

• **QUANTINUUM SYSTEMS PRODUCT CHANGE NOTIFICATION**

QIR Release Addendum	
Date of change	December 19th, 2024
Contact information	QCsupport@quantinuum.com
Products impacted	All Hardware, Emulator, and Syntax Checker targets
Changes to Product Data Sheet(s)	NO <input type="checkbox"/> YES <input checked="" type="checkbox"/>
Changes to subscription contract	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
Changes to interface	All <input type="checkbox"/> Quantinuum API <input checked="" type="checkbox"/> Microsoft <input type="checkbox"/>
Purpose	Notify customers of the following: 1) Inform customers that date when the entire Quantinuum software stack is transitioning to QIR has shifted to December 19 th . See additional information below for more details.
Reason	Performance improvements
Action required	

Additional Information:

1) Notification of H-Series software stack update to using QIR by default

This is an addendum to the PCN issued on October 23rd. As stated in the original PCN, the latest version of the pytket-quantinuum package and the Quantinuum Nexus platform switched, on November 4th, from submitting QASM to QIR to all Quantinuum systems by default, including hardware, emulators, and syntax checkers.

However, the switch in Quantinuum’s hardware stack to processing QIR by default on the hardware will now happen on December 19th instead of December 4th. After this date, users wishing to continue to submit circuits via QASM may continue to do so; these circuits will be converted within the stack to QIR prior to compilation. When the switch goes live, we plan to support in-stack TKET optimization and will provide documentation on how to directly submit QIR upon users’ request. This change will be applicable to all Quantinuum endpoints.

Quantinuum has carried out extensive testing and has confirmed that all circuits written in QIR and submitted to Quantinuum endpoints will have equivalent or better performance compared to circuits written in QASM.