

## Mini-X2 Advanced Product Announcement



Mini-X2 Components: Mini-X2 X-ray Tube Module (left) and Mini-X2 Controller (right)

Amptek is replacing the Mini-X family miniature X-ray tube system with the greatly enhanced Mini-X2 line. The Mini-X2 will consist of two components, the Mini-X2 X-ray Tube Module and the Mini-X2 Controller.

The Mini-X2 Controller provides improved software command, control, and diagnostics. It has a new software communication protocol and a new INTERLOCK interface.

The Mini-X2 will be released in Q4 2018. The first generation Mini-X products will be available until mid-2019 to permit a smooth customer transition.

### How does the Mini-X2 differ from Amptek's existing Mini-X products?

The Mini-X2 provides many additional control parameters and much better hardware monitoring than the first generation Mini-X. It provides a faster readback, and assessment that the tube is operating nominally. It incorporates software rather than hardware configuration for different tube parameters. The safety interlock includes a failsafe lamp driver and software configurability. It provides more complete fault monitoring and the ability to over-ride defaults. The Mini-X2 X-ray Tube module will have the same form factor as the current Mini-X-OEM X-ray tube.

The Mini-X2 Controller has the same physical form factor as the previous MX-50, operates on the same voltages, draws the same current, and still communicates via USB. The INTERLOCK connector has a different pinout. The software interface is completely different: new USB drivers, new command set, new parameter set, etc. A new version of the application software is required; all of the existing operations will still exist, with little change, but a menu of advanced settings will be added. For customers writing their own software, their code will need to be replaced using a new set of subroutines.

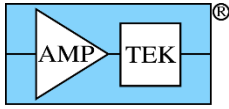
### Why is Amptek releasing the Mini-X2?

To support an increasing number of tube options, to provide a faster readback and reduce the delay in spectrum acquisition, to enable the fail safe warning lamp, and to enable better diagnostics and over-rides of defaults (which were previously in hardware).

### How is the software different?

It is a completely new software interface. It is based on the software used in Amptek's digital pulse processors. It uses the same 8051 microcontroller, the FW6 protocol, and the same WinUSB and LibUSB drivers. Customers familiar with Amptek's DPP interface software will find the communications protocols quite straightforward.

A new version of the application software will be released. It will provide the same core functions as the existing Mini-X software but with a menu of advanced features and diagnostic readouts. A new library of subroutines will be available.



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**AMETEK**<sup>®</sup>  
MATERIALS ANALYSIS DIVISION

**When will the Mini-X2 be available?**

Production quantities are anticipated by Q4 2018.

**When will the existing Mini-X products be discontinued?**

The Mini- X will be discontinued June of 2019.

The Mini-X-OEM is effectively being re-named the Mini-X2 X-ray Tube Module and will only be available with the collimator screw collar. The Mini-X-OEM without the collimator screw will no longer be available.

Customers who use these in commercial products should arrange a transition schedule and end-of-life buy with Amptek.