

## FEATURE SUMMARY

- Motorola MPC8260 PowerQUICC II™ PowerPC processor operating at 200MHz
- Tundra® PowerSpan dual PCI to PowerPC bus switch
- Four Texas Instruments TMS320C6203™ DSP complex option
- 32MB of 64-bit access SDRAM options
- 32/64-bit, up to 66MHz, PCI interface
- 6U CompactPCI® form factor
- Full hot-swap hardware capability
- Dual PMC connections
- CompactPCI H.110 backplane interface
- Front and rear I/O connectivity for added flexibility
- Two 10/100BaseT Ethernet connections via rear transition modules
- I2O messaging interface
- Intelligent Platform Management Interface (IPMI) support option
- Homologated and certified for worldwide use

Wide Area Networking (WAN) and telecomm applications of today are vastly different from those of even five years ago. As this rapid evolution continues, one thing is certain, today's WAN and telecom platforms need to be robust while remaining extremely flexible. In addition, these platforms need to be scalable and price/performance is always a critical issue.

## MARKET TRENDS AND APPLICATIONS

Tremendous growth in network traffic has been brought on by widespread use of the Internet and the ever-expanding client/server architecture. As the volume and type of multimedia data grows, performance and flexibility are needed to address the needs of both today's as well as future WAN applications.

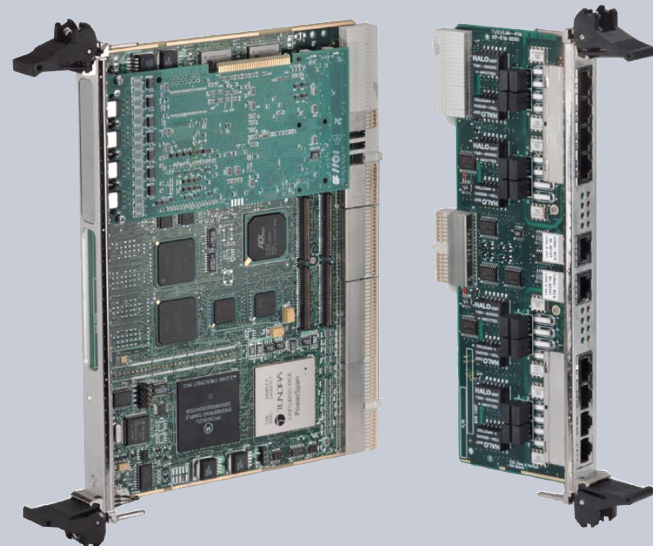
Telecom applications are increasingly required to offer enhanced or intelligent services using the SS7 protocol. This increased SS7 usage drives bandwidth upgrades for SS7 networks. Other convergence phenomena of inter-networking between Public Switch Telephone

Network (PSTN), packet networks and wireless networks are also driving the need for increased network capacity and connectivity.

E-commerce, business-to-business, and the high demand for SS7 services like enhanced 911, 1-800 number resolution and custom calling services, as well as voice over IP signaling gateways, are among the applications driving these requirements.

## PRODUCT DESCRIPTION

RadiSys ARTIC 1000 is specifically targeted at customers trying to manage the challenges of increasing their WAN I/O capabilities and at the same time addressing their emerging needs. The ARTIC 1000 is a CompactPCI I/O platform that more than quadruples the WAN I/O capabilities in the current ARTIC family. It is designed to have a flexible architecture and is targeted at carrier class applications—the fastest growing segment of telecommunications. The ARTIC 1000 also features low-level monitoring support for SS7 clean channel according to Q.703 Annex.





### HIGHEST PERFORMANCE IN INDUSTRY

The high-performance architecture of the ARTIC 1000 CompactPCI I/O Platform enables RadiSys to provide the most powerful base adapter to its customers. Featuring the 200MHz Motorola PowerQUICC II, Tundra's PowerSpan bus switch and optional Texas Instruments 'C6X DSPs, the ARTIC 1000 has the ability to handle protocol processing directly on the adapter without impacting the host processor. This is accomplished by providing the capability for more than 10,000MIPS of processing power in a single slot. This processing power is very useful in applications requiring increased channel density, higher throughput or complex protocol processing.

