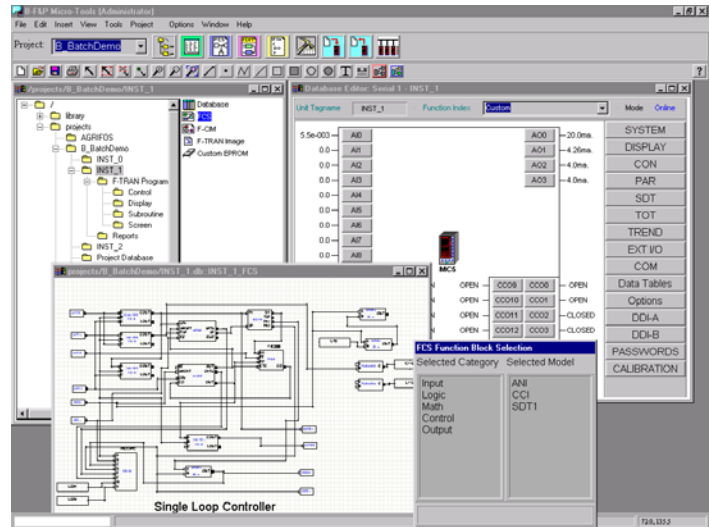
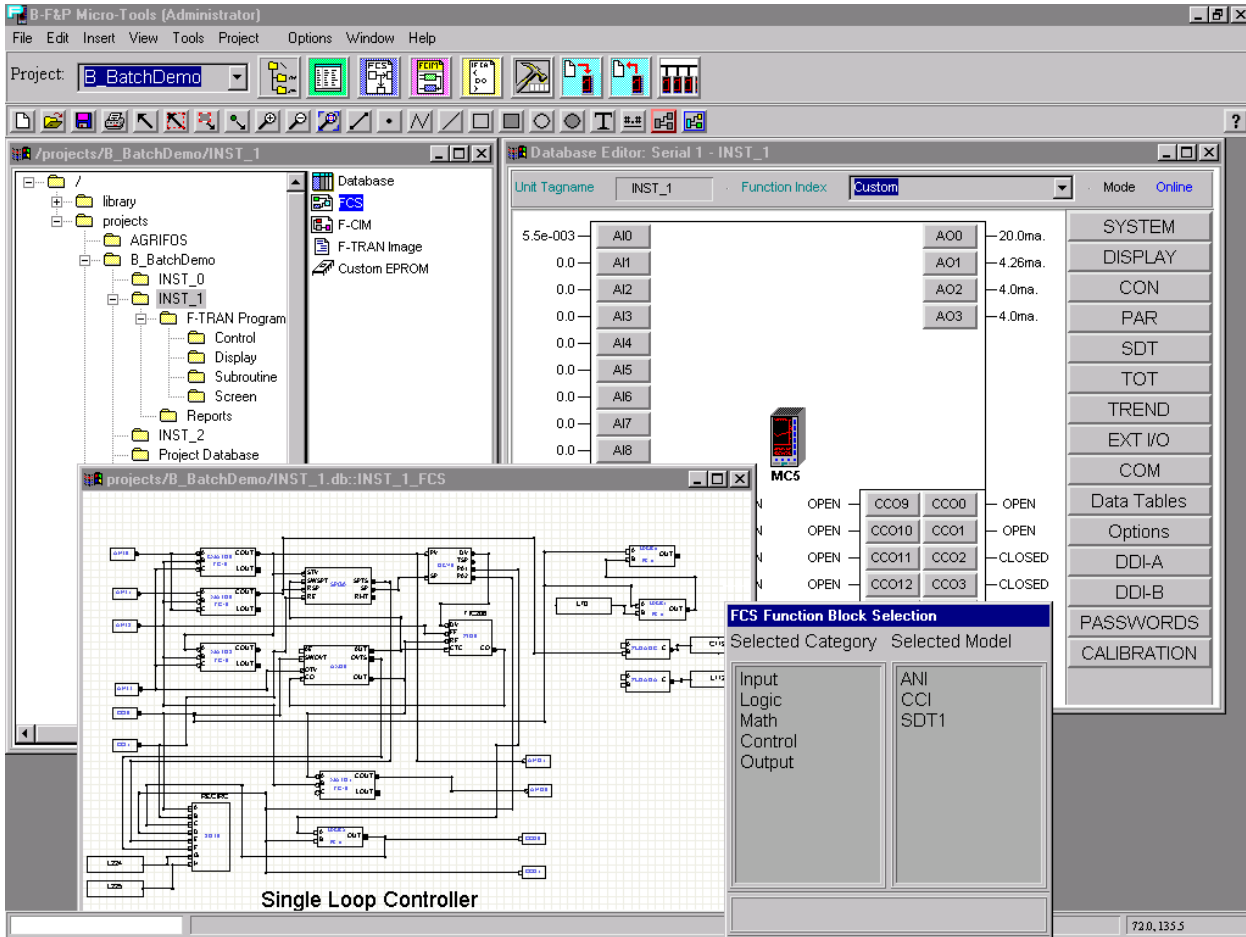


