



10 / 100 Ethernet Adapter in PCI Mezzanine Card (PMC) Form-Factor

PRELIMINARY
IDT7M9401

FEATURES:

- Bus Interface: 33Mhz, 5V, 32-bit PCI bus version 2.1 Electrical Compliance
- Form-Factor: Single-wide PCI Mezzanine Card (74mm x 149mm).
- Intel 82558 Fast Ethernet Single Chip LAN Controller
 - Dual mode 10BASE-T/100BASE-TX PHY
 - 100 Mbps transmission with minimum interframe spacing
 - Glueless 32-bit PCI bus master interface
 - Full or half duplex capable at 10 or 100 Mbps
- Automatic 10 / 100 Mb configuration supports Ethernet, Fast Ethernet, and mixed bandwidth networks via a single RJ-45 connector.
- Compliant with IEEE 802.3u 100BASE-T specification.

DESCRIPTION:

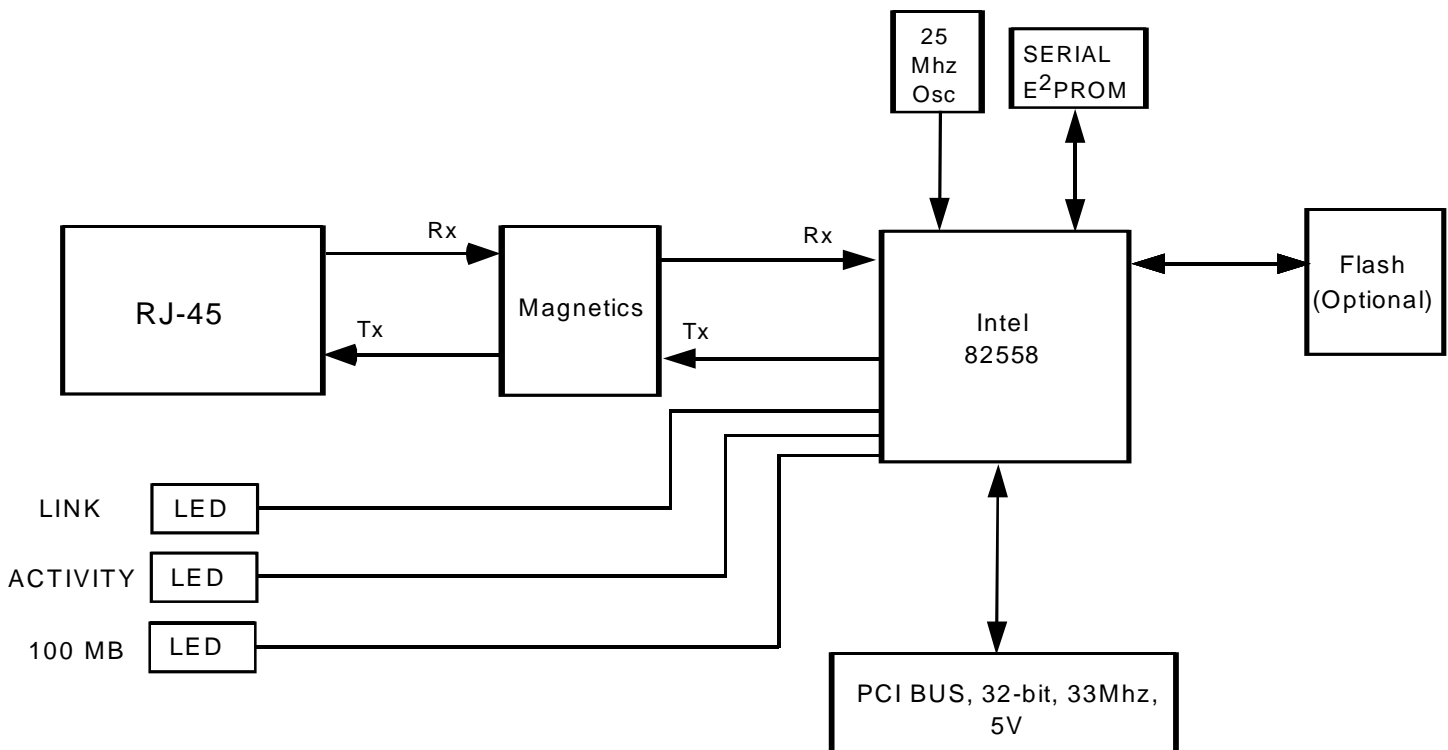
The IDT7M9401 provides reliable, high performance 10/100 Ethernet connectivity for PCI Mezzanine Card (PMC)-based systems. The IDT7M9401 is designed for mechanical and electrical compliance with the Common Mezzanine Card Specification (IEEE 1386) and the PCI Mezzanine Card Specification (IEEE 1386.1). This low-profile I/O card is ideally suited to serve as an Ethernet I/O card mounted on a standard VME or Compact PCI Single Board Computer.

