

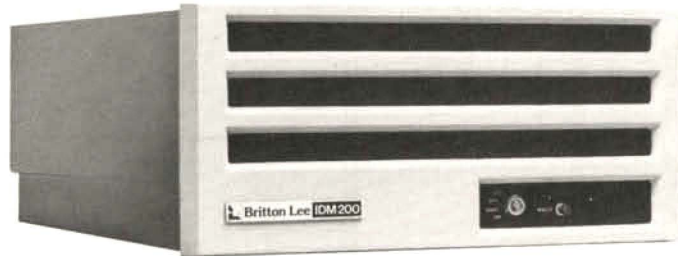


Britton Lee

IDM 200 RELATIONAL DATABASE MANAGEMENT SYSTEM

The IDM 200 Intelligent Database™ Machine is the second member in the growing first family of database machines from Britton-Lee. It is a complete relational database management system based on hardware designed exclusively to execute database management functions at extremely high speeds.

The IDM 200 can be used as a stand alone system supporting multiple intelligent terminals or as a centralized database resource for one or more mini or microcomputers. Located between the disks it manages and the computers it serves, the IDM 200 is ideally suited for medium to large scale database management applications.



A COMPLETE RELATIONAL SYSTEM

Unlike many systems which claim to be relational, the IDM is a complete relational database management system based on the rigorously defined but simple to understand relational data model.

The powerful adhoc query capability provided by a relational system allows programmers and users non-procedural access to data. This eliminates the need to navigate through complex database structures and allows queries which can retrieve data from an entire database.

Because relational database commands are extremely powerful, much of the work previously done by application programs is now done within the IDM 200, resulting in programs which are smaller, faster to develop, and easier to maintain.

The IDM 200 provides those features found in the best database management systems including full concurrency control, transaction management, security, database backup, and crash recovery.

The IDM 200 also provides a fully integrated data dictionary implemented as relations within each database. Combined with the IDM 200's self documenting and stored command features the data dictionary provides powerful tutorial and self-help tools.

The IDM 200 also provides features not found in most database management systems. Its dynamic or "live" backup facility allows a database to be dumped while it is being used. Complex or frequently used commands can be stored in an IDM 200 database in a preprocessed form which provides increased performance and

convenience. An audit logging and retrieval feature provides a complete record of database changes including user, time and date information. A random access file system provides for storage of programs and text to stand alone systems and a common file system to multiple computers.

A TRUE DATABASE MACHINE

The power and flexibility provided by relational database management has previously been available only from large software packages running on general purpose computers. Because software packages make use of general purpose operating and file management systems they run slowly—especially in multi-user environments. The IDM 200 was specifically designed to overcome these limitations.

Unlike general purpose backend processors, the IDM 200 has been custom designed to execute relational database management tasks at extremely high speeds. By off-loading the task of database management into the IDM 200, the general purpose computer is free to run application programs in parallel with the database machine. Operating as a centralized database resource, the IDM 200 can offer multiple dissimilar computers access to common databases.

A HIGH PERFORMANCE, HIGH CAPACITY SYSTEM

The IDM 200 offers performance and capacity not achievable with conventional database management systems. Multiple processors working in parallel combined with a high performance memory system provide the high throughput required by most applications. In addition, the IDM 200

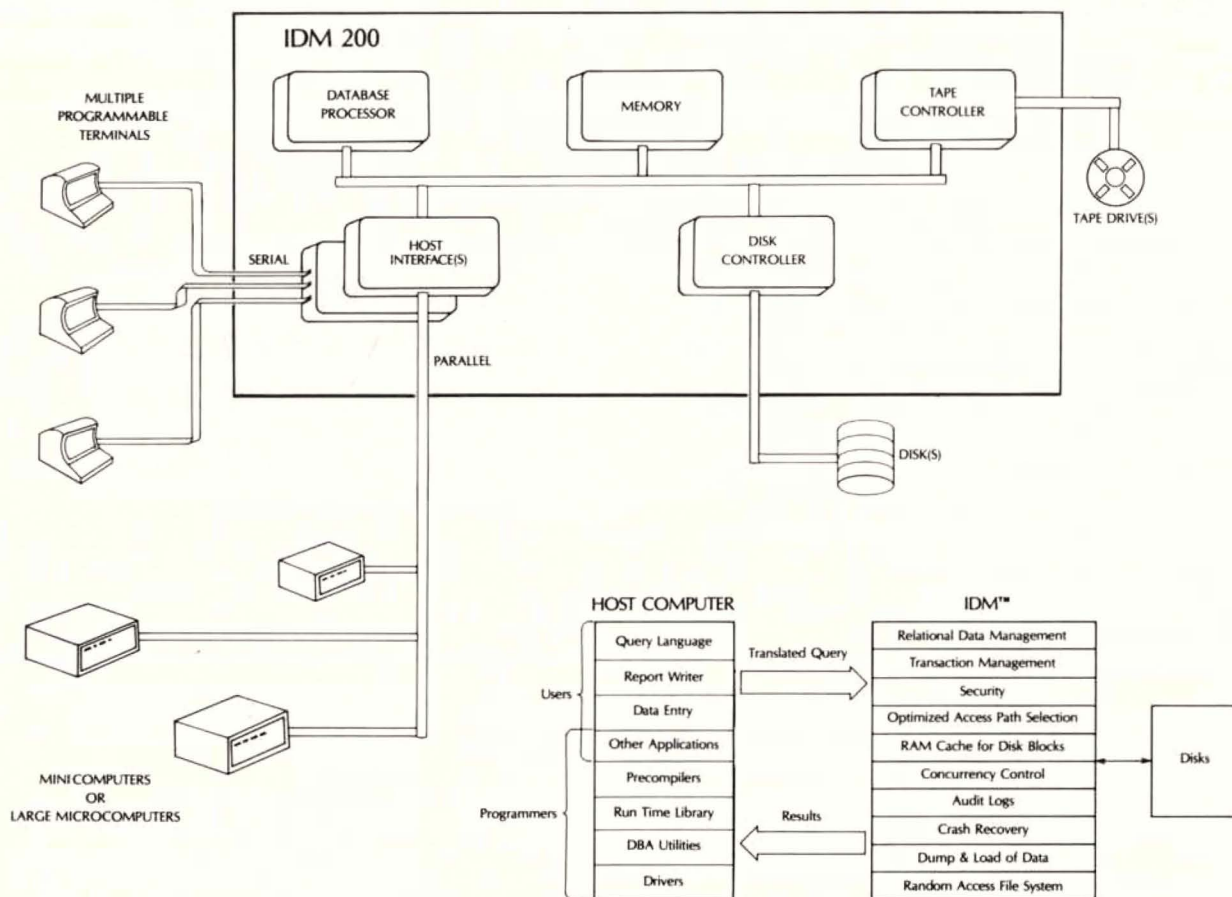
efficiently manages its resources by providing optimized disk control, overlapped seeks and intelligent scheduling.

