# Machine Link<sup>™</sup> QUICK Serve

Developed by a company that knows machining...





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Machine Link<sup>™</sup> QUICK Serve continuously monitors all machines for CNC file requests made across wireless or wired serial connections. When a request is received, the requested CNC file is *quickly served* back to the machine tool control.

😌 Machine Link(TM) QUICK S	erve (Ve	rsion 4.5.2)				_		$\times$
File Edit Operate Help								
Systems	R	equests S	Gending 0	Sent OK 0	CONFIGURE		EXIT	I
Active Scan Table								
Machine Name	PORT	Status	Transfers					*
FANUC	3	Scanning						
FAGOR	4	Scanning						
GRINDER	9	Scanning						
CNC_2121	10	Scanning						
CNC_3723	11	Scanning						
								-
4					I			
							-	

Machine operators initiate all file requests without needing to leave their machine or manually interact with the PC. The request is initiated from the machine tool control at the shop floor level using simple keywords embedded into the CNC Program Request file. The keyword configuration is extremely flexible and will accommodate all CNC machine tool controls – the only limitation is your creativity!

**Email/Text MSG support** is an optional feature that allows file requests to be emailed or sent via text message directly to Machine Link<sup>™</sup> QUICK Serve, and then quickly served to the specified CNC machine tool control. This is the ideal solution for machines that communicate in one direction (to the control), such as ADR BTRs.

The following product icon indicates that Email/Text MSG support is enabled.



### 1.1 How it Works

To receive a file, open the **CNC Request Program** (O1111) at the machine tool control and enter the desired CNC file name into the **Request Line**.

#### **CNC Request Program**

% 01111	<sup>.</sup> Recommended Program Name <sup>.</sup> Keyword <sup>.</sup> Request Line
M30 %	

Output the edited 'O1111' program from the machine tool control and then prepare the machine tool control to receive the desired CNC file entered into the Request Line '(Oxxxx)'.

After a short, adjustable delay **Machine Link™ QUICK Serve** will serve the requested CNC file back to the machine tool control.

# 2 Configuration

Press [CONFIGURE] to access the Configuration Table shown below. Each machine is given a NAME and is assigned a unique PORT number. Only Machines marked with a 'Y' (Yes) in the ACTIVE column will be monitored for requests.

rent CNC Control						
NUC				CONF	IGURE	SAVE CANCEL
ommunications AUT	O Send	AUT	TO Save Special	Options		
Communication Table		5 of 32				HELP
NAME	PORT	ACTIVE	PARAMETERS	ADVANCED	CNC FORMAT	FILE FORMATTING
FANUC	3	Y	4800,7,E,2,XON/XOFF,0,0	) 25,N	ASCII	%,CRLF,%
FAGOR	4	Y	9600,8,N,1,XON/XOFF,0,	0 25,N	ASCII	NONE, CRLF, ASCII(4)
Brothers 22A	2	N	4800,8,N,1,XON/XOFF,0,	0 20,N	ASCII	NONE, CRLF, NONE
Shizuoka	3	N	19200,7,E,2,HARDWARE,	0,0 10,N	ASCII	NONE, CRLF, %
CNCMACHINE	5	N	4800,7,E,2,XON/XOFF,0,0	) 25,N	ASCII	NONE, CRLF, NONE
GRINDER	9	γ	4800,7,E,2,XON/XOFF,0,0	) 25,N	ASCII	NONE, CRLF, NONE
CNC_2121	10	γ	4800,7,E,2,XON/XOFF,0,0	) 25,N	ASCII	NONE, CRLF, NONE
CNC_3723	11	γ	4800,7,E,2,XON/XOFF,0,0	) 25,N	ASCII	NONE, CRLF, NONE
						<b>T</b>

Configuration Table									
Edit	Table	Help							
Cur	Inse	rt Row	C	trl+l					
EAL	Dele	ete Row	C	trl+D					
J. A	Dup	licate Row	C	trl+U					
Ca	Sort	Table (Active)	C	trl+S	TUA				
	NAME			PORT	ACTIVE				
	FANU			3	Y				
	FAGOR	2		4	Y				

Rows of the Configuration Table can be modified through the [Table] dropdown menu located on the top menu bar.

## 2.1 Configuration Utility

Although the Configuration Table can be edited directly, press [CONFIGURE] to gain access to the Configuration Utility.

