

### An Industry First

The Britton-Lee Intelligent Database Machine (IDM 500) is a relational database system...with specially designed hardware optimized for the power and flexibility of its relational database software.

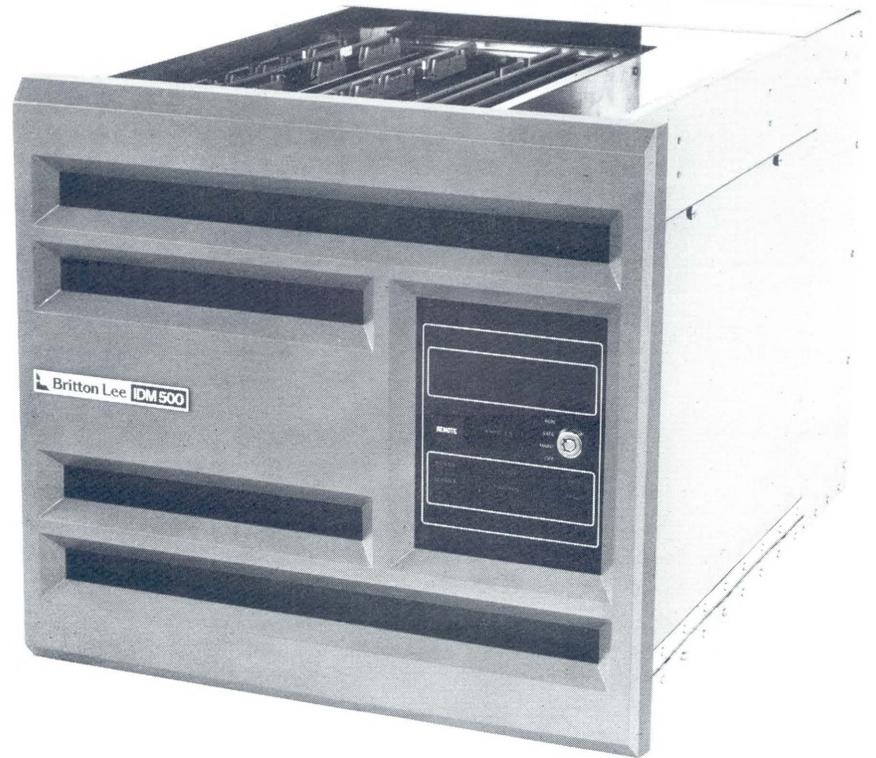
The IDM operates as a stand-alone database management system with intelligent terminals or as a backend processor to a host. As a backend processor, the IDM significantly reduces the high CPU overhead and memory requirements resulting from the implementation of large software database management packages.

### Resident Software

The relational approach was chosen for the IDM because of its:

- Ease of use
- Minimal programming efforts
- High-level language interface
- Impromptu data searches
- Application software independence from database changes

The IDM performs all of the functions associated with database management: concurrency control for multiple simultaneous users, database security, protection, transaction management, audit logging, dump and load, and graceful shut-down. Multiple users can share a host or interface directly to the IDM via intelligent terminals without the presence of any host.