## Micro-DCI™ MicroTools 53MT6000A Configuration Software

- Windows 2000/XP Graphical Interface
- Simultaneous Configuration and Documentation
- Supports 53MC5000 FCS, F-CIM and F-TRAN Configuration/Programming
- Library of pre-configured standard strategy designs
- Context Sensitive On-Line Help
- On-line and Off-line configuration
- Point & Click configuration changes



## Micro-DCI™ MicroTools 53MT6000



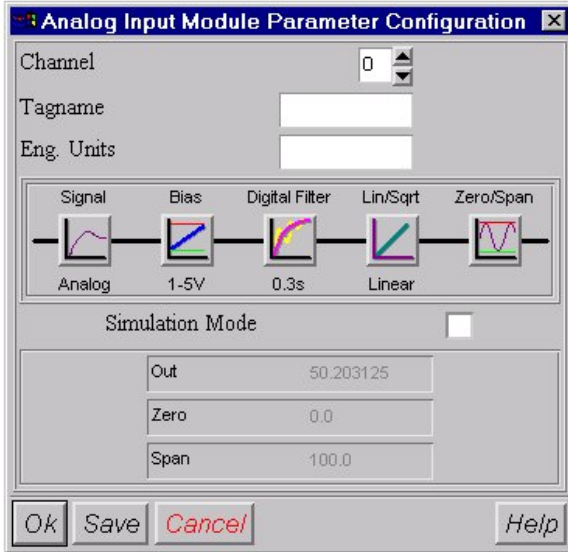
**MICRO-TOOLS 53MT6000**

**DESCRIPTION**

The Micro-Tools 53MT6000 is a personal computer (PC) based configuration and programming software toolkit designed for 53MC5000 Process Control Station family of products. This Windows 2000 Professional™ and Windows XP™ based software package provides the user tools to perform the simplest pre-configured Flexible Control Strategy designs to the development of complex sequence driven F-TRAN program designs. Micro-Tools is equipped with easy to use windows and menus designed to flow intuitively from the start of a project to its completion.

**FEATURES & BENEFITS**

**Windows Graphical Interface** MicroTools can be purchased with a graphical editor for the development of Flexible Control Strategies (FCS) and Flexible Control Interconnect Modules (F-CIM). The editor allows you to draw the desired control strategy using drag and drop modules and interconnect the modules by drawing lines between inputs and outputs. The resulting drawn strategy is converted by MicroTools for downloading into the controller.



**Intuitive and easy to use configuration tool**

MicroTools keeps your individual controller information in a Project Manager tree. Project folders are named and organized by the user. Controllers and their information are added to the Project Folders. Each controller has a unique name and the files for the controller are stored in this folder. Locating the information is as easy as finding the folder.

**Simultaneous Configuration and Documentation**

Pre-structured user alterable documentation formats are provided which grab the configuration information from the controllers offline copy of the database. Thus documentation efforts amount to selecting the report option, highlighting which portions of the controller information you want to include in the report such as database, FCS or F-CIM configuration or F-TRAN source files and clicking OK.

**Supports all three design methodologies**

**FCS - Flexible Control Strategies** allow the user to create simple control strategies using pre-structured function modules. The modules are “soft” wired together to perform control.

**F-CIM - Flexible Control Interconnect Modules**

can be used if the control strategy exceeds the capabilities of FCS. F-CIM uses many of the same module types found in the FCS library but the library is extended to provide more flexibility. A top down program execution permits a user structured program execution.