The Configuration Utility is used to guide you through the setup parameters necessary for each PORT/CNC Control.

Configuration Utility ×
Help
Configured CNC Name:
FAGOR Scanning Paused
SEND FROM - Folder
C:\MLQSERVE\CNCPROGS
SAVE TO - Folder
C:\MLQSERVE\CNCPROGS
PORT
4 Active in Scan List
PARAMETERS
baud rate     data bits     parity     stop bits     Protocol     EOL Delay     CHAR Delay       9600     8     no parity     1 bit     XON/XOFF     0     0
ADVANCED
Seconds to WAIT before Sending
Start of Transmission     End of Line     End of Transmission     CNC Format       None     CR then LF     None     ASCII
ACCEPT DEFAULTS CANCEL

Configured CNC Name: specifies the CNC control name.

**SEND FROM – Folder** specifies the folder location where CNC files will be pulled from and served to the machine.

SAVE TO – Folder specifies the folder location where received CNC files will be saved.

**PORT** specifies the *unique* serial communication port.

Active in Scan List specifies if the port will be monitored.

#### PARAMETERS

(Consult your Manuals, the Control Manufacturer, and/or the Machine Tool Builder to determine appropriate communication settings.)

**baud rate** specifies the rate of transmission in bits per second. Typical rates are 300, 1200, 2400, 4800, 9600, or faster.

**data bits** specify the numbers of bits in the incoming data. Typical values are between 5 and 8.

parity specifies the error-checking procedure. Typical value is 'no parity'.

stop bits specifies the number of stop bits. Typical value is 1.

**Protocol** specifies the communication protocol. Typical serial communication protocol is 'XON/XOFF'.

**EOL Delay** (End of Line Delay) specifies the number of milliseconds to wait after sending each line of the CNC program. Typical value is 0.

**CHAR Delay** (Character Delay) specifies the number of milliseconds to wait after sending each character of the CNC program. Typical value is 0.

#### ADVANCED

**Seconds to WAIT before Sending** controls the delay interval to wait before the requested file is *served* to the CNC control. This delay gives the operator time to prepare the machine to receive the requested CNC program.

**On Receive: Strip Extra Line Feed** will force **Machine Link™ QUICK Serve** to wait before sending a CNC file until the machine tool requests the file. (*This is an advanced feature that is designed primarily for DNC sessions and may not be applicable with all machine tool controls.*)

**Start of Transmission** specifies the character that will be automatically inserted to the beginning (FRONT) of the CNC program during transmission. Use 'None' if the character is already embedded in the CNC program contents.

**End of Line** specifies the character or character combination that will be automatically appended to the end of each program line prior to sending the file to the CNC machine control. Typical value is 'CR then LF' (Carriage Return then Line Feed).

**End of Transmission** specifies the character that will be automatically inserted at the end (BACK) of the CNC program during transmission. Use 'None' if the character is already embedded in the CNC program contents.

**IMPORTANT NOTE**: Many machine controls will not terminate the communication session successfully until the correct End of Transmission character is received.

CNC Format specifies the data format. Typical value is 'ASCII'.

# 2.2 AUTO Send

The "Auto Send Table" is used to assign the parameters required to initiate requests from the CNC machine tool control.

Configuration Table					2
dit Table Help					
Current CNC Control					
FANUC				CONFIGURE	SAVE CANCEL
		_			
Communications Al	UTO Send	AUTO Save	Special Options		
Auto Send Table					BROWSE
SEND COMMAND	Trigger STAR	T Trigger END	Auto PREFIX	Auto EXTENSION	SEND FROM FOLDER
SENDME	]	1			C:\MLQSERVE\CNCPROGS
SENDPARTNO	(	)		.NC	C:\MLQSERVE\CNCPROGS
GI0001 AND 999.	999.	*		.NC	C:\MACHLINK\_Mills\004
SD	]	1			C:\MACHLINK\_Mills\Shizuoka
M74	X	Y		.TPE	C:\MLQSERVE\CNCPROGS
:				.NC	C:\MLQSERVE\CNCPROGS
MLQS(1)				.TPE	C:\MLQSERVE\CNCPROGS
			-		
					<b>T</b>
		1			

**SEND COMMAND** specifies the keyword to initiate a File Transfer to the CNC control. Note: The SEND COMMAND characters are configurable to accommodate all CNC controllers. For additional creativity, one "AND" statement is supported.

