



PRODUCT SAFETY ALERT / SERVICE ADVISORY

Mandatory Type I – 230K Baud / Block Transfer

Mandatory Type II – v3.04 Firmware SW2-4

1203-GD1 / -GK1 and 1336-GM1 / -GMS1 Remote I/O to SCANport Communication Adapters

August, 1999

Dear Allen-Bradley Customer:

The purpose of this letter is to inform you of two issues that exist with the Remote I/O to SCANport communication adapters (1203-GD1/-GK1, 1336-GM1/-GMS1). The first involves operating at 230K baud with block transfers to the adapter, and the second involves DIP switch SW2-4 on v3.04 firmware adapters.

***** 230K Baud / Block Transfer Problem Description *****

Allen-Bradley has determined that Series A and Series B 1203-GD1, Series A 1203-GK1, Series A 1336-GM1 and Series A 1336-GMS1 Remote I/O to SCANport communication adapters may experience a problem under certain application conditions.

This type of problem may occur when all of the following conditions are true:

- adapter at 230.4k baud rate (DIP switch SW2-8 ON and SW2-7 OFF)
- block transfer is enabled on the adapter (DIP switch SW3-1 ON)
- block transfers to the adapter are used (in ladder program or DriveTools/DriveTools32 connected using Remote I/O Pass-Thru)

The above conditions may cause the Remote I/O to SCANport communication adapter to stop servicing the Logic Commands (Start, Stop, etc.) from the PLC or other controller. Because a running drive or power product will not see a Remote I/O Stop command upon an adapter problem, this is considered a safety matter.

Note that the adapter will continue to send Logic Status and Feedback words back to the processor if they are enabled (SW3-2 and SW3-3 ON). The ladder program will have current information as to the status of the drive.

***** 230K Baud / Block Transfer Product Identification *****

This Safety Alert affects all Remote I/O to SCANport communication adapters having the following catalog numbers and series level(s) shipped prior to May 1, 1999:

1203-GD1	Series A and B
1203-GK1	Series A
1336-GM1	Series A
1336-GMS1	Series A

***** 230K Baud / Block Transfer Resolution *****

If the adapters are installed and operating at the 57.6k or 115.2k baud rate, or operating at 230.4k baud rate with no block transfers to the adapter being used, they will continue to operate without problems. There is no need for to take further action beyond applying an ATTENTION label to each unit and a Document Update (Publication 1203-5.1DU4) to each manual (Publications 1203-5.0 and 1203-5.1). An ATTENTION label sheet (AB P/N 194075) containing 25 labels is enclosed along with instructions (AB P/N 194076) regarding applying the labels and requesting additional sheets. The Document Update is also enclosed and can be copied as needed.

If the Remote I/O configuration is 230.4k baud with block transfers to the adapter enabled, then one of the following solutions need to be implemented:

1. Switch to the 115.2k baud rate. This will only add ~3ms to the Remote I/O scan per full rack on the network. For example, a system with six full racks would take an additional 18ms in additional transfer time (6 full racks x 3ms each). This does not affect the processor's scan time or the Remote I/O devices' update time. For most applications, this additional time will be negligible. As mentioned above, an ATTENTION label will need to be applied to each unit and a Document Update to each manual.
2. The problem will be corrected on an upcoming release of Remote I/O to SCANport adapters, resulting in both a series and firmware change. The next release for all Remote I/O to SCANport adapters will be Series C Version 4.01 firmware. Estimated timeframe for availability is September '99. Customers requiring 230k baud with block transfers to the adapter enabled will need to use Series C Version 4.01 (or higher). Replacement adapters will be available for those who need them when the Series C version is released. Replacement adapters will also be available if the customer determines that this feature is needed at a later date (provided the unit is still being manufactured).

BUT IN ANY EVENT – SERIES A AND SERIES B CUSTOMERS MUST NOT USE 230K BAUD WITH BLOCK TRANSFERS TO THE ADAPTER BEING USED.

**** v3.04 Firmware SW2-4 Problem Description ****

Allen-Bradley has determined that switch SW2-4 ‘Hold Last State’ on Version 3.04 firmware 1203-GD1, 1203-GK1, 1336-GM1 and 1336-GMS1 Remote I/O to SCANport communication adapters does not operate as indicated in the manual with respect to a ‘Communications Loss’ (SW2-5).

