TOPDOC NexGen Programming Software

Table of Contents

Overview

TOPDOC® NexGen is the programming, configuration, documentation and maintenance software for all SoftPLC controllers and Gateways.

TOPDOC NexGen makes SoftPLC® programming and continued maintenance fast and easy. The sleek user interface design means both infrequent and "power" users have the features and functions they need.

Standard Functions

- Ladder logic program and documentation development - both offline *(local)* and online *(remote)*

- Online SoftPLC monitoring & troubleshooting

- SoftPLC and I/O Driver Configuration

- Logic and data table reports

- XML import/export utilities

- SLC-500/MicroLogix import utility *NEW in rev 5.2!*

TOPDOC, since 1984 and the release of TOPDOC for PLC-2, has been recognized as an advanced PLC program development and documentation software product. The original PLC-3 software sold by Allen-Bradley was a private label version of TOPDOC. Many "industry firsts" have been attributed to the TOPDOC software.

TOPDOC NexGen provides a contemporary and complete set of tools for SoftPLC based systems, and continues the tradition of providing innovative features for PLC users:

- Program logic & documentation are combined into a single file that is downloaded to the SoftPLC controller - no more hassles to keep both sets of files "in-sync" or trying to troubleshoot a system with no documentation

- XML export/import of application files - allows easy auto-generation or re-use of applications

- Program "Clips" for easy re-use of standard logic sequences

- Native character support for other languages than English

TOPDOC NexGen Features

Application (APP) Editing

TOPDOC provides a comprehensive editor for both remote (online) and local (offline) use. Within the APP editor you can create/modify ladder logic, data table, and program documentation. You can create programs offline, then download them to your SoftPLC's. You can also work directly online connected to a SoftPLC to create, monitor, and modify programs.

Instruction/Data Entry are easy

- Enter/edit logic and data with simple point/click interface

- Copy/paste rung(s), or portions of rungs

- Program/edit/search using addresses or tagnames

- Smart Paste feature lets you build a library of common logic sequences, then easily reuse them with new addresses and/or descriptions using a spreadsheet-style interface

- TOPDOC NexGen automatically determines if a connected SoftPLC includes any user loadable instructions (TLI's), and dynamically adds them to the instruction menus. TLI's can also be programmed offline.
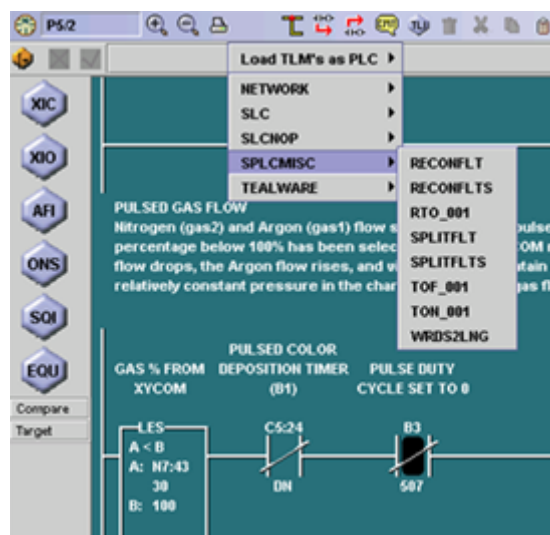
Multiple APP editors can be opened simultaneously

- Copy/paste rungs between APPs via the clipboard

- Monitor multiple SoftPLC's at the same time

- Attach multiple times to the same SoftPLC to view logic in different areas of the program simultaneously

- View offline and online versions of a program to compare

Documentation & Reports

SoftPLC APPs can include extensive text documentation, so programs can be easily understood and maintained. All documentation is included in the single APP file *(which includes logic, data table, and all documentation).* This means you have only one file to backup and keep track of!