**Trigger START** specifies the character that marks the start of the File Name to send.

Trigger END specifies the character that marks the end of the File Name to send.

Auto PREFIX specifies characters to be inserted before the found File Name.

**Auto EXTENSION** specifies characters to be appended to the end of the found File Name.

Note: this can be used to save operator typing at the CNC control if the CNC programs end with a specific extension.

**SEND FROM FOLDER** specifies the folder location where CNC files will be pulled from and served to the machine.

#### 2.2.1 AUTO Send Examples

#### AUTO Send Table Configuration

	SEND COMMAND	Trigger START	Trigger END	Auto PREFIX	Auto EXTENSION	SEND FROM FOLDER
CNC 1	SENDME	[	]			C:\CNCPROGS
CNC 2	M74	Х	Y		.TPE	C:\YourFolder
CNC 3	SENDPARTNO	(	)		.NC	C:\CNCMills

#### AUTO Send Example – CNC 1

010		
01111	4	Recommended Program Name
(SENDME)	~	Keyword
[02137.NC]	←	Request Line
(CONTROLINK SYSTEMS LLC) (PHONE 812-637-6800) (ML QUICK SERVE)		
М30		
<u>0</u>		

In the example above, after the SEND COMMAND characters 'SENDME' are found, the Trigger START character '[' specifies the start of the File Name, and the Trigger END character ']' specifies the end of the File Name.

Outputting this program from CNC 1 will result in CNC program 'O2137.NC' from 'C:\CNCPROGS' being sent to the CNC control.

AUTO Send Example – CNC 2	
00	
01111	$\leftarrow$ Recommended Program Name

In example two, 'M74' is the SEND COMMAND. Again, after the SEND COMMAND characters are found, the Trigger START character 'X' specifies the start of the File Name, and the Trigger END character 'Y' specifies the end of the File Name.

CNC 2 has an Auto EXTENSION '.TPE' specified, so outputting this program from CNC 2 will result in CNC program 'O2321.TPE' from 'C:\YourFolder' being sent to the CNC control.

AUTO Send Example – CNC 3 (SPECIAL CASE)

```
G

01111

(SENDPARTNO)

(O6289, PARTNO1)

(CONTROLINK SYSTEMS LLC)

(PHONE 812-637-6800)

(ML QUICK SERVE)

M30

%
```

In this last example, 'SENDPARTNO' (special keyword) is the SEND COMMAND. Like normal, after the SEND COMMAND characters are found, the Trigger START character '(' specifies the start of the File Name, and the Trigger END character ')' specifies the end of the File Name.

CNC 3 has an Auto EXTENSION '.NC' specified, so outputting this program from CNC 3 will result in CNC program '06289.NC' being sent to the CNC control; however, with SENDPARTNO as the keyword, the folder location of the CNC program will now be 'C:\CNCMills\PARTNO1'.

Using the 'SENDPARTNO' keyword offers an additional level of flexibility in the CNC program folder structure and is particularly useful for job shops that use the same program number across different part numbers.

### 2.3 AUTO Save

The "Auto Save Table" is used to assign the parameters required to capture and store CNC program modifications that were made on the shop floor at the CNC machine tool control and sent back to Machine Link<sup>™</sup> QUICK Serve.

