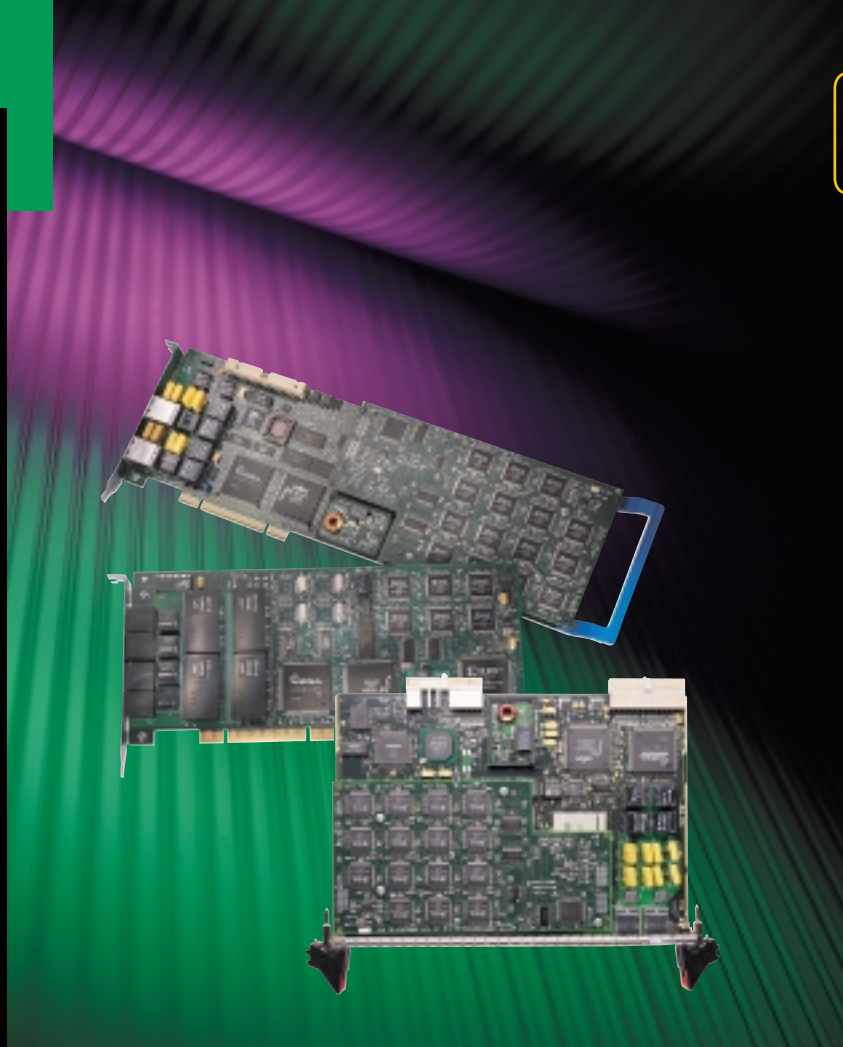


DataFire RAS Concentrators

Scalable
Server-Based
Remote Access
Concentrators
for Analog and
Digital
Connections



- > High density access concentrator (eight, 24, 30, 48 or 60 channels)
- > Advanced DSPs
- > Supports V.90, K56flex, ISDN, and advanced fax applications
- > Universal PCI and CompactPCI server compliance
- > Scalable, modular, and field-upgradable
- > Wide O/S and third-party application support
- > Perfect for modem pooling, remote access, advanced FAX, Internet and branch office internetworking
- > Five-year warranty

As both PCs and network operating systems have become more powerful and stable, PC servers have been taking over the tasks formerly performed by proprietary, standalone boxes. PC servers now efficiently handle remote communications and routing, perform as Internet and fax gateways, and are beginning to take on unified communication tasks as well. Essential to server-based communications solutions are reliable, standards-based communications adapters. Digi International, maker of the industry-standard DigiBoard, has been producing the leading communications adapters since PC servers first began shipping. Through long-standing partnerships and joint development efforts with industry leaders such as Compaq, IBM, Microsoft, Novell and Linux, Digi products have gained a reputation for compatibility, performance and reliability that is unmatched.

