

TABLE of Contents

GE/HISS Book 1 - 26

2

GE and HISI HARDWARE SPECIFICATIONS

BOOK 1

- MAC Processor Design memo 1 - Operation Code Assignment for Additional Codes used in 636
- MAC Processor Design memo 3 - Memory Addressing, configuration and Interlace Control on GE636
- MAC Processor Design memo 5 - Notes regarding address modification
- MAC Processor Design memo 6 - Additional Maintenance Panel features fault logic
- MAC Design memo 2 -- Active unit memory hogging
- MAC Design memo 3 -- 645 System Interrupt Concept
- MAC Design Memo 4 -- Status Safestore and Restore following page faults during the normal mode of operation
- MAC Design Memo 5 -- Status Safestore and Restore following address faults during the transfer mode of operation
(See below)
- MAC System Design Memo 8 -- Summary of memory topology switches
- MAC Design Memo 8 -- Store control unit (SCU) instruction
- MAC Design Memo 9 -- Status Safestore and Restore following Address faults during the XEC mode of operation
- MAC Design memo 10 -- Status Safestore and Restore following address faults during the Repeat link mode of operation
- MAC Design Memo 11 -- Status Safestore and Restore following Address faults during the repeat mode of operation
- MAC Design Memo 12 -- Status Safestore and Restore following address faults during the repeat double mode of operation
- MAC Design Memo 14 -- The Appending Mechanism
- MAC Design Memo 15 -- The Associative Memory Cycles
- MAC Design Memo 16 -- The Memory Interface Logic
- MAC Design Memo 17 -- Status Safestore and Restore for Interrupts during the execute double mode of operation
- MAC Design Memo 18 -- the GE 645 Fault Repertoire
- MAC Design Memo 19 -- The modes of execution (Master/Slave) and the modes of address (Absolute/Append)
- MAC Design Memo 20 -- The SCU-RCU catalog
- MAC Design Memo 22 -- Interrupt Recognition and Servicing in the GE645 Processor
- MAC Design Memo 23 -- 645 System Clocks
- MAC Design Memo 24 -- Sequence Character Reverse
- 645 Specifications (600 Series GE Specifications)

*MAC Design Memo No. 6 -- System Initialization and Bootload

BOOK 1 (Continued)

- GE Systems Design and Analysis Memorandum 6A
Analysis of memory allocation to the GE 645 processor as derived from
load factors and delay probabilities
- GE Systems Design and Analysis Memorandum 16
Notes towards modeling paging and segmentation in the 645
- GE Systems Design and Analysis Memorandum 18
Some mathematical considerations of time-sharing scheduling algorithms
- GE System Design and Analysis Memorandum 19
A proposal for modeling associative memory performance
- GE Systems Design and Analysis Memorandum 21
Timings Pertinent to utilization of MAP Command on DS-25
- GE Systems Design and Analysis Memorandum 24
Proposal for stage 1 simulation of the GE 645-Multics Systems

BOOK 2

- GE Systems Design and Analysis Memorandum 25
Simulation of i/o and secondary storage in a Multics File System Model
- GE System Design and Analysis Memorandum 28
Description of a multiprogramming simulator written in simscript
- GE Systems Design and Analysis Memorandum 29
Proposal for on-line performance monitoring of GE 645
- GE Systems Design and Analysis Memorandum 31
625/635 Memory Analysis
- GE Systems Design and Analysis Memorandum 32
DS-25/Proposed Multics DIM simulation
- GE Systems Design and Analysis Memorandum 33
IOC-B simulation model
- GE Systems Design and Analysis Memorandum 35
The basic GIOC model
- GE Systems Design and Analysis Memorandum 37
SIMULA II - General concepts
- GE Systems Design and Analysis Memorandum 38
Development of a tool for use by marketing in timing and
configuring the 625/635 system
- GE Systems Design and Analysis Memorandum 39
Simulation approach for GE 645 processor model
- GE Systems Design and Analysis Memorandum 40
High-traffic analysis of a general compiler configuration
- GE Systems Design and Analysis Memorandum 54
Extensions to SIMULA

BOOK 3

43A140648 Product Performance Spec -- 635 Memory Module
M50EB00087 Engineering Product spec - MSC388 Mass Storage Controller
(NOT-ISSUED)
43A140738 Product Performance spec - GE-635 Processor
M50EB00013 Engineering Product Spec -- Channel ASA Magnetic Tape Unit
M50EB00006 Engineering Product Spec - MTH211 and MTH311 Magnetic Tape Units

