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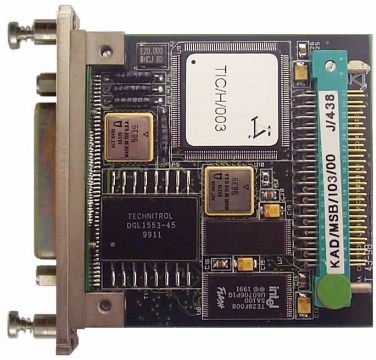
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Find the *Curtiss-Wright / ACRA Control KAD/MSB/103/C/00* at our website: ***Click HERE***

# KAD/MSB/103

*Dual redundant MIL-STD-1553 bus monitor with mode code 17 support*




## FEATURES

- Coherently PARSEs traffic and adds tags from up to 1024 messages
- ID based on all 16 bits of command, bus (A or B) and the last mode code 17 sub-address map number received for the involved remote terminals
- Handles all mode codes (including user defined)
- Supports one message counter for each bus
- Detects over 40 different errors
- Protocol tracker does not rely on instrumentation bit
- Direct coupled or transformer coupled operation
- Optional recording of messages with timed out status reply

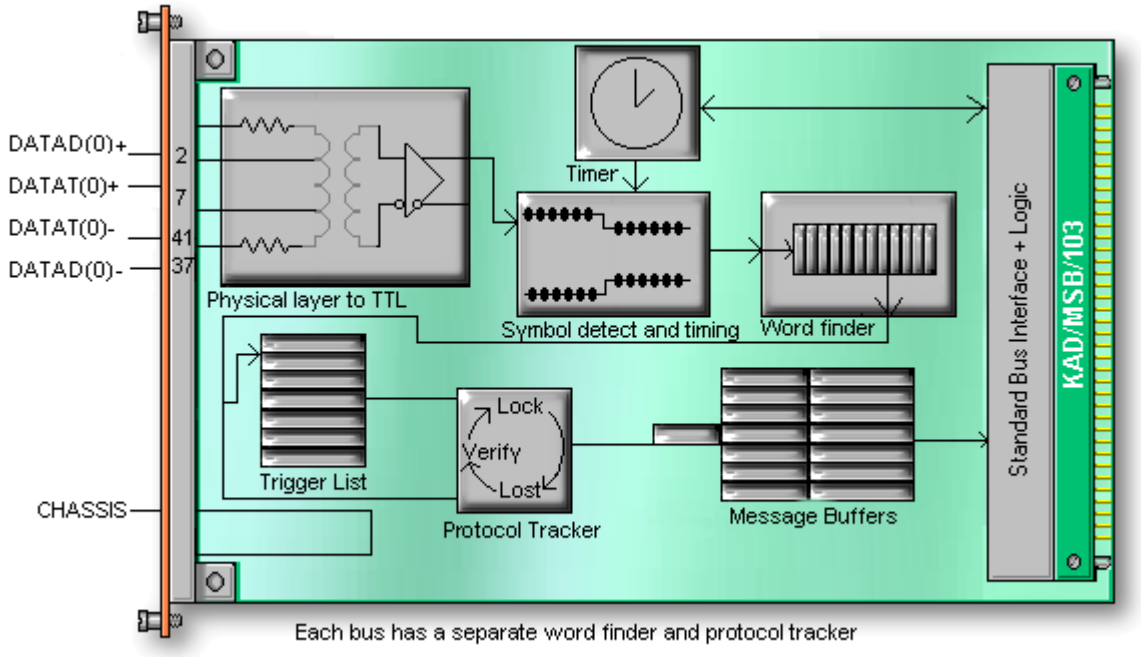


## DESCRIPTION

The KAD/MSB/103 is a MIL-STD-1553 dual redundant bus monitor. It combines the capabilities of a coherent message parser, message counter and error detection functions all on a single module. In the following discussion, traffic refers to words on the bus (command, status and data) and tags refer to associated information (microsecond time of sync. bit transition, message count, response time and errors).

The PARSER triple buffers up to 1024 complete messages and their associated tags in buffers up to 43 words wide. The INFO tag associated with each message has a STALE bit (message read before) a SKIPPED bit (buffer overwritten) and an EMPTY bit (message was never received) as well as an indication on which bus the message was received. The MESSAGE count increments on receipt of a valid message. The ERROR word has bits indicating the type of error caught in the form of a 6-bit code and the bus on which it occurred.

The KAD/MSB/103 records mode code 17 sub-address map numbers for each remote terminal separately. With that it can monitor the full expanded sub-address space for up to 31 remote terminals.




*Primary bus monitor*



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# SPECIFICATIONS

| | |
|---|---|
| **Input considerations:** | Direct coupled or transformer coupled. The input resistors, transformers and transceivers have all been specified by their suppliers for MIL-STD-1553 operation.<br>The KAD/MSB/103 handles traffic at rates above 100% on both busses simultaneously. |
| **Sampling restrictions:** | The maximum sampling rate from the module is 2Msps. |

# SETUP



| Field | Settings | Scope | Comment |
|---|---|---|---|
| **ID** | 1 to 3FF (hex) | Each bus<br>Each 16-bit command word | The 17 bits of the bus (primary/secondary) and the command word and the 7 bits of the mode code 17 sub-address map number that was last received for the addressed remote terminal can be mapped on to a 10-bit ID (0 to 3FF hex). |
| **Message definition** | All mode codes (including user defined) and all message types | Each ID | |
| **Use sub-address map** | 1 or 0 | Module | 1 means only use the SA_MAP of MC-17, 0 means use 0 and CYC_NO |
| **Ignore time** | 1 or 0 | Module | 1 means only use the CYC_NO/SA_MAP when the time bit of MC-17 is zero |
| **Ignore fresh** | 1 or 0 | Module | 1 means only use the CYC_NO/SA_MAP when the fresh bit of MC-17 is one |
| **Default map** | Between 0 and 0x7F | Module | Default map used after power up |
| **Time bit** | First, last | Module | Determines bit orientation. If First is selected, then the time bit is first transmitted bit. |
| **Maximum response time** | 16-bit value in units of 1μs | Module | When a status reply hasn't been observed within maximum response time, the module will indicate a timeout error |
| **Store on timeout** | 1 or 0 | Module | This bit allows for optional recording of messages even when the status reply didn't occur within maximum response time. A status word value of xFFFF in the parser slot will indicate this condition. |



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