

# IPX Network Trunk Card and IGX Network Trunk Modules Hardware Error Summary

Document ID: 10801

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## Introduction

Cisco WAN switching cards and modules log error codes when an anomaly occurs. Switch card errors are indicated to the user by a "CD" symbol at the bottom of the switch command line interface (CLI) screen. If you issue the **dspcderrors** command, a list of errors is displayed. These errors are presented based on access level.

This list is a reference for IPX Network Trunk Card (NTC) hardware errors presented up to the StrataCom level. StrataCom-level errors are service-significant only. Some users do not see all of the errors listed.

These are the hardware error codes that can occur on the NTC on an IPX or on the Network Trunk Modules (NTM and NTM-B) on an IGX when you issue the **dspcderrs<slot>** command.

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

### Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

## Hardware Error Summary

Solution ID : 1397  
Description : 22-Aug-96 FHA Updates added from NTM-B

N T C H a r d w a r e E r r o r S u m m a r y ( r e v 0 . 1 )

```

F E E C P x x x E
C R R A R x x x R
  R R R O x x x R
    C x x x
      F T T x x x N
        C Y Y x x x U
          P P x x x M
            E E
    
```

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FC 00 01 02 03 04 05 06 07 01 - DOWNLOAD FAILURE ERROR TYPE MESSAGES  
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0B X 01 96 X

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FC 00 01 02 03 04 05 06 07 02 - POWER-UP FAILURE ERROR TYPE MESSAGES  
-----

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0B X 02 96 01 X X X X Boot PROM Failure (Ref. "CBUS Command Specs.").
0B X 02 96 01 X X X 05 NVRAM checksum failed.
0B X 02 96 01 X X X 06 FIFO loopback failed.
0B X 02 96 01 X X X 07 No state 0 message from supervisor.
0B X 02 96 01 X X X 10 FIFO test failed.
0B X 02 96 01 X X X 11 No state 1 message, EEprom checksum failure.
0B X 02 96 01 X X X 12 Vector init FIFO clear CIO init failed.
0B X 02 96 01 X X X 13 PSOS-kernel initialization failed.
0B X 02 96 01 X X X 14 Queue-Server downloader failed.
0B X 02 96 01 X X X 15 Queue-Manager downloader failed.
0B X 02 96 01 X X X 16 Deframer downloader failed.
0B X 02 96 01 X X X 17 Frammer downloader failed.
0B X 02 96 01 X X X 18 Queue-Server DSP download failed.
0B X 02 96 01 X X X 19 Queue-Manager DSP download failed.
0B X 02 96 01 X X X 1A Frammer DSP download failed.
0B X 02 96 01 X X X 1B Deframer DSP download failed.
0B X 02 96 01 X X X 1C PSOS-spawn task failure.
0B X 02 96 01 X X X 1D PSOS-event processor startup failure.
0B X 02 96 01 X X X 1E PSOS-framer task startup failure.
0B X 02 96 01 X X X 1F PSOS-deframer task startup failure.
0B X 02 96 01 X X X 20 PSOS-queue-manager task startup failure.
0B X 02 96 01 X X X 21 PSOS-queue-server task startup failure.
0B X 02 96 01 X X X 22 PSOS-backcard task startup failure.
0B X 02 96 01 X X X 23 PSOS-command server startup failure.
0B X 02 96 01 X X X 24 Final init CIO interrupt-activation failed.
    
```

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FC 00 01 02 03 04 05 06 07 03 - SELF-TEST FAILURE ERROR TYPE MESSAGES  
-----

```

0B X 03 96 01 X X X 41 Admin ROM checksum failed.
0B X 03 96 01 X X X 42 Admin RAM stuck-bit tests failed.
0B X 03 96 01 X X X 43 Admin ROM & RAM failure.
0B X 03 96 01 X X X 44 Admin Routing Table Modulus test failure.
0B X 03 96 01 X X X 45 Admin Routing Table and ROM checksum tests failed.
0B X 03 96 01 X X X 46 Admin Routing Table and RAM stuck-bit tests failed.
0B X 03 96 01 X X X 47 Admin Routing Table, ROM & RAM failure.
0B X 03 96 02 03 * BIT0: program RAM checksum failed.
0B X 03 96 02 03 * BIT1: other DSP did not test shared RAM in time.
0B X 03 96 02 03 * BIT2: cannot get ownership of semaphore in time.
0B X 03 96 02 03 * BIT3: semaphore test data $AAAA $5555 incorrect.
0B X 03 96 02 03 * BIT4: location cannot be set to 0 in semaphore test.
0q X 03 96 02 03 * BIT5: attempt to disown not-owned semaphore.
0B X 03 96 02 03 * BIT6: slave not respond to 125usec interrupt at IRQA.
0B X 03 96 02 03 X * BIT0: manager timed out waiting to test shared RAM.
0B X 03 96 02 03 X * BIT1: shared X:RAM failed memory tests.
0B X 03 96 02 03 X * BIT2: internal X:RAM failed memory tests.
0B X 03 96 02 03 X * BIT3: internal Y:RAM failed memory tests.
    
