

Configuration Manual For SCADA LabVIEW 8.2



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Chapter 1

LabVIEW 8.2

1-1 OPC Server

| 😳 OPC TechsMod bus30CF | G.mdb - OPCTechsModbus | 30CFG | | | | |
|--|------------------------|----------|-------------------|----------------|----------------|------------|
| <u>File Edit V</u> iew <u>Go</u> <u>T</u> ools | s <u>H</u> elp | | | | | |
| 🗅 😂 😼 🚰 🗢 🔿 | 🔁 👗 🛍 💼 🏪 🦕 | | 3 60 60 | 8 AD | | |
| 🖃 🗄 🛓 Address Space | Name 🛆 | Simulate | Simple Tem | Parameterize. | Location T | уре 🔺 |
| 🖻 🜮 Port1 | AI_01 | No | | | Input Regi | ster (woj💳 |
| Device1 | AI_02 | No | | | Input Regi | ster (woi |
| | AI_03 | No | | | Input Regi | ster (woi |
| | ATAI 04 | No | | | Input Regi | ster (wor |
| AT AL 04 | | | 1 | | | |
| AI_05 | | | | | | |
| AI_06 | <u>Name:</u> | | | | | |
| AI_07 | Address: 1 | | | | □ ÷ | Simulate |
| AI_08 | Device Type | | - Timeouts (ms) — | | | |
| AI_09 | Custom | | R <u>e</u> ad: | 1000 | <u>W</u> rite: | 1000 |
| | | | Timeouts to | 3 \$ | uspend | 10000 |
| A AO 02 | | | suspend: | | period: | 10000 |
| AO_03 | | | Optimizations — | | | |
| 🕂 AO_04 | | | The numbers be | low indicate h | iow much unus | ed |
| <u>A</u> AO_05 | | | data can be tran: | sferred in one | message to me: | rge |
| AO_06 | Parameters: | | | | | жи. ——— |
| | Ideal | - | B <u>i</u> ts: | 160 | Words: | 5 |
| | | | | | | |
| Ready | | | 40 Object(s) | M | ode: Demo | |

Please create tags according to the Configuration Manual.

Later, click [File] \rightarrow [Make Active] to activate new created configuration file.

| 😳 OPCTechsModbus30CFG.mdb - OPCTechsl | Modbus30CFG | | |
|---|--|--|------------------------|
| <u>File Edit View Go Tools H</u> elp | | | |
| <u>N</u> ew Ctrl+N Open Ctrl+O | □ <u></u> <u> <u> </u> <u> </u></u> | 🗐 😰 66° 🤗 🕕 | |
| Save <u>A</u> s <u>C</u> onnection Properties | No | Input Register | (wo) |
| Export (WinCE, Embedded WinNT) | No No | Input Register Input Register Input Register | (wo) (wo) (wo) ▼ |
| CSV Export CSV Import | | | |
| XML Export XML Export Schema XML Import | vice1 | Timeouts (ms) — | ulate |
| XML Validate <u>M</u> ake Active | | Read: 1000 Write: 10 Timeouts to suspend: 3 Suspend period: 100 | 00 |
| <u>1</u> OPCTechsModbus30CFG.mdb <u>2</u> 11.mdb Exit | | Optimizations The numbers below indicate how much unused data can be transferred in one message to merge together addresses that are close but not adjacent | |
| A AO_09 A AO_10 ↓ Ideal | · | Bits: 160 Words: | 5 |
| Make current database active for using by OPC server | | 40 Object(s) Mode: Demo | N // |

1-2 Connect OPC Client to OPC Server through LabVIEW 8.2

To confirm if DSC Module has already been installed, please click [Start] \rightarrow [Programs] \rightarrow [National Instruments] \rightarrow [Measurement & Automation]



Note: DSC Module (Datalogging and Supervisory Control) should be installed first, so that OPC Client could work normally.

