



**155Mbps ABR ATM Adapter  
Family in PCI Mezzanine  
Card (PMC) Form-Factor**

**PRELIMINARY**  
**IDT7M9230 / IDT7M9240**  
**IDT7M9231 / IDT7M9241**  
**IDT7M9232 / IDT7M9242**

**FEATURES:**

- **Bus Interface:** 33Mhz, 5V, 32-bit PCI bus version 2.1 Electrical Compliance
- **Form-Factor:** Single-Size Common Mezzanine Card (74mm x 149mm). Full Dimensional Compliance to Common Mezzanine Card Specification IEEE P1386 v.2.0.
- **155Mbps Fiber optical interface supporting up to 4K VC's.**
  - Multimode (7M9230)
  - Single mode intermediate distance(7M9231)
  - Single mode long distance (7M9232)
- **155Mbps Fiber optical interface supporting up to 16K VC's.**
  - Multimode (7M9240)
  - Single mode intermediate distance(7M9241)
  - Single mode long distance (7M9242)
- **Consult factory for availability of UTP-5 interface version**
- **Full Software Compatibility with IDT77924 and IDT77925 ATM reference cards**
- **Third Party Software available:**
  - Harris & Jeffries  
Soft-ATM™ Family of Protocol Products  
Porting files for VxWorks™ and pSOS™  
888 Washington Street  
Dedham, MA 02026  
(617) 329-3200 acooley@hjinc.com
  - Advancenet Systems Inc.  
WindowsNT™ and Windows95™ Drivers  
406 Timbermill Rd.  
Durham, NC 27713  
(919) 544-5601 j.hartford@ieee.org

**DESCRIPTION:**

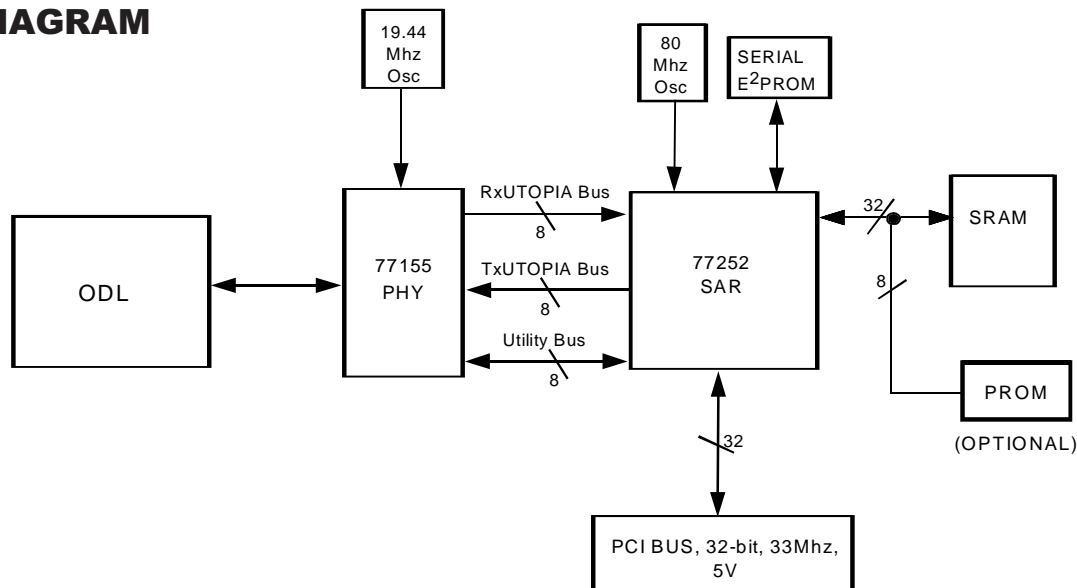
The IDT7M9230/31/32/40/41/42 provides reliable, high performance Asynchronous Transfer Mode connectivity with Available Bit Rate (ABR) support for PCI Mezzanine Card (PMC)-based systems. The IDT7M9230/31/32/40/41/42 is designed for mechanical and electrical compliance with the Common Mezzanine Card Specification (IEEE1386) and the PCI Mezzanine Card Specification (IEEE1386.1). This low-profile I/O card is ideally suited to serve as an ATM Uplink on a Fast Ethernet switch or as ATM I/O card mounted on a standard VME or Compact PCI Single Board Computer.

**OVERVIEW:**

The central component of the IDT7M9230/31/32/40/41/42 is the IDT77252ABR NICSTAR™ Segmentation and Reassembly (SAR) controller. The IDT77252ABR SAR connects directly to the PCI bus, a private SRAM/EPROM bus, and the Utopia PHY interface. The IDT77252ABR's PCI bus master interface provides efficient, low latency DMA transfer capability over PCI. For further information on the IDT77252ABR refer to the IDT77252ABR Datasheet located on the IDT website (www.idt.com).

