GPIB ASIC Reference Manual Errata

The changes described in this document are important information for users of the *NAT7210 Reference Manual*, the *NAT9914 Reference Manual*, and the *TNT4882 Programmer Reference Manual*.

Contents

NAT7210 Reference Manual

- Page 4-3, first paragraph in *The Page-In Condition* section, replace the existing text,

  (offset 4)

  with this new text,

  (offset 2)

- Page 4-15, first paragraph, replace the existing text,

  Note: Writes to the AUXCR

  with this new text,

  Note: Any register access following a write to the AUXCR

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- Page 4-46, replace both instances of the existing text,

  ch_rst + read ISR0

  with this new text,

  ch_rst + (read ISR2)

NAT9914 Reference Manual

- Page 3-3, first paragraph in *The Page-In Condition* section, replace the existing text,

  (offset 4)

  with this new text,

  (offset 2)

- Page 3-15, first paragraph, replace the existing text,

  Note: Writes to the AUXCR

  with this new text,

  Note: Any register access following a write to the AUXCR

- Page 3-46, replace both instances of the existing text,

  ch_rst + read ISR0

  with this new text,

  ch_rst + (read ISR2)

TNT4882 Programmer Reference Manual

- Page 2-4, second paragraph, replace the text,

  Accessory Read Register (ACCR)

  with this text,

  Auxiliary Command Register (AUXCR)

- Page 3-64, the last paragraph under the *Turbo+7210 Mode/ Turbo+9914 Mode* section, replace the register name,

  ACCR

  with the register name,

  AUXCR

- Page 3-67, in the paragraph for the *Turbo+7210 Mode/Turbo+9914 Mode* section, replace the register name,

  ACCR

  with the register name,

  AUXCR

- Page 3-96, in the *One-Chip Mode* section, replace the existing text,

  DO is a don't care bit. Do not set DO IE. DO may read as 1 or 0

  with this new text,

  DO indicates that the TNT4882 is an Active Talker and the local nba message is false, meaning there is no data in the FIFO to send.

- Page 3-109, replace both instances of the existing text,

  chip_reset + read ISR0

  with this new text,

  ch_rst + (read ISR2)

- Page 3-118, at the top of the page, under **Description**, replace the existing text,

  NDAC for 700 ns

  with this new text,

  NDAC for at least 8 clock cycles

- Page 4-13, in the *IEEE 488.2 Service Requesting* section, replace the existing text in that section with the following.

  If STBO IE = 1, to request service, issue the reqt auxiliary command. When the STBO interrupt condition becomes true,

write the status byte (STB) to the SPMR with the appropriate value for RQS.

If STBO IE = 0, to request service, issue the reqt auxiliary command. Then, write the status byte (STB) to the SPMR. When you write to the SPMR, write 0 to bit 6 (the rsv bit). The TNT4882 asserts and unasserts the rsv signal according to the set rsv state machine that is described in the IEEE 488.2 standard.

After the CIC serial polls the TNT4882, you must issue the reqt auxiliary command and write to the SPMR again to request service. If you want to stop requesting service before a serial poll occurs, issue the reqf auxiliary command.
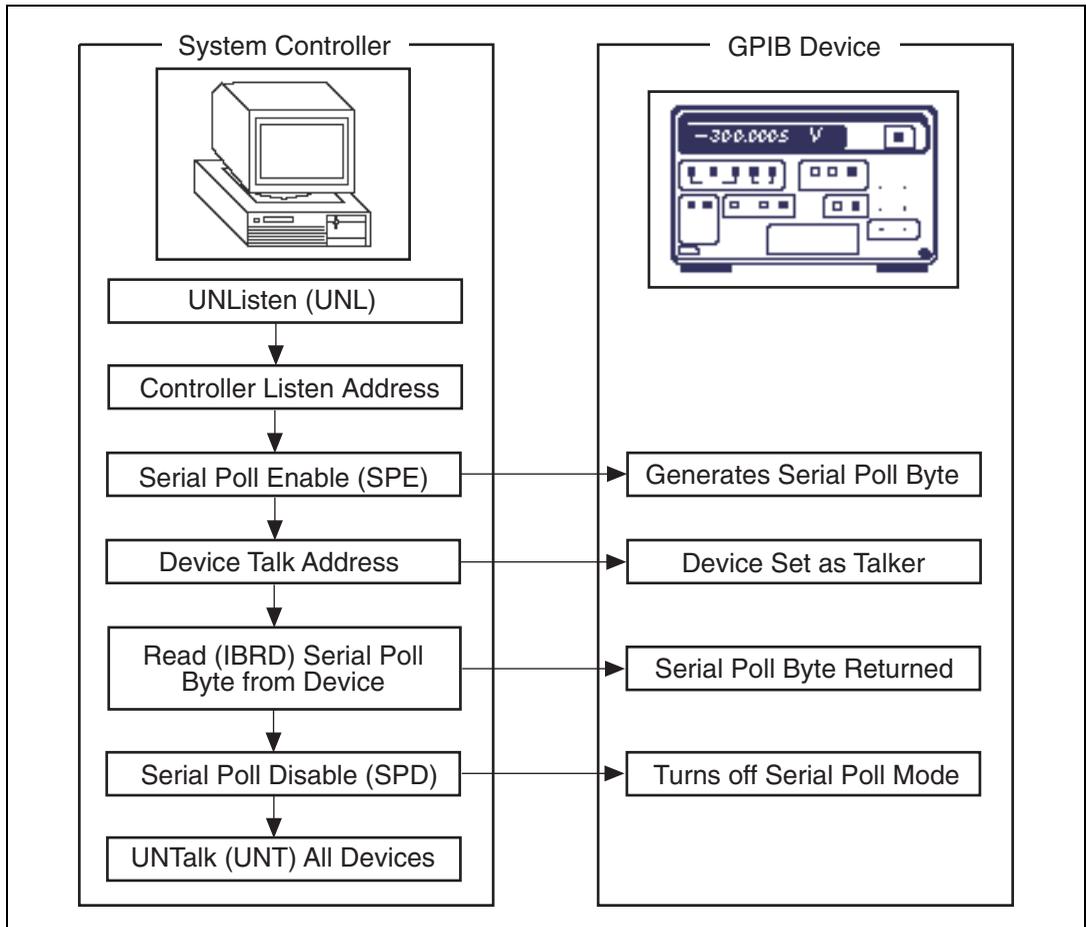
- Page 4-14, in the *Responding to Serial Polls* section, second paragraph, next-to-last sentence, replace the existing text,