[Start] → [National Instruments LabVIEW 8.2] to start LabVIEW 8.2

| 🔯 Getting Started | |
|---------------------------------|-------------------------------------|
| <u>File Operate Tools H</u> elp | |
| LabVIEW 8.2 | Licensed for Professional Version |
| | Resources |
| New | New To LabVIEW? |
| 🖏 Blank VI | Getting Started with LabVIEW |
| 🐞 Empty Project | LabVIEW Fundamentals |
| 🐮 VI from Template | Guide to LabVIEW Documentation |
| Der More | LabVIEW Help |
| 0 | Upgrading Lab¥IEW? |
| | MathScript |
| | 3D Picture Control |
| | LabVIEW Object-Oriented Programming |
| | List of All New Features |
| | Web Resources |
| | Discussion Forums |
| | Training Courses |
| | LabVIEW Zone |
| | Examples |
| | 🔍 Find Examples |
| | |

Please select [Empty Project].

| 📴 Getting Started | |
|---|-------------------------------------|
| <u>File Operate T</u> ools <u>H</u> elp | |
| LabVIEW 8.2 | Licensed for Professional Version |
| | Resources |
| New | New To Lab∀IE₩? |
| 🝓 Blank VI | Getting Started with LabVIEW |
| 🐞 Empty Project | LabVIEW Fundamentals |
| 🐮 VI from Template | Guide to LabVIEW Documentation |
| More | LabVIEW Help |
| | Upgrading LabVIEW? |
| | MathScript |
| DIOWSE | 3D Picture Control |
| | LabVIEW Object-Oriented Programming |
| | List of All New Features |
| | Web Resources |
| | Discussion Forums |
| | Training Courses |
| | LabVIEW Zone |
| | Examples |
| | 🔍 Find Examples |
| | |

On the tree view, please click [My Computer] and then press the right key select [New] \rightarrow [I/O Server]



Select the OPC you need and then click [Continue].

| 🔯 Create New I/O Server | × |
|--|---|
| I/O Server Type | |
| Alarm Printer | |
| Custom VI - On Input Change | |
| Custom VI - Periodic | |
| DataSet Marking | |
| Modbus | |
| ModbusSlave | |
| OPC | |
| | |
| | Ŧ |
| Description | |
| Communicate with OPC (OLE for Process Control) Servers. | |
| Continue Cancel Help | |

Please select "Modbus30DA.3"; then click [Ok].

| 🔯 Configure OPC Client Instance | × |
|---------------------------------|------------------|
| Settings Advanced | |
| Browse Machine Update F | late (ms) |
| Machine Dead ban | d (%) |
| Browse | |
| Registered OPC Server Reconne | ct Poll Rate (s) |
| Sun WareCorp.OmronNet30DA.3 | |
| Sun WareCorp.Modbus30DA.3 | |
| SunWareCorp.ModbusTCP30DA.3 | |
| Sun WareCorp. YaskawaNet3UDA.3 | |
| Sun WareCorp.Panasonic3UDA.3 | |
| Sun WareCorp FatekNet30D4.3 | |
| Sun WareCorp ABNet30DA 3 | |
| SunWareCorp.Fatek30DA.3 | |
| PmgID | |
| SupWareCorp Modbus20D4 3 | |
| Survaiscorp.NoabasoDA.5 | |
| | |
| | |
| | |
| OK Cancel | Help |

Item "OPC1" means the OPC Server you have just selected.



Click [Untitled Library 1]; then press the right key to select [New] \rightarrow [Variable].



