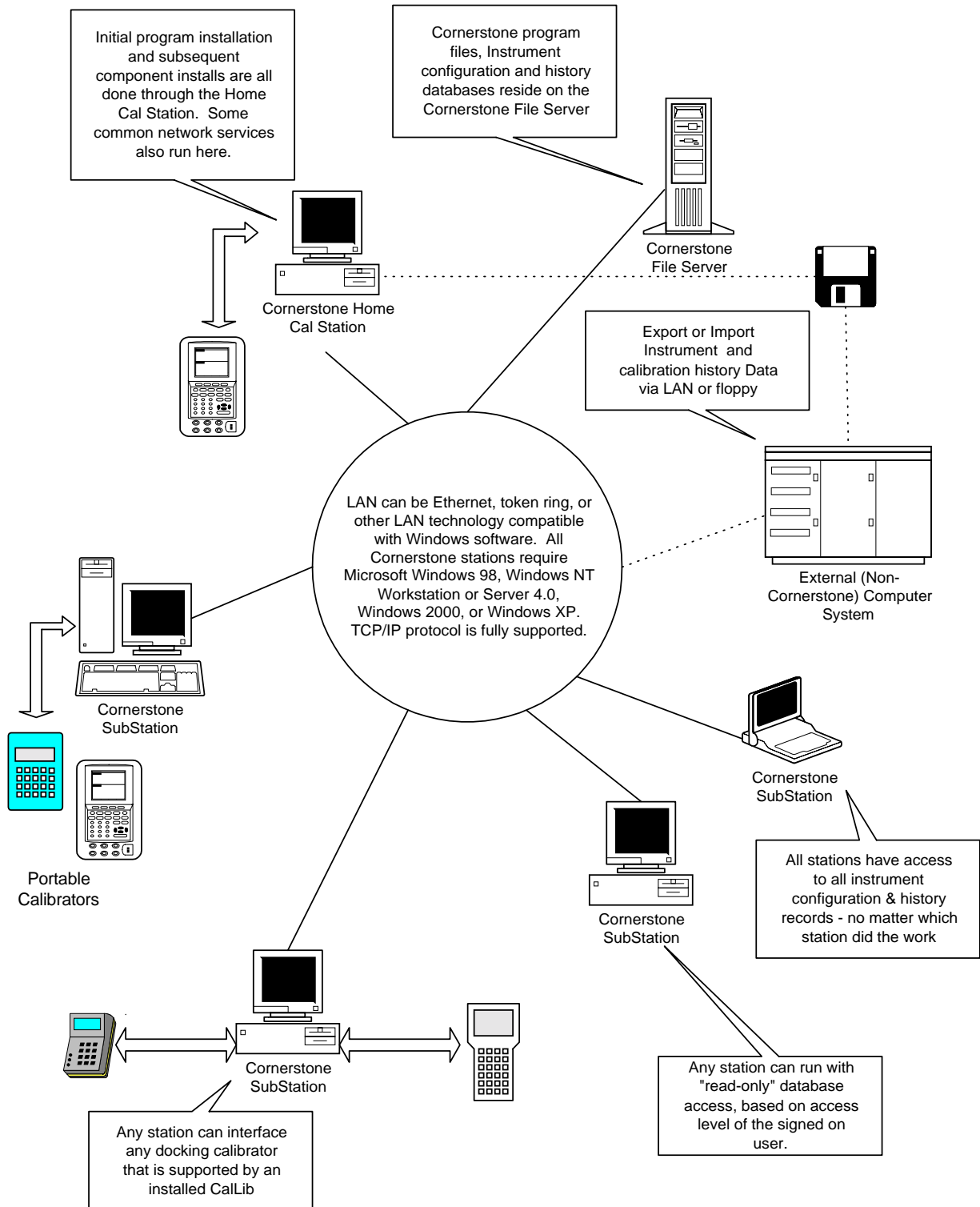


# Cornerstone™ Feature Description

## Multi-user (Networked) Cal Station System



## Cornerstone Cal Station Multi-user Software Products

### Cal Station

Cal Station software may either be used on a stand-alone computer, or as the first Cornerstone station in a networked configuration. The install procedure for the Cal Station software includes user choices for the location of the common Cornerstone program and data files. They may be located on a dedicated LAN server station or on any network drive on the LAN. The computer designated as the *Cornerstone File Server* cannot run the Cornerstone application software, but can run other programs. If the installation of this new version constitutes an update of a previous stand-alone Cal Station, then the existing instrument database is preserved and updated, and becomes the common database, accessible on the LAN from all other stations.

