connector

#### 3-Install 701ServerSQL in Main PC

Refer to Chapter 3 STEP 3.Install 701ServerSQL in Main PC

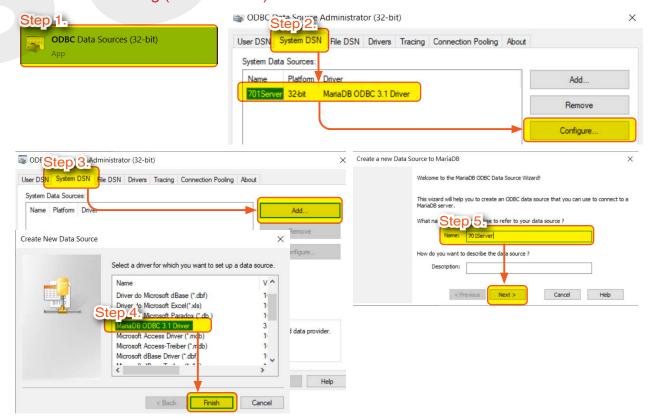
#### 4-Install 701ClientSQL in Main PC

Refer to Chapter 3 STEP 4. Install 701ClientSQL in Main PC

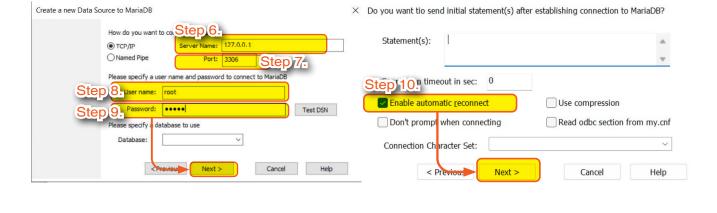
#### 5-Setting ODBC Connector

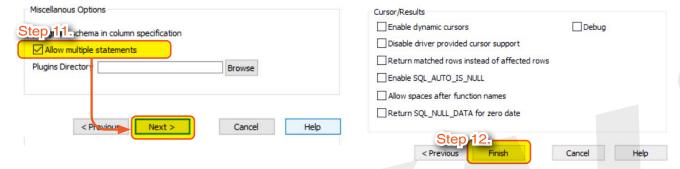
Setting up ODBC Connector will enabled connection between Remote Client A and B PC to the Main Server.

Main Server Setting (192.168.1.79)