BOOK 4

M50EB00349 Operation and Maintenance Instruction - Extended memory subsystem
fixed head disk (Librascope 3800)
M50EB00354 Operation and Maintenance Instruction - DSC302 Data Storage
Controller - Vol. 1
M50EB00156 Engineering Product Spec - GE-645 Model B System Clock
M50EB00113 GE-645 Software Performance Spec - B -- GE-645 Basic

BOOK 5

M50EB00134 Engineering Product Spec - Input/Output Controller (IOC) (DC8030)
Extended Character Set Printer PRT202
M50EB00098 Engineering Product Spec - Mass Storage Unit (MSU) Extended Memory Modu
M50EB00102 Product Design Spec - GE-115 system

BOOK 6

M50EB00105 Engineering System Spec - GE-645 Prototype System

BOOK 7

M50EB00035 Engineering Product Spec - ASA Magnetic Tape Controller to
Magnetic Tape Unit Interface
M50EB00041 Engineering Product Spec - MDS300 Magnetic Drum Subsystem (Fairchild)
M50EB00070 Engineering Product Spec - Extended Character Set Printer Subsystem PRT
M50EB00044 Engineering Product Spec - DS-15 Interchangeable Media Disc File

BOOK 8

M50EB00029 Engineering Product Spec - Common Peripheral High Speed Card Punch
Subsystem (CP-21)
M50EB00003 Engineering Product Spec - 300 CPM High Speed Card Punch

BOOK 9

M50EB00125 Engineering Product Spec - GE-645 Prototype System Clock
M50EB00112 GE-645 Software Performance Spec - B -- General Implementation Specs.
M50EB00114 GE-645 Software Performance Spec - B -- GE-645 Fortran IV
M50EB00310 Engineering Product Spec -- MSU388 Mass Storage Unit

BOOK 10

M50EB00410 Unit Test Spec - GE-645 Prototype System Clock
M50EB00446 GE-645 System Test Specification
43A138524 Product Performance Spec - Operator Console Subsystem 600 line
M50EB00449 Software Performance Spec - GIOC/IOC Compatibility Processor (K2)
M50EB00474 Design Description - Adaptor Maintenance Aid
43A122030 Product Performance Spec - Limited Crossbar Magnetic Tape Subsystem
(30/120) KC
43A126642 Product Performance Spec - for the High Speed Printer Subsystem
Common Peripheral
43A127567 Standard Terminology - Time and Failures
43A130459 Product Performance Spec - Low Speed Card Punch Subsystem
43A130523 Product Performance Spec - High Speed Card Reader Subsystem
43A133369 Product Performance Spec - Disk Storage Unit Subsystem

BOOK 11

M50EB00001 Common Design Requirement for Computer Department Products
M50EB00405 Software Performance Spec - C -- Multics

BOOK 12

M50EB00023 Engineering Product Spec - High Speed Card Reader CRZ201
GE-645 System Manual -- The Compatibles/600 (February 1966 and January 1968)
Memo 1 - Revision 6 -- Segmentation in the 636

BOOK 13

43A160277 Product Performance Spec - GIOC

Book 14 a and b

MISCELLANEOUS

Book 15

43A155839 Drum Storage Unit - Purchase Specs.
43A130934 Product Design Spec - Bit Buffer Unit (BBU) - Class B
M50EB00124 Product Performance Spec - Custom Direct Word Channel Adaptor
43A163648 Product Design Spec - GIOC Controller
43A160017 Product Performance Spec - DSU-250 Mass Memory System
43A177856 Engineering Product Spec - PRT300 High Speed Line Printer Subsystem
43A181700 Product Design Spec - GIOC Appendix A-GIOC Adapter
43A181701 Product Design Spec - GIOC Appendix B-GIOC Brute Force
43A181702 Product Design Spec - GIOC Appendix C-Field changeable

Book 16

43A181703 Product Design Spec. - GIOC Appendix D-AC and DC Power
43A181704 Product Design Spec - GIOC Appendix E-High Performance
43A181705 Product Design Spec - GIOC Appendix F-IPA 600
43A181706 Product Design Spec - GIOC Appendix G-Teletypewriter
43A181707 Product Design Spec - GIOC Appendix H-Character
43A181708 Product Design Spec - GIOC Appendix J-Character
43A181709 Product Design Spec - GIOC Appendix K-Dialing Adapter
GIOC Design Memo 1 Definition of Terms
GIOC Design Memo 2 Buffer Interface Expansion
GIOC Design Memo 3 Status Storage for Direct Channels
GIOC Design Memo 17 Average Sustained Throughput-Direct Channels
GIOC Design Memo 18 Adapter Interface
GIOC Design Memo 21 Adapter Interface Parity Errors
43A137918 Product Performance Spec - 300 Card Per Minute Punch
43A142393 Product Performance Spec - Magnetic Drum Subsystem
43A143085 Product Performance Spec - 7/9 Channel ASA Compatible Magnetic Tape
Subsystem
43A143619 Product Performance Spec - Dual Channel Adapter
43A144025 Product Performance Spec - Common Peripheral Printer Model PRT201
43A144455 Product Design Spec - 625/635 Processor

