

## FEATURES

- Four independent input channels
- Bit-rates from 300bps to 1,000,000bps
- 7/8 bits per word with odd/even or no parity
- Programmable start sequence (one to eight characters)
- Programmable stop sequence (one character or by fixed length)
- Locks on idle time
- Parses up to 126 strings (messages) per module
- Up to 512 characters (bytes) per message; minimum of nine characters (bytes) per message
- Time tagging ( $\pm 0.1\text{ms}$ )
- Message wide stale (skipped) indication
- First In, First Out (FIFO) is 2K words deep per channel
- Two bits for FIFO full/empty

## APPLICATIONS

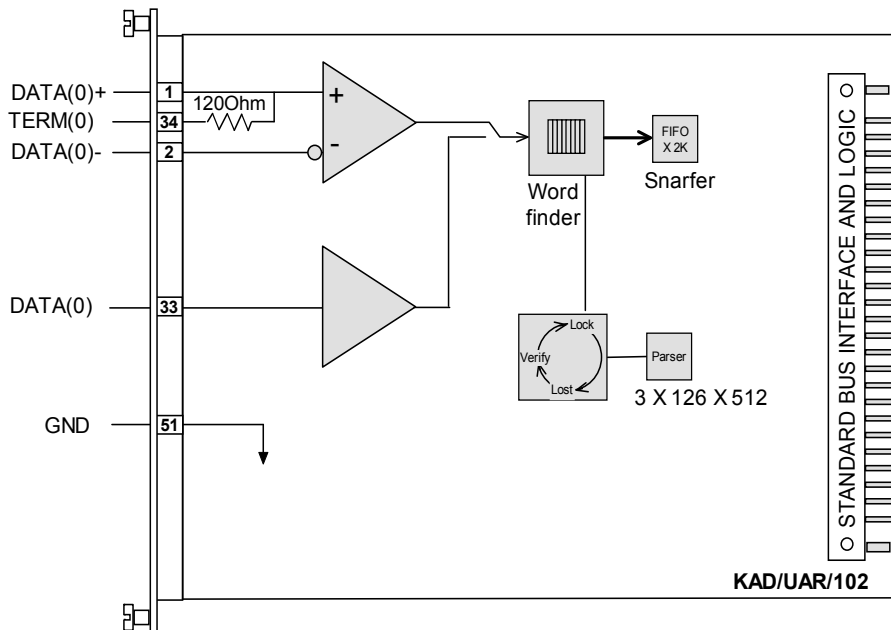
- Receiving data from GPS module or onboard computer

## DESCRIPTION

The KAD/UAR/102 is used to parse (coherently extract specific bytes) and snarf (send all data to a FIFO) up to 4 RS-232/422/485 channels. The module is able to parse and snarf each channel at the same time.

The signal type (RS-232/422/485), bits per word and parity are programmable on a channel-by-channel basis. The bit-rates must be binary multiples of each other.

In the PARSEr, a total of up to 126 complete messages are triple buffered so that the 'stale' indication is message-wide. Each message can be up to 512 characters (bytes) long (including start and stop characters). Each message is tagged to 0.1ms resolution; a message is considered found when up to eight specific bytes are received. The end of message byte is determined by a user-defined stop character or specific number of words. A message is not updated if any sequence is incorrect. The SNARFER stores all data from each bus in a separate FIFO 2K words deep.



First of four channels of the KAD/UAR/102

## Selection guide and ordering information

### Selection Paths

Airborne Data Acquisition → KAM-500 → Modules → Bus → RS-232/422/485

### Ordering Information

Part Number	Description
<b>KAD/UAR/102</b>	4-channel RS-232, RS-422 or RS-485 universal asynchronous PARSEr and SNARFER (with 52-way double density module top connector)
<b>KAM/UAR/102</b>	4-channel RS-232, RS-422 or RS-485 universal asynchronous PARSEr and SNARFER (with 51-way micro-miniature module top connector)
<b>MKM/UAR/102</b>	4-channel RS-232, RS-422 or RS-485 universal asynchronous PARSEr and SNARFER (with 51-way micro-miniature module top connector)

By default, the standard mating connector (CON/KAD/002/CP for KAD modules; or ACC/CON/008/04 for KAM and MKM modules) is included with each module in the shipment. Its part number will be added to the Confirmation of Order unless an alternative option is specified (see the *Cables* data sheet). In this data sheet KAD/UAR/102 refers to the KAD, KAM and MKM version of the module.

### Revision History

Revision	Differences	Status
<b>KAD/UAR/102</b>	First release	Recommended for new programs

### Related Products

Module	Details
<b>KAD/UAR/002</b>	4-channel RS-232 or RS-422/485 universal asynchronous PARSEr
<b>KAD/UAR/001</b>	8 channel RS-232 or RS-422/485 universal asynchronous receiver
<b>KSM-500</b>	This module is supported by the KSM-500 suite of software tools
<b>KSMv2</b>	This module is supported by KSMv2 software

### Related Documentation

Document	Details
<b>DOC/DBK/001</b>	KAM-500 Databook
<b>DOC/GBK/002</b>	Environmental Qualification Handbook
<b>DOC/MAN/018</b>	KSM-500 Databook
<b>TEC/NOT/016</b>	Power dissipation
<b>TEC/NOT/049</b>	Power estimation