The IDT77155 PHY chip provides the SONET/SDH processing and ATM mapping functions of a 155Mbps ATM User Network Interface. The IDT77155 provides both Transmission Convergence (TC) and Physical Media Dependent (PMD) sublayer functions and supports a UTOPIA interface. For further information on the IDT77155 refer to the IDT77155 Datasheet located on the IDT website(www.idt.com).

**BLOCK DIAGRAM**



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**FEBRUARY 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 <sup>(1)</sup>	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) <sup>(1)</sup>	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) <sup>(1)</sup>	AD[17]	32
33	FRAME#	GND	34
35	GND	IRDY#	36
37	DEVSEL#	+5V	38
39	GND	LOCK#	40
41	SDONE#	SBO# <sup>(1)</sup>	42
43	PAR	GND	44
45	V(I/O) <sup>(1)</sup>	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) <sup>(1)</sup>	AD[03]	58
59	AD[02]	AD[01]	60
61	AD[00]	+5V	62
63	GND	REQ64# <sup>(1)</sup>	64

### PN2

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

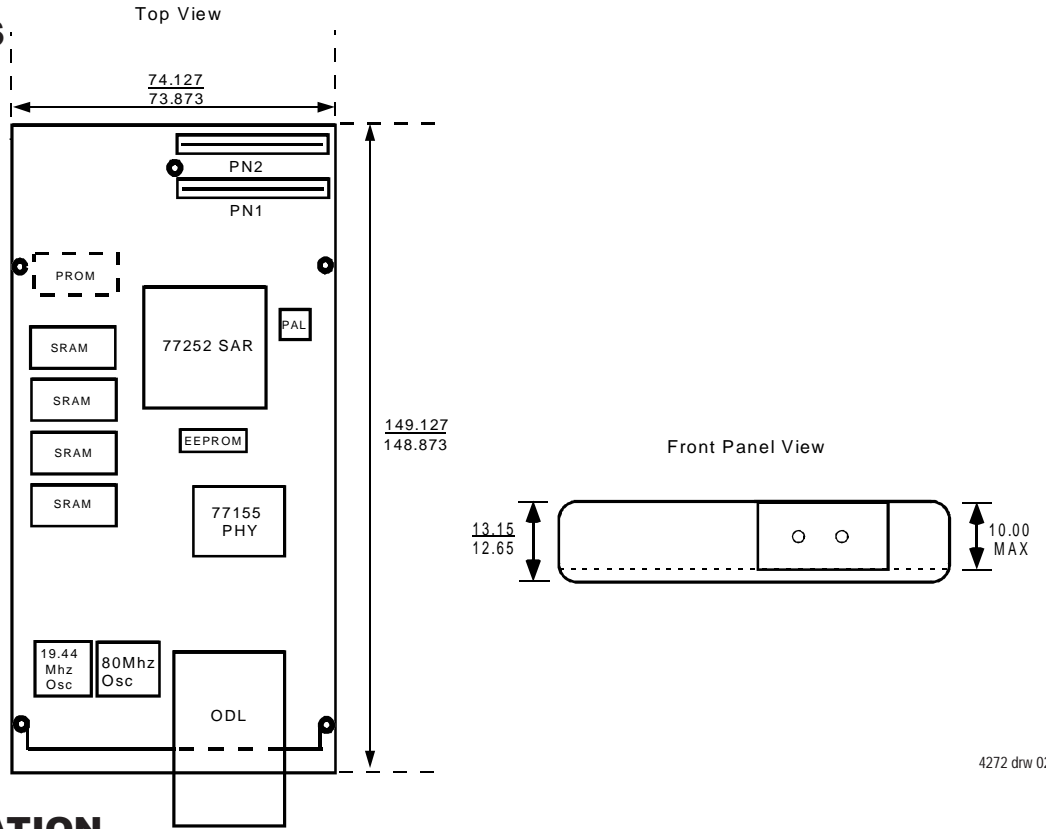
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#### NOTES:

1. These signals are not connected (NC) on the IDT7M9230/31/32/40/41/42.
2. +3.3V is not used by the IDT7M9230/31/32/40/41/42; however, it is decoupled on the board.

# BOARD DIMENSIONS



NOTES:  
1. All dimensions in millimeters.

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## ORDERING INFORMATION

IDT	XXXXX	X	X	X	X	
	Device Type	Power	Speed	Package	Process/ Temperature Range	
					Blank	Commercial (0°C to +70°C)
					M	PMC-Standard PCI Connection
			155			Speed in Megabits/Second
		S				Standard Configuration
						Up to 4K VC's
						155 Mb/s ATM Adapter-Multimode
						7M9231 155 Mb/s ATM Adapter-Intermediate Distance Single Mode
						7M9232 155 Mb/s ATM Adapter-Long Distance Single Mode
						Up to 16K VC's
						7M9240 155 Mb/s ATM Adapter-Multimode
						7M9241 155 Mb/s ATM Adapter-Intermediate Distance Single Mode
						7M9242 155 Mb/s ATM Adapter-Long Distance Single Mode

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