```

0B	X	03	96	02	03	X	*	BIT4: unused P:RAM failed memory tests.
0B	X	03	96	02	03	X	*	BIT5: server timed out waiting for Frammer interrupt(IRQB).
0B	X	03	96	02	03	X	*	BIT6: DPR memory test failed.
0B	X	03	96	02	03	X	X	BIT0: background checksum failed.
0B	X	03	96	02	03	X	X	BIT1: unused X:,P: RAM memory tests failed.
0B	X	03	96	02	03	X	X	BIT2: RAM constants failed.
0B	X	03	96	04	X	X	X	00 Frammer code checksum failed.
0B	X	03	96	04	X	X	X	01 Frammer internal X-RAM failure.
0B	X	03	96	04	X	X	X	02 Frammer internal Y-RAM failure.
0B	X	03	96	04	X	X	X	03 Frammer external Y-RAM failure.
0B	X	03	96	04	X	X	X	04 Frammer queue buffer tests failed.
0B	X	03	96	04	X	X	X	05 Frammer DPR memory failure.
0B	X	03	96	04	X	X	X	06 Frammer interrupt test failure.
0B	X	03	96	05	X	X	X	00 Deframer code checksum failed.
0B	X	03	96	05	X	X	X	01 Deframer internal X-RAM failure.
0B	X	03	96	05	X	X	X	02 Deframer internal Y-RAM failure.
0B	X	03	96	05	X	X	X	03 Deframer external Y-RAM failure.
0B	X	03	96	05	X	X	X	04 Deframer MUXBUS FIFO tests failed .

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FC 00 01 02 03 04 05 06 07 04 - MEMORY TEST FAILURE ERROR TYPE MESSAGES  
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0B X 04 96 X

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FC 00 01 02 03 04 05 06 07 05 - BOOT PROM FAILURE ERROR TYPE MESSAGES  
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0B	X	05	96	01	00	00	00	00	Waiting for HF flag change from DSP.
0B	X	05	96	01	00	00	00	01	Waiting for TXDE become TRUE from DSP.
0B	X	05	96	01	00	00	00	02	Waiting for RXDF become TRUE from DSP.
0B	X	05	96	01	00	00	00	03	Unable to initialize DSP.
0B	X	05	96	01	00	00	00	04	Unable to internal load the DSP.
0B	X	05	96	01	00	00	00	05	Unable to program EEPROM.
0B	X	05	96	01	00	00	00	06	Bad message from CBUS controller.
0B	X	05	96	01	00	00	00	07	FIFO 9th-bit format error from supervisor.
0B	X	05	96	01	00	00	00	08	No NMICLR in response to NMI to supervisor.
0B	X	05	96	01	00	00	00	09	Timeout waiting for space in Admin FIFO.

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FC 00 01 02 03 04 05 06 07 06 - INTERNAL FAILURE ERROR TYPE MESSAGES  
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0B	X	06	96	01	09				NTC LCA error.
0B	X	06	96	01	0A				NTC missing back-card error.
0B	X	06	96	01	0B				NTC invalid back-card number.
0B	X	06	96	01	0C				NTC invalid back-card type.
0B	X	06	96	01	0D				NTC back-card buffer error.
0B	X	06	96	01	0E				NTC back-card not configured.
0B	X	06	96	01	10				ADMIN unexpected PSOS return code.
0B	X	06	96	01	12				ADMIN command length exceeds maximum.
0B	X	06	96	01	14				NTC FIFO 9th-bit error during command fetch.
0B	X	06	96	01	15				NTC fatal error - context unknown.
0B	X	06	96	01	20				ADMIN illegal message code between tasks.
0B	X	06	96	01	25				ADMIN event Tx timeout error.
0B	X	06	96	01	24	01			ADMIN Frammer I F task event fragment timeout.
0B	X	06	96	01	24	02			ADMIN Deframer I F task event fragment timeout.
0B	X	06	96	01	24	04			ADMIN Q-manager I F task event fragment timeout.
0B	X	06	96	01	24	08			ADMIN Q-server I F task event fragment timeout.
0B	X	06	96	01	24	10			ADMIN Back-card I F task event fragment timeout.
0B	X	06	96	01	21	02			Q-manager illegal message source(task ID).
0B	X	06	96	01	23	02			Q-manager mismatch unsolicited event fragment ID.