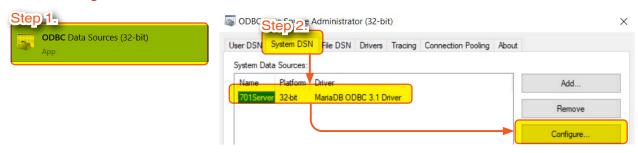




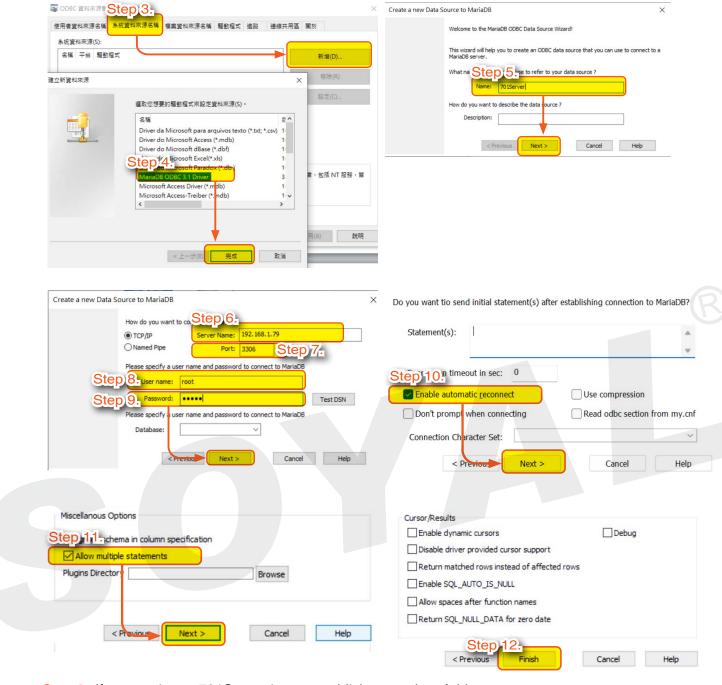




- Step 1. Go to 'ODBC Data Sources (32-bit)'
- Step 2. Select 701ServerSQL and select Configure
  (Skip Step 3-Step 5 if connection to 701Server is established and directly to Step 6)
- Step 3. If connection to 701Server is not establish yet, select Add
- Step 4. Select 'MariaDB ODBC 3.1 Driver, Click [Finish]
- Step 5. Enter [701Server] on Name field and select [Next]
- Step 6. Server Name 127.0.0.1 (connection to Host PC)
- Step 7. On Port setting enter [3306]
- Step 8. Username enter [root]
- Step 9. Password enter [admin] and select [Next]
- Step 10. Tick [Enable automatic reconnect] then select Next
- Step 11. Tick [Allow multiple statements] then select Next
- Step 12. The next part does not required set up so click Click Next>until you the end of the page and click [Finish]
- Remote Client A (192.168.1.81) & Remote Client B (192.168.1.82) have the same setting



- Step 1. Go to [ODBC Data Sources (32-bit)]
- Step 2. Select 701Server and select Configure
  (Skip Step 3-Step 5 if connection to 701ServerSQL is established and directly to Step 6)



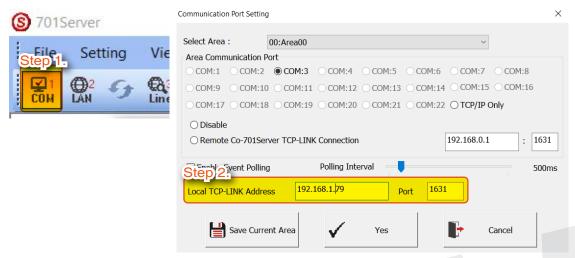
- Step 3. If connection to 701Server is not establish yet, select Add
- Step 4. Select 'MariaDB ODBC 3.1 Driver, Click [Finish]
- Step 5. Enter [701Server] on Name field and select [Next]
- Step 6. Server Name 192.168.1.79 (connection to Main Server PC's IP Address)
- Step 7. On Port setting enter [3306]
- Step 8. Username enter [root]
- Step 9. Password enter [admin] and select [Next]
- Step 10. Tick [Enable automatic reconnect] then select Next
- Step 11. Tick [Allow multiple statements] then select Next
- Step 12. The next part does not required set up so click Click Next>until you the end of the page and click [Finish]



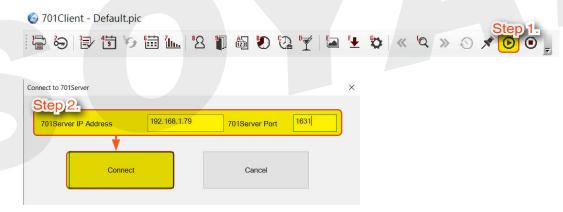
#### 6-Setting TCP-LINK Server and TCP-LINK Client

After ODBC Connector setting, now 701ServerSQL's TCP-LINK Server and 701ClientSQL's TCP-LINK Client required setting to establish the connection between 701Software to Database remotely.

• Main Server (192.168.1.79)

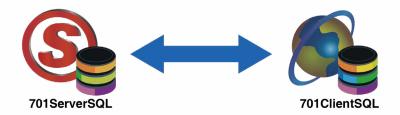


- Step 1. On 701ServerSQL [COM]
- Step 2. Local TCP-LINK Address enter Main Server IP Address which is 192.168.1.79 Port 1631
- Remote Client A (192.168.1.81) & Remote Client B (192.168.1.82) have the same setting



- Step 1. First time running 701ClientSQL under database mode, software will ask a connection to 701ServerSQL.
  - 701ServerSQL IP Address enter 192.168.1.79 (Main Server IP address) 701ServerSQL Port enter 1631. Then click 'Connect'
- Step 2. Or manually change the Main Server IP Address by clicking [Start Polling] button 701ServerSQL IP Address enter 192.168.1.79 (Main Server IP address) 701ServerSQL Port enter 1631. Then click [Connect]

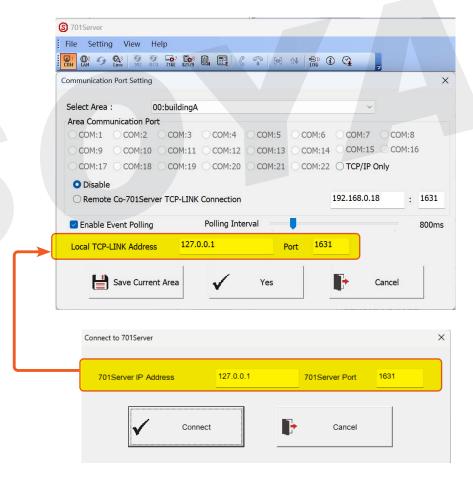
#### Key Points for Connecting 701ServerSQL and 701ClientSQL



#### Essential Checkpoints for Connecting 701ServerSQL and 701ClientSQL

#### 1- IP / PORT

701ServerSQL needs to configure the IP/Port in COM settings for communication with the 701ClientSQL software. Therefore, when running 701ClientSQL for the first time with administrator privileges, an IP/Port configuration window will pop up. At this point, you should enter the IP/Port of 701ServerSQL in the COM section marked in red.



