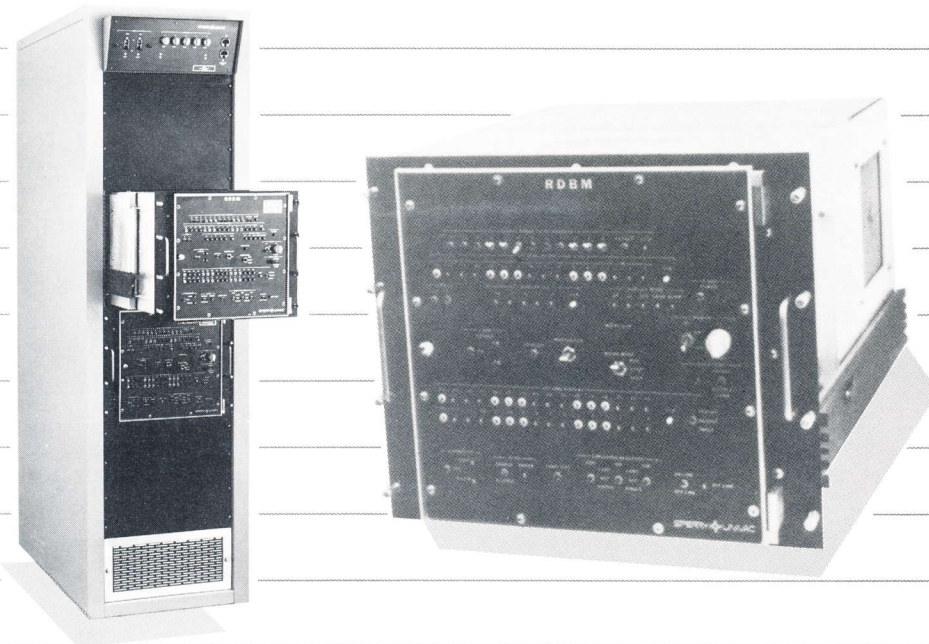


Remote Display Buffer Memory(RDBM)



- Provides refresh to either a time-shared or an all-digital Automated Radar Terminal System (ARTS) display at a remote site
 - Microprogram controlled data refresh and formatting
 - Provides refresh of last good positional situation in the event of a DPS failure
 - Reduces input/output load requirements of the DPS
 - Modularly expandable
 - Capable of remoting the Minimum serial interfaces
 - Self-contained diagnostics
 - Two Full Duplex Interfaces.



Features

General

The Remote Display Buffer Memory (RDBM) mounts in a standard 19-inch equipment rack and contains a microprogrammed controller, display refresh memory, a serial input-output channel for interfacing with a 2400-9600 bit per second communication modem, one parallel input-output channel for interfacing with an air traffic control display and a Minimum Safe Altitude Warning (MSAW) alarm interface. The RDBM functions to selectively update air traffic control information lists with data received from the remote computer via communication links presenting the latest positional situation to either a time-shared or all-digital display. Additionally, the RDBM accepts keyboard and position entry module information from the display to be retransmitted to the remote computer. The controller microprogram, self-contained diagnostics, display diagnostics and display constants are programs resident in the programmed read only memory (PROM). The input buffer memory and refresh memory are random access memories (RAM).

Controller

Microprogrammed controller
16-bit microprocessor
2's complement parallel arithmetic
Two 16-bit data transfer buses
Controller memory

16 bit semiconductor memory on PC boards
Up to 64K of PROM total
4K PROM used for controller microprogram
4K PROM used for RDBM self-contained diagnostics
4K PROM used for display diagnostics
Input buffer memory — 1K x 16 bits (RAM)
Test pattern data — 64 words x 16 bit (PROM)

Refresh Memory

Semiconductor memory on PC boards
2K of 32 bit RAM used for time-shared display or 4K of 32 bit RAM used for all-digital ARTS display
230 nanosecond access

Serial Adapters

Serial interface to Input/Output Processor (IOPs)
Converts serial to parallel on input and parallel to serial on output
1 or 2 full duplex send/receive pluggable adapter boards per RDBM
Adapter board for one duplex-serial interface contains a Communication Transmitter Adapter (CTA) and Communication Receiver Adapter (CRA) which is the same as adapter boards in the

Communications Multiplexer Controller (FA-8371)
Industry standard serial interface (EIA-STD-RS232C or MIL-STD-188C)
Up to 9600 bit per second serial I/O rate

Display Interface

32 bit, parallel, Type A interface (Sperry Univac specification SB10205)

MSAW Interface

Allows connecting the MSAW Aural Alarm Control Unit (AACU) up to 500 feet from the RDBM

Physical Characteristics

Mounts in standard 19 inch Equipment Rack (FA-8380)
Power: 120 VAC, 60 Hz
Size (inches): 19W, 16 H, 24 D
Weight: 100 pounds
Operating Temperature: 50° F to 90° F
Operating Humidity: 10% to 80%

Applications

- Portable Air Traffic Control Stations
- Provides ARTS capability at satellite and smaller airports

