

13 CrossMark Benchmarking Rules v1.0

This document describes the rules governing publication of results derived from running the BAPCo CrossMark benchmark. Any licensee who wishes to publish such results or when results are published automatically is obliged to adhere to all rules and regulations described in this document or other documents provided by BAPCo related to execution and reporting of CrossMark benchmark results. BAPCo reserves the right to change the rules outlined in this document at any time. Licensees are encouraged to consult BAPCo website at www.bapco.com for the latest information regarding execution and publication rules. For more information, please consult the Software License Agreement.

13.1 Benchmark Execution

CrossMark Application: All benchmark tests must be run using the CrossMark application. This application is an executable program that runs the CrossMark benchmark. It also includes a module that generates the final benchmark results for the system under test. All published results must be derived only from a complete and correct run of the benchmark. All tests must be performed without modification to any part of the CrossMark application or workloads.

The collective set of hardware and software used in generation of an official CrossMark result must be available to the public as defined by BAPCo's availability criteria. The following specific rules apply:

Operating System: The operating system used to generate and publish results must be a publicly available release from the original software vendor. Consult the product manual at www.bapco.com for the current list of supported operating systems. Upgrade of specific drivers that are released and maintained by vendors other than the operating system vendor (e.g. graphics drivers, disk drivers, motherboard setting files, multimedia drivers) is allowed provided these drivers are publicly available, release-quality drivers from original vendors of such drivers. Licensees may also use operating system service packs, API updates (e.g. Direct X) and other such updates provided they are publicly available, release-quality software from the original vendor, and that they meet the benchmark's Operating System requirements. Licensees should also consult license agreements from individual software vendors to ensure compliance with vendor benchmark restrictions.

Performance Enhancing Utilities: Use of performance enhancing utilities or techniques is allowed provided that the utility or technique is publicly available, release-quality software from the original vendor. The utility needs to be documented and such techniques should not compromise the integrity of the system under test or the benchmark. BAPCo shall reserve the right to review the usage of such tools or techniques and invalidate published results if need be.

System Configuration: To ensure the integrity of CrossMark results, test systems must maintain the same hardware configuration and software settings throughout the execution of the test. Any modification to hardware configuration and/or software settings will invalidate the results.

Hardware: The system hardware used to generate official CrossMark results must be publicly available at the time of publication or within 60 days thereafter. The system must be purchasable as a complete platform from an Original Equipment Manufacturer within 60 days of publication. Alternatively, licensees may report results for systems which may not be available from an OEM but whose individual components are publicly available and purchasable from various vendors at the time of publication or within 60 days thereafter. Note that the 60-day grace period does not apply to system software. All software used must be publicly available and be of release-quality available from the original software vendor.

Software: OEM software used to generate official CrossMark results has no grace period, and therefore must be release quality and publicly available from the original vendor immediately upon publication of results.

Wireless Connectivity: The systems wireless network adapter should be turned on and associated to a wireless network for the duration of the test in free version of the app, whereas it is required in pro version only during the submission of FDR. Either wireless LAN (i.e., Wi-Fi) or wireless broadband (e.g., LTE) may be used to fulfill this requirement at the tester's discretion. Bluetooth may not be used to fulfill this requirement.

13.2 Full Disclosure Report

A complete Full Disclosure Report (FDR), is generated by the CrossMark application at the completion of the benchmark run. Based on the free or pro version of the CrossMark application, user may choose to submit or automatically submit results to BAPCo for inclusion in FDR database. This FDR must include the overall CrossMark Rating, the ratings for each of the three scenarios as well as pertinent system information about the state of the system under test. The format and the information included in this report is determined by BAPCo. No modifications should be made to the FDR (modifications to the FDR will invalidate the FDR).

13.3 Publication

BAPCo requires all licensees to submit FDRs to the BAPCo website (<https://results.bapco.com>) for all publicly available published results generated from pro version of the CrossMark application. Results may be submitted by any of the following methods:

- 1) Clicking the 'submit results' button from inside the benchmark GUI after a completed run.
- 2) Uploading results via the online submission form at <https://results.bapco.com>

Or, if the above options are unavailable.