### NOTE

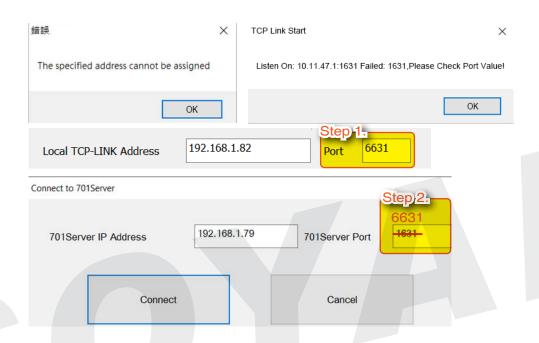
Many people mistakenly fill in the IP/Port of the 727CM converter or the E-series card reader in these two fields, resulting in errors. For those who encounter this error, please consider how you would fill in the IP/Port if your architecture includes multiple 727CM converters or E-series card readers.



#### 2-Firewall

To avoid communication abnormalities or blocking of messages returned by card readers, ensure that 701ServerSQL and 701ClientSQL are excluded from the firewall settings. For detailed instructions, please refer to --> Q2: Device connection to 701Software become offline and unable to connect

### Q1. "The specified address cannot be assigned" error message or "Listen on: XXXX Failed: 1631, Please Check Port Value"



A3. Both of the error is as a result that your antivirus software is blocking connection to 701 Software. To solve this issue, please change the Listen Port connection between TCP-LINK Server and TCP-LINK Client into other Port that is not 163, for example 6631.

- Step 1. On 701ServerSQL's COM section change the Port from 1631 into 6631
- Step 2. After changing the Port on 701ServerSQL, all of the 701ClientSQL Port (connection to 701ServerSQL) must also be changed from 1631 into 6631

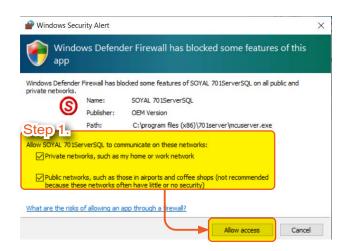
# Q2. Device connection to 701Software become offline and unable to connect

A4. Because Software 10.2 Version is enabling multiple port and connection that leaning on internet connection, sometimes Windows defender Firewall and/or antivirus software might block the connection to 701Software. If doing Troubleshooting Q3 problem still persists, please follow the steps listed below:



# 1- Allowing both 701ServerSQL and 701ClientSQL on Windows Defender Firewall

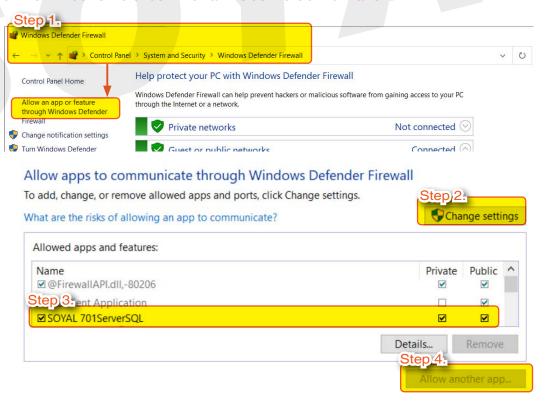
#### 1: Windows Security Alert message

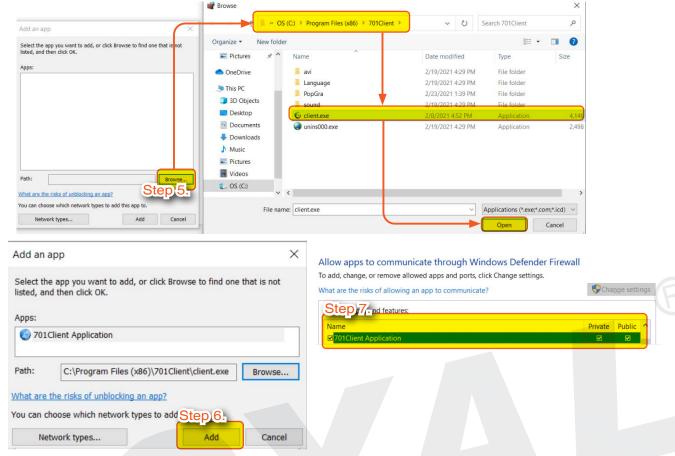


Step 1. If you are installing 10.2 directly in the first place you will find Windows Security Alert message. Tick both private networks and public networks.