Edit Table Help         Current CNC Control         FANUC       CONFIGURE       SAVE       CANCEL         FANUC       BROWSE       CANCEL         Communications       AUTO Send       AUTO Save       Special Options       BROWSE       Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Configure       SAVE       CANCEL         Communications       AUTO Send       AUTO Save       Special Options       Image: Colspan="2">Image: Colspan="2" Image: Colspa=
Current CNC Control       CONFIGURE       SAVE       CANCEL         FANUC       Communications       AUTO Send       AUTO Save       Special Options         Muto Save Table         SAVE COMMAND       Trigger START       Trigger END       Auto PREFIX       Auto EXTENSION       SAVE TO FOLDER         SAVEAS       [       1       .NC       C:/MLQSERVE/CNCPROGS/RECEIVED       SAVEAS       .NC       .NC       .NC/MCHLINK/_Mills/004         SF       [       1       .NC       C:/MACHLINK/_Mills/Shizuoka       .NC
FANUC     CONFIGURE     SAVE     CANCEL       Communications     AUTO Send     AUTO Save     Special Options     Image: Special Options       Auto Save Table       SAVE COMMAND     Trigger START     Trigger END     Auto PREFIX     Auto EXTENSION     SAVE TO FOLDER       SAVEAS     [     1     Image: Save Concernsion     SAVE CONCPROGS/RECEIVED     Image: Save Concernsion       SAVEAS     [     1     Image: Save Concernsion     Save Concernsion     Save Concernsion       SAVEAS     [     1     Image: Save Concernsion     Image: Save Concernsion     Image: Save Concernsion       SAVEAS     [     1     Image: Save Concernsion     Image: Save Concernsion     Image: Save Concernsion       SAVEAS     [     1     Image: Save Concernsion     Image: Save Concernsion     Image: Save Concernsion       SAVEAS     [     1     Image: Save Concernsion     Image: Save Concernsion     Image: Save Concernsion       SAVEAS     [     1     Image: Save Concernsion     Image: Save Concernsion     Image: Save Concernsion       SF     [     1     Image: Save Concernsion     Image: Save Concernsion     Image: Save Concernsion
Communications       AUTO Send       AUTO Save       Special Options         BROWSE         BROWSE         SAVE COMMAND       Trigger START       Trigger END       Auto PREFIX       Auto EXTENSION       SAVE TO FOLDER       Image: SAVEAS       I
Communications     AUTO Send     AUTO Save     Special Options       Auto Save Table     BROWSE       SAVE COMMAND     Trigger START     Trigger END     Auto PREFIX     Auto EXTENSION     SAVE TO FOLDER       SAVEAS     [     ]
BROWSE       BROWSE       SAVE COMMAND     Trigger START     Trigger END     Auto PREFIX     Auto EXTENSION     SAVE TO FOLDER       SAVEAS     [     ]
SAVE COMMAND       Trigger START       Trigger END       Auto PREFIX       Auto EXTENSION       SAVE TO FOLDER         SAVEAS       [       ]       C:\MLQSERVE\CNCPROGS\RECEIVED         SAVEAS       [       ]       .NC       C:\MLQSERVE\CNCPROGS\RECEIVED         : AND G       I       S       .NC       C:\MACHLINK\_Mills\004         SF       [       ]       C:\MACHLINK\_Mills\Shizuoka
SAVEAS         [         ]         C:\MLQSERVE\CNCPROGS\RECEIVED           SAVEAS         [         ]         .NC         C:\MLQSERVE\CNCPROGS\RECEIVED           : AND G         1         S         .NC         C:\MACHLINK\_Mills\004           SF         [         ]         C:\MACHLINK\_Mills\Shizuoka
SAVEAS         [         ]         .NC         C:\MLQSERVE\CNCPROGS\RECEIVED           : AND G         I         S         .NC         C:\MACHLINK\_Mills\004           SF         [         ]         C:\MACHLINK\_Mills\Shizuoka
: AND G         I         S         .NC         C:\MACHLINK\_Mills\004           SF         [         ]         C:\MACHLINK\_Mills\Shizuoka
SF [ ] C:\MACHLINK\_Mills\Shizuoka
M73 X Y .TPE C:\MLQSERVE\CNCPROGS
: AND G .NC C:\MLQSERVE\CNCPROGS
SAVEAS [ ] .TPE C:\MLQSERVE\CNCPROGS

**SAVE COMMAND** specifies the keyword to initiate an Auto Save of the CNC program. Note: The SAVE COMMAND characters are configurable to accommodate all CNC controllers. For additional creativity, one "AND" statement is supported.

**Trigger START** specifies the character that marks the start of the File Name to save.

Trigger END specifies the character that marks the end of the File Name to save.

Auto PREFIX specifies characters to be inserted before the found File Name.

**Auto EXTENSION** specifies characters to be appended to the end of the found File Name.

Note: this can be used to save operator typing at the CNC control if the CNC programs end with a specific extension.

SAVE TO FOLDER specifies the folder location where CNC files will be saved to.

#### 2.3.1 AUTO Save Examples

#### Auto Save Table Configuration

	SAVE COMMAND	Trigger START	Trigger END	Auto PREFIX	Auto EXTENSION	SAVE TO FOLDER
CNC 1	SAVEAS	[	]			C:\CNCPROG \RECEIVED
CNC 2	: AND G	S	А		.NC	C:\YourFolder \RECEIVED

# AUTO Save Example – CNC 1

。 O4005(DRILLING WITH TORQUE/THRUST) ( <mark>SAVEAS</mark> ) [O4005EDIT1.NC]	← Keyword ← Trigger Characters
N10(START)	
G20G80G90G40G55	
N100(POSITION AND DRILL)	
#127=3.82*#101/#104(RPM)	
#128=#127*#102(IPM)	
M03S#127	

In the example above, after the SAVE COMMAND characters 'SAVEAS' are found, the Trigger START character '[' specifies the start of the File Name, and the Trigger END character ']' specifies the end of the File Name.

