SuperCom
Heidenhain Communication Library

Toolkit for Windows and Linux

- Communication Solutions by ADONTEC
- TNC Explorer sample application

Version 4.60 new !

Price List

Product Range

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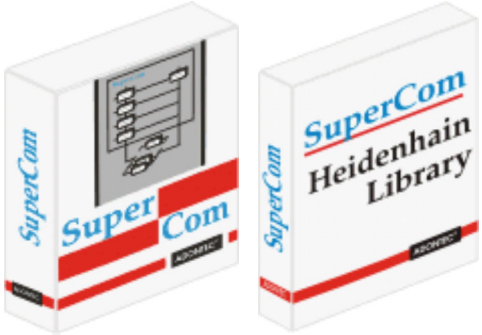
Translate

32 Bit and 64 Bit Versions available!

Control and monitor Heidenhain TNC through serial ports and Ethernet (TCP/IP)

Introduction



The **SuperCom Heidenhain Library** enables fast and accurate data acquisition of machine and process state data from Heidenhain controlled machines.

The **SuperCom Heidenhain Library** contains functions to control many simoultaneous, stable and fast, data connections to Heidenhain TNC controllers. The connection can be setup using the serial interfaces or the TCP/IP protocol stack (Ethernet connection). The connection can be made locally within the factory or over a large distance via Modem, Internet or ISDN connection (see also SuperCom Suite).

The functions in the **SuperCom Heidenhain library** (the entire protocol stack) are optimized in-house development (as common to the SuperCom software) and do not use any external tools or libraries from third-party providers but access the TNC directly.

The **SuperCom Heidenhain Library** supports data communication to different Heidenhain TNC through **serial lines** or **TCP/IP** (Ethernet connection).

Acquire and monitor Heidenhain TNC machine state data, machine states or process data. Several functions enable fast data acquisition of the machine status. Collect data from the Heidenhain TNC machines (data collection software) or monitor the machine status (Machine Monitoring Software) of multiple machines simultaneously.

Loading and executing NC programs, checking files and directories, retrieving and examining machine parameters, log files (logbook), tool tables and much more. The **SuperCom Heidenhain Library** also contains direct memory access functions that can be used to retrieve or modify data directly from the PLC memory.

The overall information provided by the SuperCom functions by many different ways also enables monitoring

the TNC machine status.

A Heidenhain TNC client simply connects to the **SuperCom Heidenhain library** with older and newer TNCs that have a serial or TCP/IP connection.

The **SuperCom Heidenhain Library** almost hides the complexity of the data communication to a *Heidenhain TNC* and provides functions that perform the most wanted tasks by using simple function calls. SuperCom establishes the connection to the *Heidenhain TNC* directly via the **serial** port or the **TCP/IP** protocol stack. The whole data communication is running transparently in background using high-speed functions achieving rapid results.

Direct access

The **SuperCom Heidenhain Library** is accessing the TNC directly without using any other third party software layer that often introduce huge delays or unknown behavior (e. g. no third party machine specific library or driver, OPC Server, external program, etc.). All self-developed optimized code. This means the software achieves short runtimes and avoids unknown behavior.

Controlling many connections or machines concurrently is supported and that is common to SuperCom software.

SuperCom's Event-Driven file transfer functions enable accurate monitoring of the file transfer progress, providing continuously status information to the application, if needed.

The library includes high-speed functions for event-driven file transfer to and from the *Heidenhain TNC* (send files, receive files), list directories, create or delete directories, rename or delete files, read TNC configuration data, retrieve machine status, machine data, process data, read and write memory etc.

Special Features*:
Retrieve information like TNC type, NC-Version, PLC-Version and software version. Handle directories and files. Transfer files. Query program information , Errors, Execution Mode / Operating Mode, Program Status, Overrides Values, Part Count, Machine up time, Machine running time, Tool Info, Axes config, Axes position, Cutter location, DNC Mode, Spindle Speed , Temperatures, and more. Read/Write memory locations, markers, counters, inputs, outputs, timers, query and modify machine parameters and configuration values, log entries, Read and change tables, setting of special Q parameters, axes positioning , ...

* The amount of information may vary between the different machines (machine specific limits).

The **SuperCom Heidenhain Library** implements the protocol functions using a SuperCom communication library (serial or TCP/IP) and the SuperCom LSV/2 protocol module* that provides a stable data communication link.

*Included with this library.

