AN/UYK-15 (V) COMPUTER

- Militarized construction (MIL-E-16400F)
- General purpose 16-bit digital computer
- Physically and functionally modular and expandable
- MSI (medium scale integrated) elements
- Integral cooling blowers and power supplies
- 19-Inch rack mountable
- Plug-in options

Applications:

Command and control
Signal processing
Message handling
Radar processing
Air traffic control
Navigation
Management information
Logistics
Telemetry
Ship instrumentation
Range tracking
Data management
Central Processor

Two’s complement arithmetic
8-bit byte, 16-bit and 32-bit operands
1 to 4 sets of 16-bit general purpose registers
Program status register
Single bus functional interface
Direct addressing capability to 65K words or 131K bytes
4-level interrupt processing (hardware serviced)
16-bit and 32-bit instructions — in any mix
Basic instructions — 4 formats
  Add 750 nanoseconds
  Multiply 3.75 microseconds
  Divide 3.75 microseconds
Indexing via general registers
Load and store multiple registers
Processor — peripheral channel
Up to 16 peripheral controllers (multiplexed)
Processor — interrupt serial channel
Up to 4 asynchronous serial channels per
EIA-STD-RS232

Main Storage
Expandable — 8K to 65K words in 8K increments
Word size (bits): 16 + 2 parity
Independently accessible memory banks
Read/restore cycle time — 750 nanoseconds is optimal
Asynchronous timing — request and acknowledge signals
Multiport interface in 32K word increments

Input-Output Controller (1 to 4 Optional)
Processor-initiated program chain
21 instructions; format same as for CP
IC buffer control memory for each channel
Parallel channels — asynchronous operation
  18-bit channel interface
  8-bit byte, 16-bit word or 32-bit dual-channel transfers
  4 input and output channel groups (4 groups maximum)
  Interface voltage levels by 4 channel groups
    - -3.0 volts, +3.5 volts, or -15.0 volts
Serial channels — synchronous or asynchronous
  operation
  MIL-STD-188 or EIA-STD-RS232 interface
  8-bit byte or 16-bit word transfers
  2 full-duplex channel groups (8 groups maximum)
  Input channel parity checking
I/O channel operation priority
  First level by channel
  Second level by function

Power Supply
115V, 1 phase, 60 Hz input (blowers)
115V, 1 phase, 47 Hz to 500 Hz input (logic) with regulated
dc output to CP, IOC and Memory

Physical
Ship/shore environment: MIL-E-16400F
Temperature Range
  Operating: 0°C to 50°C
  Storage: -62°C to 75°C
Relative Humidity: to 95%
Size (inches)
  Height: 14.4 plus 3.5" shock mounts
  Width: 20.75
  Depth: 25.75
Weight: Approximately 170 pounds

Software
16-bit support software operating on the SPERRY
UNIVAC™ 1100 series computers
16-bit standard support software:
  Core resident routines
  Basic assembler
  Macro assembler
  Text editor
  Librarian
  Batch monitor
  FORTRAN IV compiler
  FORTRAN IV subroutine library
  Linking loader
  System tape generator
  Debug aids
  Utility routines

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