# LoggerNet 3.4 series Datalogger Support Software

LoggerNet is Campbell Scientific's full-featured datalogger support software. It is referred to as "full-featured" because it provides a way to accomplish almost all the tasks you'll need to complete when using a datalogger. You can write datalogger programs, transfer those programs to the datalogger, collect the data, and analyze the data either in real-time or after the file has been saved to a PC.

Client/Server Architecture

LoggerNet is based on a client/server network architecture. In a nutshell, a server is a device or application (program) that manages file sharing, processes, and computer network traffic, and a client is a user application (program). In LoggerNet, a server is launched any time the LoggerNet Toolbar is opened. This server manages communication with the dataloggers in your network and maintains a binary database (or data cache) of data collected from the dataloggers. The clients are the user-interface—the actual applications—used to display the results of the server's interaction with the dataloggers. These results can be in the form of a graph to display measurement values, a window to send a program to the datalogger, a status screen showing the status of the entire network, or a log window showing communication between the server and the entire datalogger network.
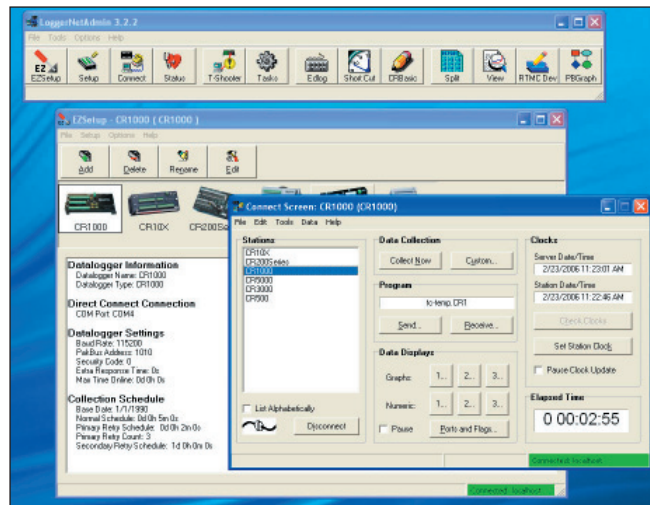
There are many advantages to using a client/server network architecture. One advantage is that multiple clients on multiple computers can connect to a single server, and the server can provide these clients with data almost simultaneously. Also, this network architecture allows for communications between the clients and the server over a TCP/IP network, providing fast, reliable communication with your datalogger network and the ability to manage the datalogger network remotely.

Remote Computers

Multiple Computers

Computer Running LoggerNet Server

Datalogger Network
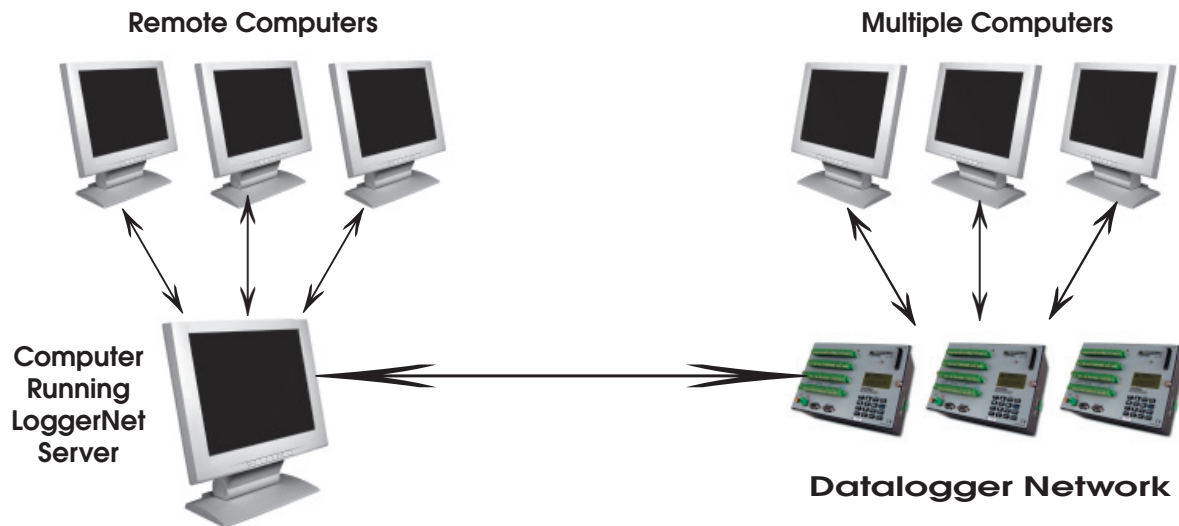
Client/Server network architecture allows LoggerNet to accommodate communication between one computer and the datalogger network, many computers and the datalogger network, or many remote computers and the datalogger network.

