Rockwell Automation

Allen-Bradley

CONFIGURING 1203-SM1 G-FILES WITH RSLogix 500

APPLICATION NOTE **JANUARY 28, 1997**

PURPOSE

The purpose of this document is to instruct users of the 1203-SM1 and RSLogix 500 in the configuration of G-files. Users must ensure that installations meet applicable codes and are suitable for the existing conditions.

WHAT THIS NOTE CONTAINS

This document contains information and sample RSLogix 500 screen shots that demonstrate how to configure G-files in the 1203-SM1.

INTENDED AUDIENCE

This application note should be used by personnel familiar with the hardware components and programming procedures necessary to operate SCANport devices. It is also assumed that the user has some familiarity with RSLogix 500 and SLC-500 programming.

WHERE IT IS USED

The example screen shots and instructions included in this application note are designed to address specific issues in many different applications. Some changes by the user may be necessary to apply the concepts of this document to a specific application.

APPLICATION CONSIDERATIONS

The examples were written to be simple and clear and do not perform all the functions needed for a real application. Consult the specific product manuals for more information.

CONFIGURING G-FILES

Figure 1 shows the screen that will appear after a new file is created (FILE/NEW).

To configure the I/O double-click the IO Configuration file in the project tree (shown hi-lighted).

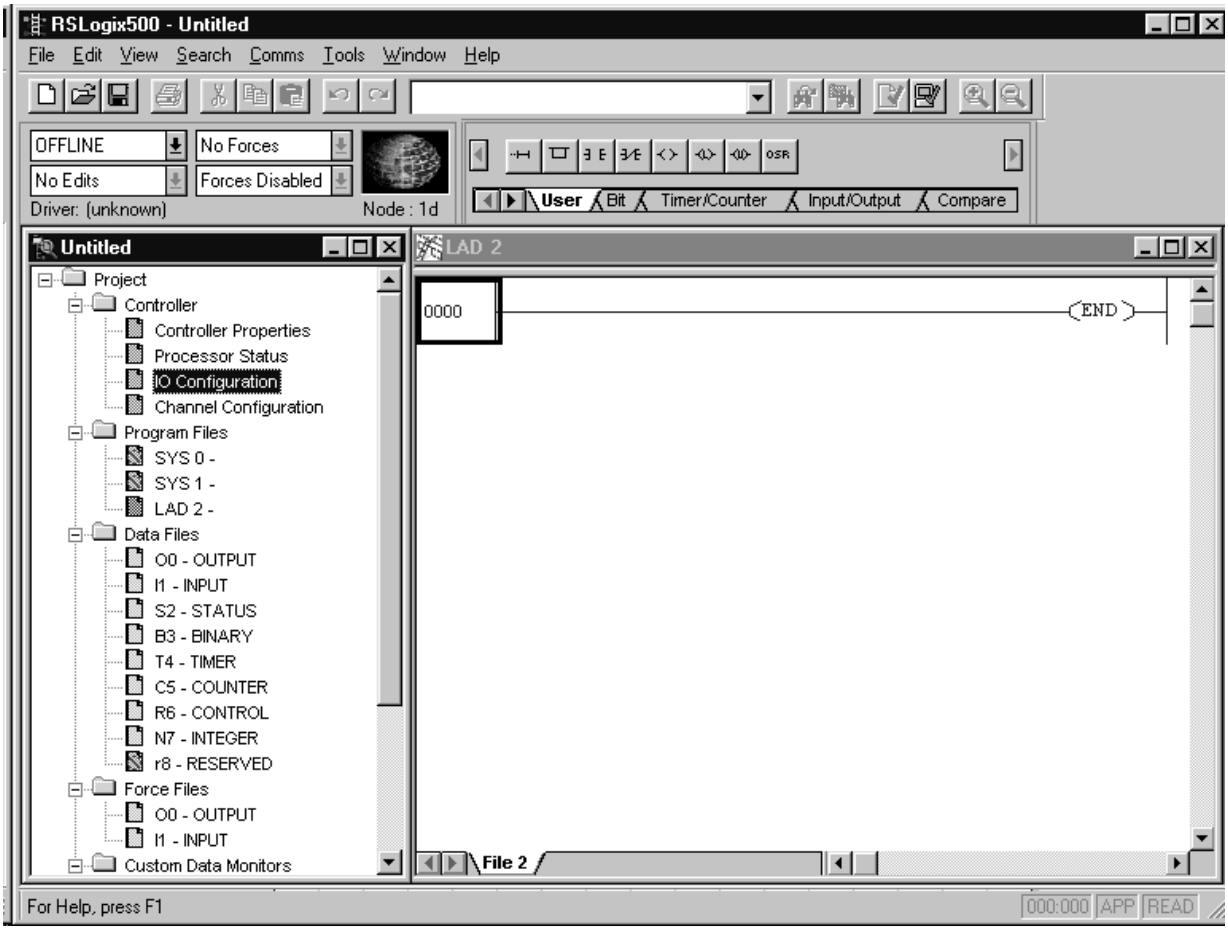

Figure 1 -- Start of I/O configuration

Figure 2 shows the I/O Configuration screen. Select the slot where the module will be inserted. Then scroll down through the module list. If the 1203-SM1 appears in the list double-click it to add it to the slot. If the 1203-SM1 does not appear in the list double-click on “Other” (shown hi-lighted in figure 2).