If SW2-5 ‘Communications Loss’ is set to the default ‘Fault on Comm Loss’ (ON), a loss of communications will result in a drive fault. If SW2-5 ‘Communications Loss’ is set to ‘No Fault’ (OFF), then the Comm adapter uses SW2-4 ‘Hold Last State’ to determine the action to take. ‘Zero Image on PLC Fault’ (SW2-4 ON) clears the Logic Command and Reference words. A running drive that is using these words will be referenced to run at 0 (zero) hertz and a stopped drive that is using these words will remain stopped. The ‘Run at Last State’ (SW2-4 OFF) selection has a running drive continue running at the last commanded speed while a stopped drive will remain stopped.

It has been determined that when SW2-5 ‘Communications Loss’ is set to ‘No Fault’ (OFF), an actual communications loss will cause the drive to ‘Run at Last State’ regardless of the SW2-4 ‘Hold Last State’ setting (ON or OFF). ‘The ‘Zero Image on PLC Fault’ does not occur in conjunction with SW2-5 ‘Communications Loss’.

Note that if any communications loss occurs to the adapter, the SLC / PLC/ ControlLogix processor will still indicate a ‘rack fault’ in the associated Status word of the controller. The ladder program should already be monitoring this data and taking action appropriate for the application. The RIO adapter LED’s will also indicate that a fault has occurred.

Also note that when SW2-6 ‘Reset/Program/Test’ is set to “No Fault (OFF), it also utilizes SW2-4 ‘Hold Last State’. In this case SW2-4 ‘Hold Last State’ operates as specified in the manual, with the drive being commanded to either ‘Zero Image on PLC Fault’ (SW2-4 ON) or ‘Run at Last State’ (SW2-4 OFF).

The following table spotlights the problem areas:

PRODUCT SAFETY ALERT / SERVICE ADVISORY
GD1/GK1/GM1/GMS1 Adapters

SW2-6	SW2-5	SW2-4	Result	
			Reset/Pgm/Test	Comms Loss
ON	ON	ON	Drive Fault	Drive Fault
ON	ON	OFF	Drive Fault	Drive Fault
OFF	ON	ON	Zero Image	Drive Fault
OFF	ON	OFF	Run Last State	Drive Fault
ON	OFF	ON	Drive Fault	Run Last State (Instead of Zero Image)
ON	OFF	OFF	Drive Fault	Run Last State
OFF	OFF	ON	Zero Image	Run Last State (Instead of Zero Image)
OFF	OFF	OFF	Run Last State	Run Last State

**** v3.04 Firmware SW2-4 Product Identification ****

This service advisory affects all Version 3.04 firmware Remote I/O to SCANport communication adapters having the following catalog numbers:

1203-GD1
1203-GK1
1336-GM1
1336-GMS1

Version 3.04 firmware has been shipping from Allen-Bradley since approximately September 1998.

**** v3.04 Firmware SW2-4 Resolution ****

If v3.04 adapters are configured at the default SW2-5 'Communications Loss' setting 'Fault on Comm Loss' (ON), or utilize SW2-5 'Communications Loss' in the 'No Fault' setting (OFF) with SW2-4 'Hold Last State' in the 'Run at Last State' setting (OFF), they will operate as specified in the manual. There is no need for further action beyond adding a Document Update (Publication 1203-5.1DU5) to each manual (Publications 1203-5.0 and 1203-5.1). The Document Update is also enclosed and can be copied as needed.

If the Remote I/O configuration has SW2-5 'Communications Loss' in the 'No Fault' setting (OFF) and SW2-4 'Hold Last State' in the 'Zero Image on PLC Fault' setting (ON), then one of the following solutions need to be implemented:

1. Return SW2-5 to the default setting 'Fault on Comm Loss' (ON) which will cause the drive to fault if there is a communications loss. **Or**
2. Understand that if 'No Fault' is selected (SW2-5 OFF), the module will 'Run at Last State' on a communications loss regardless of the SW2-4 'Hold Last State'

setting. A drive that is running will continue to run at its last commanded speed. A drive that is stopped will remain stopped. **Or**

3. If 'Zero Image on PLC Fault' is needed, then replace v3.04 adapters with v4.01 when they become available. All adapters (GK1/GD1/GM1/GMS1) on the next release will be Series C Version 4.01 firmware. Estimated timeframe for availability is September '99. Replacement adapters will be available for those who need them when the Series C version is released. Replacement adapters will also be available if the customer determines that this feature is needed at a later date (provided the unit is still being manufactured).

As mentioned above, the ladder program should already be monitoring the 'rack fault' Status word data in the processor and taking action appropriate for the application.

It is important to note that the default setting for SW2-5 'Communications Loss' is to 'Fault on Comm Loss' (ON). With this default setting, SW2-4 'Hold Last State' is not applicable since a fault condition will result in the drive faulting. It is believed that most customers operate with SW2-5 at the default setting.