**F-TRAN- Flexible Translator Language** is the most versital of the programing methods. F-TRAN is a compiled control language comprised of command instruction and standard module subroutines that permit the user to use create programs and subrountines that best meet their needs. F-TRAN permits sequential logic operations, batch operations and hybrid digital/analog control functions. F-TRAN also allows the user to create custom display interfaces for the operators.

**A library of pre-configured standard strategy designs** for both Flexible Control Strategies and Flexible Control Interconnect Modules is provided. The library includes 10 FCS and 10 F-CIM strategies. These can be copied from the library and saved in a controller folder. The configurations can then be used as is or edited to suit the need of the user. User created strategies can be added to the library for future use in another application.

**Context sensitive on-line help** is available for nearly every screen. Help screens cover the tools as well as the controller. Help screens are structured in the typical Windows fashion.

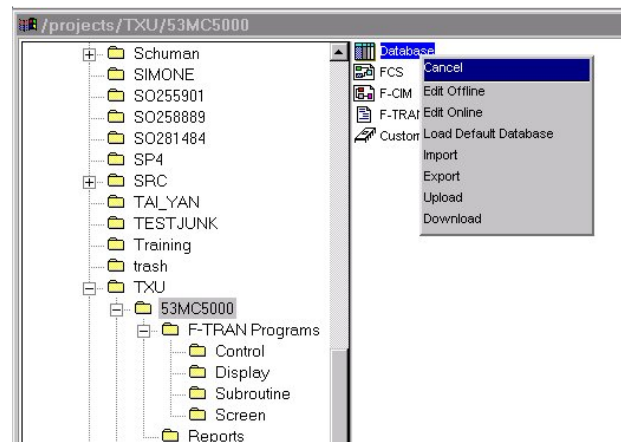
**On-line and Off-line configuration**

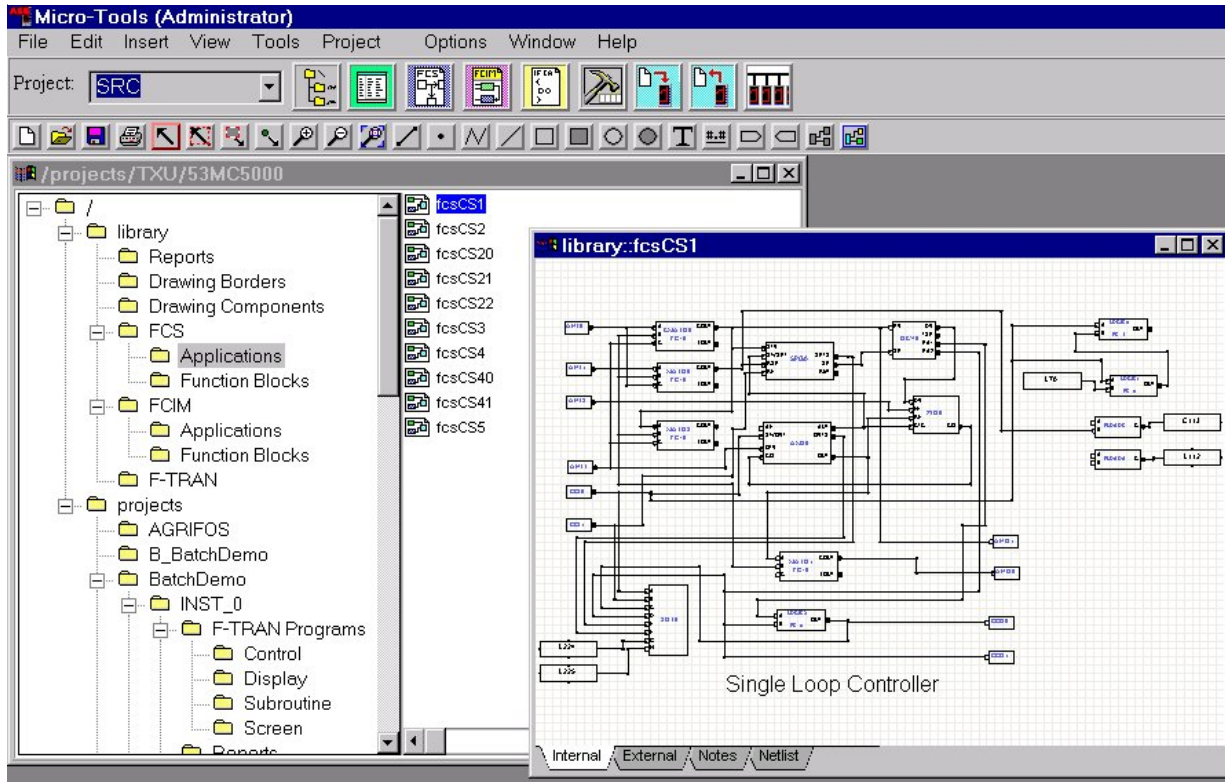
Configuration changes to a controllers database can be done on-line via one of the communications ports available or off-line for future download to a controller.