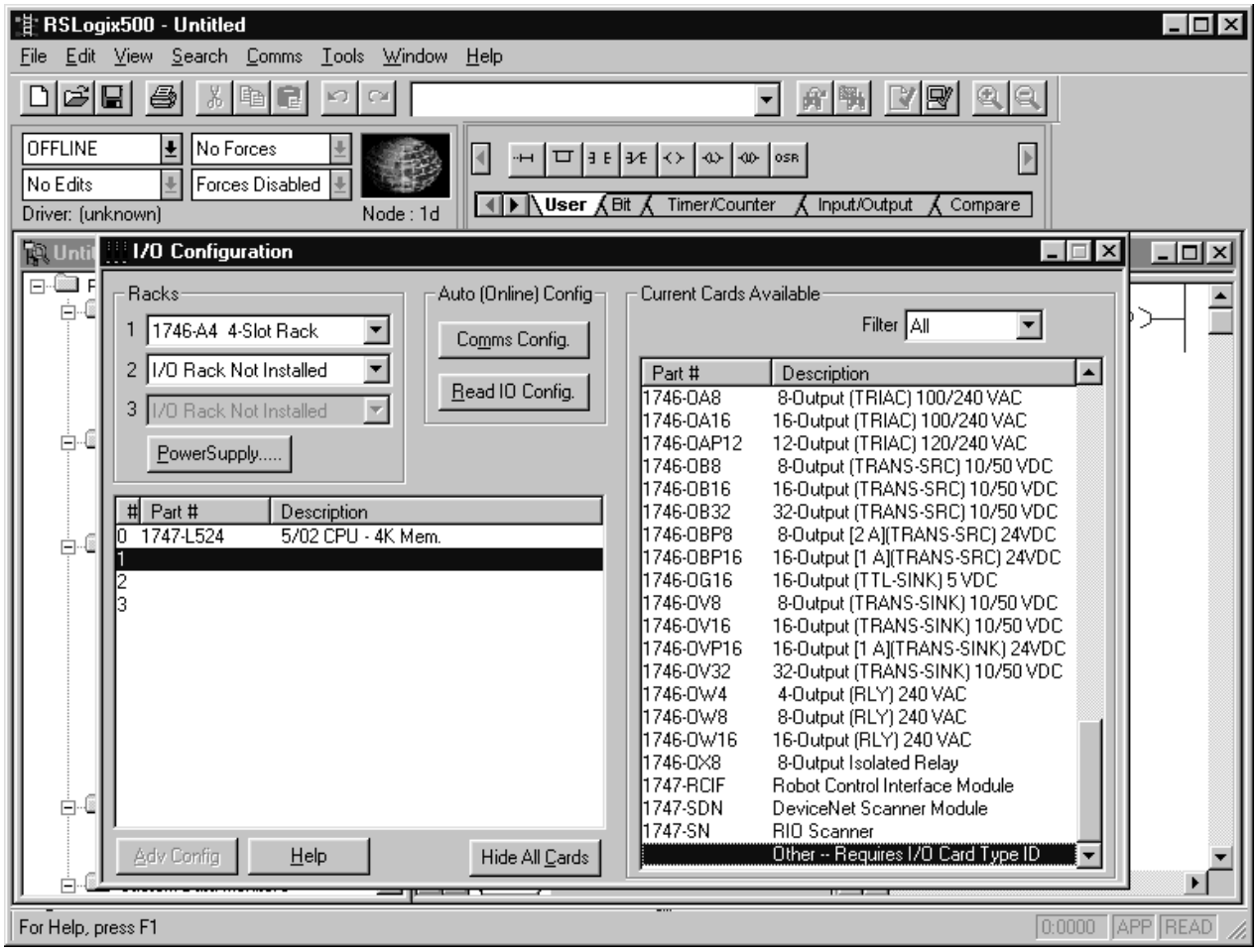

Figure 2 -- I/O Configuration Screen

Double-clicking on “Other” in Figure 2 brings up the dialog box shown below. If the module is to be used in “Enhanced” mode enter 13616 and click [OK]. Otherwise enter 3516 for “Basic” mode and click [OK].

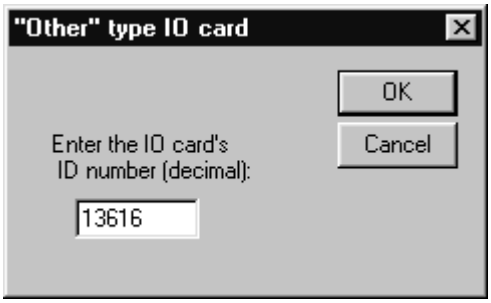

Figure 3 -- Module ID Code Entry Dialog

Now that the module type has been entered the G, M0 and M1 files should be configured (if “Enhanced” mode is to be used). Select the 1203-SM1 module in slot 1 (shown hi-lighted in the left pane of the window shown in Figure 4) and double-click on it.

