



Picoammeter



**Especially suited for applications
where multi-channel fast
acquisition is a concern
I.E. Feedback
Systems**

FEATURE	BENEFIT
<p>This device performs current measurement from ± 2.5 nA (with a resolution of 298 aA) up to ± 11 mA (resolution of 1.35 nA) with sampling frequencies of up to 26 kHz (for 1 channel and a 16-bit resolution) and 6.5 kHz (4 channels, 16 bit/sample).</p>	<ul style="list-style-type: none"> - Extremely low current measurements. - Bipolar current measurements.
<p>Housed in a light and extremely compact box.</p>	<p>Can be placed close to the signal sources in order to reduce cable lengths and minimize possible noise pick-up.</p>
<p>Low temperature drifts, good linearity and very low noise.</p>	<p>High-precision current measurements.</p>
<p>Modular communication capability.</p>	<p>Allows the user to freely select the type of communication interface, allowing control of the instrument with different types of programming languages and/or operating systems.</p>
<p>Buffered voltage monitors that are proportional to the measured input current.</p>	<p>Allows direct analogue monitoring on the oscilloscope.</p>
<p>High voltage (30 V) output.</p>	<p>Detector biasing.</p>

Applications

- Ultra-low current measurements.
- Beam position monitoring.
- Si and Diamond detectors readout.
- Ion chamber readout.



Elettra Sincrotrone Trieste

This product is sold under license of Elettra Sincrotrone Trieste (Italy).

Deliverables

- AH501B Picoammeter.
- Beam position monitoring. Preinstalled Ethernet communication module. Other compatible modules are: RS232, RS422/485, USB and Ethernet (TCP/IP and UDP).
- Power supply integration PS-2209.
- Oscilloscope LabView Software.

How does it work?

03 How does it work?

It is composed of a particular transimpedance input stage for current sensing combined with several analogue signal conditioning and filtering stages with state-of-the-art electronics.

Acquisition of samples from the AH501B may be performed using either “continuous” or “on demand” transmission modes:

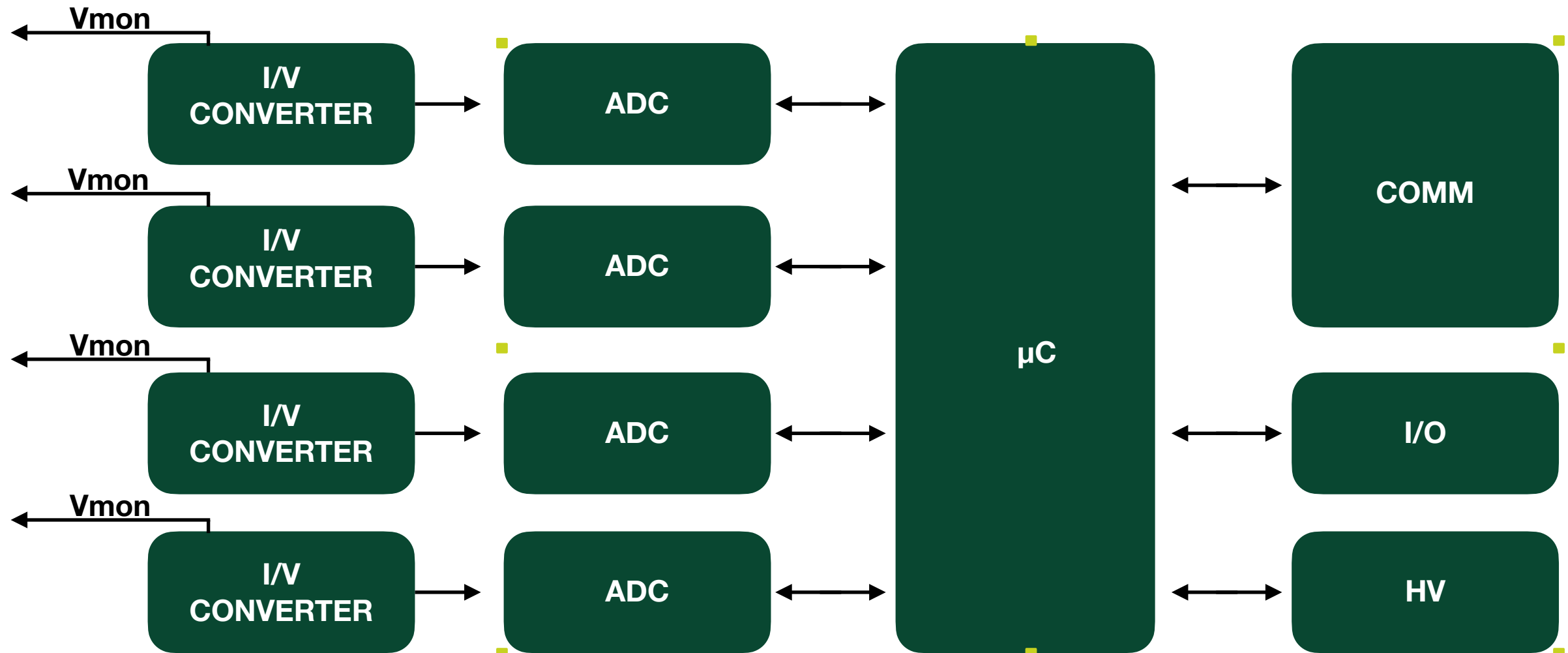
- **Continuous Mode:** data are continuously sampled and transmitted, without external intervention, to the host device, allowing for real time data acquisition.
- **On Demand Mode:** data are sampled and transmitted only on a specific remote command request.

The external Trigger/Gate input signal is available for the purpose of synchronizing the acquisition of the picoammeter with external events (i.e. laser triggering). Furthermore, digital samples can be transferred using either the ASCII format or the RAW binary data format for fast data transmission.

The AH501B is available in different configurations: analogue cut-off frequency (the standard value is 1 kHz but it has been successfully tested up to 10 kHz), communication interface (xPiggy) and input connectors (SMA or BNC).

The availability of trigger input and output signals on an RJ11 connector allows for the synchronization of the acquisition to external events.

Input channels	4
Input connectors type	SMA or BNC
Effective current measuring range	From ± 2.5 nA to ± 11 mA
Resolution bits	16 or 24
Data transfer	Up to 26 ksamples/sec (1 ch. 16 bit)
Analogue cut-off	Configurable (tested up to 10 kHz)
Polarity	Bipolar
Communication modules	Ethernet TCP-IP and UDP, USB 2.0, R-S232
Supply voltage	From ± 6 V to ± 9 V
Supply current	From 270 to 410 mA depending on common module
Dimensions	160 x 108 x 45mm
Weight	500 g
Weight	420 g



Want to learn more?

For more information about the **Picoammeter** please contact us:



Technical information available at

alibavasystems.com



Phone

+34 934 22 21 80



Mail

info@alibavasystems.com



Location

Carrer de Ca n'Alzina 118A
08202 Sabadell
Barcelona
Spain