- Rung comments are virtually unlimited in size. The first line of a rung comment can also become a easily located "subtitle" in a program.
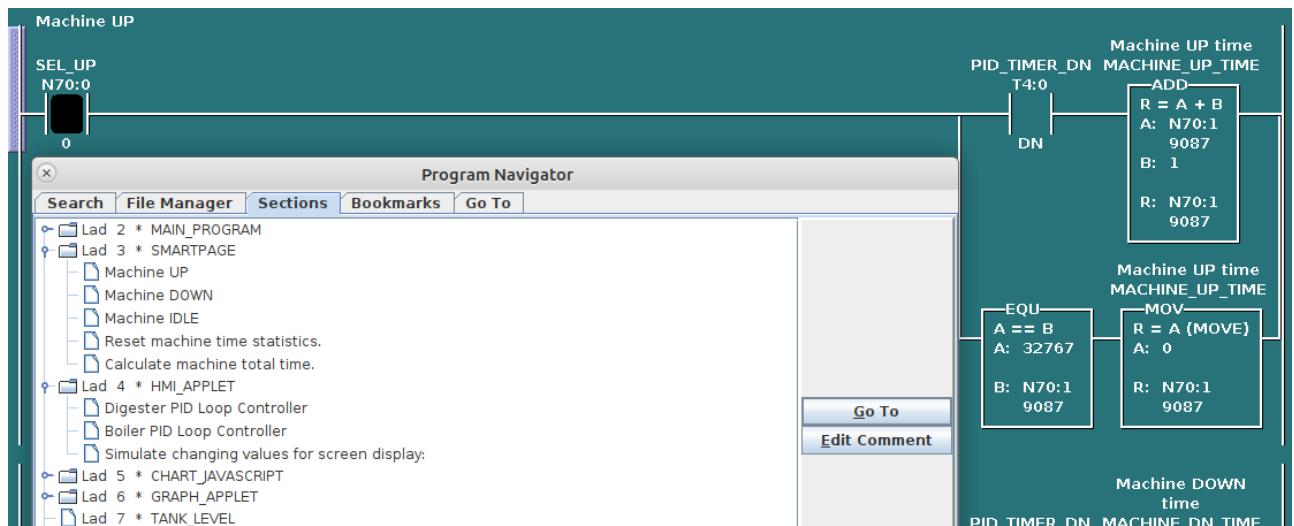
- Subroutines and data table files can be documented with both short and long descriptions.

- Data Table address descriptors include a tagname and a long description. Descriptors are edited in TOPDOC using a spreadsheet style interface, or can be easily created/edited in an external program *(eg: Excel)* and pasted into TOPDOC's editor.

A Ladder Diagram Report and Data Table Report can be printed or saved to PDF format.

Properties Editor

Property Tables are a RAM-resident database in SoftPLC that is useful for applications such as sorting conveyors, warehousing, and recipe-oriented controls. The Properties Editor makes it easy to create and maintain property file entries, using a spreadsheet style user interface. The tables can also be pasted into TOPDOC from an external program, such as Excel.

File 2

Name	Value
Product 1	15|1567|65.43|1234|XYZ|222.22
Product 2	8|33333|43.111|2345|AAA|23.67
Produ...	

File 1

Name	Value
12345	Floor 2;Aisle 7;Shelf 20;Bin 5
23456	Floor 3;Aisle 2;Shelf 3;Bin 3
34567	
45678	
56789	

File 3

Name	Value
30040	Cumming,GA,AtlantaBMC
48084	Troy,MI,DetroitBMC
53204	Milwaukee,WI,MilwaukeeBMC
60510	Batavia,IL,ChicagoBMC
78669	Spicewood,TX,DallasBMC
95050	Sant Clara,CA,OaklandBMC

