DriveTools™ SP Software v5.01

Best-in-Class Software Offers Simplified Programming for Drive

DriveExecutive™ Software

- Easy online and offline programming
- Windows® Explorer-style navigation
- Helpful dialogs and wizards

DriveObserver™ Software

- Online, real time drive data collection and display
- Offline data viewing
- Convenient data display options

DriveTools SP Highlights

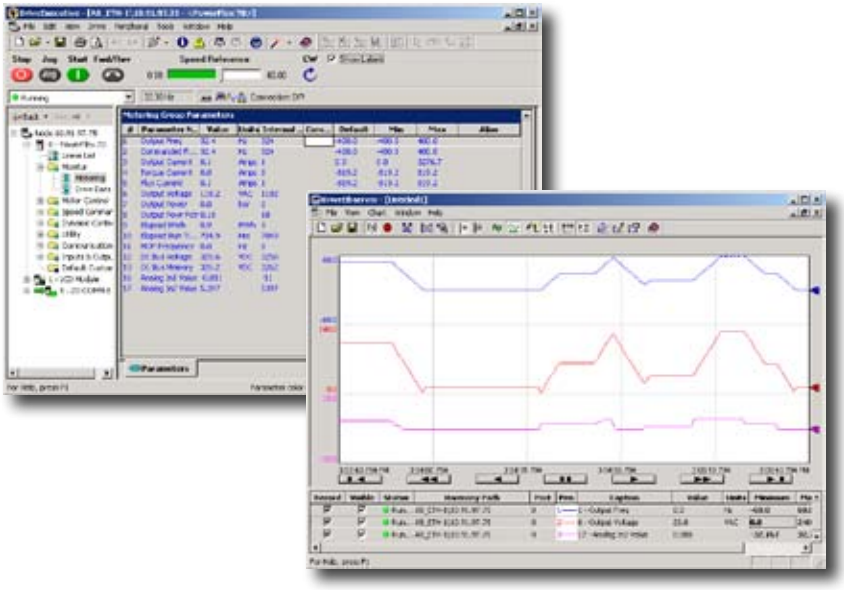
- Intuitive user interface with integrated HTML Help™ architecture providing application help, parameter help, and fault help
- Optimized communication allows for simultaneous use of DriveExecutive and DriveObserver

Supported Products

- PowerFlex Component class and Architecture class drives and peripherals
- SCANport™ products and peripherals
- SMC™ Flex
- 1395 Digital DC drive via ControlNet™, DataHighway Plus, and serial

Communications

- Serial point-to-point
- Ethernet direct
- DeviceNet™ direct
- ControlNet direct
- DataHighway Plus™direct
- RSLinx® gateway
- RSLogix™ 5000 and SLC-5/05 backplanes (bridging) as supported by the hardware
- Integrated communication using RSLinx and RSWho™– no separate DriveTools communication set-up and no KT Port Mapping



PC Requirements

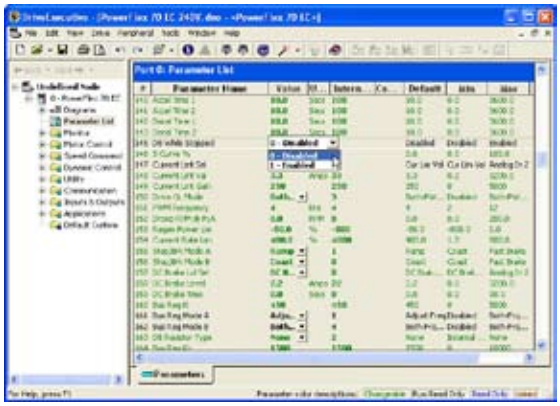
To install the software, you will need an 800MHz processor with at least 512MB of RAM, 20GB of hard disk space, SVGA display with 800 x 600 or greater resolution, a mouse or other Windows-compatible pointing device, and a CD-ROM drive.