Outputting this program from CNC 1 will result in CNC program 'O4005EDIT1.NC' being saved to the folder 'C:\CNCPROGS\RECEIVED'.

#### AUTO Save Example – CNC 2

° O4005(DRILLING WITH TORQUE/THRUST) ( <mark>: AND G</mark> ) (S <mark>O4005EDIT2</mark> A)	← Keyword ← Trigger Characters
N10(START) G20G80G90G40G55 N100(POSITION AND DRILL) #127=3.82*#101/#104(RPM) #128=#127*#102(IPM) M03S#127	

In this last example, ': AND G' is the SAVE COMMAND. Again, after the SAVE COMMAND characters are found, the Trigger START character 'S' specifies the start of the File Name, and the Trigger END character 'A' specifies the end of the File Name.

Outputting this program from CNC 2 will result in CNC program 'O4005EDIT2.NC' being saved to the folder 'C:\YourFolder\RECEIVED'.

### 2.4 Special Options

The "Options Table" helps manage CNC files that were edited on the shop floor and returned using the AUTO Save feature.

🚭 Configuration Table						×
Edit Table Help						
Current CNC Control						
FANUC				CONFIGURE	SAVE	CANCEL
Communications A	UTO Send A	AUTO Save	Special Options			
Options Table						HELP
AUTO Print (Y/N)	AUTO Update (	Y/N) No. of F	iles to Keep			
N	Y	5				
N	N					
N	Y	15				
N	N					
N	N					
Y	N					
						<b>T</b>
						•

AUTO Print (Y/N) specifies if the AUTO Saved file should be automatically printed.

**AUTO Update (Y/N)** specifies if the AUTO Saved file should overwrite an existing file with the same name. Setting AUTO Update to 'N' will store the received file into the designated folder for engineering review. After engineering approval, the file can be placed into the appropriate AUTO Send folder where it will be served back to the CNC control when requested.

**No. of Files to Keep** specifies the number of historic files to keep. Additional files are automatically deleted to conserve disc storage space.

# **3 Requesting a CNC File**

CNC Request Program 'O1111' (recommended program name) on each CNC machine should contain the configured SEND COMMAND keyword for that specific machine tool control. As outlined in <u>Section 2.2.1</u>, after the SEND COMMAND keyword is found, the Trigger START and Trigger END characters are used to find the desired CNC file to serve. Between the Trigger START and Trigger END characters is called the **Request Line**. The Request Line is the <u>only</u> line that needs to be altered by the user to request a specific CNC file.

#### **CNC Request Program 01111**

% O1111 (SENDME) (OXXXX)	← ←	Recommended Program Name Keyword Request Line
(CONTROLINK SYSTEMS LLC) (PHONE 812-637-6800) (ML QUICK SERVE)	-	
M30 %		

### 3.1 Steps to Receive a CNC File

- 1) At the machine tool control, open the 'O1111' CNC Request Program.
- 2) Enter the desired CNC file name into the Request Line.
- 3) Output the 'O1111' program from the machine tool control.
- 4) Prepare the machine tool control to receive the desired CNC file.
- 5) Wait the **Seconds to WAIT before Sending** specified for the machine tool control.
- 6) Receive the CNC file.

# 4 COM Port/Cable Test

The "COM Port Test" is used to validate wireless and wired COM Port assignments and troubleshoot COM Port/Cable problems. It is accessed through the top menu bar by clicking [Operate > COM Port/Cable Test].

