

VISA to TCP/IP Configuration Worksheet

Overview

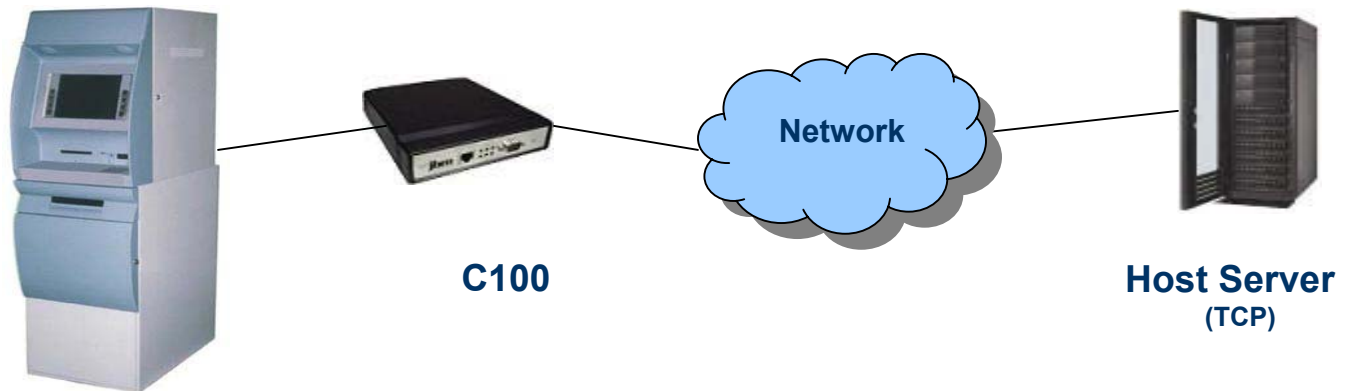
JBM Electronics provides a free configuration service for a sixty-day period, which starts as soon as you contact us for support. We will use the site information that you provide to build a configuration file for the Gateway.

The worksheets list the required information to successfully configure the unit. Proper completion of the worksheet will help ensure a smooth installation.

Typical Terminals

The VISA protocol is normally used in the financial industry between POS terminals and the host. The devices communicate through leased phone lines or async dial modems.

SAMPLE Installation



ATM or POS
(VISA)

Applicable Units

All of the Gateways support VISA protocol when it is transmitted using async transmissions.

GENERAL INFORMATION

Contact Information

Company Name: _____

Your Name: _____

Phone Number: _____

Cell Number: _____

Fax Number: _____

Email Address: _____

Your Name: _____

Street Address 1: _____

Street Address 2: _____

City: _____

State / Province: _____

Zip Code: _____

Country: _____

Delivery Instructions

Please indicate how you would like the configuration file provided to you:

Email as an attachment: _____

Sent to your FTP Server: _____

Placed on our FTP Server: _____

Special Instructions: _____

(For example: rename the file from .zip to .zi – To bypass email attachment scanning.)

Unit Identification

Model Number _____

Serial Number _____

Note: This information is on the serial number sticker on the bottom of the unit.

Special cables _____ (for example: G50 Adapter)

Worksheet Instructions

In the following sections, you will find many configuration questions. The majority of the questions are defaults (defaults are in **Blue**) and can be safely ignored. They are listed for the few installations that have specially modified their networks.

Please review the options and make any changes on the form to match the information provided by your network administrator. If you have any questions, please contact us for guidance.

Once this document is complete, email it to support@jbmelectronics.com. You can also fax it to JBM at 314-426-0007. We will contact you if we have any questions. Once both companies are in agreement that the selected parameters are reasonable, we will build the configuration file and send it to you via the method selected below.

Step #1 – Interface Parameters

These parameters in this section are installation dependent and must match your specific device.

Line Speed (57600, 38400, 28800, 25600, 19200, 14400, **9600**, 7200, 4800, 3600, **2400**, 1800, 1200): _____

The port provides clocking for the attached device when the port is set to DCE. Otherwise, the attached device defines the line speed.

Port Parity Settings (7E1, **8N1**): _____

The Port Parity should be set to one of two settings. It should be set to either “**7 data bits – even parity – 1 stop bit**” or “**8 data bits – no parity – 1 stop bit**”.

Select one of the three following Independent Activation scenarios (**1**, **2**, **3**): _____

- 1)** The Com Port side independently answers the modem and accepts connections, and pending a good connection will cause the TCP side to initiate or allow a connection.
- 2)** The TCP Side independently accepts or initiates it's connection, and only after that connection is established will the Com Port allow an incoming call.
- 3)** The Com Port side will always answer calls, regardless of the TCP Connection status, and the TCP side will always accept, initiate or maintain a TCP Connection, regardless of the Com Port's connection status.

Note: The Independent Activation option is #1; if unsure of the needed setting, select option #1.

Step #2 – VISA Protocol Parameters

[ENQ] Delay (1-255 Seconds, **3-5 Seconds Recommended**): _____

This is the timeout value after sending a [ENQ] to the terminal. After timeout, we will retransmit [ENQ] or send [EOT] and disconnect if the number of retries is complete. See also "Maximum Retransmission".