Descriptors | Properties

Monitoring/Troubleshooting
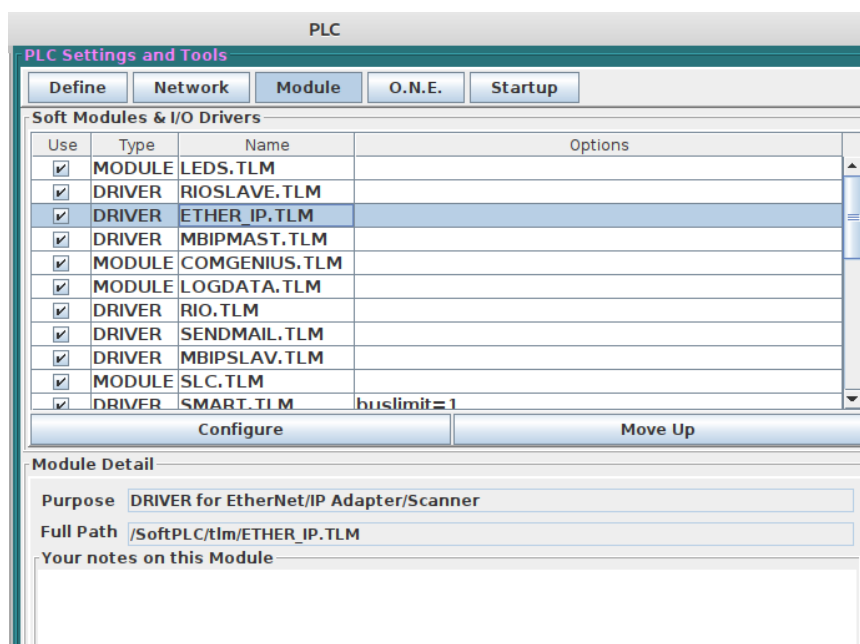
A number of features are available for SoftPLC system maintenance

- Search by address, tagname, instruction, or instruction/address combination. You can search by direct reference or with wildcard specifications.

- A "Find All" function provides a list of all usages, search results are retained for an easy "trace" function capability.

- Position by rung number, program file number, or comment subtitles

- I/O forcing from ladder or force table editors, including block insert/remove of forces

- Status file monitoring, fault analysis, and other features make it easy to determine causes of problems

- Data table editor provides multiple data formats, "spinners" for easy field state/value editing, and a quick undo function to return to prior value on bit manipulation *(On/Off)*

- Data table "watch windows"- user customizable non-sequential data table editors can be created and stored in the APP

B0003:0000
/00: off
TONS_DAY
Dec: 8185
GRAPH_SP
.SP: 80.0000000
F0110:0001
= 170.500000
N0073:0050
Dec: 2824

P3/0

Machine UP

SEL_UP
N70:0

0

XIC
XIO
AFI
ONS

F0014:0000
= 0.00000000
N0013:0110
Bin: 00000000000
F0011:0277
= 0.00000000
T0004:0001
.ACC: 0
.PRE: 100
T0004:0002
.ACC: 0
.PRE: 100
N0013:0005
Hex: 0000
N0013:0004
Dec: 0
F0011:0258
= 0.00000000

Data   Watch

MWSP_ACTIVE
= 0.00000000
MW_MODE
Bin: 0000000000000000
MW_FR_BIAS_R
= 0.00000000
MWSP_CPC_WT
.ACC: 0
.PRE: 100
MWSP_CPS_WT
.ACC: 0
.PRE: 100
MWSP_CP_CBR
Hex: 0000
MWSP_CP_CEAV
Dec: 0
MWSP_UI_S
= 0.00000000

Data   Watch   Force

Watch Navigator

Watch Lists
*DEMO_LIST

Selected List
B0003:0000 @(/00:,1)
N0071:0002 @(Dec:,1)
PD0013:0003 @(.SP:,1)
F0110:0001 @(=,1)
N0073:0050 @(Dec:,1)

Activate or Jump
Set as Default
Add
Delete
Clone

Insert
Remove
Modify
Move Up
Move Down

Quit   Help

Tag
TON
Des
HMI
per

Data   Watch   Force   Ladder

PLC Configuration

TOPDOC includes a complete SoftPLC configurator which is used to set up TCP/IP and serial communications parameters, select and configure TLM's *(I/O drivers and loadable functions)*, set start-up parameters, and more. The PLC Configurator makes it easy to map other vendor's I/O to a SoftPLC system, such as Ethernet/IP, A-B RIO, ModbusTCP, Modbus serial, and others.