Edit the Tags' name and data type. Then, click [Browse...] to display all the OPC Server.

| 🔁 Shared Yariable Properties | × |
|------------------------------|------------------------|
| Category | Variable |
| Variable | Name |
| Logging Undate Deadband | AI_01 |
| Alarming | Data Type |
| Scaling | Int32 |
| Initial Value | Variable Type |
| Description | Network-Published 🚽 🖣 |
| , southy | |
| | I♥ Use Buffering |
| | Number of 132s |
| | |
| | |
| | Bind to Source |
| | Access Type read/write |
| | Path |
| | Browse |
| T | Single Writer |
| | OK Cancel Help |

Please select " OPC1 " to show up the data items.

| Select Source Item | X |
|--|--|
| | |
| Network-Published Source | |
| Project Items | |
| | |
| 🖃 🖦 Project: Untitled Project 1 | |
| 🖻 💂 My Computer | Item data type |
| District Construction of the second s | |
| 🗄 😂 OPC1 | |
| Dev Port | |
| | |
| <u>AI_01</u> | |
| | |
| AI_03 | |
| AI_U4 | |
| | Thum and the second sec |
| AI_00 | Item access type |
| AI_07 | Inone |
| AT_00 | |
| AT 10 | Make properties match selection? |
| AO 01 | |
| AO 02 | |
| AO 03 | |
| AO_04 | |
| | |
| | |
| | OK Cancel Help |
| | |

Set up all the parameters; then click [OK].

| 🔁 Shared ¥ariable Properties | × |
|------------------------------|--|
| Category | Variable |
| Variable | Name |
| Logging Undate Deadband | AI_01 |
| Alarming | Data Type Twi Int 22 (long [22] bit integer (-21/17/83648 to 21/ |
| Scaling | Int32 |
| Initial Value | Variable Type |
| Description | Network-Published 🗸 |
| | ☑ Use Buffering |
| | Number of I32s |
| | ✓ Bind to Source |
| | Access Type read/write |
| | Path My Computer/Untitled Library 1/OPC1/NewPort/ Browse Browse |
| | Single Writer |
| | OK Cancel Help |

Later on, the tag, "AI_01", you have just edited will be created.



Click [Untitled Library 1]; press the right key selecting [New] \rightarrow [VI]



Drag the "AI_01" from Pronect Explorer to Block Diagram, and then move "Number Indicator" from Controls to Front Panel



Create link with tag "AI_01" and Numeric.

| 😰 Untitled Library 1:Untitled 1 Block Diagram on M | Computer * | |
|---|--|-----------------------------------|
| <u>File Edit View Project Operate Tools Window</u> | 🔯 Untitled Library 1:Untitled 1 Front Panel on My Computer * | |
| 수 관 🔵 💵 😵 🕵 🛵 🗗 🔐 12pt A | <u>File Edit Yiew Project Operate Tools Window H</u> elp | Controls |
| | 🗘 🐼 🛑 💵 12pt Application Font 🔽 🚛 🚛 🕮 🤇 | 🔍 Search 🛛 🕄 View 🔻 📑 |
| Numeric | | ▼ Modem |
| AI_01 | | |
| | | 123 123 |
| | | Numeric Cont Numeric Indic |
| | | 12:00 11/07 |
| | | Time Stamp C Time Stamp In |
| | | 10- 10- |
| 🛃 Project Explorer - Untitled Project 1 * 📃 🗖 | Numeric | 0- |
| <u>File Edit View Project Operate Tools W</u> indow | | Vertical Fill Sli Vertical Pointe |
| 🏝 😅 🞒 🗴 🗈 🕼 🗙 💕 🖬 🖽 🕶 1 | | |
| E- b Project: Untitled Project 1 | | Vertical Progr Vertical Gradu |
| 🗗 📑 Untitled Library 1 | | |
| - 2 OPC1 | | Horizontal Fill Horizontal Poi |
| Untitled 1 | | |
| Build Specifications | | Horizontal Pro Horizontal Gra |
| | | 4 6 2-0 2-0 |
| | | Knob Dial |
| | My Computer 4 | e 4 🔨 |

Complete setting process.



Run the project to confirm the program works normally.

| 🛃 U | 🔁 Untitled Library 1:Untitled 1 | | | | | | | | |
|------|---------------------------------|--------------|---------|-----------------|---------------|----------------|--------------|--|----------|
| File | <u>E</u> dit | <u>V</u> iew | Project | <u>O</u> perate | <u>T</u> ools | <u>W</u> indow | <u>H</u> elp | | 1 |
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