**"Point & Click” configuration changes**

MicroTools is a Windows 2000 or XP based application and uses mouse controls extensively to access and change data. Most of the options are selected from Windows push-button functions or pull-down menus.

**OTHER STANDARD FEATURES**





**Access to the controllers**

MicroTools is designed to take full advantage of the MicroDCI Communications Services. These services provide a variety of options to access the controller. The MicroDCI Communication Services will support both PC serial communications ports as well as the MicroDCI Supervisor communication cards. Each controller comes standard with an RS232 serial communication port located on the controller front faceplate. The controller also has a standard RS485 communication port at the rear of the controller that uses the MicroMod DataLink communications protocol. Serial communication to the controller can be through either of these two ports. An optional high speed peer-to-peer communications capability, called MicroLink, can be installed in the controller. MicroTools supports MicroLink equipped controller communication through PC based MicroLink Supervisor communication cards.

MicroTools in conjunction with the MicroDCI Communications Services will provide all possible access to the controller.

- Database configuration and storage
- Program development, compilation and storage
- Upload/Download of programs and instrument databases
- Custom EPROM generation
- Communication

**MINIMUM SYSTEM REQUIREMENTS**

- **Hardware:**
  - Intel Pentium Processor 120Mhz or faster
  - 32 MB of RAM
  - 20 MB of hard disk space minimum (additional data storage space required for controller data)
  - SVGA card, 256 color support and a minimum resolution 800 x 600
  - CD-ROM (for software installation)
  - Parallel printer port
  - Serial communication port (minimum)
- **Operating System:** MS Windows 2000 Professional™ or Windows XP™
- 53MT6000 Application Software is supplied on CD-ROM

## Model Number Designation

	53MT60	A		
<u>Version Type (see Notes)</u>				
Basic Functionality - Standalone	0			
Basic Functionality Add-on	1			
Full Functionality Standalone	2			
Full Functionality Add-on	3			
Full Functionality Micro-PWC Add-on	4			
<u>Communication Interface</u>				
None		0		
9-Pin "D" to MC5 Fron Port		1		
25-Pin "D" tp MC5 Front Port		2		
RS-485 Cable and RS-232/485 ITB		3		
<u>Design Level</u>			A	
<u>Security Key Type</u>				
Paralell Port			0	
USB Port			1	
<u>Media Type</u>				
None			0	
CD-ROM			1	

### VERSION TYPE

There are two Functionality versions implemented in five possible combinations of the Micro-Tools software. Basic functionality Micro-Tools does not include the Graphical Configuration Tools. Each of these versions is described below.

#### Basic Functionality Standalone

This version will add Micro-Tools to a host PC. No existing versions of LoopMaster (53HC2610A), Micro-DCI Communications Services(53SU6010A) or Micro-PWC have been previously installed.

#### Basic Functionality Add-on

This version will add MicroTools to an existing version of LoopMaster (53HC2610A) and/or Micro-DCI Communications Services (53SU6010A). A Hardware Security Device already exists for LoopMaster and/or the Micro-DCI Communications Services, the user must submit the Hardware Security Device ID number at the time the order is entered. A new MicroTools Software License Key will be issued for this hardware security device ID number.