The Digi DataFire Family of DSP (Digital Signal Processor) based RAS (Remote Access Server) concentrator adapters provides the widest compatibility and most powerful performance available in a single PCI or CompactPCI slot. For demanding, server-based applications including modem pooling, remote access, advanced fax, World Wide Web and branch office internetworking, you won't find a better product line than DataFire.

The Digi DataFire DSP-based RAS concentrator adapters support from eight to 60 channels in a single PCI or CompactPCI slot, and most can be field-upgraded with additional channels as needed. Digi DataFire adapters support a full range of connections, from low density analog modem, to medium density Basic Rate Interface (BRI) ISDN, to high density T1/E1 and Primary Rate Interface (PRI) ISDN. Multiple DataFire adapters can be installed in a single server so capability can be added as system needs grow.



Advanced DSPs Support V.90 Modem, ISDN, and Advanced Fax Communications

The dense modem technology built into to Digi DataFire adapters is based on high performance DSPs. On-board DSPs provide advanced modem and fax support and maximize the efficiency of each communications channel. Each DataFire adapter channel operates independently and configures itself dynamically for analog (up to V.90 or K56flex) or digital (ISDN B-channel) support. This ensures smooth, remote connections regardless of whether callers are using analog modems or ISDN devices.

Universal Server Compliance Ensures Compatibility with All Leading PCs

All Digi DataFire adapter models operate within the PCI 2.1 mechanical and electrical specifications, support 3.3-or 5-volt PCI and CompactPCI servers, and share a common software architecture. These features ensure compatibility with a wide variety of PCs and application software, enhance reliability, and facilitate support. DataFire RAS/DSP-based adapters also share a common software architecture with Digi AccelePort RAS/DSP-based multi-modem adapters for the ultimate flexibility in system design.

Scalable, Modular Design and Field Upgrades Protect Your Investment

The great advantage of Digi DataFire server-based solutions is the ability to grow and expand as your needs change, whereas standalone communications solutions must be replaced in order to accommodate system changes. Most DataFire

adapters can be field upgraded with additional communication channels as needed. Both DataFire BRI ISDN and T1/E1 or PRI ISDN adapters can reside in the same server to provide exactly the types of connections your network requires. And, DataFire adapters can be easily upgraded or swapped in and out of the server as technology changes. DataFire adapters provide complete design flexibility.

Operating System Integration and Use of Standard APIs Facilitate System Installation and Maintenance

Digi DataFire adapters integrate with, and take advantage of, the inherent communication capabilities already built-in to your server operating environment. And, unlike some competitive products that use proprietary APIs (application programming interfaces), DataFire drivers are written to standard APIs and are enhanced with PortAssist management software provided by Digi. Use of standard APIs means that installation and management of your ports is completely familiar and intuitive to network administrators. IT managers can continue to use the same management systems and administrative tools they know and trust. And, users can continue to use the same remote access resources they're accustomed to since the DataFire Family of DSP-based RAS concentrators offers full modem coverage. The DataFire adapter product line is a natural extension of your existing network and does not require administrator or user training, or a substantial investment to add capabilities such as remote access or fax connectivity.

Advanced Application Support for Freedom of Choice

Software products for communication applications, management, and performance enhancements are available from a wide variety of developers. Digi DataFire adapters are designed and tested to ensure compatibility with leading application software like fax and unified communication applications. Up-to-date compatibility testing information can be found on the Digi Web site: www.digi.com in the "industry alliances" section.

Quality and Reliability

The Digi DataFire DSP-based RAS concentrator adapters meet the strongest Digi International design and manufacturing standards including ISO 9001 certification, and are backed by a five-year warranty. All DataFire DSP-based RAS concentrators are designed to be the only communications adapters you'll ever need.