  to the SPMR (write 0 to bit 6)

  with this new text,

  to the SPMR with the appropriate value for RQS

- Page C-22, replace the existing Figure C-7 with the following figure,

Figure 1. New Figure C-7 for Page C-22

- Page D-9, in the *System Configuration* section, third paragraph, second sentence, replace the existing text,

  1E hex

  with this new text,

  0x1F

- Page D-9, following the *System Configuration* section, insert the contents of *Appendix A* of this document, to create a new section entitled *Operation*.

- Page F-2, the last line of the *Multiline Interface Command Messages* section, add to the existing text,

   1F 037 31 US

   by inserting this new text,

   CFE in the Msg column

- Page F-2, under *Message Definitions*, add these two new messages to the existing text,

   CFE   **Configure Enable**

   CFG   **Configure**

- Page F-3, the table on the right-hand side of the page, which begins with a Hex value of 60, insert the data in bold-face type as shown in Table 1.

Table 1. New data in bold for Table on Page F-3, Right-Hand Side

Hex	Oct	Dec	ASCII	Msg
60	140	96	`	MSA0,PPE
61	141	97	a	MSA1,PPE,**CFG1**
62	142	98	b	MSA2,PPE,**CFG2**
63	143	99	c	MSA3,PPE,**CFG3**
64	144	100	d	MSA4,PPE,**CFG4**
65	145	101	e	MSA5,PPE,**CFG5**
66	146	102	f	MSA6,PPE,**CFG6**
67	147	103	g	MSA7,PPE,**CFG7**
68	150	104	h	MSA8,PPE,**CFG8**
69	151	105	i	MSA9,PPE,**CFG9**
6A	152	106	j	MSA10,PPE,**CFG10**
6B	153	107	k	MSA11,PPE,**CFG11**
6C	154	108	l	MSA12,PPE,**CFG12**
6D	155	109	m	MSA13,PPE,**CFG13**
6E	156	110	n	MSA14,PPE,**CFG14**
6F	157	111	o	MSA15,PPE,**CFG15**

Appendix A

Insert the contents below to create a new section following the *System Configuration* section on Page D-9 of the *TNT4882 Programmer Reference Manual*.

Operation

Configuring the System Cable Length

To use HS488 transfers, a Controller sends the CFE command followed by a CFGn command.

Responding to System Cable Length Configuration

HS488 devices (including the Controller) must recognize and respond to the system cable length commands (CFE and CFGn). The software must recognize the CFE and CFGn commands and implement the CF interface function. Unlike other GPIB commands, the TNT4882 does not automatically respond to these commands. The software must assist the hardware.

To implement the CF interface function set AUXRB[CPT_ENABLE] and IMR1[CPT IE] to interrupt on undefined commands.

ISR1[CPT] sets when an undefined "primary" command is received. When an undefined primary command is received, CPT also sets on all secondary commands until a defined primary command is received. Each time the ISR1[CPT] sets, execute the following algorithm:

1. Read the command byte from the CPTR

2. If the command is CFE (0x1F) then

    a. Disable HS488 as described in the following section *Disabling HS488*

    b. Write 0xDF to AUXRF to hold off on all commands

3. Otherwise, if the command is a PCG command other than CFE then

    a. Write 0xD0 to AUXRF to clear hold off on all commands

    b. Clear AUXRB[CPT_ENABLE], then set AUXRB[CPT_ENABLE]

4. Otherwise, if (0x61 ≤ command ≤ 0x6F)

    a. Subtract 0x60 from command to calculate cable length

    b. Enable HS488 with Cable Length as described in the following section, *Enabling HS488*

5. Write AUXMR[VALID] to release DAC hold off

Enabling HS488

To enable HS488, first write 0x1C to NIC_DELAY. Then, set HIER[DG], HIER[NO_TSETUP], DIO_SETUP and DAV_HOLD according to the following table. Finally, set MISC[HSE].

Cable Length	HIER[DG]	HIER[NO_TSETUP]	DIO_SETUP[4:0]	DAV_HOLD[4:0]
1	0x0	1	0x0	0x0
2	0x0	1	0x0	0x0
3	0x0	0	0x0	0x2
4	0x2	0	0x0	0x2
5	0x2	0	0x2	0x4
6	0x2	0	0x2	0x4
7	0x2	0	0x2	0x4
8	0x3	0	0x4	0x6
9	0x3	0	0x4	0x6
10	0x3	0	0x6	0x8
11	0x3	0	0x6	0x8
12	0x3	0	0x6	0x8
13	0x3	0	0x9	0xB
14	0x3	0	0x9	0xB
15	0x3	0	0x9	0xB

Disabling HS488

To disable HS488 clear MISC[HSE] and write 0x3 to HIER[DG]. Clearing IMR1[CPT IE] and AUXRB[CPT_ENABLE] causes HS488 configuration commands to be ignored.