Microsoft®Internet Explorer™ version 6.0 (included on CD) or later and a compatible version of RSLinx Lite (included on CD) must be installed on your PC prior to installing a DriveTools SP application.

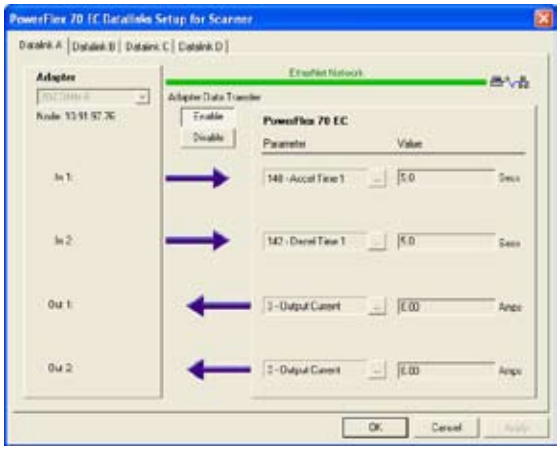
DriveTools SP is supported in the following environments as described:

Software [1]	Win2000 [2], Win XP [3], Win Vista [4]
DriveExecutive Lite	✔
DriveExecutive	✔
DriveTools SP (DriveExecutive + DriveObserver)	✔

[1] Windows NT no longer supported with v5.01.
[2] DriveTools SP requires Windows 2000 with Service Pack 4 or later.
[3] DriveTools SP requires Windows XP with Service Pack 3 or later.
[4] Business and Basic versions



In-Grid or dialog based editing



Datalink set up dialog

DriveExecutive Software

DriveExecutive software takes advantage of the best features of both DriveManager32™ and DriveExplorer™ software by implementing powerful multi-drive views, simple communication set up, and Windows Explorer-style navigation.

DriveExecutive software is available in two versions:

- DriveExecutive – a full-featured software package sold separately and as part of the DriveTools SP suite.
- DriveExecutive Lite – a special version with limited features that is bundled with some Rockwell Software products, such as RSLogix 5000 Full/ Standard/Professional and RSNetworx™ MD.

Product Highlights

- Diagram views for select drives.
- In-grid and dialog based parameter editing.
- Parameter find (Ctrl + F) searches parameter number, name, and units.
- View multiple online and offline drive configurations simultaneously using multiple drive windows.
- Immediate visual indication of drive and communication status for online drives.
- Startup wizards simplify configuration process.
- Control Bar tools for starting and stopping drives.
- DeviceLogix programming for PowerFlex 750-Series drives.
- Lists of most recent files and connections in the File menu.

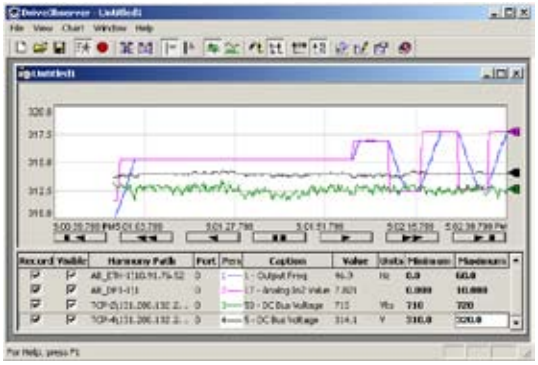
Feature	DriveExecutive	DriveExecutive Lite
Online/offline editing of parameters & links	✔	✔
Saving and downloading of files	✔	✔
Printing	✔	✔
Customizable parameter table	✔	✔
Support for PowerFlex and SCANport products and adapters	✔	✔
RSLinx-based communication	✔	✔
Parameter help	✔	✔
Undo/redo of edits	✔	✔
Support for faults, alarms, events	✔	✔
Peer comm dialog for PowerFlex 700S DriveLogix	✔	✔
Datalinks set up dialog	✔	
Parameter find	✔	
Parameter and link compares	✔	
Support for diagnostic items	✔	✔
Diagram views	✔	
Creation of online shortcut files	✔	
Wizards	✔	✔
Control Bar	✔	
Folder Upload/Download	✔	
DeviceLogix programming	✔	✔