**** Requested Customer Action ****

We are requesting that each customer perform the following:

- ***Immediately fill out and return the enclosed reply card.*** It simply confirms that you have received this important product information. Returning this card will avoid unnecessary mailings being sent to you.
- If you have specific questions dealing with your application, please contact your local Rockwell Automation Sales Office.
- Determine if you have any GD1/GK1/GM1/GMS1 adapters configured at the 230.4k baud rate (DIP switch SW2-8 ON and SW2-7 OFF) and block transfers are enabled (DIP switch SW3-1 ON). If block transfers are enabled, it can be assumed that either block transfers to the adapter are being used in the ladder program or DriveTools/DriveTools32 software could be connected sometime via Remote I/O Pass-Thru.
- At the same time, also check if you have any Version 3.04 firmware GD1/GK1/GM1/GMS1 adapters configured with SW2-5 'Communications Loss' set to 'No Fault' (OFF) and SW2-4 'Hold Last State' set to 'Zero Image on PLC Fault' (ON).

Understand that if the GD1/GK1/GM1/GMS1 adapters are installed and operating at the 57.6k or 115.2k baud rate, or operating at 230.4k baud rate with no block transfers to the adapter being used, they will continue to operate without problems. There is no need for to take further action on the 230k baud / block transfer issue beyond applying an ATTENTION label to each unit and a Document Update (Publication 1203-5.1DU4) to each manual (Publications 1203-5.0 and 1203-5.1). An ATTENTION label sheet (AB P/N 194075) containing 25 labels is enclosed along with instructions (AB P/N 194076) regarding applying the labels and requesting additional sheets. The Document Update is also enclosed and can be copied as needed.

If v3.04 adapters are installed and operating with SW2-5 ‘Communications Loss’ set to the default ‘Fault on Comm Loss’ (ON), or SW2-5 ‘Communications Loss’ set to ‘No Fault’ (OFF) and SW2-4 ‘Hold Last State’ set to ‘Run at Last State’ (OFF), the units will operate as specified in the manual. There is no need for to take action beyond adding the Document Update (Publication 1203-5.1DU4) to each manual (Publications 1203-5.0 and 1203-5.1).

- **Additional ATTENTION Labels** can be ordered at no-charge from the distributor. The “RIO to SCANport ATTENTION Label Kit” is catalog number 1203-GX1-ATTN. It contains two sheets of 25 labels each (AB P/N 194075), an instruction sheet (AB P/N 194076) and a document update (Publication 1203-5.1DU4) for existing Remote I/O Communications Module manuals (Publications 1203-5.0 and 1203-5.1).
- If your application is configured for 230.4k baud with block transfers to the adapter enabled, you can implement any of the solutions listed in the 230k baud / block transfer resolution section above.
- If your v3.04 adapter configuration has SW2-5 ‘Communications Loss’ set to ‘No Fault’ (OFF) and SW2-4 ‘Hold Last State’ set to ‘Zero Image on PLC Fault’ (ON), you can implement any of the solutions listed in the v3.04 firmware SW2-4 resolution section above.
- If necessary, replacement units can be obtained by contacting the local Allen-Bradley distributor or Rockwell Automation Sales Office. Please request the replacement from the location where you originally purchased it. The replacement catalog number stays the same but will now be a Series C Version 4.01 firmware for all adapters. The estimated timeframe for availability is September ’99.

BUT IN ANY EVENT – SERIES A AND SERIES B CUSTOMERS MUST NOT USE 230K BAUD WITH BLOCK TRANSFERS TO THE ADAPTER BEING USED.

PRODUCT SAFETY ALERT / SERVICE ADVISORY
GD1/GK1/GM1/GMS1 Adapters

If you have any concerns about switching the baud rate from 230.4k to 115.2k baud, please contact Rockwell Automation Technical Support at 414-512-8176.

The devices are to be returned to the location from which the replacement is received.

Important Note to OEM's, Contractors, Integrators and Panel Shops

Please contact the location from which you recently purchased the GD1/GK1/GM1/GMS1 adapters, either your local distributor or sales office. If you have purchased any of these affected adapters for inclusion and resale within another product or machine, please contact your local Allen-Bradley Sales Office immediately to review your applications in order to determine how you and your customers may be affected by this Safety Alert. Allen-Bradley will provide customer notification assistance, if desired.

As a valued Allen-Bradley customer, we sincerely regret any inconvenience this effort may cause you.

Respectfully,



Gregory W. Mears
Product Manager – Communications Products

Enclosure: Publication 1203-5.1DU4
 ATTENTION Label Sheet (AB P/N 194075)
 Label Instruction Sheet (AB P/N 194076)
 Product Safety Alert Reply Card
 Publication 1203-5.1DU5