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WHEN MEASUREMENTS MATTER

LoggerNet Software Packages

LoggerNet

The standard software package is recommended for those who have datalogger networks that do not require the more advanced features offered in LoggerNet Admin. It includes the LoggerNet server and client applications that allow you to program the datalogger, collect data, monitor and troubleshoot the network, manage the dataloggers in your network, create graphical data displays that update when data is collected, create automated tasks, and view or post-process the data.

LoggerNet Admin

This more advanced software package has tools that are useful for those with large datalogger networks. It includes all the functionality of LoggerNet, as well as the ability to enable security, manage the server from a remote PC, run LoggerNet as a service, export data to third party applications, and launch multiple instances of the same client (for instance, opening two Connect windows to communicate simultaneously with two different dataloggers in the same or a different network).

LoggerNet Remote

This software package includes all of LoggerNet Admin's clients except the Service Manager. However it does not include the LoggerNet server. LoggerNet Remote lets you manage an existing LoggerNet datalogger network from a remote location, without investing in another complete LoggerNet Admin software package.

LoggerNet Linux

LoggerNet Linux provides a solution for those who want to run the LoggerNet server in a Linux environment. The package includes a Linux version of the LoggerNet server and a copy of LoggerNet Remote. The Microsoft Windows-based client applications in LoggerNet Remote are run on a separate computer running Windows 2000, Windows XP, or Windows Vista, and are used to manage the LoggerNet Linux server. The LoggerNet Linux disk contains two RPM distributions—Fedora Core 5 and CentOS 4.3.

Computer Requirements

The minimum recommended hardware is a Pentium II processor with 128 Mbytes of RAM and a screen resolution of at least 800 x 600. LoggerNet is optimized for features in Windows 2000, XP, or Vista that maximize the reliability of unattended scheduled data collection and multitasking applications programs. The computer must also have at least 100 MB of free disk space.

Client Applications

EZ Setup Wizard

This simple station-oriented wizard walks you through the setup process. The wizard can also be used to modify settings for an existing site.

The EZ Setup Wizard provides step-by-step help in setting up and configuring a datalogger for communication and data collection.

Setup, Connect, Status, LogTool, Troubleshooter, PakBus Graph

These tools are used to set or change datalogger parameters, monitor the status of network communications, reset a datalogger's clock, display data, send programs from the computer to the datalogger, collect data on demand or according to a schedule, and discover the cause of communication problems. Datalogger communication links supported include direct serial, TCP/IP, telephone, radio (VHF/UHF or spread spectrum), cellular phone, TAPI, short-haul or multidrop modems (including combinations of these links).

Short Cut, Edlog, CRBasic Editor, Transformer

LoggerNet provides several programming tools. Short Cut is the easiest to use—generating straightforward programs in four easy steps. It supports over 100 sensors (including generic measurements) and multiplexers. Short Cut can also be used for the ET106 or MetData1 weather stations.

Edlog and the CRBasic Editor provide more sophisticated program editing capabilities. Both of these program editors use select-from-a-list and fill-in-the-blank sequences to develop the datalogger program. They differ in the dataloggers they support. Edlog supports the CR500, CR510, CR10(X), 21X, CR23X, and CR7. The CRBasic Editor (similar in syntax to the BASIC programming language) supports the CR200-series, CR800, CR850, CR1000, CR3000, CR5000, and CR9000(X).

The Transformer tool converts Edlog programs to CRBasic programs. Specifically, it can convert a CR510 or CR10X program to a CR1000, CR800, or CR850 program, or a CR23X program to a CR3000 program.

View

View provides tabular displays or simple line-graphs of one or two elements from a data file. The graphs can be saved as BMP, WMF, or EMF files. The left and right y-axes can be configured independently, and you can use the mouse pointer to zoom in on a range of data or a single point.

Real-Time Monitoring and Control (RTMC)

RTMC is used to create custom displays of real-time data, flags, and ports. It provides digital, tabular, graphical, and Boolean data display objects, as well as alarms. You can combine data from multiple dataloggers on one display. Complex displays can be organized on multi-tabbed windows.

Split

Split is used to post-process data files and create printed reports. It sorts and combines data based on time or conditions, performs calculations on data values, converts between mixed-array "day of year" calendar dates and more traditional date/time stamps, and allows variable column widths for printable reports, as well as a simple HTML-formatted report.

Device Configuration Utility (DevConfig)

DevConfig allows you to send new operating systems to dataloggers and other devices with FLASH memory, configure various PakBus® settings in dataloggers, and edit settings for communication peripherals such as the MD485 and RF401. The latest DevConfig can be downloaded from our web site.