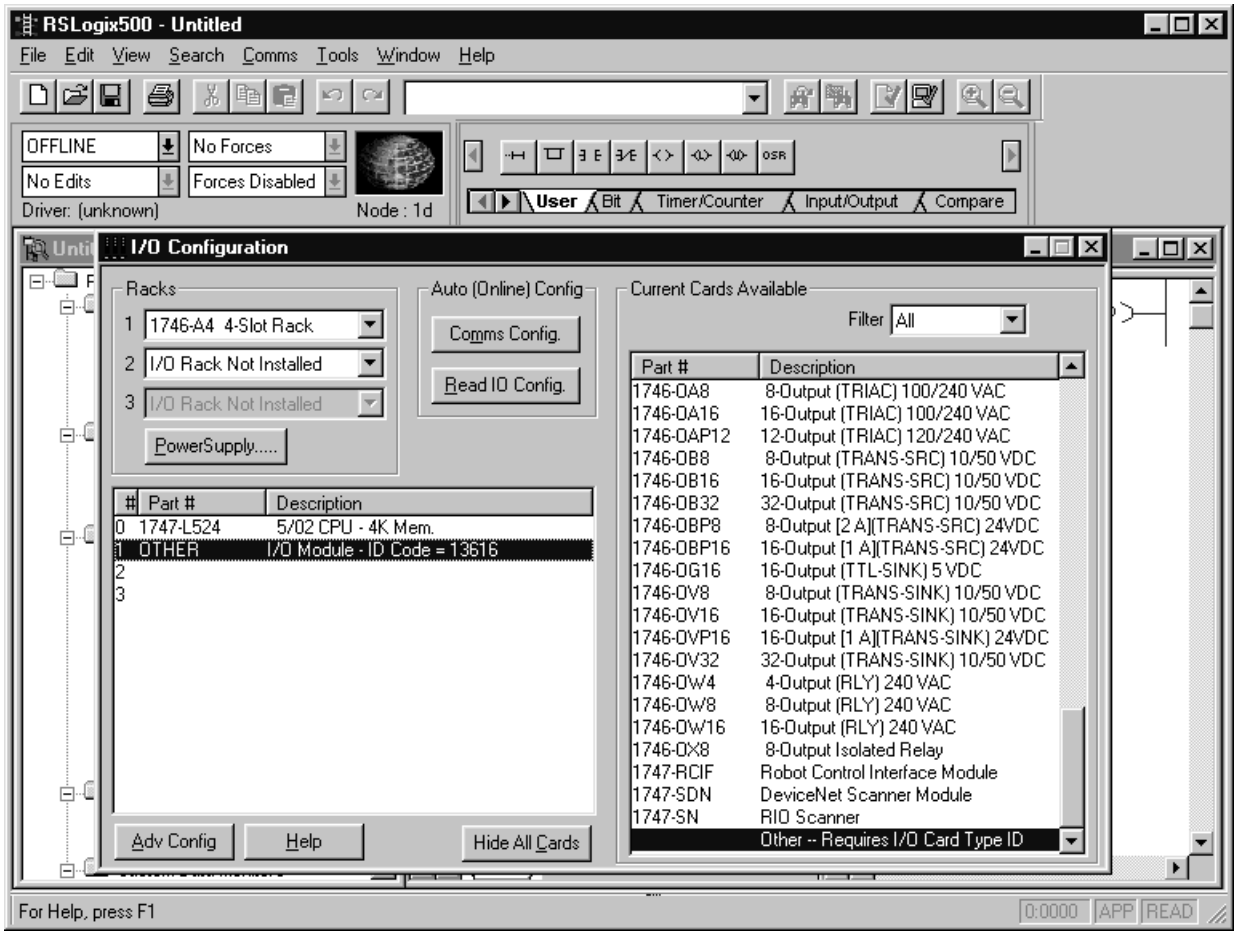

Figure 4 -- Return to the I/O Configuration Screen

Double-clicking the module in slot 1 brings up the Advanced I/O Configuration dialog as shown in Figure 5. The M0 file length should be set to 800, the M1 file to 400 and the G file to 32. If “Datalinks” or “Safe State Data” are to be configured click on [Edit G Data]. If not, click [OK].

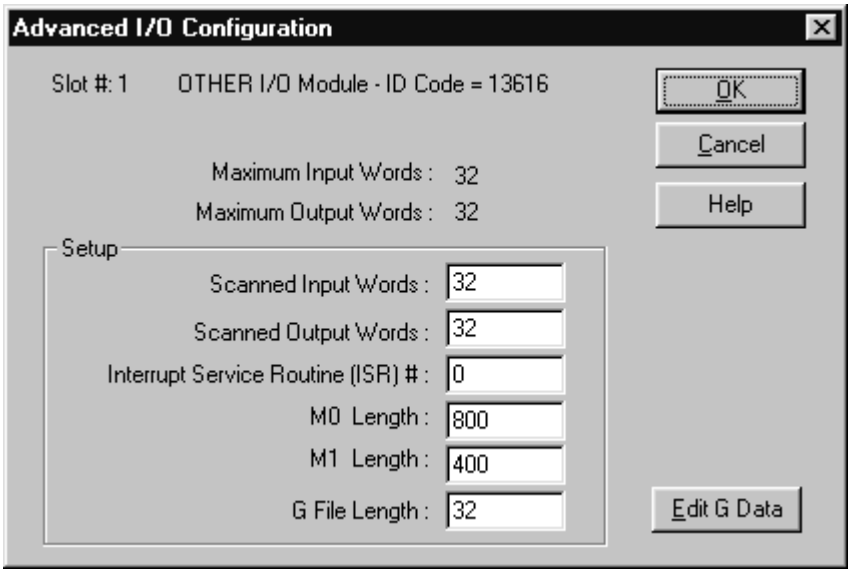

Figure 5 -- Advanced I/O Configuration Dialog

Clicking [Edit G Data] brings up the dialog box shown in Figure 6. The G file contains 32 words of configuration data for the module. The first word is set by RSLogix 500 and should not be changed. The second word is used to enable the SCANport channel Datalinks. The remaining 30 words contain Safe State Data and should be configured based on the user’s desired operation of the SCANport products if the SLC faults or is placed in program mode.