This procedure must also be done with both 701ServerSQL and 701ClientSQL.

2: Check the Windows Defender Firewall inside the Control Panel





- Step 1. If you happened to skip the procedure, go to Control Panel > System and Security > Windows Defender Firewall and manually added 701ServerSQL and 701ClientSQL to allow connection on both public and private networks. Select [Allow an app or feature through Windows Defender Firewall]
- Step 2. Select [Change Settings]
- Step 3. Tick Private and Public on [SOYAL 701ServerSQL]
- Step 4. Select [Allow another app] to setup 701ClientSQL for the next step
- Step 5. Select Browse and enter [C:\Program Files (x86)\701ClientSQL] > then select client.exe > click [Open]
- Step 6. Select [Add]
- Step 7. Tick both Private and Public for [701ClientSQL Application]

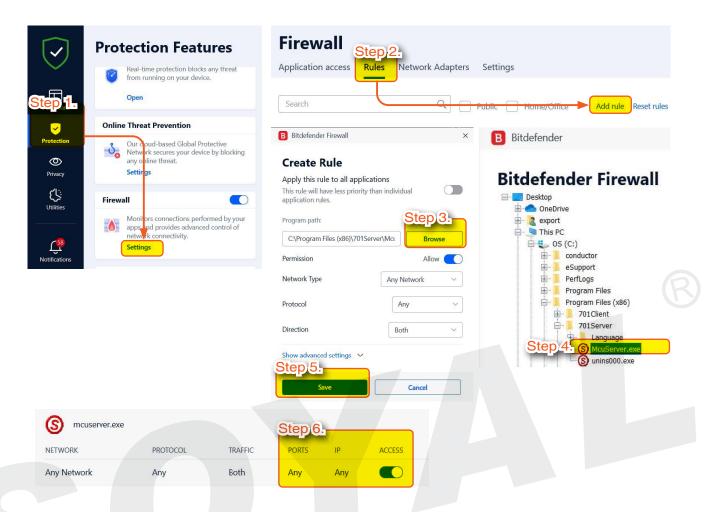
#### 2- Allowing both 701ServerSQL and 701ClientSQL on Antivirus Software

#### **Example 1: Norton Antivirus**



Step 1. On Firewall Alert setting options, select Allow Always on McuServer.exe

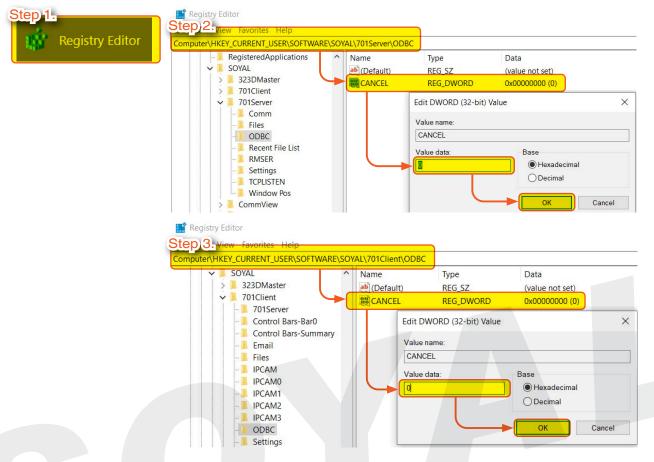
#### Example 2: Bitdefender



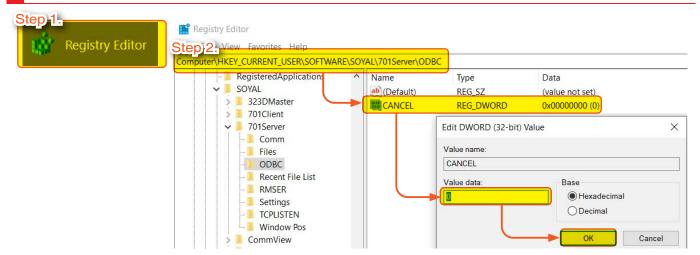
- Step 1. Run Bitdefender software and select Protection > Firewall Setting
- Step 2. Select Rules > Add rule
- Step 3. Click Browse
- Step 4. Enter C:\Program Files (x86)\701ServerSQL > and select 'McuServer.exe'
- Step 5. Select Save
- Step 6. McuServer.exe has been added to Firewall Setting and Access is allowed. This also allowing access to Any Ports and IP Address without restriction