The SuperCom library provides fast and rock solid functions to extract information and control one or more TNC machines. It enables the software developer to control many connections to different TNC machines

simultaneously. It enables to query information by different ways thus increasing the amount of information retrieved. Also, the amount of information supported and returned by the different TNC machines may differ.

Easy to use, stable and fast

The SuperCom software is particularly valued by industrial customers for its stability and speed. More than 30 years SuperCom software is supporting industrial customers in rough environment, often with strictly timing requirements.

There is only one API to learn! The same functions and parameters used with serial, TCP/IP or ISDN type of connections. Many sample programs included.

A short list of functions: » «

HN_SetConfig	Configure the SuperCom software and/or the remote TNC
HN_GetCurrentDir	Retrieve the information about the TNC's current directory
HN_ChangeDir	Change the TNC's current directory
HN_MakeDir	Create a directory under the current directory
HN_RemoveDir	Removes a directory
HN_FileExists	Check if a specific file name exists on the TNC
HN_CopyFile	Create a copy of a specific file on the TNC
HN_DeleteFile	Delete a specific file on the TNC
HN_RenameFile	RenameFile a specific file on the TNC
HN_ReceiveFile	Retrieve a file from the TNC (Download, incl. Events and Progress-Information)
HN_SendFile	Transmit a local file to the TNC (Upload, incl. Events and Progress-Information)
HN_ChangeFileAttr	Changes a files attributes on the TNC
HN_SetFileTime	Changes a files time stamp on the TNC
HN_GetTNCVersion	Versions-Information der TNC abfragen
HN_GetTNCDateTime	Retrieve the date & time information of the TNC
HN_SetTNCDateTime	Set the date & time information of the TNC
HN_ReadMarkers, HN_ReadWords, HN_ReadInputs, HN_ReadTimers, ...	Access memory area to retrieve special information out of the TNC (read, retrieve Plc Data)
HN_WriteMarkers, HN_WriteWords, ...	Access memory area to alter information on the TNC (write, modify Plc Data)
HN_ActivateAndRun	Activate and run the specific program file
HN_GetRunInfoEx	Provides DNC state information
HN_GetPgmStatus	Retrieve the program status
HN_GetExecMode	Retrieve the TNC execution mode
HN_SetMachineParameters	Changes maschine parameter
HN_GetLog*	Retrieves the log file

HN_SearchLogFile	Search the log file for specific entry
HN_GetTimes*	Alternate function, retrieves runtime values
HN_ReadTimers	Retrieves Timer values
HN_ExtractToolData	Extracts single fields out of the tool table
HN_UpdateToolData	Changes a single field inside the tool table
: :	: :
* Requires a SuperCom Suite software version and license.	

Technical Support

As with all SuperCom products, free technical support is included. In addition to the large amount of functions contained in the SuperCom software, our customers can enjoy our extensive information database on the various Heidenhain machines, provided by our technical support team, which we have collected over the years and can may help with difficult constellations.

Hardware requirements

Heidenhain TNC with a serial port interface or Ethernet (TCP/IP) interface.
Heidenhain TNC 320, TNC 360, TNC 426, TNC 430, iTNC 530, TNC 620, TNC 640, TNC7, MANUALplus, DataPilot CP 620, DataPilot CP 640, DataPilot MP 620, DataPilot 4110, DataPilot 4290 and more. **Option 18 is not used.**

License Information

Executable Applications developed using the SuperCom library can be distributed royalty free. More ...

Supported compilers

C#, C/C++, C++ Builder, Delphi, MS .NET, Visual C++, Visual Basic, Visual Basic NET, VBA, LabView, FoxPro, PowerBuilder and other Compiler and programing languages.

What to order?

The **SuperCom Heidenhain Library** needs a SuperCom communication layer for the data transfer (Serial and/or TCP) e.g. SuperCom Serial for Windows, SuperCom Suite for Windows. The SuperCom communication layer is responsible for establishing connections and low level data transfer.

* The SuperCom LSV2 Protocol Module is included with the **SuperCom Heidenhain Library**.

Favorable combinations for Windows  or Linux 

A flexibel and portabel library for use in Windows or Linux application*.

* Please select the specific Windows or Linux product codes.

PDF Document: Output of some example programs

PDF Document: SuperCom-Heidenhain-Software-Library

Using SuperCom you overcome many limitations. SuperCom was designed and used from the beginning in high demanding data communication applications.