The computer where the initial installation takes place has a special status in the system and is called the *Home Cal Station*. Common service programs, required for operation of all Cornerstone stations on the LAN, will reside and execute on the Home Cal Station. Other optional Cornerstone libraries, for use throughout the network, are installed only through the Home Cal Station. Those libraries will reside on the same network drive as the Cal Station program and database files. Software registration and authorization for the whole multi-user system takes place only through the Home Cal Station.

### Multi-user Kits

Three optional Multi-user Kits add Cornerstone stations (called SubStations) to the Home Cal Station described above. Kits are purchased separately and are available in three sizes, providing a total of 3 users, 6 users, or 10 users. With the exception of a few network administration functions, SubStations provide all of the functions of a stand-alone Cal Station or the Home Cal Station. They can perform directed calibrations, manual calibration data entry, and calibrator docking. Substations must meet Cal Station hardware platform requirements except that minimal hard disk space is required. Multi-user kits include a Server install disk, a SubStation install disk, a Multi-user kit install disk, and an installation manual. With all Multi-user kits, you can install SubStation software on any number of computers on your LAN. The 3, 6, or 10 user kit size limits only the number of simultaneous active Cal Station users on the network.

### User Manuals

Use of the SubStation software is identical to that documented in the User's Manual for Cornerstone Cal Station, which is included with the single Cal Station model. Additional User's Manuals for use with SubStations are ordered separately in the quantity you require.

### Optional CalLibs

Optional CalLibs may be added to a networked Cornerstone system. Just as with a stand-alone system, multiple types of CalLibs may be used on the same networked system. You need purchase only a single licensed copy of each CalLib type for use on a networked system. Each CalLib is installed only once through the Home Cal Station, and the CalLib program files reside on the Cornerstone File Server.

### Disk Requirements

On the Cornerstone File Server, program files can require up to 15 MB. Also on the Server, database file space needs are dictated by your instrument population and the extent of historical record storage desired. Typically, a 1000 instrument database, storing up to 25 history records per instrument, requires about 200 MB. Each SubStation requires about 3 MB for local files.

## Multi-user System Requirements

- Cornerstone program files and global system database files may be installed on a dedicated LAN server station or they may be installed on any suitable server or other station on the LAN. The computer where these files reside must be running Microsoft Windows NT Server 4.0, Windows 98, Windows 2000, or Windows XP. The computer where the common Cornerstone files reside cannot run the Cal Station application. The server computer can run other applications or act as a file server for other applications. This Cornerstone File Server also hosts the license (key) server that administers multi-user operation of the Cal Station software.
- All Cornerstone stations (Home Cal Station and SubStations) must be running Microsoft Windows 98, Windows NT Workstation 4.0, Windows 2000, or Windows XP.
- The Cornerstone File Server, Home Cal Station and SubStation computers should be set up to run the TCP/IP protocol or the standard Microsoft NetBEUI Network protocol. One of these protocols can normally coexist on the same hardware platforms and network cable with other network protocols and file servers (e.g. IPX/SPX). A multi-user Cal Station system can be set up that does not run either of these protocols, but such a configuration will yield slower data access response times, making it advantageous to run the TCP/IP or NetBEUI protocol.
- LAN hardware and driver software must be compatible with Windows software.
- The server computer where the Cornerstone program files and global system database files are located (the Cornerstone File Server) , and the computer where the Home Cal Station software is installed, must both be up and functional in order for any other Cornerstone LAN stations to operate.

## Operational Considerations

- Cornerstone Multi-user configurations have been designed and tested for correct performance on local area networks (LANs). Wide Area Network (WAN) operation may be feasible but was not a specific design objective and is not supported. Note that use of the NetBEUI protocol is not compatible with routers and other equipment normally associated with long distance network connections.
- Normal Cornerstone user password security is provided on the Multi-user system. The user and password tables are global for the entire LAN system. There is no restriction as to which user may sign on to which station on the LAN. The software does provide the Cornerstone System Manager user with the ability to configure each SubStation location for the major function windows that it displays. With this feature, you can restrict certain functions to certain SubStations. For example, you could designate which stations allow calibrator docking.
- The user password and security level system of Cornerstone software allows a SubStation, based on the security level of the signed on user, to act as a read-only station on the network. The “Restricted” security level allows read-only access to the Cornerstone database. It also provides the ability to print reports and to export data from the database into .CSV files for use by other applications. Restricted users cannot make any database changes and cannot connect to any calibrators.
- The Cal Station Event Log is maintained local to each station on the network.
- Software response time performance on a LAN is a function of hardware capabilities, the activity on each Cornerstone station, other activity on the LAN, and loads on the Server from other applications. For best Cal Station performance, the TCP/IP or NetBEUI network protocols should be used, in addition to any other network protocols that your network applications may require.