0B	X	06	96	01	26	02			Q-manager function code unknown to slave.
0B	X	06	96	01	31	02			Q-manager vector timeout error.
0B	X	06	96	01	32	02			Q-manager input (write) timeout.
0B	X	06	96	01	33	02			Q-manager output (read) timeout.
0B	X	06	96	01	34	02			Q-manager illegal function code.
0B	X	06	96	01	35	02			Q-manager illegal argument.

0B	X	06	96	01	21	03	Q-server illegal message source(task ID).
0B	X	06	96	01	23	03	Q-server mismatch unsolicited event fragment ID.
0B	X	06	96	01	26	03	Q-server function code unknown to slave.
0B	X	06	96	01	31	03	Q-server vector timeout error.
0B	X	06	96	01	32	03	Q-server input (write) timeout.
0B	X	06	96	01	33	03	Q-server output (read) timeout.
0B	X	06	96	01	34	03	Q-server illegal function code.
0B	X	06	96	01	35	03	Q-server illegal argument.
0B	X	06	96	01	21	04	Framer illegal message source(task ID).
0B	X	06	96	01	21	05	Deframer illegal message source(task ID).
0B	X	06	96	01	23	02	Q-manager mismatch/unsolicited event fragment ID.
0B	X	06	96	01	23	03	Q-server mismatch/unsolicited event fragment ID.
0B	X	06	96	01	23	04	Framer mismatch/unsolicited event fragment ID.
0B	X	06	96	01	23	05	Deframer mismatch/unsolicited event fragment ID.
0B	X	06	96	01	24	01	ADMIN/Framer I/F task event fragment timeout.
0B	X	06	96	01	24	02	ADMIN/Deframer I/F task event fragment timeout.
0B	X	06	96	01	24	04	ADMIN/Q-manager I/F task event fragment timeout.
0B	X	06	96	01	24	08	ADMIN/Q-server I/F task event fragment timeout.
0B	X	06	96	01	24	10	ADMIN/Back-card I/F task event fragment timeout.
0B	X	06	96	01	25		ADMIN event Tx timeout error.
0B	X	06	96	01	26	02	Q-manager function code unknown to slave.
0B	X	06	96	01	26	03	Q-server function code unknown to slave.
0B	X	06	96	01	26	04	Framer function code unknown to slave.
0B	X	06	96	01	26	05	Deframer function code unknown to slave.
0B	X	06	96	01	30	02	Q-manager timeout error.
0B	X	06	96	01	30	03	Q-server timeout error.
0B	X	06	96	01	30	04	Framer timeout error.
0B	X	06	96	01	30	05	Deframer timeout error.
0B	X	06	96	01	31	02	Q-manager vector timeout error.
0B	X	06	96	01	31	03	Q-server vector timeout error.
0B	X	06	96	01	31	04	Framer vector timeout error.
0B	X	06	96	01	31	05	Deframer vector timeout error.
0B	X	06	96	01	32	02	Q-manager input (write) timeout.
0B	X	06	96	01	32	03	Q-server input (write) timeout.
0B	X	06	96	01	32	04	Framer input (write) timeout.
0B	X	06	96	01	32	05	Deframer input (write) timeout.
0B	X	06	96	01	33	02	Q-manager output (read) timeout.
0B	X	06	96	01	33	03	Q-server output (read) timeout.
0B	X	06	96	01	33	04	Framer output (read) timeout.
0B	X	06	96	01	33	05	Deframer output (read) timeout.
0B	X	06	96	01	34	02	Q-manager illegal function code.
0B	X	06	96	01	34	03	Q-server illegal function code.
0B	X	06	96	01	34	04	Framer illegal function code.
0B	X	06	96	01	34	05	Deframer illegal function code.
0B	X	06	96	01	35	02	Q-manager illegal argument.
0B	X	06	96	01	35	03	Q-server illegal argument.
0B	X	06	96	01	35	04	Framer illegal argument.
0B	X	06	96	01	35	05	Deframer illegal argument.
0B	X	06	96	01	41		ADMIN ROM failure.
0B	X	06	96	01	42		ADMIN RAM failure.
0B	X	06	96	01	43		ADMIN ROM/RAM failure.
0B	X	06	96	01	44		ADMIN routing table modulus test failure.
0B	X	06	96	02	01		Q-magr function set_bmp detected 1 instead of 0.
0B	X	06	96	02	02		Q-magr function rcy_eba/last_eba points to non-zero location.
0B	X	06	96	02	03		Q-magr function m_active found PIFIFO reset.