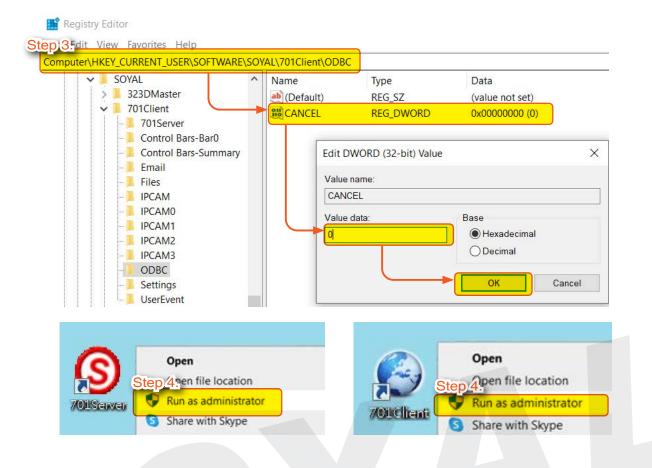


# Q3. Already following the installation step by step and install DBMS with its ODBC Connector but software still shows 'File System Mode'



- A1. 701ServerSQL and 701ClientSQL connection to Database is not successful so software will remain as File System Mode.
- Step 1. Go to Registry Editor
- Step 2. Select Computer\HKEY\_CURRENT\_USER\SOFTWARE\SOYAL\701ServerSQL\ODBC → double click [CANCEL] value and change from 1 into 0 → select [OK]
- Step 3. Select Computer\HKEY\_CURRENT\_USER\SOFTWARE\SOYAL\701ClientSQL\ODBC→ double click [CANCEL] value and change from 1 into 0 → select [OK]
  - Q4. Does not select "Run as Administrator", when running software it does not convert to SQL Database Mode

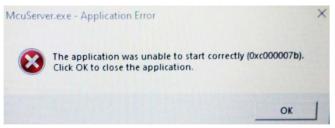




- Step 1. Go to Registry Editor
- Step 2. Select Computer\HKEY\_CURRENT\_USER\SOFTWARE\SOYAL\701ServerSQL\ODBC → double click 'CANCEL' value and change from 1 into 0 → select 'OK'
- Step 3. Select Computer\HKEY\_CURRENT\_USER\SOFTWARE\SOYAL\701ClientSQL\ODBC → double click 'CANCEL' value and change from 1 into 0 → select 'OK'
- Step 4. Right click on 701ServerSQL and choose "Run as administrator". Repeat the same method with 701ClientSQL software.

# Q5. 0xc000007b, mfc140u.dll and api-ms-win-crt-runtime-l1-1-0.dll problems when installing 701ServerSQL and 701ClientSQL

After installing 701ServerSQL and 701ClientSQL, when running the application it shows an error 0xc000007b, mfc140u.dll and api-ms-win-crt-runtime-l1-1-0.dll









Both problems can be solved after installing below file. For OS Win32, please download vc\_redist.x86.exe For OS Win64, please download vc\_redist.x64.exe Reference: https://support.microsoft.com/zh-tw/help/2977003/the-latest-supported-visual-c-downloads

Redistributable version for Windows operating system:

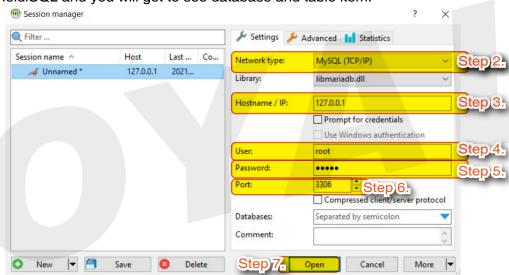
Win 7: redistributable version 2010 Win 10: distributable version 2015-2019

# Q6. Could not load previous date data when loading msg files, how to track the data stored on the database?

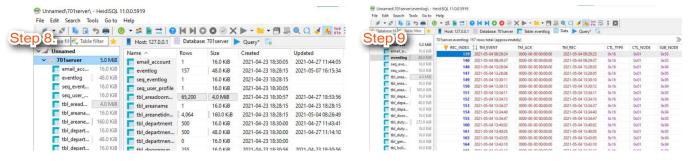
A6. Taking MariaDB for example, after download and install MariaDB, HeidiSQL shortcut will be automatically created

Logged in into HeidiSQL and you will get to see database and table item.