- 3) Results may be submitted by email to report@bapco.com

Licensees are responsible for retaining available FDR records for all published results. Results submitted by email will also be published at results.bapco.com.

All FDRs submitted by licensees to BAPCo are subject to a 10 day review period. During this review period any BAPCo member can challenge the submitted FDR or submit a counter FDR. When a challenge occurs

or a counter FDR is submitted, BAPCo will decide which, if any, of the FDRs will be accepted for inclusion in the FDR database.

Any publication of results must be accompanied by at least the system model number plus any discrepancies between the shipping configuration of that system model and the configuration of the system model actually tested.

Results collected on systems that do not meet the minimum system requirements for running CrossMark may be published if submitted to BAPCo for inclusion in the FDR database. However, BAPCo will only offer technical support for system configurations that meet or exceed the minimum system requirements for CrossMark.

Any publication of CrossMark results must include the CrossMark overall score from the same run of the benchmark.

Any publication of CrossMark results must include a link to the online results database where the claim has been submitted.

13.4 Availability

When publishing CrossMark results, the tested system must be available for purchase by the public either at the time of publication or within 60 days after publication. Note that the 60-day grace period does not apply to system software. All software used must be release-quality and made publicly available from the original software vendor.

13.5 FDR Processing

The submitted FDRs are processed by BAPCo and classified as:

Released for publication - The results are released for publication as filed.

Rejected - The results are rejected for publication as filed.

The Released for publication classification is in no way a validation or an endorsement of the results by BAPCo. Licensees are free to publish results as long as a complete and valid FDR has been generated and submitted to results.bapco.com. BAPCo will perform frequent audits of the submitted FDRs and reserves the right to revoke the license granted to licensees who have not adhered to the regulations described in this or other CrossMark documentation. In the case where an FDR is returned to the licensee with rejected classification, the licensee must immediately stop publication of the rejected results until the matter is clarified by BAPCo. Any publication of results must be accompanied by at least the system model number plus any discrepancies between the configuration of the stated model number and the configuration of the system tested. The publication can use the single overall CrossMark rating or the combination of the overall rating and a scenario rating. Licensees may not publish scenario ratings unless the overall CrossMark rating is also included. (E.g. the Productivity scenario rating cannot be published without disclosing the CrossMark overall rating) The term CrossMark is a registered trademark of the Business

Applications Performance Corporation and may only be used in conjunction with performance metrics generated by the CrossMark application. Any other performance characterizations may be made but must be derived from the performance metrics generated by the application. The terms CrossMark may not be used as the performance metric describing such characterizations.

13.6 Publication of Results on Non-OEM Platforms

BAPCo allows the publication of performance indices using CrossMark for making "Non-OEM" platform comparisons. This includes performance comparisons on systems that are not shipped from an OEM as a complete platform. An example of such comparisons is when a graphics card manufacturer wishes to compare the performance of its graphics card to that of another manufacturer in an identical platform by swapping the cards and measuring the performance. Results published on Non-OEM platforms must be marked as Modified on the accompanying FDR and whenever appearing in publications of any kind.

13.7 Publication of Results for Competitive Comparisons

Licensees may publish results on competitor systems as long as the performance results for the competitor have been published previously at www.bapco.com. In the case where competitor performance results are not available, the competitor will be notified by BAPCo and given fifteen working days to provide a counter-FDR for its own system or challenge the submitted FDRs (results). The submitted results may not be published until the fifteen-day waiting period has expired and all matters with respect to any counter-FDRs have been resolved by BAPCo. In the absence of a response from the competitor after fifteen days, the original publishing licensee may begin publication. Industry publications may publish results for making competitive comparisons without being subject to the above procedure. Publications are, however, subject to all other regulations set forth in this document.