The utility is incredibly useful for validating all COM Port assignments.

e	DM Port Test
	Disconnect the cable from the machine tool and place a jumper across pins 2 and 3. pecify the COM Port and the communication parameters, then press [TEST PORT].
	module performs a loop-back test on the specified COM Port. op-back test allows you to send and receive data using the same serial port to verify that the port is rational and to help identify wireless device assignments. A jumper needs to be inserted across s 2 and 3 to perform this test.
	d help? Click HELP!
	1
	Ata bits     TEST PORT       Bata bits     FAILED TEST       Bata bits     FAILED TEST
	bit arity no parity

**COM port** specifies the communication port to troubleshoot.

**TEST PORT** initiates the COM Port/Cable Test.

### 4.1 Performing a COM Port/Cable Test

Select the COM port to test and then disconnect the cable from the selected machine. Once disconnected, insert a jumper across pins  $2_{(TX)}$  and  $3_{(RX)}$ . Press [TEST PORT]

### 4.2 Interpreting the COM Port/Cable Test Results

#### PASS

- 1) Validates the wire and that all connections are unbroken.
- Validates that the correct COM port was selected and that it is working properly.
- 3) Validates that the selected COM port is compatible with the specified communication parameters.

#### FAIL

- 1) A wire is loose and/or a connection is broken.
- 2) The incorrect COM port was selected.
- The selected COM port is not compatible with the specified communication parameters.

# 5 Scan Log

The Scan LOG shows when the program was started and stopped, along with all service activities for each active machine. It is accessed through the top menu bar by clicking [Operate > View Scan Log].

File names and folder path details are provided for a thorough review of any errors or issues. Inaccurate requests initiated from the shop floor can also be investigated when necessary.

🚭 View Scan LOG History	y		- 🗆 ×
Help			
Scan LOG History		PRINT LOG	CLEAR LOG EXIT
CNC Name	Date/Time	Operation	Status
FANUC	2/23/2021, 3:43:38 PM	RECEIVE	C:\MLQSERVE\CNCPROGS\RECEIVED\062
Shizuoka	2/23/2021, 2:21:03 PM	AUTO SERVE	C:\MACHLINK\_Mills\Shizuoka\O4006.NC
FAGOR	2/23/2021, 1:08:54 PM	AUTO SERVE	C:\MLQSERVE\CNCPROGS\06115.NC
Brothers 22A	2/23/2021, 1:07:33 PM	AUTO RECEIVE	C:\MACHLINK\_Mills\004\02321EDIT.NC
FAGOR	2/23/2021, 1:05:13 PM	ERROR	<not a="" path=""></not>
GRINDER	2/23/2021, 12:38:06 AM	AUTO RECEIVE	C:\MLQSERVE\CNCPROGS\02321EDIT.TPE
GRINDER	2/23/2021, 11:23:32 AM	SEND	C:\MLQSERVE\CNCPROGS\02321.TPE
FANUC	2/23/2021, 10:54:17 AM	AUTO SERVE	C:\MLQSERVE\CNCPROGS\PARTNO1\0628
Shizuoka	2/23/2021, 10:16:28 AM	AUTO RECEIVE	C:\MACHLINK\_Mills\Shizuoka\O4005EDIT
Shizuoka	2/23/2021, 7:42:54 AM	AUTO SERVE	C:\MACHLINK\_Mills\Shizuoka\O4005.NC
Shizuoka	2/23/2021, 7:39:02 AM	ERROR	<not a="" path=""></not>
Brothers 22A	2/23/2021, 7:04:48 AM	AUTO SERVE	C:\MACHLINK\_Mills\004\02321.NC
FANUC	2/23/2021, 6:31:07 AM	AUTO SERVE	C:\MLQSERVE\CNCPROGS\02137.NC
FANUC	2/23/2021, 6:22:19 AM	RECEIVE	C:\MLQSERVE\CNCPROGS\RECEIVED\040
Controlink Systems	2/23/2021, 6:00:00 AM	PROGRAM START	Scanning
			7
4			Þ

# 6 Manually Select and Send

The "Select and Send" utility is used to manually send CNC files to the selected machine tool control. It is accessed through the top menu bar by clicking [File > Send to CNC].

🚭 Select and Send	-	
Help		
Configured Machine Controls		
FANUC SELECT SELECT	SEND	EXIT
CNC Program		
2137.NC		
02321.TPE		
04005.NC		
06289.NC		
		<b>T</b>

**Configured Machine Controls** specifies the machine tool control to manually send a CNC file to.

**SELECT FOLDER** browses to a specific folder location. The desired CNC file can then be selected from the CNC Program list.

**SELECT FILE** browses to a specific CNC program location.

**SEND** outputs the selected CNC program to the selected machine tool control.

**EXIT** returns to the main monitor.

# 7 Manually Receive and Save

The "Receive and Save" utility is used to manually receive CNC files from the selected machine tool control. It is accessed through the top menu bar by clicking [File > Receive from CNC].