BOOK 17

43A145284 Definition and Classification of Equipment Malfunctions
Component Engineering
43A145285 Definition of Mean Time to Repair
43A159180 Test Spec - 7/9 Channel Magnetic Tape Controller
M50EB00175 GE-645 Software Performance Spec - B: GE-645 PL/I Compiler
M50EB00171 Software Performance Spec - B: 645 Free-standing Simulator
M50EB00167 Software Performance Spec: GE-645 GECOS - IOC Version
M50EB00188 Software Performance Spec - C: Multics/GECOS Monitor
GE-645 Software Performance Spec - B: GE-645 BASIC
GE-645 Software Performance Spec - B: GE-645 FORTRAN IV
GE-625/635 Software Performance Spec - B: ALGOL

BOOKS 18 and 19

M50EB00107 Engineering Product Spec - GE-645 Prototype Processor

Book 20

M50EB00517 Engineering Product Spec - DSU270 Fixed Head Magnetic Disc Subsystem
43A177855 Engineering Product Spec, Part I: Basic High Speed File Channel
for the GE-400/600 Computer Systems
DSU270 Disc Storage System

BOOK 21

M50EB00131 Performance Spec - B: Multics Assembler
43A143120 Product Design Spec - 625/635 Memory Controller
Preliminary Product Performance Spec - Custom Direct Adapter
43A177853 Engineering Product Spec, Part I, -- High Speed file channel DSS170
for the 400/600 computer systems

Book 22

43A177737 Engineering Product Spec - 2
6000 Core Storage Unit Power System
43A177741 Engineering Performance Spec (EPS-1) 645 Follow-On CPU
43A177742 Engineering Product Spec, Part I Extended Address Direct Channel
43A177744 Engineering Product Spec Bulk Core Storage Unit Modular Power System
43A177750 Engineering Product Spec Bulk Storage Unit Modular Power System
43A177851 Engineering Product Spec, General Design Requirements for GE-655
and GE-355 Systems
43A177856 Engineering Product Spec, Part I PRT300 High Speed Line Printer
Subsystem
43A177857 Engineering Product Spec, Part I Card Reader for MQX Board Tester
43A177861 Engineering Product Spec, Part I DSS175/180 Subsystems

Book 23

43A177862 Engineering Product Spec, Part I Device Channel Adapter (DCA)
43A177874 Engineering Product Spec, Part I Peripheral Subsystem Interface (PSI)
43A177875 Engineering Product Spec - 1 Microprogrammed Peripheral Controller
43A177879 Engineering Product Spec, Part I MPC - PSI Link Adapter
43A177880 Engineering Product Spec, Part I 655 IOM Peripheral Subsystem
Interface Adapter

BOOK 23 (Continued)

43A177886 Engineering Product Spec (EPS) Document Handler Software for the
DES6000

BOOK 24

43A219601 Engineering Product Spec, Part I GE-655 Processor

43A219602 Engineering Product Spec, Part I 655 System Controller

43A219603 Engineering Product Spec, Part I 655/6000 Core Storage Unit

43A219604 645X IOM EPS-I Draft

43A219613 Engineering Product Spec, Part I DEC-6000 Data Entry Controller

43A232215 MTC-500 Controller, EPS-1 Engineering Product Spec, Part I

BOOK 25

43A232230 Engineering Product Spec - 1 DSC181/DSC190 Controller

43A232273 Engineering Product Spec, Part I Datanet 305 Subsystems

43A232439 Engineering Product Spec, Part I for DHC601 Document Handler
Channel (DRD236 Reader/Sorter)

43A232499 Engineering Product Spec, Part I H-6000 System Control Center

43A232719 Engineering Product Spec, Part I 655 Extended Instruction Set
Processor

43A238300 645F/6100 SCU EPS I Draft

BOOK 26

43A239623 Engineering Product Spec, Part I MTS500 Magnetic Tape Subsystem

43A239851 Engineering Product Spec - 1 DSS181 and DSS190 Removable Media
Disk Storage Subsystems

43A239854 Engineering Product Spec, Part I 6000B Input/Output Multiplexer
(IOM) Central

58001001 Engineering Product Spec Bulk Core Storage Unit Modular Power System

58001105 Engineering Product Spec, Part I Remote Line Printer, RLP 300

58001110 Engineering Product Spec, Part I Computer Monitor Adapter

58001112 Engineering Product Spec, Part I Input/Output Controller
Type I (IOC)