OVERVIEW:

The central component of the IDT7M9401 is the Intel 82558 Fast Ethernet single chip LAN controller. The 82558 connects directly to the PCI bus, an expansion Flash memory device and an Ethernet LAN. The 82558's PCI bus master interface provides efficient, low latency DMA transfer capability over PCI.

The 82558 chip provides both the Ethernet MAC and PHY layers in a single device. This integration enhances reliability and reduces power consumption requirements.

BLOCK DIAGRAM



4277 drw 01

MAY 1999

PIN ASSIGNMENTS

The 32-bit PCI bus is implemented in two 64-pin headers (PN1 & PN2) in compliance with the PMC Specification and is provided below.

PN1

Pin #	Signal Name	Signal Name	Pin #
1	TCK	-12V ⁽¹⁾	2
3	GND	INTA#	4
5	INTB#	INTC#	6
7	BUSMODE1#	+5v	8
9	INTD#	PCI-RSVD	10
11	GND	PCI-RSVD	12
13	CLK	GND	14
15	GND	GNT#	16
17	REQ#	+5V	18
19	V(I/O) ⁽¹⁾	AD[31]	20
21	AD[28]	AD[27]	22
23	AD[25]	GND	24
25	GND	C/BE[3]#	26
27	AD[22]	AD[21]	28
29	AD[19]	+5V	30
31	V(I/O) ⁽¹⁾	AD[17]	32
33	FRAME#	GND	34
35	GND	IRDY#	36
37	DEVSEL#	+5V	38
39	GND	LOCK#	40
41	SDONE#	SBO# ⁽¹⁾	42
43	PAR	GND	44
45	V(I/O) ⁽¹⁾	AD[15]	46
47	AD[12]	AD[11]	48
49	AD[09]	+5V	50
51	GND	C/BE[0]#	52
53	AD[06]	AD[05]	54
55	AD[04]	GND	56
57	V(I/O) ⁽¹⁾	AD[03]	58
59	AD[02]	AD[01]	60
61	AD[00]	+5V	62
63	GND	REQ64# ⁽¹⁾	64

PN2

Pin #	Signal Name	Signal Name	Pin #
1	+12V ⁽¹⁾	TRST#	2
3	TMS	TDO	4
5	TDI	GND	6
7	GND	PCI-RSVD	8
9	PCI-RSVD	PCI-RSVD	10
11	BUSMODE2#	+3.3V ⁽²⁾	12
13	RST#	BUSMODE3#	14
15	+3.3V ⁽²⁾	BUSMODE4#	16
17	PCI-RSVD	GND	18
19	AD[30]	AD[29]	20
21	GND	AD[26]	22
23	AD[24]	+3.3V ⁽²⁾	24
25	IDSEL	AD[23]	26
27	+3.3V ⁽²⁾	AD[20]	28
29	AD[18]	GND	30
31	AD[16]	C/BE[2]#	32
33	GND	PMC-RSVD	34
35	TRDY#	+3.3V ⁽²⁾	36
37	GND	STOP#	38
39	PERR#	GND	40
41	+3.3V ⁽²⁾	SERR#	42
43	C/BE[1]#	GND	44
45	AD[14]	AD[13]	46
47	GND	AD[10]	48
49	AD[08]	+3.3V ⁽²⁾	50
51	AD[07]	PMC-RSVD	52
53	+3.3V ⁽²⁾	PMC-RSVD	54
55	PMC-RSVD	GND	56
57	PMC-RSVD	PMC-RSVD	58
59	GND	PMC-RSVD	60
61	ACK64# ⁽¹⁾	+3.3V ⁽²⁾	62
63	GND	PMC-RSVD	64