File Support

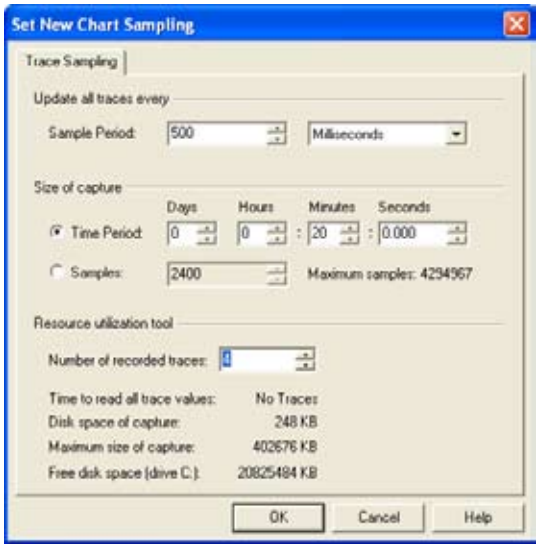
- DriveExecutive automatically generates new databases for new firmware revisions.
- Upload and download drive and peripheral configurations to preserve user data and quickly commission replacement drives.
- Folder Upload/Download provides a quick mechanism for uploading/ downloading to a group of drives.
- All data for a single node (drive plus peripherals) is stored in a single file that can be shared with other DriveExecutive users.
- DriveExecutive can import/ export DriveManager32 revision 2.50 parameter files and can use DriveManager32 databases for offline programming.
- DriveExecutive can import DriveExplorer revision 2.xx to 4.xx files and can export DriveExplorer revision 3.xx to 5.xx files.

Diagnostics

- Display of faults, alarms, and events with product content from the user manuals.
- The compare wizard shows the differences between two online/ offline configurations or between a configuration and defaults. It gives you the power to make two configurations the same.
- Displays device diagnostic items.
- Integrated flash update tool.



A picture is worth a thousand words - real time data collection of parameters



Select a sampling rate and amount of data to retain

DriveObserver Software

DriveObserver software provides a straight-forward interface for creating new charts, collecting data, saving data, and viewing data. DriveObserver software takes advantage of the RSTrendX control (which supports up to 100 traces) to provide powerful user options.

Product Highlights

- DriveObserver is designed to co-exist with DriveExecutive and automatically knows about all the online connections currently open in DriveExecutive.
- DriveObserver charts parameter values.
- Data files save the most recently collected data and chart setup so you can either view data offline or use the same file to collect more data.
- Integrated parameter information and help.
- Ability to reconfigure existing charts by adding/removing parameters, adjusting sampling rate, or changing amount of data to record to file.
- View status for each drive in the chart at a glance.

Real-Time Data Collection

- Use in-grid or property dialogs to change minimum and maximum ranges while collecting data.
- Collect data from multiple drive nodes on the same chart.
- Collect data on multiple charts simultaneously.
- The software tests data collection rates and notifies you if changes are made.
- Choose the amount of data to keep in memory: last 10 minutes, last day for overnight collection, last three days for weekend collection, a particular quantity of samples, etc.
- Export data via a Save to *.csv for use with MS-Excel and other third-party software.
- Pause the display for closer inspection of data while still collecting data using the handy VCR buttons beneath the chart.
- Add non-recorded parameters to a chart for easy editing of Gains and other drive values while recording data.

Data Display Options

- Isolated and non-isolated display options. Isolated means that traces have individual Y-axes. Non-isolated means that traces use the same Y-axis.
- Automatic or preset Y-axis scaling. Preset scaling uses the minimum and maximum values that you choose.
- Individual or same Y-axis scaling.
- Zoom in/out on the time axis.
- Change trace formatting and/or assign markers to see the difference between data points and interpolation.
- Use the value and delta bars to view values at a given point in time or the differences between two points in time, respectively.
- Make individual traces visible/in-visible as desired to make data viewing easier.