### FLEXIBILITY

The ARTIC 1000 accepts flexible network interface options via two PCI Mezzanine Card (PMC) connectors. This approach allows telecomm manufacturers and OEMs to standardize on the base I/O processor engine, development environment and RTOS. OEMs can tailor the ARTIC 1000 to a specific protocol or interface from T1/E1 and V.35 by changing the PMC. Today's RadiSys PMC offering includes a 4-Port T1/E1/J1 DSP PMC, 4-Port T1/E1/J1 Line PMC, and an 8-Port V.35 PMC. The T1/E1/J1 PMCs support both front and rear I/O and can be installed in pairs to provide up to eight ports of connectivity in a single slot. The 8-port V.35 only supports front I/O.

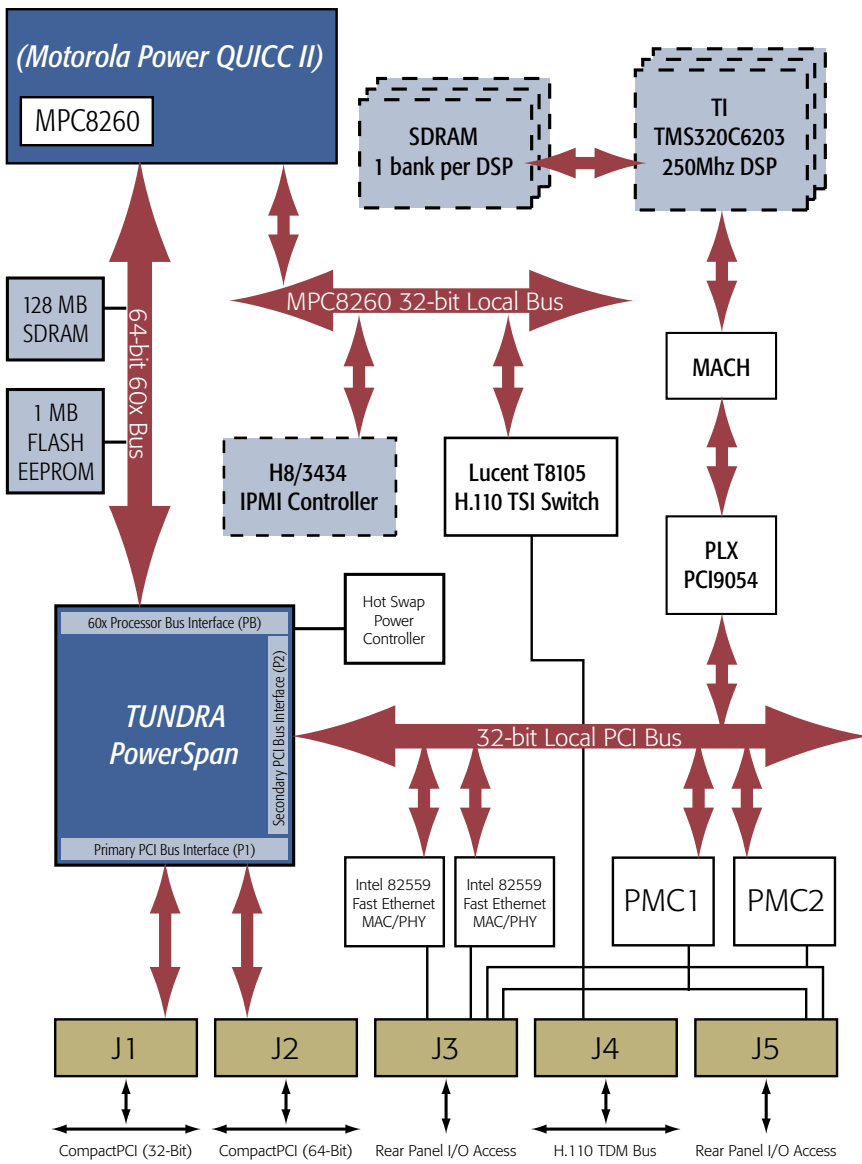
### DESIGNED FOR CARRIER CLASS APPLICATIONS

The ARTIC 1000 is designed for worldwide carrier class applications. RadiSys' extensive homologation process has validated it for use in all major countries worldwide. Its high mean-time-between-failure rate exceeds critical uptime requirements of the most demanding customers. The Intelligent Platform Man-agement Interface (IPMI) controller option provides "out of band" management functions including watchdog and reset. Using the latest hot-swap technology helps the ARTIC 1000 ensure high-availability for applications with critical uptime requirements.

### SOFTWARE SUPPORT

A full complement of host operating system support is available including Windows NT® 4.0, Windows 2000, Sun® Solaris™ for SPARC and Intel® platforms and Linux® support. The ARTIC 1000 uses a STREAMS-compliant API, which allows SS7, ATM HSL or Frame Relay protocol stacks to run on the adapter. Protocol support capability includes full HSL, HDLC and Frame Relay. APIs and sample programs provide for monitoring SS7 MTP-2, HSL, and GPRS Gb and Gr.