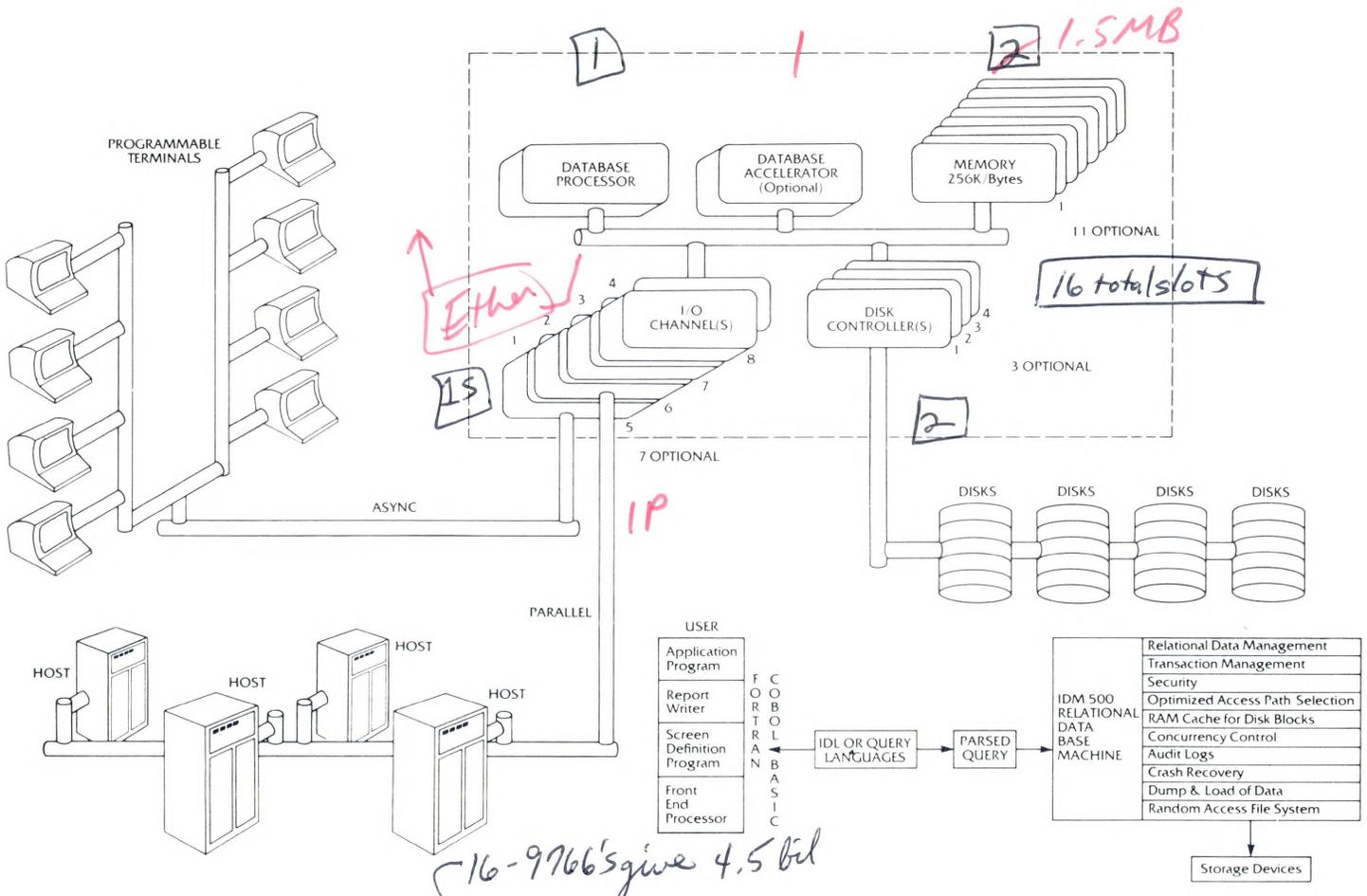


### Hardware

The basic IDM comes in a rack mountable chassis with a self-contained power supply. The minimum system includes a database processor, SMD disk controller, parallel or serial I/O and expandable memory. An optional Database Accelerator improves system performance by a factor of 10. The IDM also includes self-diagnostic hardware fault detection and correction down to the board level as well as power-fail/auto-restart capabilities.

### Performance

Using such advanced techniques as parallel processing, pipe-lining, and coordinated hardware and software design, the IDM achieves transaction rates in excess of 20 per second in many applications. The 10 MIPS Database Accelerator allows the IDM to perform basic computation and complicated query processing at speeds faster than the transfer rate of the disk. Only commands and results cross the interface between host or terminal and the IDM. The IDM is a complete system designed for OEM or large customers to conveniently integrate into a wide variety of data management products.



**IDM 500 Preliminary Specifications**

- Database Type: Relational
- Maximum data capacity: 32 billion bytes
- Typical processing rate:
  - 2-5 transactions per second standard
  - 10-25 with Database Accelerator Option
- Maximum number of databases per IDM: 50
- Maximum number of relations (files) per database: 32,000
- Maximum number of domains (fields) per relation: 250
- Maximum number of tuples (records) per relation: 2 billion
- Maximum tuple width: 2000 bytes
- Data types: 1, 2, 4 byte integers
  - 1-255 byte variable length character fields
  - 1-31 digit packed decimal
  - 4, 8 byte floating point (limited support)
- Maximum number of clustering indices per relation: 1
- Maximum number of non-clustering indices per relation: 255
- Maximum number of domains (keys) per index: 15
- Index type: B tree

**IDM 500 Configuration Information**

- Base configuration:
- Database Processor
  - Memory Timing and Control Board
  - Memory Storage Board (256K bytes)
  - Disc Controller (supports up to 4 Storage Module Drives\*)
  - Serial or parallel I/O Channel Board
  - 16-slot Chassis, Power Supply and Bottom Plane

**Options:**

- Database Accelerator (Typically improves performance by a factor of 10) *2 overall*
- Memory (256K byte Array Boards) — up to 3 Megabytes of Storage
- I/O Configurable in any combination up to 64 Serial Lines or up to 8 GPIB Lines
- Serial I/O (8 lines, RS232C Asynchronous, 19.2K baud maximum)
- Parallel I/O (GPIB, IEEE-488 1975/78, 250K byte/sec. maximum)
- Disc Controller (Each controller supports 4 additional drives) — up to 4 controllers for a maximum of 16 disks (32 billion bytes)
- Physical Dimension: 17.5" high x 19" wide x 24.75" deep
- Electrical Specifications: 1.6 Kw max., 240 volts, 50/60 Hz AC ± 10%
- Weight: 170 lbs. max. 150 avg.



90 ALBRIGHT WAY  
 LOS GATOS, CALIFORNIA 95030  
 (408) 378-7000

\*Currently fully SMD Compatible

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