#### Full Functionality Standalone

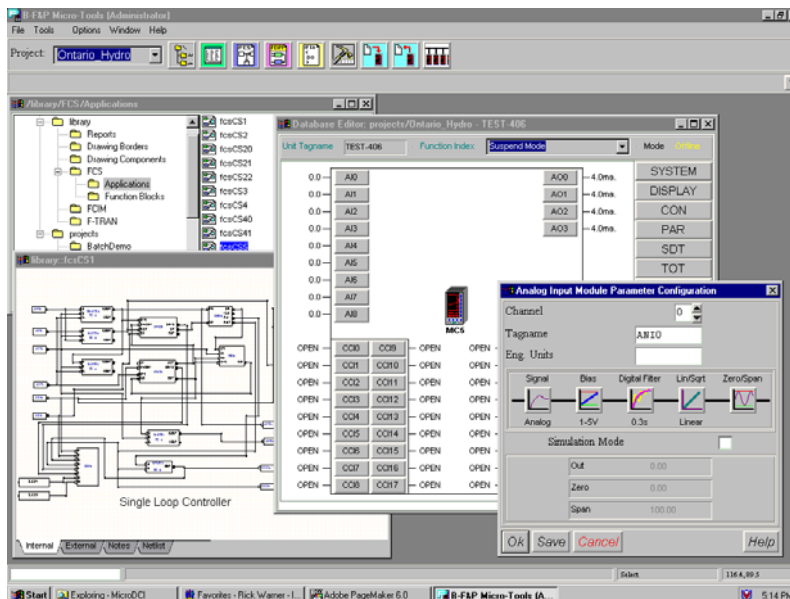
This version will add Micro-Tools to a host PC. No existing versions of LoopMaster (53HC2610A), Micro-DCI Communications Services(53SU6010A) or Micro-PWC have been previously installed.

#### Full Functionality Add-on

This version will add Micro-Tools to an existing version of LoopMaster (53HC2610A) and/or Micro-DCI Communications Services(53SU6010A). A Hardware Security Device already exists for LoopMaster and/or the Micro-DCI Communications Services, the user must submit the Hardware Security Device ID number at the time the order is entered. A new Software License Key will be issued for this ID number.

#### Full Functionality Micro-PWC Add-on

This version will add Micro-Tools to an existing version of Micro-PWC (53PW6000). An SL-GMS software license already exists. A Hardware Security Device already exists for Micro-PWC, the user **must** submit the Hardware Security Device ID number at the time the order is entered. A new Software License Key will be issued for this ID number.





## Additional Information

### In addition to this Specification, the 53MC5000 Process Control Station is supported by:

- Quick Start Installation Guide
    - Installation
    - Functionality
    - Flexible Control Strategy
  - Instruction Bulletin
    - Installation
    - Operation
    - Functionality and Displays
    - Communications
    - Maintenance
  - Customization Guide
    - F-TRAN (B-F&P Translator Language)
    - F-CIM (B-F&P Control Interconnection Modules)
  - MicroLink™ Instruction Bulletin
    - Installation
    - Network Management
    - Gateway Functions
  - 53MC5000 HART® Interface Instruction Bulletin
    - Installation
    - Operator Displays
  - PLC and Printer Interfaces Instruction Bulletin
    - Installation
    - Allen-Bradley Mode
    - OPTO 22 Mode
    - Modbus RTU Mode
    - Siemens S5 Mode
    - Koyo Mode
    - Printer Interface
  - Custom Program Interface Instruction Bulletin 53HC3300 Rev. D
    - MC5FIG
    - MC5DRAW
    - Documentor
- Micro-PWC™ Operators Console
- Micro-PWC™ Installation and Setup Guide
    - Hardware requirements
    - Installation
    - Start-up and Operation
  - Micro-PWC™ Operator's Manual
    - System Features
    - Logs
    - Trend Displays
    - Graphics
    - Process Alarms
  - Micro-PWC™ Configuration Guide
    - System Configuration
    - Hierarchical Displays
    - Configuration of Graphics
    - Historical Database
    - Logs
    - Trending
    - System Status Display
    - Utilities
    - Historical Block Data Collection
    - @aGlance/IT Server Interface
  - MicroTools™ Configuration Tool Kit
    - 53MC5000 Configuration/Programming
    - On-line / off-line database editor
    - Project Manager