0B	X	06	96	02	04		Q-magr function m_active found server inactive.
0B	X	06	96	02	05		Q-magr function m_time found server inactive.
0B	X	06	96	02	06		Q-magr function rx_pkt found an zero EBA in PIFIFO.
0B	X	06	96	02	07		Q-magr function rx_pkt found an EBA with non-zero ls-nibble in PIFI
0B	X	06	96	02	08		Q-magr function m_time detected no server response to last interrup
0B	X	06	96	02	09		Q-magr function rcy_eba was passed a zero EBA.
0B	X	06	96	02	0A		Q-magr GCI received by rx_pkt is either 0 or \$FF
0B	X	06	96	02	10		Q-magr disowned resource was not owned.
0B	X	06	96	02	11		Q-magr stack error.

0B X 06 96 02 12	Q-magr manager received unused IRQB interrupt.
0B X 06 96 02 13	Q-magr received unused SSI interrupt.
0B X 06 96 02 14	Q-magr received unused HOST vector or default.
0B X 06 96 02 15	Q-magr illegal instruction detected.
0B X 06 96 02 16	Q-magr resource ownership request timeout.
0B X 06 96 02 17	Q-magr background checksum failed
0B X 06 96 02 18	Q-magr slave never received frame interrupt while activating.
0B X 06 96 02 19	Q-magr other processor did not receive frame interrupt during activation.
0B X 06 96 02 1A	Q-magr power-up selftest failed.
0B X 06 96 02 30	Q-magr unknown host command.
0B X 06 96 02 31	Q-magr illegal parameter value in host command.
0B X 06 96 02 32	Q-magr illegal host command for current DSP state.
0B X 06 96 02 33	Q-magr host command configuration.
0B X 06 96 03 01	Q-srvr function s_active found the EBA FIFO reset.
0B X 06 96 03 02	Q-srvr function clr_bmp detected 0 instead of 1.
0B X 06 96 03 03	Q-srvr deactivated while manager still active
0B X 06 96 03 04	Q-srvr function s_active detected non-empty EBA FIFO while activating.
0B X 06 96 03 05	Q-srvr manager no s_time signal to frame interrupt handler.
0B X 06 96 03 06	Q-srvr macro fill_eba out of EBAs in functions s_time or s_active.
0B X 06 96 03 07	Q-srvr time-out in function s_active, awaiting manager activation.
0B X 06 96 03 08	Q-srvr function s_rcyeba was passed a zero EBA.
0B X 06 96 03 09	Q-srvr xd subqueue search decremented <= 0 (serve_xd)
0B X 06 96 03 0A	Q-srvr subqueue depth is decremented < 0 (serve_xd)
0B X 06 96 03 0B	Q-srvr serve is serving a illegal credited queue
0B X 06 96 03 0C	Q-srvr serve is serving a illegal rnd robin queue
0B X 06 96 03 0D	Q-srvr serve SCB list ends and no queue is present
0B X 06 96 03 0E	Q-srvr xd subqueue search decremented <= 0 (age_xd)
0B X 06 96 03 0F	Q-srvr age_xd cannot find pkts in subqueue
0B X 06 96 03 10	Q-srvr disowned not-owned resource.
0B X 06 96 03 11	Q-srvr stack error.
0B X 06 96 03 12	Q-srvr manager received unused IRQB interrupt.
0B X 06 96 03 13	Q-srvr received unused SSI interrupt.
0B X 06 96 03 14	Q-srvr received unused HOST vector or default.
0B X 06 96 03 15	Q-srvr illegal instruction detected.
0B X 06 96 03 16	Q-srvr resource ownership request timeout.
0B X 06 96 03 17	Q-srvr background checksum failed
0B X 06 96 03 18	Q-srvr slave never received frame interrupt while activating.
0B X 06 96 03 19	Q-srvr other processor did not receive frame interrupt during activation.
0B X 06 96 03 1A	Q-srvr power-up selftest failed.
0B X 06 96 03 30	Q-srvr unknown host command.
0B X 06 96 03 31	Q-srvr illegal parameter value in host command.
0B X 06 96 03 32	Q-srvr illegal host command for current DSP state.