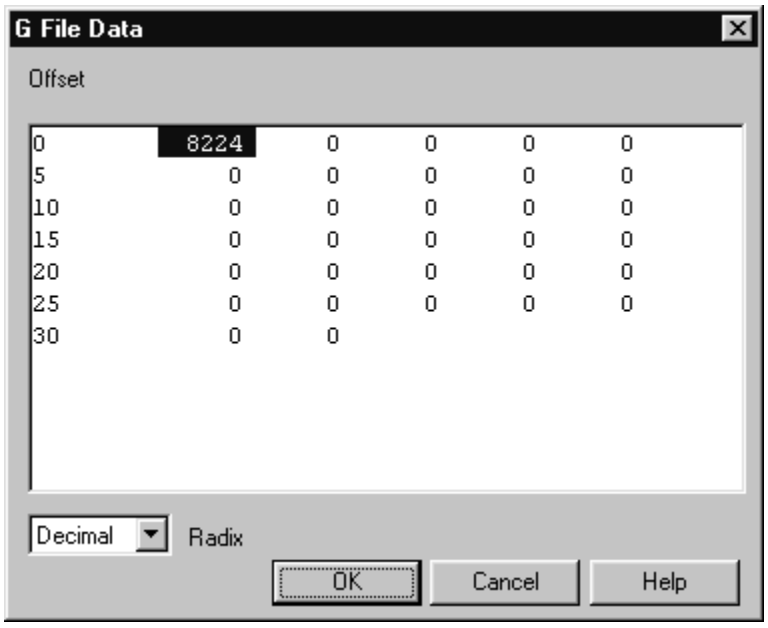

Figure 6 -- G File Data Entry Dialog

The G-file image is shown at right. The addresses are shown with '***s***' indicating the slot number of the module.

The Datalink Enable word is explained further below:

G-File Datalink Enable Definitions

Bit	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	Not Used				ED 3	EC 3	EB 3	EA 3	ED 2	EC 2	EB 2	EA 2	ED 1	EC 1	EB 1	EA 1

Gs.1

x SCANport Channel Number

s Module Slot Number

EA*x* SCANport Channel x Datalink A Enable bit. When set high (1) datalink A is enabled for the corresponding channel. NOTE: The datalink will only be active while the channel's Data Enable bit is also set.

EBx SCANport Channel x Datalink B Enable bit. When set high (1) datalink B is enabled for the corresponding channel. NOTE: The datalink will only be active while the channel's Data Enable bit is also set.

ECx SCANport Channel x Datalink C Enable bit. When set high (1) datalink C is enabled for the corresponding channel. NOTE: The datalink will only be active while the channel's Data Enable bit is also set.

EDx SCANport Channel x Datalink D Enable bit. When set high (1) datalink D is enabled for the corresponding channel. NOTE: The datalink will only be active while the channel's Data Enable bit is also set.

The remaining words in the G-file are used to set up the Safe State Data. This data will be sent to the SCANport product by the 1203-SM1 module if the DIP switch on the module is configured to use Safe State Data and the SLC processor is faulted or in program mode. The user must be sure to configure Safe State Data to provide desired operation.

G-File Image

Reserved	Gs:0
Datalink Enables	Gs:1
Logic Command Channel 1	Gs:2
Analog Reference Channel 1	Gs:3
Logic Command Channel 2	Gs:4
Analog Reference Channel 2	Gs:5
Logic Command Channel 3	Gs:6
Analog Reference Channel 3	Gs:7
Channel 1 Datalink A1 Inp	Gs:8
Channel 1 Datalink A2 Inp	Gs:9
Channel 1 Datalink B1 Inp	Gs:10
Channel 1 Datalink B2 Inp	Gs:11
Channel 1 Datalink C1 Inp	Gs:12
Channel 1 Datalink C2 Inp	Gs:13
Channel 1 Datalink D1 Inp	Gs:14
Channel 1 Datalink D2 Inp	Gs:15
Channel 2 Datalink A1 Inp	Gs:16
Channel 2 Datalink A2 Inp	Gs:17
Channel 2 Datalink B1 Inp	Gs:18
Channel 2 Datalink B2 Inp	Gs:19
Channel 2 Datalink C1 Inp	Gs:20
Channel 2 Datalink C2 Inp	Gs:21
Channel 2 Datalink D1 Inp	Gs:22
Channel 2 Datalink D2 Inp	Gs:23
Channel 3 Datalink A1 Inp	Gs:24
Channel 3 Datalink A2 Inp	Gs:25
Channel 3 Datalink B1 Inp	Gs:26
Channel 3 Datalink B2 Inp	Gs:27
Channel 3 Datalink C1 Inp	Gs:28
Channel 3 Datalink C2 Inp	Gs:29
Channel 3 Datalink D1 Inp	Gs:30
Channel 3 Datalink D2 Inp	Gs:31

Safe State Data Values