Sample Data Collection Rates

Data collection rates are approximated and then tested by DriveObserver prior to starting data collection. Data collection is dependent on:

- The method of communication (serial, Ethernet, DeviceNet, etc.)
- The rate of the communication method (serial baud rate, network baud rate, etc.)
- Bandwidth available on the communication media for explicit messaging.
- Speed, RAM, and available bandwidth on your PC. Other applications running on your PC may affect PC bandwidth and data collection rates.

On a 1.8 GHz laptop with 512MB RAM, data collection from a PowerFlex 70 via a serial connection of 38.4 kBaud was:

- Two 16-bit parameters from 160-200mS
- Four 16-bit parameters from 300-340mS

On the same laptop with a 100MHz Ethernet connection, data collection from a PowerFlex 70 was:

- Two 16-bit parameters from 80-100 mS
- Four 16-bit parameters from 150-200

Network Connectivity

<table>
<tr><th></th><th>DSI compatible devices (7)</th><th>DPI™ compatible device (1)</th><th>PowerFlex 755</th><th>PowerFlex 700S DriveLogix drive (2)</th><th>SCANport compatible device (3)</th><th>1336 FORCE drive (5)</th><th>1395 Digital DC Drive</th><th>User PC</th></tr>
<tr><td>ControlLogix Gateways (Ethernet, ControlNet, DeviceNet, DataHighway Plus™)</td><td colspan="7">Equipment depends on network to which the device is connected</td><td>Equipment depends on network to which the device is connected</td></tr>
<tr><td>ControlNet Direct</td><td rowspan="3">N/A</td><td rowspan="3">20-COMM-C adapter</td><td rowspan="3">20-750-CNET-C or 20-COMM-C v2.007 or later</td><td rowspan="3">1788-CNC, 1788-CNCR, 1788-CNF, or 1788-CNFR & cables</td><td rowspan="3">1203-CN1 (Ver1.002 or later) and 1202 cable</td><td rowspan="3">ControlNet Adapter (1336T-GT3EN), Repeater Adapter (1786-RPA), and Fiber Module (1786-RPFM)</td><td rowspan="3">ControlNet Adapter 1395-KP54EN, Repeater Adapter1786-RPA, and Fiber Module 1786-RPFM</td><td>1784-KTC, -KTCX, -PCC, or -PCIC</td></tr>
<tr><td>Ethernet to ControlNet Direct</td><td>Client: Ethernet running TCP/IP; Server: Ethernet running TCP/IP and 1784-KTC, -KTCX, -PCC, or -PCTX</td></tr>
<tr><td>RS-232 to ControlNet Direct</td><td>RS-232 serial port and 1770-KFC</td></tr>
<tr><td>DeviceNet Direct</td><td rowspan="2">22-COMM-D adapter</td><td rowspan="2">20-COMM-D adapter (Ver 1.006 or later)</td><td rowspan="2">20-750-DNET or 20-COMM-D v2.004 or later</td><td rowspan="2">20-COMM-D adapter (Ver 1.006 or later)</td><td colspan="2" rowspan="2">2100-GK61, 1336-GM5/1203-GK5 (Ver 2.001 or later), or 1336-GM6/1203-GU6 (Ver 2.001 or later) & cables</td><td rowspan="2">N/A</td><td>1784-PCD, -PCIDS, or - PCID</td></tr>
<tr><td>RS-232 to DeviceNet Direct (6)</td><td>RS-232 serial port and 1770-KFD</td></tr>
<tr><td>Serial Point-to-Point</td><td rowspan="2">22-SCM-232 adapter or 1203-USB</td><td colspan="3" rowspan="2">1203-SSS (Ver 3.004 or later) or 1203-USB</td><td colspan="2" rowspan="2">1203-SSS,1203-USB or 1203-GD2/1336-GM2 (Ver 2.07 or later) & cables</td><td>3rd Party RS-232 to RS-422 Converter (8)</td><td>RS-232 serial port or USB port if 1203-USB is used</td></tr>
<tr><td>Ethernet to Serial Point-to-Point (RSLinx Gateway)</td><td>N/A</td><td>Client: Ethernet running TCP/IP; Server: Ethernet running TCP/IP and RS-232 serial port</td></tr>
<tr><td>Modem (4)</td><td>22-SCM-232 adapter or 1203-USB; 9300-RADKIT, 9300-RADES, 9300-RAPMKIT modem kit, & cables</td><td colspan="3">1203-SSS (Ver 3.004 or later) adapter or 1203-USB, modem kit & cables</td><td colspan="2">1203-SSS, 1203-USB or 1203-GD2/1336-GM2 (Ver 2.07 or later) adapter; 9300-RADKIT, 9300-RADES, 9300-RAPMKIT modem kit & cable</td><td>N/A</td><td>9300-RADKIT, 9300-RADES, 9300-RAPMKIT modem kit and RS-232 serial port or USB port if 1203-USB is used</td></tr>
<tr><td>EtherNet/IP Direct</td><td>22-COMM-E adapter</td><td>20-COMM-E adapter</td><td>embedded or 20-COMM-E v3.005 or later</td><td>1788-ENBT</td><td colspan="2">1203-EN1 adapter & cables</td><td>N/A</td><td>Client: Ethernet running TCP/IP</td></tr>
<tr><td>DataHighway Plus™Direct</td><td colspan="5" rowspan="3">N/A</td><td rowspan="3">PLC® Communications Adapter (1336T-GT1EN)</td><td rowspan="3">Multi CommAdapter 1395-KP51</td><td>1784-KT, -KTX, -KTXD, or -PCMK</td></tr>
<tr><td>RS-232 to DataHighway Plus™Direct</td><td>RS-232 serial port</td></tr>
<tr><td>Ethernet to DataHighway Plus™ Direct (RSLinx Gateway)</td><td>Client: Ethernet running TCP/IP; Server: Ethernet running TCP/IP and 1784-KT, -KTX,-KTXD, or -PCMK</td></tr>
</table>

