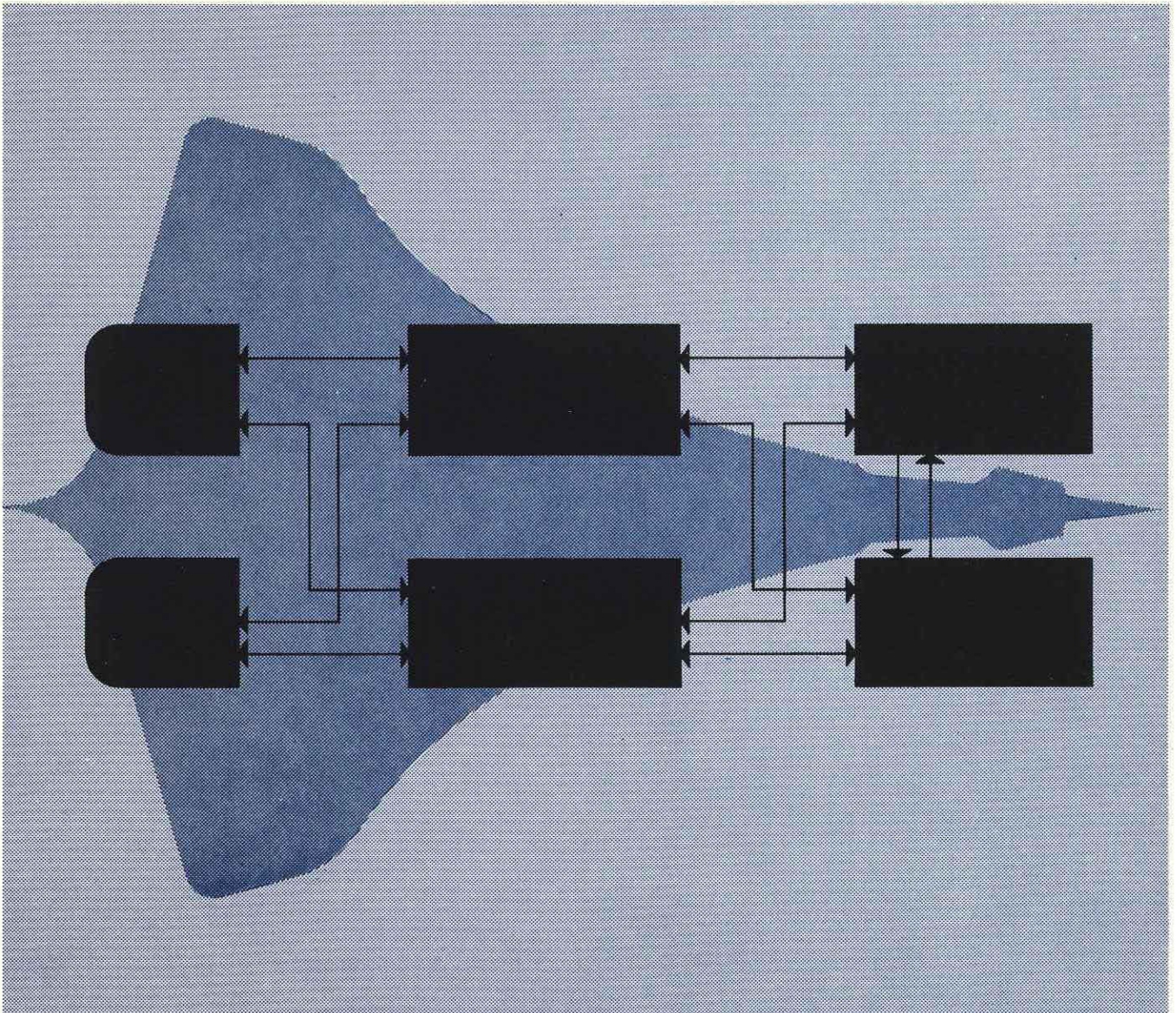


ELLIOTT

Digital Engine Controller



Current Data

WORD LENGTH	12 bit (resolution of 1 part in 4000).
ORDER CODE	16 basic functions.
SAMPLE INSTRUCTION TIMES	Add 4.4 μ s. Multiply 11.6 μ s.
NUMBER REPRESENTATION	Binary fraction; negative numbers as 2's complement.
INPUT/OUTPUT	Program or Peripheral controlled.
STORE	4K words (extendable to 8K); variable for development, fixed for production.
PROGRAM LEVELS	Base and Interrupt level.
POWER	120VA at 115v 400Hz.
SIZE	1/2 ATR long.
TEMPERATURE RANGE	-26 C to +50 C continuous operation.
WEIGHT	Approx. 25lb (11Kg).
RELIABILITY	2000 hours MTBF.
SPECIAL FEATURES	Space for system orientated digital highway interface or other special requirements in the basic unit. Optional provision of continuous program monitor hardware, watchdog timer and other self check features.

Background

In the increasingly demanding field of engine control a point is rapidly being reached where practical analogue techniques no longer provide an optimised control system. High speed digital computing techniques lend themselves ideally to such systems.

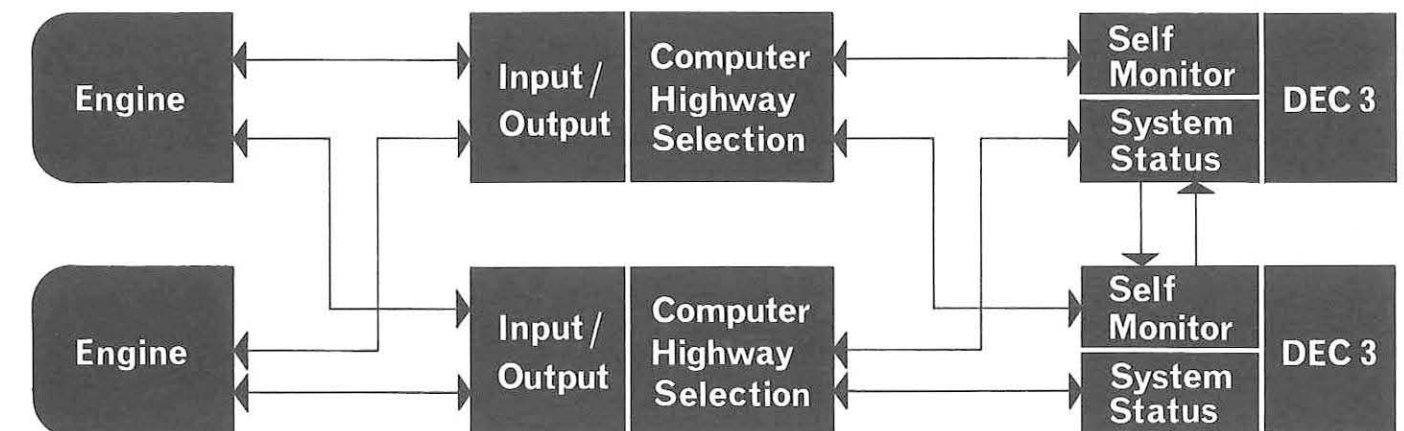
The Digital Engine Controller is one of a family of Task Orientated 12/12 processors which has been developed from the well known Elliott 900 series of general purpose digital computers. The Digital Engine Controller incorporates the expertise gained from this series and, of course, takes full advantage of the

high degree of software compatability. Thus, programming and program modification is greatly simplified. Fixed Memories are available for production systems, together with an excellent internal failure monitoring capability.

In addition to providing effective and repeatable control performance and pre-flight checking, the Digital Engine Controller offers reductions in system development timescales through its inherent flexibility and the ability to introduce system sponsored changes in a shorter timescale than with hydromechanical or electrical analogue hardware.

System Applications

- * Single Channel and Multiplexed Control Systems
- * Multi-Engine Configuration - (integrity maintained by standby reversionary capabilities)
- * Engine Control in VTOL aircraft
- * Complete Engine System Management including intake control
- * Engine Health Monitoring



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