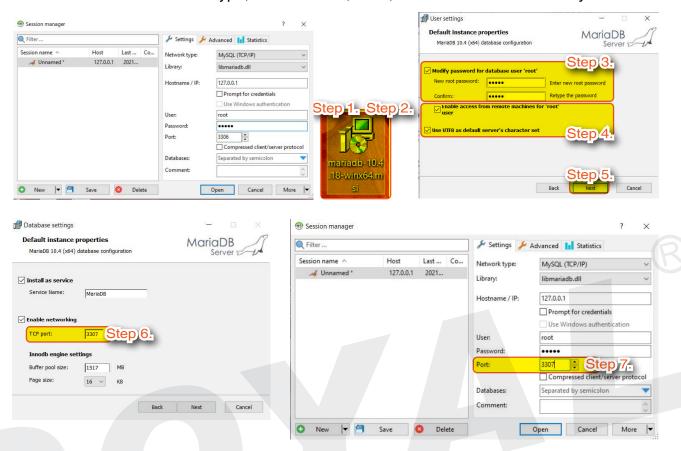
- Step 1. Double click to open HeidiSQL
- Step 2. Select Network type, if you are newest version of HeidiSQL, select [MySQL (TCP/IP)]
- Step 3. Hostname / IP: select 127.0.0.1 for host computer, if enabling TCP-LINK enter server PC's IP address
- Step 4. User enter [root]
- Step 5. Password enter [admin]
- Step 6. Port enter [3306]
- Step 7. Select [Open]



- Step 8. You will see the table of 701Software UI and data here
- Step 9. Select table that you want to look the data of, and then select [Data].

#### Q7. Could not logged in to HeidiSQL

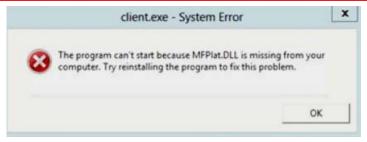
A7. Make sure the Network type, Hostname/IP, User, and Password has already correct



Then there is a possibility that you have download and install W701S software before which using the same port 3306. Then for 701ServerSQL connection to database instead of Port 3306, change it into Port 3307.

- Step 1. On the MariaDB program files, right click > select [Uninstall]
- Step 2. After finished uninstall MariaDB, right click > Select [Install] again
- Step 3. During the installation, Enter [New root password] and [Confirm] as admin. This password is used for connection to database, please **do not forget** this password.
- Step 4. Then tick [Enable access from remote machine for 'root' user] and [User UTF8 as default server' s character set]
- Step 5. Select [Next]
- Step 6. Enter TCP Port [3307]
- Step 7. Logged in to HeidiSQL and change the Port into [3307].

# Q8. Installation on Windows Server 2012 show MFPlat.DLL Error when running 701ClientSQL

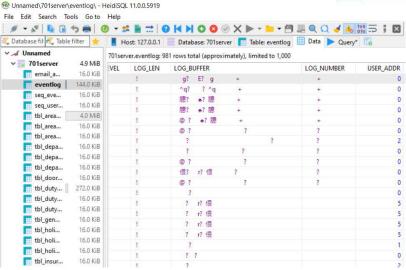


A9. Required to enable some Media Feature Role in administrator console and download Windows Server Essentials Media Pack in order for 701ClientSQL to running normally.



### Q9. Why it shows error input on HeidiSQL?





A8. It is because the data shows is under HEX format, please click to show binary data on text format instead of HEX format.



- Q10. Installation on Windows 7 in Database Mode show "This application is only supported on Windows 10, Windows Server 2016, or higher."
  - A10. Please install MariaDB version 10.4.12 and before, ODBC version 3.1.0, and Redistributable 2010
- Q11. When running the software, an error message "CSHTSV10.DLL not found" is displayed.



Please make sure to install Microsoft Visual C++ Redistributable before backing up the data.

\*\*Backup procedure > Backup and Restore 701ServerSQL and 701ClientSQL



- Step 1. Please uninstall the 701Server & 701Client software from the "Programs and Features" section in the Control Panel.
- Step 2. Search for "regedit" (Registry Editor) on your computer. Find the SOYAL software path at "Computer\HKEY\_CURRENT\_USER\SOFTWARE\SOYAL" and delete the 701Server & 701Client folders.
- Step 3. Delete the 701Server & 701Client folders from the installation directory. If you have any backup requirements, please make sure to copy them before deleting.
- Step 4. Run the installation file for 701ServerSQL/701ClientSQL again to proceed with the software installation.