(1) DPI compatible devices: PowerFlex 70, PowerFlex 700, PowerFlex 700S, PowerFlex 700H, PowerFlex 700S/DriveLogix, PowerFlex 7000. The PowerFlex 700S/DriveLogix is a DPI compatible device, however, additional NetLinx connection options are available. Therefore, both "DPI compatible device" and "PowerFlex 700S/DriveLogix" columns apply to the PowerFlex 700S/DriveLogix.

(2) Options in the "PowerFlex 700S/DriveLogix" column only apply to PowerFlex 700S drives that have the DriveLogix controller installed.

(3) SCANport compatible devices: 1305, 1336 PLUS, 1336 PLUS II, 1336 SPIDER, 1336 IMPACT™, 1336 FORCE™, 1336 REGEN, 1397, 1557, 2364F RGU, SMC™, and SMP™. The 1336 FORCE is a SCANport compatible device, however, additional connection options are available. Therefore, both "SCANport compatible device" and "1336 FORCE" columns apply to the 1336 FORCE drive.

(4) A total of two supported modems are required, one at the drive and one at the PC. The 1203-RAD kit contains two modems; the 1203-RAD1 kit contains one modem.

(5) 1336 FORCE drives with firmware version 2.xx or later are supported.

(6) Not recommended due to limited bandwidth in the 1770-KFD causing slower communication performance.

(7) DSI compatible devices: PowerFlex 4, 40 and 400. Some DSI products do not support network adapters.

(8) 1395 Serial (Windows 2000 and XP only)

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