Model Code	<b>53MT60</b>	—	—	<b>A</b>	<b>0</b>	—
	01 - 06	07	08	09	10	11
<b>Configuration Software for 53MC5000 Controller</b>	53MT60					
<b>Version Type (see Notes)</b>						
Basic Functionality - Standalone, Menu-based configuration	0					
Basic Functionality Add-on - <i>using existing Hardware Security key</i>	1					
Full Functionality Standalone - Graphic based configuraiton	2					
Full Functionality Add-on - <i>using existing Hardware Security Key</i>	3					
Full Functionality Micro-PWC Add-on <i>using existing MicroPWC Full Functionality Hardware Security Key</i>	4					
<b>53MC5000 Communication Interface</b>						
None	0					
9-Pin "D" to MC500 Front Port - 7 ft.	1					
25-Pin "D" to MC5 Front Port cable consult factory	2					
RS-232/485 ITB and cable	3					
<b>Design Level</b>				A		
<b>Security Key Type</b>						
None ( <i>for adding to systems with existing Security Device/copy protection key</i> )					X	
Parallel Port					0	
USB Port					1	
<b>Media Type</b>						
CD-ROM						1

The Micro-Tools software is a Microsoft Windows 2000 Professional and Windows XP Professional compatible software package for configuring and documenting control strategies for the 53MC5000 Process Control Station. The product includes a CD\_ROM, an instruction manual, hardware/software licensing keys and a communications interface option (if specified).

#### IMPORTANT INFORMATION:

The Micro-Tools product functionality is controlled by a software license manager. The implementation takes the form of a hardware security device (which plugs into the parallel port or the USB port of the PC) and one or more 20 digit software license keys to match the hardware plug. Therefore, in order to use Micro-Tools software, the host computer must have a working parallel port (with a standard 25 pin female "D" connector using the standard IBM parallel port pin out) or a Universal Serial Bus (USB) port. The hardware security device is a pass-thru device permitting its parallel port to be used for driving a second parallel device, such as a printer.

Only one Hardware Security Device is required when Micro-PWC, Micro-DCI Communications Services, LoopMaster and Micro-Tools products are installed on the same host computer.

The Micro-Tools and Micro-PWC products both make use of the "Graphic Modeling System" which is licensed from the SL Corporation (SL-GMS). Only one license is required per host machine.

The customer is required to sign one of more Software License agreement which legally restricts the usage of some Micro-DCI Software elements.

### Minimum Host Machine Requirements

CPU	Windows 2000 Professional or Windows XP Professional compatible personal computer with a Pentium-based PC of 120 Mhz (or higher) is recommended.	rec-
Memory	128 Megabytes of RAM Memory, with the ability to expand the memory capacity	
Hard Disk	A 520 MB hard disk drive, with the ability to expand to 1 Gigabyte of disk space. This can be SCSI or IDE drive, but must be compatible with Windows 2000 or XP.	
CD-ROM	A CD-ROM drive (Micro-Tools software is distributed on CD-ROM ONLY)	
Keyboard	An IBM AT compatible 101 key keyboard.	
Mouse	A cursor pointing device. This can be a two or three button mouse, trackball, or other Windows compatible cursor positioning device.	
Video	A video board and monitor capable of supporting 256 colors (65536 colors recommended) at 1024 x 768 pixel resolution.	
Floppy	A 3.5 inch floppy disk drive for small capacity removable storage.	
I/O	A parallel port for the Hardware Security Device and an optional printer. One or more serial communications ports (COM ports) for connection to one or more networks of controllers. One or more full ISA card slots for use with Supervisor communication cards.	
Software	Microsoft Windows 2000 Professional or Windows XP Professional	

### VERSION TYPE

There are two Functionality versions implemented in five possible combinations of the Micro-Tools software features. The two functionality version are Micro-Tools without Graphical configuration and MicroTools with Graphical configuration. Basic functionality Micro-Tools does not include the Graphical Configuration Tools. Each of the five combinations of features is described below.

#### Basic Functionality Standalone

This version will add Micro-Tools to a host PC. No existing versions of LoopMaster (53HC2610A), Micro-DCI Communications Services (53SU6010A) or Micro-PWC have been previously installed. This software package requires Microsoft Windows 2000 Professional or WIndows XP Professional. An SL-GMS software license IS NOT REQUIRED.

#### Basic Functionality Add-on

This version will add Micro-Tools to an existing version of LoopMaster (53HC2610A) and/or Micro-DCI Communications Services(53SU6010A). Both of these software packages require Microsoft Window NT 4.0 Operating System and Service Pack patches, Windows 2000 Professional or Windows XP Professional. An SL-GMS software license IS NOT REQUIRED. A Hardware Security Device already exists for LoopMaster and/or the Micro-DCI Communications Services, the user must submit the Hardware Security Device ID number at the time the order is entered. A new Software License Key will be issued for this ID number.



