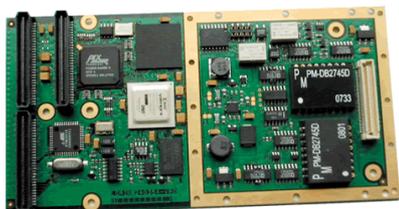


# A-DIGIBUS

## DIGIBUS BOARD



### DESCRIPTION

The **Digibus** board supports a full implementation of the French military communication bus Digibus. It fully complies with the Digibus GAM-T101 standard. The **Digibus** board implements a redundant bus. It can be used in ground applications such as test benches and maintenance tools or involved in embedded airborne systems.

The **Digibus** board support simultaneously the 3 main functions of Digibus :

**Bus controller** : rules the traffic on the bus by emitting data on the "procedure" communication line.

**Terminal equipments** : acts as one or several terminal equipments listening commands on procedure communication line and emitting or receiving data from data communication line.

**Monitor (spy)** : acquires and records the complete data traffic on the bus

### KEY FEATURES

- IRIG-B Datation under 1  $\mu$ s of resolution
- PCI 32-bit bus interface
- PMC Format conduction cooled
- Magali driver interface

### SPECIFICATIONS

#### Technical Data

Format	PMC "Conduction cooled" (CCPMC). Uses primary and secondary thermal interfaces. PCI interface conforms to PCI standard 2.1 (32 bits, 33 MHz with 3.3 or 5V signalling).
Digibus	Fully GAM-T-101 compliant (redundant bus mode)
I/O (all TTL)	Outputs : Top synchro: triggered on a given message General purpose output. Input : Top cycle: triggers a new cycle in controller operation One general purpose input.
IRIG B	Supports B122 format: 1 KHz base modulation Amplitude Modulation 1 time input. 1 time output. 1 PPS (heartbeat) output.
Connectors	PMC/Pn4 : Digibus, binary signals in unprotected TTL interface. Front panel : Honda HDR-E50 supports Digibus; IRIG_B, 1xRS422 & 2xTTL signals, cables should use Honda Connectors HDR-E50 M S G1
Power supply	3.3 V, 5 V, +12V, -12V. < 10W
MTBF	MIL HDBK 217 FN2, Method 1 case 1 28250 hours, 50°C

#### Environmental

Temperature	Operating : -20..+ 75 °C, Non operating -40..+ 85°C
Vibrations	10-75 Hz increasing 6dB/octave 75Hz-250Hz W0=0.04g/Hz 250Kz-2000Hz decreasing -3dN/octave

- Bus Controller**
  - User application describes the bus traffic by tables that are copied into the board memory.
  - Traffic timing can be based on internal clock or external events.
- Terminal equipments**
  - User software declares which terminals are managed by the board and which commands are processed by each terminal.
  - Received data can be read at any moment.
  - Up to 32 terminals can be implemented by the board.
- Monitor**
  - Every message on the redundant bus is captured, time stamped and saved in processor main memory.
  - Status bits define data characteristics: parity errors, echoes, presence of "V" bit etc.
- Message trigger**
  - The Digibus board can be configured for detection of a given message pattern which generates a hardware signal (synchro trigger). Simultaneously the same message is marked by a specific flag in acquisition flow. This useful feature allows synchronization of external acquisition equipments with the computer software.
- Time stamping**
  - The Digibus board can receive an IRIG B compliant synchronization signal. Its internal date is then synchronized with the external world.
  - The Digibus board can also generate an IRIG B signal and act as a master for other IRIG B compatible equipments.
- Error generation**
  - It is possible to generate traffic with Digibus standard violations: parity errors, missing V bit or echoes.
- Error detection**
  - Each received byte comes with a full description of its characteristics : parity, echoes, V bit etc.
- General purpose I/O**
  - One general purpose digital input and one digital output are available for user's specific needs.
- Other possibilities**
  - The board includes a Power PC 405 processor not used in the functions described above but which can be programmed for specific real time needs.

## ORDERING INFORMATION

MAG-300/A\_DIGIBUS/PCI/2

Digibus dual stream - PCI format

*Specifications are subject to change.  
Please, verify the latest specifications  
prior order.*

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