### **Chapter 5. Frequently Asked Questions**

# Q1. Current software version 8.06, could it perform to upgrade directly to Ver. 10.2?

A1: We recommend to do the upgrade step by step, 8.06 > 9.02 > 10.2

First, please do the backup data of 8.06 software and directly update with 9.02 version.

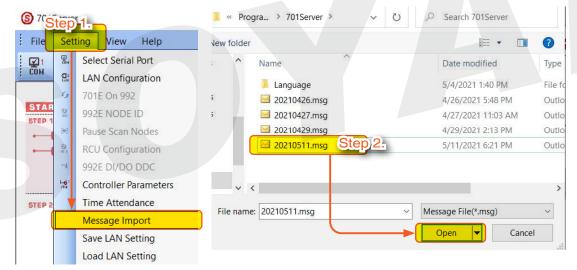
After that follow the instruction on Chapter 1. Please note that Version 8.06 can only be used on Windows XP meanwhile, 701 Software version 10.2 can only be used on Windows 7 or 10.

# Q2. After updating software to Ver. 10.2 and, is preserving old data under file system is possible?

Yes you can. Please refer to Chapter 1 Step 3. Backup Data.

#### Q3. How to convert old data from file base to database?

A3: When upgrading to Database Mode, the old data that is recorded on file system mode will still save under file system format. Once you upgrade into the database, all of old data will automatically transferred to database and cannot be converted back to file system data. For event log (msg files), you required to do 'Message Import' manually from 701ServerSQL to convert the data from file system into database format.



Step 1. Open 701ServerSQL > Select [Setting] > Select [Message Import]

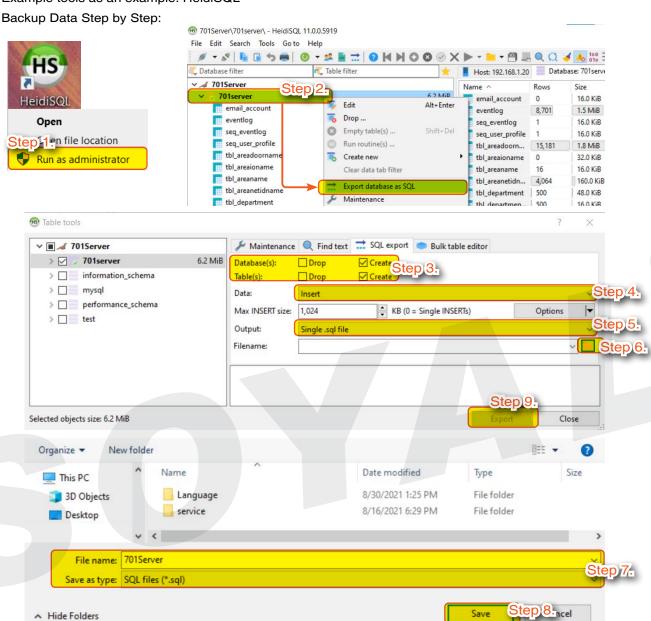
Step 2. Select msg files to import > Select [Open]

Data that is remain on file system	n base even after upgrade to databa	ase mode:
time attendance report  such as DUTY file	2. lift and floor data	3. fingerprint and face data
20210504.dut	FloorBypass001_001.Floor FloorBypass001_001.txt FloorBypass001_007.Floor	FP00001.FP3