0B X 06 96 03 33	Q-srvr host command configuration.
0B X 06 96 03 50	Q-srvr serve_xd PIB_ptr = 0
0B X 06 96 03 51	Q-srvr serve_v PIB_ptr = 0
0B X 06 96 03 52	Q-srvr serve_ts PIB_ptr = 0
0B X 06 96 03 53	Q-srvr serv_nts PIB_ptr = 0
0B X 06 96 03 54	Q-srvr serve_hp PIB_ptr = 0
0B X 06 96 03 55	Q-srvr drp_ovp PIB_ptr = 0
0B X 06 96 03 56	Q-srvr drp_otsp PIB_ptr = 0
0B X 06 96 03 57	Q-srvr drop_xd PIB_ptr = 0
0B X 06 96 04 01	Framer stack error.
0B X 06 96 04 02	Framer illegal instruction error.
0B X 06 96 04 03	Framer illegal exception error.
0B X 06 96 04 04	Framer power-up test failure.
0B X 06 96 04 05	Framer background checksum failure.
0B X 06 96 04 06	Framer zero header packet pulled from queue buffer.
0B X 06 96 04 07	Framer zero EBA read from Q server.
0B X 06 96 04 10	Framer unknown function code from host.
0B X 06 96 04 11	Framer illegal number of arguments in host command.
0B X 06 96 04 12	Framer illegal parameter in host command.
0B X 06 96 04 14	Framer illegal host command for DSP state.
0B X 06 96 04 16	Framer configuration error.
0B X 06 96 05 01	Deframer stack error.
0B X 06 96 05 02	Deframer illegal instruction error.
0B X 06 96 05 03	Deframer illegal exception error.

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0B X 06 96 05 04      Deframer power-up test failure.
0B X 06 96 05 05      Deframer background checksum failure.
0B X 06 96 05 06      Deframer zero header packet pulled from queue buffer.
0B X 06 96 05 07      Deframer zero EBA read from Q-server.
0B X 06 96 05 10      Deframer unknown function code from host.
0B X 06 96 05 11      Deframer illegal number of arguments in host command.
0B X 06 96 05 12      Deframer illegal parameter in host command.
0B X 06 96 05 14      Deframer illegal host command for DSP state.
0B X 06 96 05 16      Deframer coniguration error.

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FC 00 01 02 03 04 05 06 07  07 - WATCHDOG FAILURE ERROR TYPE MESSAGES
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0B X 07 96 01 aa bb      Admin watchdog error.
                          aa = time since last Cbus poll, (x 32ms)
                          bb = time since last ADMIN watchdog, (x 32ms)

0B X 07 96 02            Queue-manager watchdog error.
0B X 07 96 03            Queue-server watchdog error.
0B X 07 96 04            Framer watchdog error.
0B X 07 96 05            Deframer watchdog error.

Part Number :    OLD_01
Part Name :     IPX HW PCC Model D
Part Number :    207390-20
Part Name :     IPX HW NTC Model E

```

## Card Errors Example

This example shows the OB card error for NTM in slot 5:

Using the <b>dspcderrs</b> Command						
IGX	StrataCom	IGX16	9.1.xx	Feb. 11 2000	10:37	EDT
NTM in Slot 5 : 427891 Rev FHH						
-----						
Failure Type: Hardware Error						
Failure Time: Feb. 11 2000 10:02:54 EDT						
Hardware Error Event:						
0B FD 06 96 01 24 02						
Error Fcode: FD						
Failure Type: Internal						
Processor Number: 01						
This Command: <b>dspcderrs 5</b>						

This is an "ADMIN Deframer I F task event fragment timeout"-0B X 06 96 01 24 02.

## Related Information

- [Cisco WAN Switching Solutions – Cisco Documentation](#)
- [Guide to New Names and Colors for WAN Switching Products](#)
- [Downloads – WAN Switching Software \( registered customers only\)](#)
- [Technical Support & Documentation – Cisco Systems](#)