The "Receive and Save" utility is a useful tool for troubleshooting CNC file request issues. Using it allows you to capture outputted files from the machine tool control for review.



**Configured Machine Controls** specifies the machine tool control to manually receive a CNC file from.

**RECEIVE** launches a communication session to receive a CNC file from the selected machine tool control.

SAVE performs a Save As for the received CNC file.

**EXIT** returns to the main monitor.

# 8 Print CNC File

The "Print CNC File" utility is used to manually print the selected CNC file. It is accessed through the top menu bar by clicking [File > Print CNC File].

Printing a CNC file using the "Print CNC File" utility documents the CNC file name, folder location, and CNC file contents and is a useful hardcopy for review and archive purposes.

			Waiting for	File Selection				
Select File to Print								
$ \rightarrow \uparrow \uparrow \square $	This PC	» Desktop » CN	NC Files	~	õ	, Search C	NC Files	
Organize 👻 New	folder						833 -	
	^ Na	ime	^	Date modified	Туре		Size	
Quick access	E	2137.NC		9/22/2021 2:22 PM	NC File		1	KB
Desktop 📌		02321.TPE		9/22/2021 2:22 PM	TPE File		1	KB
📋 Documents 🖋		04005.NC		9/22/2021 2:22 PM	NC File		1	KB
Fictures 📌		06289.NC		9/22/2021 2:22 PM	NC File		1	KB
👆 Downloads 🚿	r							
📰 Pictures 🛛 🖈	~							
F	File name:	O4005.NC			~	All Files (*.*)		01
						OK		Cancel

# **9 Optional Features**

### 9.1 AUTO Send via Email/Text MSG (ADR BTRs Support)

Machine Link<sup>™</sup> QUICK Serve with Email/Text MSG support allows CNC file requests to be emailed or sent via text message, and then *quickly served* to the specified CNC machine tool control. A message will be returned to the sender after the file request has been served.

Email/Text MSG support is the ideal solution for ADR BTRs that communicate in one direction (to the control). This feature replaces the need for terminal hardware used for machines that cannot output CNC file requests.

#### 9.1.1 EMAIL Configuration

The "EMAIL" section is used to configure email account settings and assign the email accounts and cell phone numbers to monitor for CNC file requests.

An email account is required for Email Support, and it is recommended that the account be dedicated for Machine Link<sup>™</sup> QUICK Serve. (A Gmail account is recommended).

Configuration Table	e							×
Edit Table Help								
Current CNC Control	AUTO Send	AUTO Save		Special Op	tions	CONFIGURE	SAVE	CANCEL
Monitored Email user@yourbus phonenumber phonenumber phonenumber	iil Addresses: iiness.com @vzwpix.com @tmomail.com @txt.att.net	cs.com	~	F	mail Cor POP3 Ser pop.gm SMTP Ou smtp.gn usernamo youremo assword YourPas SMTP po 587 POP3 por 995 Use SS	nfiguration ver ail.com itgoing nail.com e ail@gmail.com d sword rt rt		

**Monitored Email Addresses** specifies the email accounts and cell phone numbers to monitor for CNC file requests. Messages from recipients not on this list will be ignored.

#### **Email Address Format**

user@yourbusiness.com	

#### **Cell Phone Number Format**

Verizon Wireless	phonenumber@vzwpix.com
Sprint	phonenumber@messaging.sprintpcs.com
T-Mobile	phonenumber@tmomail.com
AT&T	phonenumber@txt.att.net
Other	phonenumber@custom

**POP3 Server** is monitored for incoming emails. Typical value for Gmail account is 'pop.gmail.com'.

**SMTP Outgoing** manages outgoing emails. Typical value for Gmail account is 'smtp.gmail.com'.

**username** specifies the email address for **Machine Link™ QUICK Serve** to monitor for CNC file requests.

password specifies the password to log in to the email account.

SMTP port specifies the SMTP port. Typical value for Gmail account is '587'.

POP3 port specifies the POP3 port. Typical value for Gmail account is '995'.

**Use SSL** specifies if the Secure Sockets Layer (SSL) will be used to establish an encrypted link between a mail server and a mail client. Typical value is 'True'.

#### 9.1.2 Gmail Account Security Settings

After creating a dedicated Gmail account for **Machine Link™ QUICK Serve**, it is required to modify the [Security] setting to allow "Less secure app access" (turn it ON).

