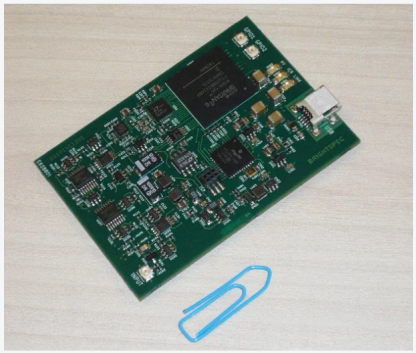
BRIGHTSPEC

Topaz-X

Compact digital MCA for energy-dispersive X-ray fluorescence (EDXRF)

Compact, stand-alone digital multichannel analyser for energy-dispersive X-ray fluorescence analysis, with a fast 14-bit flash ADC and a DSP in an FPGA. It is powered via USB or a power adapter, and the circuit board is available separately to OEM c ustomers. The bAxil software is available as a package.



Weight
Less than 100 g (including box) [2]

Spectrum channels
Up to 16,384, 32-bit depth per channel [3]

Specifications

DETECTOR

Compatible detectors	High-resolution, electrically cooled silicon detectors such as silicon drift detectors (SDD) or Si-PIN diodes	[2]

ELECTRONICS & SIGNAL

ADC	14-bit flash ADC, 50 MHz; 100 MHz DSP in an FPGA	[1]
Gain	×1–×256	[1]
Digital filter rise time	0.1–20 µs in 0.2 µs steps; flat top 0.1–8.0 µs in 0.1 µs steps (trapezoidal shaper)	[2]
Spectrum channels	Up to 16,384, 32-bit depth per channel	[3]

CONNECTIVITY & INTERFACE

Communication	USB 2.0 (3 m cable included)	[2]
Connection	Lemo or BNC connectors (specified when ordering)	[2]

POWER & BATTERY

Supply voltage	Via USB or external AC/DC adapter (supplied)	[2]

MECHANICAL

Dimensions	Box 86 × 70 × 18 mm (L × W × H); PCB 68 × 46 mm	[2]
Weight	Less than 100 g (including box)	[2]

GENERAL

Functions	Digital MCA for energy-dispersive X-ray fluorescence analysis (EDXRF)	[1]

Sources

[1] Topaz-X
BrightSpec · product-page · Product page; Product page – Main features · checked 2026-10-16
https://www.brightspec.be/brightspec/?q=node/34

[2] Topaz-X technical specifications (V1.1)
BrightSpec · datasheet · p. 2, Technical Specifications; p. 2, Technical Specifications – Digital Settings (printed as µs; the PDF text layer has a symbol-font character in plac; p. 1, description · checked 2026-10-16
https://www.brightspec.be/brightspec/downloads/Topaz-X_Spec_V1.1.pdf

[3] BrightSpec MCA Summary Table (V10, Nov 2024)
BrightSpec · catalog · MCA Summary Table V10 – Max. no of channels/channel depth, column Topaz-X · checked 2026-10-16
https://www.brightspec.be/brightspec/downloads/BrightSpec_MCA_SummaryTable_V10b.pdf

Every value is taken from the manufacturer's own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer's published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.