SMS and Card Convert

SMS is used for retrieving data from and transferring datalogger programs to storage modules. It's compatible with our SM4M, SM16M, SM716, and SM192 storage modules, and our CSM memory cards. CardConvert is used to convert and save binary data from a PC Card or CompactFlash® card. PC Cards are compatible with our CR5000 and CR9000X dataloggers. CompactFlash cards are compatible with our CR1000, CR3000, CR5000, and CR9000X dataloggers.

Security Manager (LoggerNet Admin/Remote only)

Security Manager is used to set up security within the LoggerNet application to restrict access to certain functions. Individual user accounts are set up and assigned one of five levels of security, with different user privileges assigned to each level.

LoggerNet Server Monitor
(LoggerNet Admin/Remote only)

The LoggerNet Server Monitor is a utility that runs minimized with an icon in the Windows Status Area. It monitors the status of a LoggerNet server when it is being run as a service or being run on a remote computer.   Multiple instances of the LoggerNet Server Monitor can be launched to monitor more than one server running on remote computers.

Hole Monitor (LoggerNet Admin/Remote only)

The Hole Monitor is used to monitor the hole collection activity for the dataloggers in a LoggerNet network. Holes are most often encountered with data collected from table-based dataloggers via data advise (data advise is used for data collection in large table-data RF networks). A hole occurs when there are missing records of data in the LoggerNet server's data cache for a datalogger.

Service Manager (LoggerNet Admin only)

Service Manager is used to install LoggerNet as a service, and to manage the service on the PC. When run as a service, after a power failure, LoggerNet will resume data collection and scheduled task activities when power is restored to the computer—regardless of whether or not a user logs on to the computer.

Stand-alone LoggerNet Clients

Several stand-alone LoggerNet clients are available that run on remote PCs. Functions supported by these clients include distributing data to remote files, OPC interface, PC displays, and web browsers. Refer to the LoggerNet Client product literature for more information.
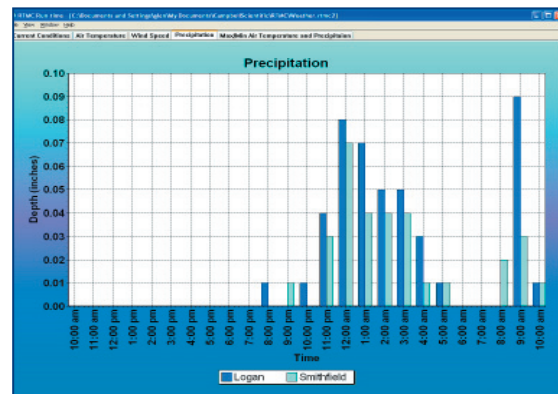
RTMC Run-Time and RTMC Web Server clients run projects created in the developer program of RTMC, which is bundled with LoggerNet.

Software Developers Kits

LoggerNet-SDK and LoggerNet Server-SDK allow software developers to create custom applications that communicate with the LoggerNet server and through the server to one or more dataloggers. Refer to the Software Development Kit product literature for more information.

Foreign Language Files

Campbell Scientific offers LoggerNet language files in Spanish, Japanese, or Russian. To obtain the language files, go to www.campbellsci.com/downloads and select "Software Language Files". They are simple to install and you can easily switch from one language to another. The files allow command choices to be displayed in the language of choice; however, deeper levels of the software remain in English.

Upgrade Paths

On the chart below, the software package you are currently using is listed on the left, and the upgraded software is listed on the right. All items that are checked on the same line are required to upgrade your existing software to the current version of LoggerNet, LoggerNet Adm, or LoggerNet Remote. For instance, to upgrade PC208W to LoggerNet Admin, you must purchase LoggerNet Remote, as well as an upgrade to LoggerNet.

Existing Software	No Upgrade Path	LoggerNet	LoggerNet Remote	LoggerNet/U	LoggerNet Admin/U	LoggerNet Remote/U	Patch	Upgraded Version
PC208W				✓				LoggerNet
			✓	✓				LoggerNet Admin
	✓							LoggerNet Remote
LoggerNet 1.x Host	✓							LoggerNet
					✓			LoggerNet Admin
	✓							LoggerNet Remote
LoggerNet 1.x Remote	✓							LoggerNet
			✓	✓				LoggerNet Admin
						✓		LoggerNet Remote
LoggerNet 2.x				✓				LoggerNet
			✓	✓				LoggerNet Admin
	✓							LoggerNet Remote
LoggerNet 3.x							✓	LoggerNet
			✓					LoggerNet Admin
	✓							LoggerNet Remote
LoggerNet 3.x Remote	✓							LoggerNet
		✓						LoggerNet Admin
							✓	LoggerNet Remote
PC400				✓				LoggerNet
			✓	✓				LoggerNet Admin
	✓							LoggerNet Remote

If you have questions on which version of LoggerNet is right for you, contact one of our Applications Engineers.