**ARTIC 1000 BLOCK DIAGRAM**



## SPECIFICATIONS

FEATURE	FUNCTION	DESCRIPTION
---------	----------	-------------

Board Style	-	6U CompactPCI (PICMG 2.0)	
CPU	-	Motorola PowerQUICC II, 200MHz	
Board size	Length	233.35mm (9.19")	
	Width	160mm (6.29")	
	Depth	< 13.71mm (.54")	
System Memory	SDRAM	32MB - 64-bit access	
	EEPROM	1MB Flash	
Environment	Operating temperature	0° to 55° C	
	Humidity	5 - 95%	
Power Requirements	+5 V DC	.28 A max	
	+3.3 V DC	6.2 A max	
	+12 V DC	.006 A max	
	-12 V DC	.002 A max	
Protocol Support	-	SS7 MTP-2, HSL, Frame Relay, monitoring traffic on GPRS Gb, Gp	
Typical Performance	-	SS7 channels - 128*	
	-	HSL channels - 4	
	-	Frame Relay channels - 128*	
Physical Interfaces	-	H.110 CT-bus (PICMG 2.5)	
	-	PICMG 2.1	
	-	PCI 64-bit @ 66MHz	
	-	10/100BaseT Ethernet on rear transition module	
	-	T1/E1/J1- 8 ports with two PMCs	
	-	V.35 - 8 ports	
Software Support	Host operating system and device driver	Windows NT® 4.0, Windows® 2000, Sun® Solaris for SPARC and Intel® platforms, Linux	
	Adapter software	STREAMS kernel allows protocol stacks SS7, Frame Relay, ATM and HSL to be resident on adapter	
Regulatory Conformance	Safety	UL 1950 3rd Ed., incl. Clause 6	
		IEC 950 2nd Ed., + A1 - A11 incl. Clause 6	
		EN 60950: 1992 + A1 - A11 incl. Clause 6	
		Printed circuit boards min V-0	
		Connectors min. V-1	
		EMC	FCC Part 15 Class A
	EMC	European EMC Directive	
		EN55022: 1994 Class A	
		EN50082: 1997	
		Telecom	Australia & New Zealand 120W
		CTR 12 and CTR 13 for 120W	
		CTR Layer 1	
Telecom	Japan to JT-1431-a		
	Industry Canada CS-03 as DS-1 and ISDN		
	FCC Part 68 CSU function & ISDN PRI		

\* Depends on the packet size

## ORDERING INFORMATION

Call for pricing and availability.  
Refer to the order codes below.

### DESCRIPTION:

ARTIC 1000 CompactPCI I/O Platform  
**ORDER CODE: IOP-CPCI-10000**

### Bundled ARTIC 1000 with PMC and RTM:

ARTIC 1000 4-Port T1/E1/J1  
**ORDER CODE: IOP-CPCI-11100**

ARTIC 1000 8-Port T1/E1/J1  
**ORDER CODE: IOP-1107-V21**

### PCI Mezzanine Cards (support front and rear I/O):

ARTIC 4-Port T1/E1/J1 DSP PMC  
**ORDER CODE: IOP-PMC-01000**

ARTIC 4-Port T1/E1/J1 PMC  
**ORDER CODE: IOP-PMC-02000**

### PCI Mezzanine Cards (support front I/O only):

ARTIC 4-Port T1/E1/J1 Front I/O PMC  
**ORDER CODE: IOP-PMC-05000**

ARTIC 8-Port V.35 Front I/O PMC  
**ORDER CODE: IOP-PMC-08000**

### Rear Panel Transition Modules (RTM):

ARTIC 8-Port T1/E1/J1 / 2-Port Ethernet RTM  
**ORDER CODE: IOP-RTM-00100**



World Headquarters  
5445 NE Dawson Creek Drive  
Hillsboro, OR 97124 USA  
Phone: 503-615-1100  
Fax: 503-615-1121  
Toll-Free: 800-950-0044  
[www.radisys.com](http://www.radisys.com)  
[info@radisys.com](mailto:info@radisys.com)

©2004 RadiSys Corporation. RadiSys and EPC are registered trademarks of RadiSys Corporation. All other trademarks are the properties of their respective owners. All specifications within this document are subject to change without notice. 07-1116-04 1204