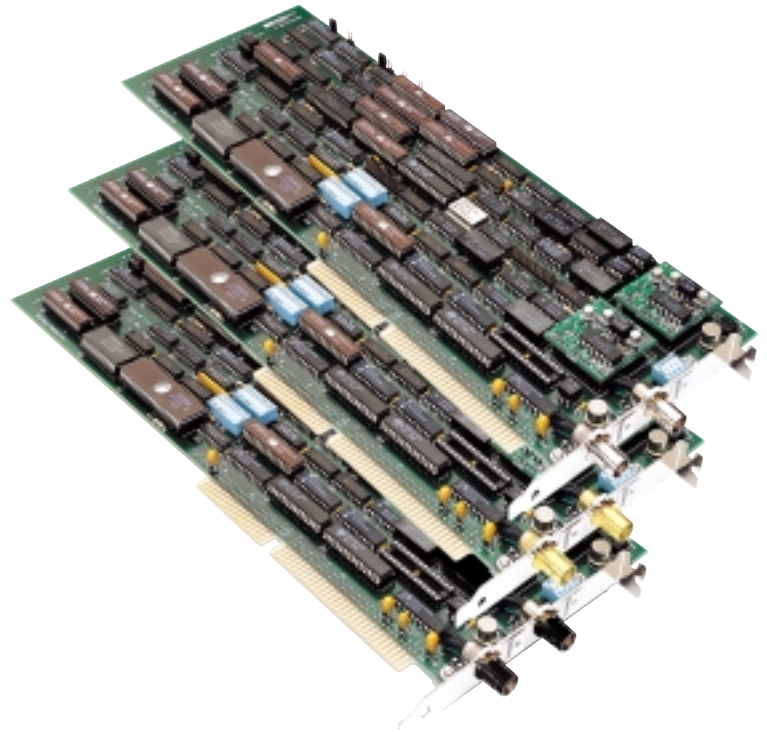


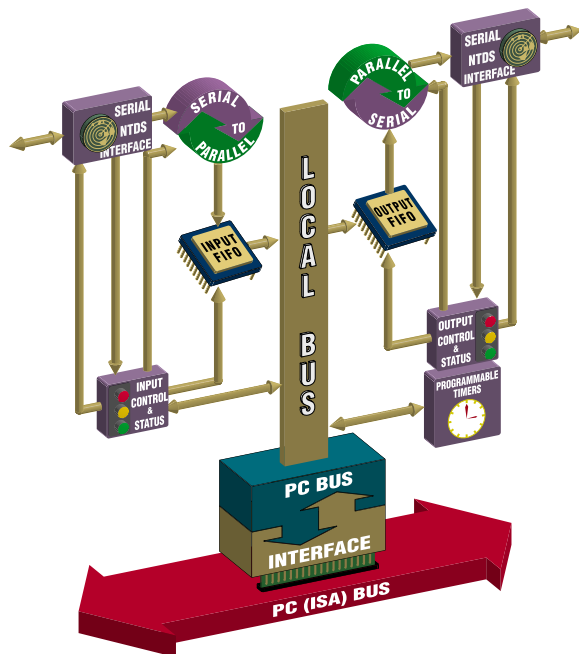
Navigator ii serial

Description

The NAVIGATOR II family of Serial NTDS boards from Sabtech are versatile and affordable 32-bit interfaces between MIL-STD-1397C Type D, E, or J serial devices and the PC (ISA) bus. NAVIGATOR IIs can be installed in desktop, portable, or rugged PC systems to meet a wide variety of demanding requirements in the lab or aboard ship such as testing, emulation, training, simulation, data collection, or tactical operations. A NAVIGATOR II board occupies a single ISA slot making it easy to install multiple boards in a system. It can also be used on EISA systems such as the U.S. Navy's TAC-3/4.



