

# OEM Spectrometer: AS-7010 Microprocessor board



The AS-7010 is the all new electronic platform and the base for Avantes' future spectrometer models.

It is equipped with a powerful Xilinx Zynq 7010 microprocessor. It combines the software programmability of a Processor with the hardware programmability of an FPGA, resulting in unrivalled levels of system performance and flexibility. The generous 100 Mpixel memory enables onboard storage of spectra and custom programming. Equipped with 2 different AD converters optimal performance for each detector type is assured.

The As-7010 comes with the ability of 2 communication ports: High Speed USB3.0 and GigaEthernet.

Also on board is the HD26 digital I/O connector with 13 programmable digital I/O ports, 2 analog out ports and 2 analog in ports. The connector is compatible with the AS-5216 I/O connector.

## Technical Data

<b>Microprocessor</b>	Xilinx Zynq 7010
<b>Memory</b>	100 Mpixel
<b>A/D converter</b>	16-bit, 2 channels for video signal / 16-bit, high end - low noise (detector dependent)
<b>Integration time</b>	2 $\mu$ s - 10 minutes (detector dependent)
<b>USB interface</b>	3.0 high-speed, 5 Gbps
<b>ETHERnet interface</b>	Giga Ethernet, 1 Gbps
<b>Digital IO</b>	HD-26 connector, 2 Analog in, 2 Analog out, 13 Digital bidirectional, trigger, synchronization, strobe, laser
<b>Power supply</b>	Default USB3.0 power, 500 mA 12 VDC, reverse polarity protection, 300 mA
<b>Temperature range</b>	0- 55 °C
<b>Dimensions, weight</b>	162,5 x 100 mm, 97 grams

## Ordering Information

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|----------------|--|
| <b>AS-7010</b> | <ul style="list-style-type: none"> <li>Microprocessor board 16-bit AD and USB3.0/Ethernet interface. Specify detector type, see below</li> </ul> |
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## Detector Types

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|--------------|---|
| - ILX511     | for Sony ILX511B detectors (AvaSpec-ULS2048L-EVO)                           |
| - HAM11639   | for Hamamatsu S11639 CMOS detectors (AvaSpec-ULS2048CL-EVO)                 |
| - HAM13496   | for Hamamatsu S13496 CMOS detectors (AvaSpec-ULS4096CL-EVO)                 |
| - HAM2048XL  | for Hamamatsu S11155 detectors (AvaSpec-ULS/HS2048XL-EVO), extra pcb incl.  |
| - HAM1024x58 | for Hamamatsu S7031 detectors (AvaSpec-HERO), extra pcb incl.               |
| - HAM2048x64 | for Hamamatsu 11071 or 11850 (AvaSpec-ULS2048x64(TEC)-EVO), extra pcb incl. |
| - NIR        | for InGaAs NIR detectors (Specify model), extra pcb incl.                   |