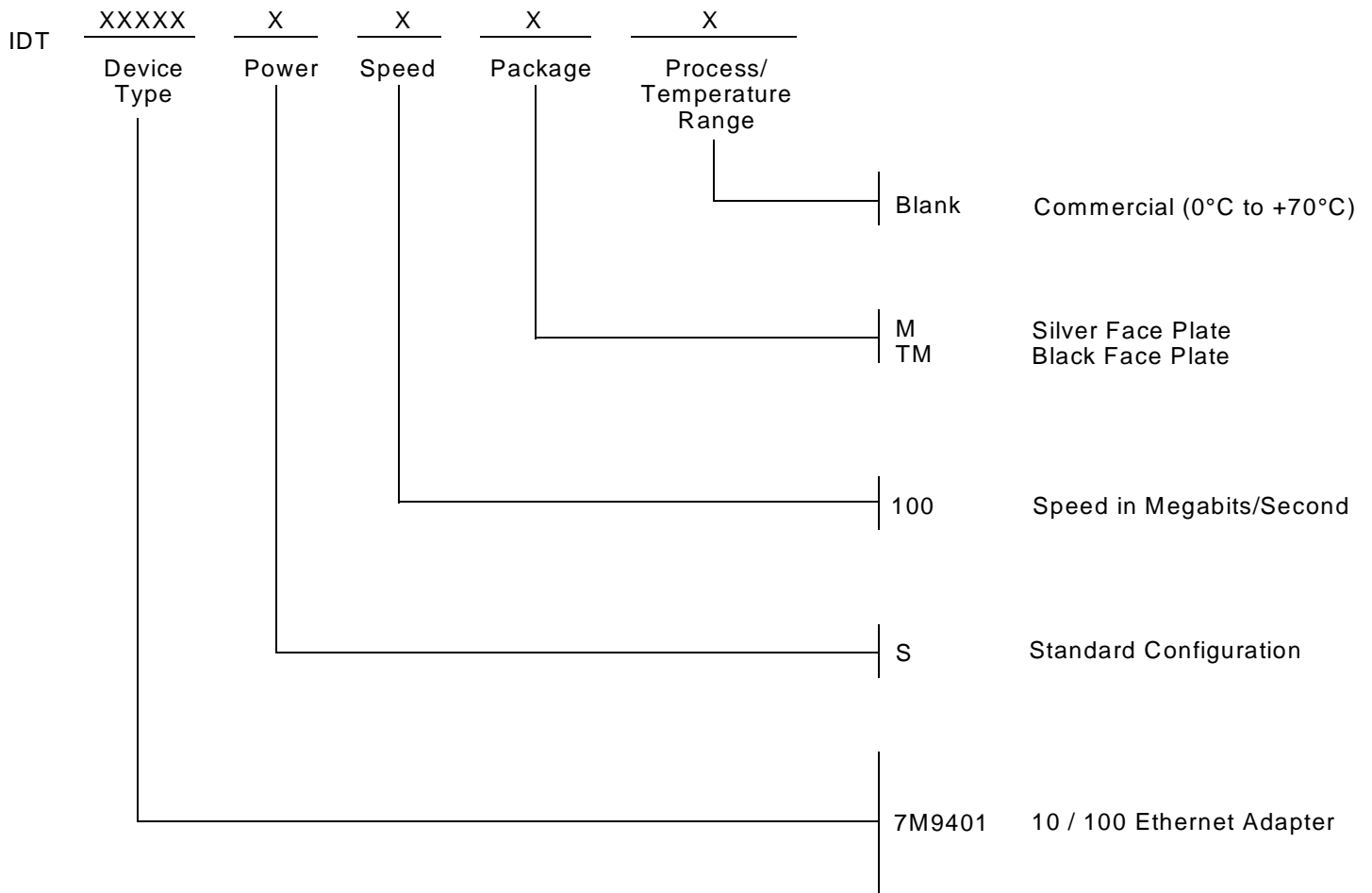
4277 tbl 01

4277 tbl 02

NOTES:

1. These signals are not connected (NC) on the IDT7M9401.
2. +3.3V is not used by the IDT7M9401; however, it is decoupled on the board.

ORDERING INFORMATION



4277 drw 02



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