Security	Less secure app access
	Your account is vulnerable because you allow apps and devices that use less secure sign-in technology to access your account. To keep your account secure, Google will automatically turn this setting OFF if it's not being used. Learn more
	On On

### 9.1.3 AUTO Send via Email/Text MSG Example

$\triangleright$	From 🗸	user@yourbusiness.com	← Monitored Email Address
Send	То	youremail@gmail.com	← Machine Link™ QUICK Serve Gmail Account
	Cc		
	Subject	MLQS email REQ	← Subject Line
	SEND: File TO: FANU(	Name.txt C	← Request Line ← Machine Name

#### **AUTO Send via Email Example**

#### AUTO Send via Text MSG Example

To: youremail@gmail.com	← Machine Link <sup>™</sup> QUICK Serve Gmail Account
MLQS email REQ SEND: FileName.txt TO: FANUC	← Subject Line ← Request Line ← Machine Name
qwertyuiop	
asdfghjkl	
☆ z x c v b n m ⊗	
123 space return	

In the examples above, the 'Subject Line' specifies that it is an Email request, the 'Request Line' specifies which CNC file to send, and the 'Machine Name' specifies which active CNC control to send the requested file to. Note: the sender of the message must be on the Monitored Email Addresses list.

After preparing the machine tool control to receive the desired CNC file, sending this request to the dedicated email account will result in CNC program 'FileName.txt' being served back to the 'FANUC' control, and a message indicating the status of the request will be returned to the sender after the file request has been processed.

# 10 Help

### 10.1 Context Help

Context Help provides helpful hints, useful details, and explanations. It is accessed through the top menu bar by clicking [Help > Show Help]. Once active, simply hover the mouse cursor over any item to view its details.

Context Help	<b>x</b> <sup>5.2)</sup>	– 🗆 🗙
Configure Click to Configure/Modify Active Scan Table (specify communication parameters, make ACTIVE, specify file formatting, etc.)	Sending Sent OK	EXIT
Scanning will be PAUSED until configuration is complete.	s Transfers	A
<ul> <li>Image: A second s</li></ul>		F

### 10.2 How to Videos

The How to Video Directory provides helpful videos for learning how to configure machines in Machine Link<sup>™</sup> QUICK Serve, receive CNC programs, register your product, and more! It is accessed through the top menu bar by clicking [Help > How To Videos].



### **10.3 Help About**

Help About provides version and contact information necessary to connect with Controlink Systems LLC for support. It is accessed through the top menu bar by clicking [Help > About].

Help About –				
Machine Link(TM) QUICK Serve (Version 4.5.3) Copyright (C) Controlink Systems LLC Controlink Systems LLC Combining machining expertise with Process Monitori Control, and DNC Software Solutions!	ng,		^	
24545 Lela Dr., Lawrenceburg, IN 47025 Phone: (812) 637-6800 or (800) 838-3479 Fax: (812) 637-6801 website: https://www.controlinksystems.com				
email: support@controlinksystems.com				
Distributor: Controllink Systems LLC			~	
RETURN TO THE MAIN PROGRAM				

#### **Top Panel LED Indicators**

Name	Color	Function		
	Red	Steady on:	Power is on, and the NPort is booting up.	
		Blinking:	An IP conflict exists, or the DHCP/ BOOTP server did not	
Boody		1	respond properly.	
Ready	Green	Steady on:	The NPort is functioning normally.	
		Blinking:	The unit is responding to Locate function.	
	Off	Power is off, or a power error condition exists.		
	Green	Steady on:	Wireless enabled	
		Blinking:	The NPort can't establish WLAN connection with AP	
WLAN			(Infrastructure) or station (Ad-Hoc)	
	Off	Wireless not e	nabled.	
Dent 1	Orange	Serial port is receiving data.		
Port 1	Green	Serial port is transmitting data.		
	Off	No data is flowing to or from the serial port.		
		1 Red - the sig	gnal strength (RSSI) is worse than -88 dBm	
Signal Strength	Red	2 Red - the sig	gnal strength (RSSI) is between -87 to -79 dBm	
(5 LEDC)		3 Green - the	signal strength (RSSI) is between -78 to -68 dBm	
(5 LEDS)	Green	4 Green - the signal strength (RSSI) is between -67 to -60 dBm		
		5 Green - the	signal strength (RSSI) is between -59 to -45 dBm	