Because the IDM 200 is a high performance system, it can support a large number of users, and large amounts of cache memory and disk storage. In fact, the IDM 200 can support up to 128 users accessing up to 8 billion bytes of data. For those applications requiring more performance or capacity, the more powerful IDM 500 is available.

DEPENDABILITY BACKED BY SERVICE

The bottom line in database management is dependability. The IDM 200 was designed to guarantee data integrity and to minimize system downtime. This helps reduce the cost of ownership. System integrity features include: error detection and correction for disk and main memory subsystems, self-diagnostic hardware, and software consistency checks.

Servicing is simple with Britton-Lee's built-in board level fault isolation and board level repair policy. In addition, the IDM 200 is fully supported by Britton-Lee's nationwide sales and service organization.



IDM 200 SPECIFICATIONS

(all figures are maximums unless otherwise stated)

Database Type:

Relational

Performance:

Up to 8 Transactions per second (typical)⁽¹⁾

Capacity:

Main Memory: 1 Mbyte

Disk Storage: 1 to 4 SMD disk drives⁽²⁾

Databases per IDM: 50

Relations (files) per database: 32,000

Attributes (fields) per relation: 250

Tuples (records) per relation: 2 billion

Tuple width: 2,000 bytes

Number of users: 128

Data Types:

1, 2, 4-byte binary integers

4, 8-byte binary floating point (limited support)

1-31-digit packed decimal (BCD) integers

1-31-digit packed decimal (BCD) floating point (exponent range $10^{-1,023}$ to $10^{+1,022}$)

1-255-byte variable-length character fields

Indexing:

Clustered indices per relation: 1

Non-clustered indices per relation: 254

Attributes (keys) per index: 15

Index type: B*-tree

IDM 200A/B Base Configurations:

7-Slot Chassis, Front Panel and Power Supply

(1) Database Processor

(2) Memory Timing and Control

(3a) 1/2-Mbyte Main Memory (IDM 200A)

(3b) 1-Mbyte Main Memory (IDM 200B)

(4) SMD Disk Controller (supp. up to 4 drives)⁽³⁾

(5) Host Interface (Serial or Parallel)

IDM 200 Options:

1/2-Mbyte Memory (up to 1 Mbyte total)

Tape Controller (supports up to 8 transports)⁽⁴⁾

Parallel Host Interface (IEEE-488 1978, 250K bytes/sec max.)

Serial Host Interface (8 lines, RS-232C, Asynchronous, 19.2K baud max.)

Physical Specifications:

Front Bezel:

Height: 8.75 inches

Width: 19 inches

Chassis:

Height: 8.50 inches

Width: 17.50 inches

Depth: 26 inches

Weight: 80 lbs. maximum

Conforms to EIA RS-310-C Rack Mount Standard

Electrical Specifications:

10A max. at 115 volts +10%–20%

5A max. at 220 volts +10%–20%

50/60 Hz AC +10%–10%

Environmental Specifications

(Operating):

Temperature: 10 to 40 degrees C

Relative Humidity: 20% to 80%

Altitude: –305 to +2,740 meters

Notes:

⁽¹⁾ Performance is dependent on IDM 200 configuration, database design, and command complexity

⁽²⁾ The IDM 200 has an absolute maximum address space of 8 billion bytes

⁽³⁾ Storage Module Drive (SMD) compatible (1.2 Mbytes/sec max.)

⁽⁴⁾ Pertec Formatter Interface compatible (125 inches/sec max.; 3,200 BPI max.)

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