MODEM STANDARDS COMPATIBILITY

56 Kbps

- > Rockwell/Lucent K56flex standard
- > ITU V.90 standard

V.34

- > Telephony (CTI) modes
 - > ITU G.711 μ -Law/A-Law Companding and Expanding
 - > DTMF generation and detection
 - > Caller ID and Call Progress
- > Data Modems
 - > ITU-T V.34: 33,600-2400 (TCM)
 - > ITU-T V.34 bis
 - > ITU-T V.32 bis: 14,400, 12000, 7200 (TCM)
 - > ITU-T V.32: 9600 (TCM), 4800 (QAM)
 - > ITU-T V.24 bis
 - > ITU-T V.23: 600/75, 1200/75 (FSK)
 - > ITU-T V.22 bis: 2400 (QAM)
 - > ITU-T V.22: 1200 (DPSK)
 - > ITU-T V.21: 300 (FSK)
 - > Bell 212a: 1200 (DPSK)
 - > Bell 103: 300 (FSK)
 - > TIA TSB37-A
 - > TIA TSB38

Fax Modes

- > Group 3
 - > ITU-T V.17: 14,400
 - > ITU-T V.29: 9600
 - > ITU-T V.27 ter: 4800
 - > ITU-T V.21 channel 2: 300

Compression and Error Correction

- > V.42 bis
- > MNP Class 2
- > MNP Class 4
- > MNP Class 5
- > V.42 Error Correction (LAPM and MNP)

POWER REQUIREMENTS

DataFire RAS 24/48/30/60 (PCI) (PT1/PE1/PT2/PE2)

- > 2.56 A @ 5.0 V typical (PT1)
- > 2.77 A @ 5.0 V typical (PE1)
- > 3.51 A @ 5.0 V typical (PT2)
- > 3.94 A @ 5.0 V typical (PE2)

DataFire RAS 4 (B4 U and B4 ST) (PCI)

- > 1.13 A @ 5.0 V typical (B4 ST)
- > 1.21 A @ 5.0 V typical (B4 U)

DataFire DSP 24/48/30/60 (CompactPCI) (PT1/PE1/PT2/PE2)

- > 11.65 Watts +/-5% typical (PT1)
- > 12.175 Watts +/-5% typical (PE1)
- > 19.35 Watts +/-5% typical (PT2)
- > 24.35 Watts +/-5% typical (PE2)

BUS CAPACITY

Unlimited DataFire and/or AccelePort adapters can work together in the same server. Practical limitations are dependent on the capability of the server platform.

RAS FAMILY API

All of the Digi DSP-based RAS products conform to the same, highly flexible, well documented API. With this API, developers can write drivers to proprietary operating systems, or to standard operating systems with proprietary extensions.

FAX COMMAND SET STANDARDS

- > Group 3 FAX Class 1
 - > 2D - MR (Modified READ) Image Conversion
- > Group 3 FAX Class 2
 - > 2D - MMR (Modified Modified READ) Image Conversion
- > Group 3 FAX Class 2.0
 - > Copy Quality Checking and Receive Quality Thresholds
- > Class 2.0 Error Correction Mode (ECM)
 - > Adaptive Answering
- > FAX Compression Formats: All optional Class 2.0 data format conversions are supported including:
 - > Normal Image
 - > Fine Image
 - > 1D Image Conversion
 - > TSI Banner
 - > Distinctive Ring
 - > Caller ID (Automatic Number Identification - ANI)
 - > IS-101 Voice Command Set

T1/E1 SPECIFICATIONS

- > T1 Supervision Modes
 - > Ground Start Signaling
 - > Wink Start Signaling
 - > Immediate Start Signaling
 - > Loop Start Signaling
- > E1 Supervision Modes.
 - > CCS with CRC4 ITU G.704
 - > CAS with CRC4 ITU G.704
 - > CRCA with Remote End Block Error Signaling
 - > R2 Signaling (future enhancement)

ISDN SPECIFICATIONS

Primary Rate Interface

- > D-Channel Signaling:
 - > ISDN data link layer ITU-T Q.921
 - > ISDN call control signaling ITU-T Q.932/I.451

Basic Rate Interface

- > ITU-T V.110/I.463
- > ITU-T V.120/I.462 (future)
- > Novell NetWare CAPI

FEATURES

	DataFire DSP-based RAS					
	B4ST	B4U	PT1	PT2	PE1	PE2
> ISDN ST BRI Ports	4					
> ISDN U BRI Ports	4					
> ISDN PRI Ports			1	2	1	2
> T1 Ports			1	2		
> E1 Ports					1	2
> B Channels per board	8	8	23	46	30	60
> D Channels per board	4	4	1	2	1	2
> Modems per board	8	8	24	48	30	60
> On-board DSPs	8	8	24	48	30	60
> Field upgradable to Double Density			Yes		Yes	