# Q4. How to backup data in Database Mode?

Example tools as an example: HeidiSQL

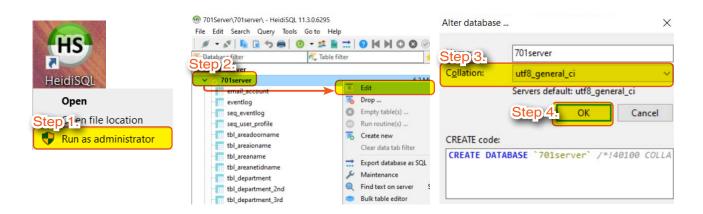


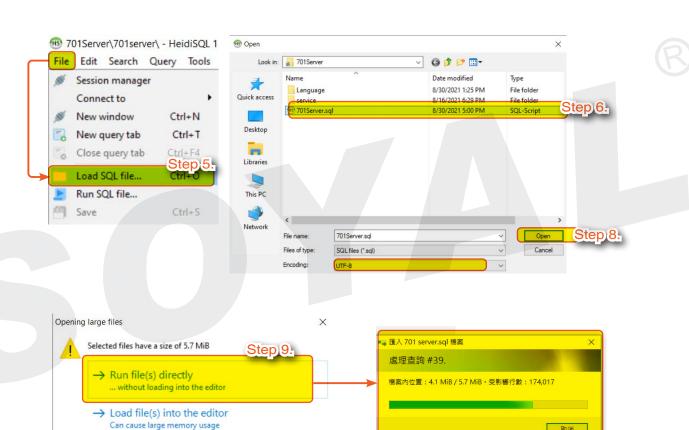
- Step 1. Run HeidiSQL and open the database by selecting [Run as administrator]
- Step 2. Select the database you want to back up, click right and select [Export database as SQL]
- Step 3. On Database and Table option, choose [Create] by ticking the box
- Step 4. On Data option select [Insert]
- Step 5. Output option select [Single .sql file]
- Step 6. Select folder path to save file
- Step 7. Name the backup file, for example: 701Server; and save under extension file .sql
- Step 8. Click [Save]
- Step 9. Select [Export] to start exporting data for backup

The backup file has been created on the designated path under format SQL-Script

# **Chapter 3. Frequently Asked Questions**

#### Restore Data Step by Step:





- Step 1. Run HeidiSQL and open the database by selecting [Run as administrator]
- Step 2. Select the database you want to restore, click right and select [Edit]
- Step 3. Select Collation and change into [utf8\_general\_ci]
- Step 4. Select [OK]

File list

- Step 5. Select [File] > select [Load SQL File]
- Step 6. Select backup file to restore

→ Cancel

- Step 7. Select Encoding type [UTF-8]
- Step 8. Select [Open]
- Step 9. Select [Run file(s) directly] and data will be restore back to database



### Q5. How to configure or change TCP Port and Modbus Port?

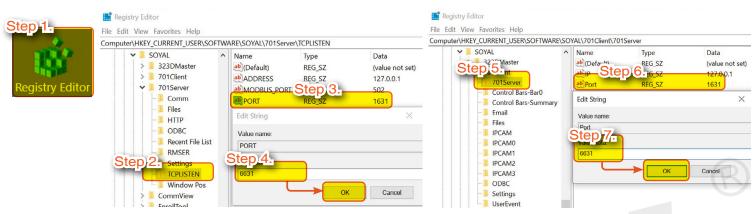
After 701ServerSQL startup, two TCP ports will be opened:

• Soyal Link for 701Client: 1631

• Modbus TCP: 502

To configure or change them, please refer to the following instructions:

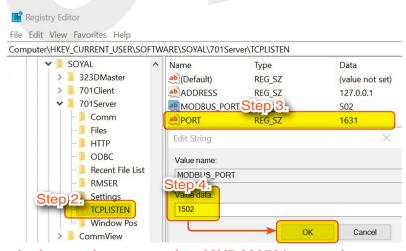
#### 1- TCP Port:



- Step 1. Run the [Registry Editor]
- Step 2. Navigate to the path:Computer\HKEY\_CURRENT\_USER\Software\SOYAL\701Server\TCPLISTEN
- Step 3. Right-click on the PORT and select Modify.
- Step 4. Set the string value to [6631] or any other allowed value, and click OK.
- Step 5. Navigate to the path: Computer\HKEY\_CURRENT\_USER\SOFTWARE\SOYAL\701Client\701Server
- Step 6. Right-click on the PORT and select Modify.
- Step 7. Set the string value to [6631] or any other allowed value (must be the same as the setting in Step 4), and click OK
- **X** Note: The Port settings in Step 4 and Step 7 must be consistent.

#### 2- Modbus Port:





#### **X** Please update the instructions to version 10V5 230531 onwards.

- Step 1. Run the [Registry Editor].
- Step 2. Navigate to the path: Computer\HKEY\_CURRENT\_USER\Software\SOYAL\701Server\TCPLISTEN
- Step 3. Right-click on MODBUS\_PORT and select Modify.
- Step 4. Set the string value to [1502] or any other allowed value, and click OK.

### NOTE

 If the MODBUS\_PORT entry is missing in the Registry Editor even after updating 701ServerSQL to version 10V5 230531 onwards, please restart 701ServerSQL and press F5 to refresh the Registry Editor screen.