### Full Functionality Standalone

This version will add Micro-Tools to a host PC. No existing versions of LoopMaster (53HC2610A), Micro-DCI Communications Services(53SU6010A) or Micro-PWC have been previously installed. This software package requires Microsoft Windows 2000 Professional or Windows XP Professional. An SL-GMS software license DOES NOT already exist and will have to be issued.

### Full Functionality Add-on

This version will add Micro-Tools to an existing version of LoopMaster (53HC2610A) and/or Micro-DCI Communications Services(53SU6010A). Both of these software packages require Microsoft Windows 2000 Professional or Windows XP Professional. An SL-GMS software license DOES NOT already exist and will have to be issued. A Hardware Security Device already exists for LoopMaster and/or the Micro-DCI Communications Services, the user must submit the Hardware Security Device ID number at the time the order is entered. A new Software License Key will be issued for this ID number.

Note 1: Communication between a PC running the 53MT60000 Micro-Tools software and the 53MC5000 Process Control Station may be done either through a point-to-point connection via RS-232 front port connection, through a Micro-DCI multidrop Datalink communication network over RS-485 or by DataLink or MicroLink communication using a Supervisor communications card. Additional communication hardware must be ordered separately (refer to the price list below).

Interconnection diagrams showing the various communications cabling options/configurations may be found in the 53MT6000 Instruction Bulletin.

#### Communication Interface Option (1) & (2):

Use this option to connect a single 53MC5000 Process Control Station via the RS-232 Face Plate front port. The 7 foot cable is either a 9-pin (698B183U01) or 25-pin (698B184U01) female D connector on the computer end and a 5-pin miniDIN connector on the controller end.

#### Communication Interface Option (3):

Use this option when connecting to a network of up to 32 53MC5000 Process Control Stations using the standard RS-485 DataLink connection. An RS-232 to RS-485 Interface Terminal Board (686B720U01) is supplied along with a 7 foot long cable (698B240U01) for connecting the interface to the computer. The cable has a 9-pin female D connector on the computer end. The user must supply wiring between the RS-232/485 Interface Terminal Board, the first controller and between controllers.

#### Additional Communication Interface:

The 53MT6000 Micro-Tools software can also be used in conjunction with networks of 53MC5000 Process Control Stations (PCS) using Supervisor communication cards. Supervisor communications cards are available in either DataLink or MicroLink versions. Cable connections between a DataLink Supervisor card and the 53MC5000 can be either standard terminal (677B907U01) or cord set (677B943U01). Additional cabling is required between Process Control Stations.

**Supervisor Cards**

Datalink	686B574U02
Datalink with PLC Option	686B574U03
MicroLink	686B619U03
MicroLink with PLC Option	686B619U04
Redundant MicroLink Interface	686B626U02

**Upgrade kit for Datalink Supervisor Cards**

To upgrade previous PROM revisions to Revision 5.0	614C085U01
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**Upgrade kit for MicroLink Supervisor Cards**

To upgrade previous PROM revisions to Revision 5.0	614C086U01
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**Communications Optional Hardware**

Comm. Interface Terminal Board (ITB)	686B622U01
Communications Cable, Modular connector (2.5 ft)	677B943U01
RS232 to RS485 Interface Terminal Board (ITB)	686B720U01

**Cables**

Datalink Card to uDCI Instrument (Screw Terminals Non-Cord Set)	5 ft.	677B907U01
	10 ft.	677B907U02
	15 ft.	677B907U03
	20 ft.	677B907U04
	25 ft.	677B907U05
	30 ft.	677B907U06
	50 ft.	677B907U07
MicroLink cards to 53MC5000	2.5 ft.	677B943U01
	5 ft.	677B943U02
	25 ft.	677B943U03
RS232/RS485 ITB to PC Serial port	8 ft.	698B240U01

**Manuals**

User's Guide (PN 24926)	694A169U01
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[www.micromodautomation.com](http://www.micromodautomation.com)

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Printed in USA

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S-DCI-53MT6000\_3 August 2005