PLC

PLC Settings and Tools

Define   Network   Module   O.N.E.   Startup

Soft Modules & I/O Drivers

Use	Type	Name	Options
✔	MODULE	LEDS.TLM	
✔	DRIVER	RIOSLAVE.TLM	
✔	DRIVER	ETHER_IP.TLM	
✔	DRIVER	MBIPMAST.TLM	
✔	MODULE	COMGENIUS.TLM	
✔	MODULE	LOGDATA.TLM	
✔	DRIVER	RIO.TLM	
✔	DRIVER	SENDMAIL.TLM	
✔	DRIVER	MBIPSLAV.TLM	
✔	MODULE	SLC.TLM	
✔	DRIVER	SMART.TLM	buslimit=1

Configure   Move Up

Module Detail

Purpose   DRIVER for EtherNet/IP Adapter/Scanner

Full Path   /SoftPLC/tlm/ETHER_IP.TLM

Your notes on this Module

A "Detect on Net" function makes it easy to see which SoftPLC's are on the network, and to perform an easy configuration file backup of all PLC's.
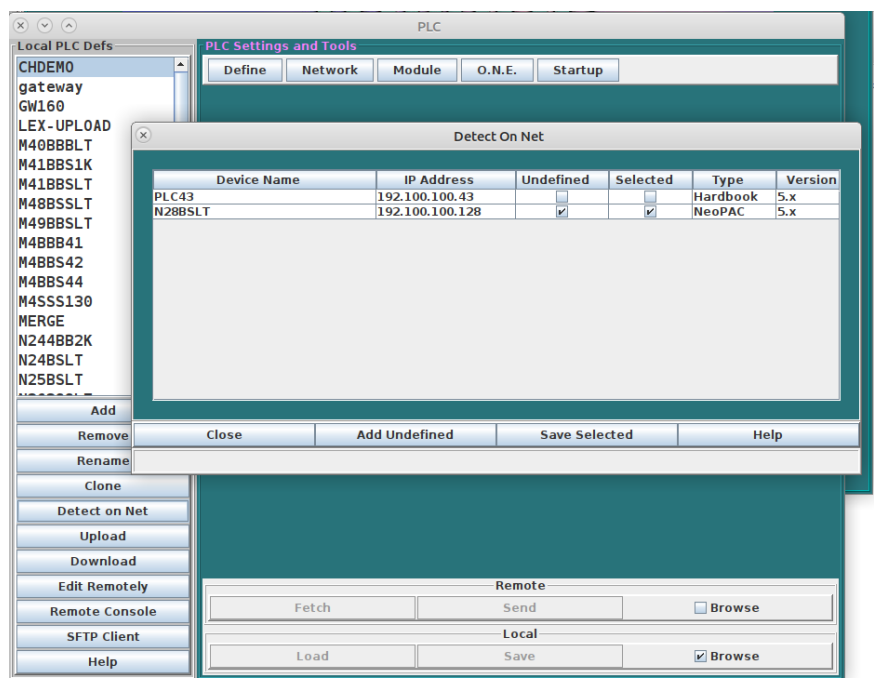
Specifications

TOPDOC NexGen is available for Windows or Linux operating systems.

System Requirements

- Operating System - 64 bit Windows or Ubuntu Linux

- Minimum Screen Resolution 1024x768

- 150MB free disk space

- Ethernet port *(to connect to SoftPLC/Gateway)*

- USB port *(for software protection key)*

Resources

Data Sheets

TOPDOC NexGen Data Sheet

TOPDOC NexGen features/functions.

Manual

Smart/NeoPAC SoftPLC & TOPDOC NexGen User Guide

User Guide includes Smart and NeoPAC SoftPLC hardware, and use of TOPDOC NexGen for configuration for firmware version 5 SoftPLC's. It also describes how SoftPLC operates, common troubleshooting techniques, etc. Detailed programming, instruction set, and software use are in the product's online help system.

Demo

TOPDOC NexGen Evaluation/Demo (ver 5)

The download is a demo version that allows offline editing without save capability. Ladder programming and detailed product use information are in the product help system. Contact SoftPLC Sales for the unzip password. *(Note that Windows unzip no longer supports passwords and you will need a 3rd party utility, ie: 7zip.)*

TOPDOC NexGen Installation Guide (v5.0)

It is **strongly recommended** that you download and use this guide while installing TOPDOC NexGen ver 5.

Tutorials/Videos

Intro to TOPDOC NexGen Ladder Editor *(~20 min video)* Download or Watch on YouTube

Intro to SoftPLC Configuration & Online Functions _(~16 min video) Download or Watch on YouTube