DIMENSIONS

DataFire RAS 24 PT1, 48 PT2, 30 PE1, 60 PE2 (PCI)

- > Length: 12.283 inches (31.199 cm)
- > Width: 4.200 inches (10.668 cm)

DataFire RAS Daughter Card(s) 24 PTM, 30 PEM

- > Length: 7.10 inches (18.034 cm)
- > Width: 3.80 inches (9.652 cm)

DataFire RAS 4 (B4ST and B4U) (PCI)

- > Length: 9.21 inches with metal retainer (23.39 cm)
- > Width: 4.20 inches (10.668 cm)

DataFire DSP 24 PT1, 48 PT2, 30 PE1, 60 PE2 (CompactPCI)

- > Length: 6.3 inches (16.002 cm)
- > Width: 9.19 inches (23.342 cm)

OPERATING SYSTEM SUPPORT

Microsoft

- > Windows 2000 Server
- > Windows NT 4.0

Novell

- > NetWare 4.1
- > NetWare 4.11
- > NetWare 5

SCO

- > UnixWare 7 SVR5
- > OpenServer 5

Linux

CERTIFICATIONS

DataFire RAS 24 PT1, 48 PT2, 30 PE1, 60 PE2 (PCI)

DataFire DSP 24 PT1, 48 PT2, 30 PE1, 60 PE2 (CompactPCI)

Emissions Specifications and Immunity

- > USA: FCC Part 15, Subpart J, Class B
- > CSA C108.8-M83, Class B
- > CISPR 22, Class B
- > Canada: ICES 003 Radiated Emissions
- > Europe: EN55022 Radiated Emissions
- > VCCI Radiated Emissions
- > AS3548 Radiated Emissions
- > EN50082 Immunity

Safety

- > USA: UL Recognized, UL 1950
- > Canada: CSA Certified, CSA C22.2 No. 950
- > Europe: EN60950
- > CE mark
- > Australia: AS3260

Telecom

- > USA: FCC Part 68
- > Canada: CS03

- > Europe: I-CTR4 (NET 5)
- > Japan: Jate Blue Book
- > Australia: TS038

DataFire RAS 4 B4 ST and B4 U (PCI) Emissions and Immunity

- > USA: FCC Part 15, Subpart J, Class B
- > CSA C108.8-M83, Class B
- > CISPR 22, Class B
- > VCCI 2
- > EN55022-1
- > IEC 801-2, 801-3, 801-4, 801-5, 801-6

Safety

- > USA: UL Recognized, UL 1950
- > Canada: CSA Certified, CSA C22.2 No. 220
- > Europe: IEC 380/950 Safety (TUV)
- > CE mark

Telecom

- > USA: FCC Part 68
- > Canada: CS03
- > Europe: I-CTR4 (NET 5)
- > Net 3

ENVIRONMENTAL

- > Ambient temperature: 0° C to 50° C (32° F to 122° F)
- > Relative humidity: 5% to 90%, non-condensing
- > Air movement: 30 CFM Forced
- > Altitude: 0 to 3,660 M (0 to 12,000 Feet)

DIGI SERVICE AND SUPPORT

You can purchase with confidence knowing that Digi is here to support you with expert technical support, a strong five-year warranty and a 30-day money-back guarantee.

MODEL / PART NUMBERS

PCI Bus:

DataFire RAS (ISDN BRI Interface)

- DataFire RAS 4 B4 ST # 77000605
- DataFire RAS 4 B4 U # 77000606

DataFire RAS (ISDN PRI or T1 Interface)

- DataFire RAS 24 PT1 # 77000593
- DataFire RAS 48 PT2 # 77000597
- DataFire RAS Daughter 24 PTM # 77000594

DataFire RAS (ISDN PRI or E1 Interface)

- DataFire RAS 30 PE1 # 77000599
- DataFire RAS 60 PE2 # 77000603
- DataFire RAS Daughter 30 PEM # 77000600

CompactPCI Bus:

DataFire DSP (ISDN PRI or T1/E1 Interface)

- DataFire DSP 24 PT1 CompactPCI # 77000623
- DataFire DSP 48 PT2 CompactPCI # 77000624
- DataFire DSP 30 PE1 CompactPCI # 77000625
- DataFire DSP 60 PE2 CompactPCI # 77000626

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