NAVIGATOR II SERIAL FAMILY



NAVIGATOR II Serial NTDS Board Block Diagram

The interface is configured at the factory to support serial NTDS Type D, E, or J protocols. It performs full-duplex 32-bit NTDS transfers using independent input and output data paths each with its own FIFO. The NAVIGATOR II was designed for versatility by allowing for DMA, polled, or interrupt mode operation. It meets the demands of MIL-STD-1397C by delivering sustained 10 Mb/s full-duplex serial throughput. For Types E & J, it supports single word or burst mode operation and all MIL-STD-1397C System Integrity Features (SIF).

The NAVIGATOR II offers remarkable programming flexibility because of the large number of accessible control & status registers. It has three 16-bit programmable timers for precise application control. Its advanced capabilities also include onboard relays to permit internal loopback testing without removing cables. SIS/SOS control frames are fully programmable, allowing the development of comprehensive interface tests.

MS DOS® and optional Windows NT® device drivers make the NAVIGATOR II easy to program. Each board is also supplied with comprehensive diagnostic software, detailed documentation, and programming examples written in C to simplify development and save time.

Wherever the need exists to interface to NTDS serial equipment, the NAVIGATOR II is the ideal COTS choice for building powerful yet affordable NTDS systems.

MS-DOS and Windows NT are registered trademarks of Microsoft Corp.

Features

A complete description of the NAVIGATOR II includes all the features and capabilities described in the PC NTDS FAMILY SECTION of this catalog, as well as those listed below:

Types D, E & J

- MIL-STD-1397C Type D, E, or J compatible
- Full-duplex 32-bit serial transfers at 10 Mbps/sec
- Separate input and output FIFOs buffer 1024 32-bit words
- Independent input and output FIFO reset control
- Maskable interrupts
- Supports forced EFs and Els
- Three independent 16-bit programmable timers
- Operates in DMA, polled, or interrupt modes
- Switch-selectable DMA channels and Interrupt Request (IRQ) levels
- 16 switch-selectable I/O base addresses
- Requires only one full-length expansion slot
- Multiple NAVIGATOR IIs and EAGLEs may be used in a single PC system
- Supplied with MS-DOS-resident device drivers, test programs, and sample interface programs
- Onboard relays enable internal loopback test without disconnecting NTDS cables

Types E & J

- Single word or burst mode operation
- Fully configurable SIS/SOS control frames
 - Modify first and last bit for testing
 - Disable transmission of SIS/SOS for testing
- Supports all MIL-STD-1397C System Integrity Features (SIF)
 - Parity error, framing error, illegal condition
 - SIS timeout (No SIS control frame response from Sink)
 - SOS or IF timeout (No SOS control frame or IF from Source)
 - Sink NOT READY timeout (SIS not ready control frame response from Sink)
 - Detects false signals based on control frame 4th bit

Specifications & Ordering Information

	Navigator D	Navigator E	Navigator J
NTDS Interface:	MIL-STD-1397C Type D	MIL-STD-1397C Type E	MIL-STD-1397C Type J
PC Interface:	Single ISA slot	Single ISA slot	Single ISA slot
NTDS I/O Connectors:	Two BNC isolated coaxial (Amphenol 31-10)	Two non-isolated triaxial (Trompeter P/N BJ77TL)	TXMTR (HFBR 1402/4) RCVR (HFBR 2416)
Form Factor:	13.25 x 4.5 in. (33.6 x 11.4 cm)	13.25 x 4.5 in. (33.6 x 11.4 cm)	13.25 x 4.5 in. (33.6 x 11.4 cm)
Weight:	450 g (16 oz.)	450 g (16 oz.)	450 g (16 oz.)
Power Consumption:	+5Vdc @ 2.5 A	+5Vdc @ 2.5 A	+5Vdc @ 2.5 A
(Typical)	-5Vdc @ 40 mA -12Vdc @ 60 mA	-5Vdc @ 40 mA -12Vdc @ 60 mA	-5Vdc @ 40 mA -12Vdc @ 60 mA
Operating Temperature:	0° C to +55° C	0° C to +55° C	0° C to +55° C
Relative Humidity:	0% to 90% (noncondensing)	0% to 90% (noncondensing)	0% to 90% (noncondensing)
Part Number:	EA-03102-00	EA-04102-00	EA-05102-00

Specifications subject to change without notice