Maximum Wait for Connection (0-255 Seconds, **30 Seconds Recommended**): _____

Controls how long, in seconds, a local connection will remain 'open', while awaiting our remotely routed sub-address connection to be established. If "Ignore Host Disconnects" is "Yes", then this value is ignored.

Local Response Timeout (0-255 Seconds, **10 Seconds Recommended**): _____

The amount of time to wait to receive a "ACK or NAK message" to a transmitted message. After transmission, a retransmission or [EOT] may be transmitted. See "Maximum Retransmissions". Large messages sent across slow lines (<1200 baud) will need larger timeouts.

Maximum Retransmission (0-255 Times, **3 Times Recommended**): _____

This defines the maximum number of retransmissions to local port, not to remote sub-address. This sets the maximum number of times we allow timeouts to occur or receive a [NAK]. If a timeout occurs while receiving a message, we may send another [ENQ] or send an [EOT] and disconnect. If a timeout occurs, or we receive a [NAK], while waiting to receive an [ACK], we will retransmit the message this number of times.

Maximum Idle Time Before Disconnect (0-255 Seconds, **10 Seconds Recommended**): _____

Best value determined from experimentation. There is currently no way to disable this timer. Max wait for data from remote sub-address (host) before disconnecting.

Ignore Host Disconnects (Yes, **No**): _____

If this option is set to "No", then if the remote subaddress becomes disconnected, we will disconnect the local connection. In addition, we will wait to send [ENQ] until the remote subaddress is connected. When set to "Yes", we operate independently from the remote subaddress, and errors are usually discovered when the "Max Idle time before disconnect" timeout occurs. If using "Per Transaction" mode, this option is forced to Yes.

Transaction Mode (Single, Multiple, Transparent, Download): _____

In 'Single' mode, we will allow one transaction, after which we will send [EOT]. In 'Multi' mode, we will send [ENQ] after a transaction in anticipation of more transactions. In 'Transparent' mode, we switch to 8N1, we will not send any VISA protocol characters, nor will we interpret anything – this is a clean channel to the remote subaddress. In 'Download' mode, we will negotiate the first incoming transaction according to the VISA protocol, after which we switch the line to 8N1 and allow the remote subaddress complete control of the line (like Transparent).

Disable ACK (Yes, **No**): _____

We will not send an [ACK] to the POS after receiving a good transaction. Some POS devices do not want the [ACK], but instead want either a NAK or the response message to imply the [ACK].

Step #3 - TCP Port Parameters

This section is used to specify the information used to communicate with the IP network and application.

Port Definition Name: _____

This is the text description that will be associated with this port. When viewing statistics this is the port name that will be displayed. We recommend a name that will be easily recognizable. If you leave this field blank, we will assign a generic value.

Will the JBM Gateway act as a Client or a Server? _____

If the JBM Gateway is acting as a Client, the unit will initiate a connection to a remote TCP server at a specific IP address and Port number. *If the Gateway needs to act as a Client, please fill out the client information section.*

If the JBM Gateway is acting as a Server, the unit will be in a listening state at a specific port waiting for a remote client to make a connection to it. *If the Gateway needs to act as a Server, please fill out the server information section.*

TCP Client Configuration

Independent Activation: (**Yes**, No)

This option determines if the Gateway will start the TCP link before the connection to the Serial device(s) is established.

IP Address of the Gateway: _____

This must be a unique address for each device in the network and is configured using the niccfc script. At your root Linux prompt, type niccfc eth0 and follow the onscreen prompts to complete

your IP address configuration. Refer to the unit's Operation Manual supplied on the installation CD or on our home page.

Destination IP Address and Port Number: _____

This refers to the IP Address and Port Number of the remote Server to which the unit will connect.

Headers: _____

The option determines if the Gateway adds special headers when communicating with TCP applications. This is needed if framing of the data is required and the TCP application supports the headers. The most commonly used header is JBM standard. This is a 2-byte length header in network order format that does not include itself in the length.

TCP Server Configuration

Independent Activation: (Yes, No) _____

This option determines if the Gateway will start the TCP link before the connection to the Serial device(s) is established.

IP Address of the gateway: _____

This must be a unique address for each device in the network and is configured using the niccfcg script. At your root Linux prompt, type niccfcg eth0 and follow the onscreen prompts to complete your IP address configuration. Refer to the unit's Operation Manual supplied on the installation CD or on our home page.

Listening Port Number: _____

This is the Port Number at which we will be listening for a connection from a remote TCP client.

Allow Peer to Re-attach While Connected (Yes, No): _____

If a remote client's connection is interrupted and does not disconnect gracefully, this option can allow a new connection to override the previous (old) connection. This procedure will only work when a single connection is expected from a remote IP device. If multiple Clients attempt to establish connections from the same remote IP Address, this option must be set to **No**.

Fallback Routing

One of the major capabilities available with the Gateways is the ability to route the data to different destinations in the event that the primary connection is disrupted. The data can be routed to another destination on the same connection, or if an alternate path is

available, through another media (for example: a POTS modem). If fallback is required, you can specify the destinations and when the fallback is attempted.

Because of the numerous options available with fallback routing, we recommend that you contact JBM support for guidance. We will prepare the appropriate worksheets after consultation and then add to the Gateway's configuration.

Summary

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