

# ACORN HARDWARE CONFORMANCE SCHEME

## DRAFT DOCUMENT FOR DISCUSSION

### SUBJECT

Proposal for an "Acorn Hardware Conformance" scheme for high-quality, third-party hardware upgrades that are designed and marketed specifically for use with Acorn computer platforms.

### INTRODUCTION

Acorn has always benefitted from third-party developers providing additional expansion routes for its computer platforms and, in particular, addressing the needs of specialist or niche markets. Although Acorn has attempted to encourage and support these developers, there has so far been no method for providing recognition for those products that fully meet Acorn specifications and, therefore, no means of identifying to end users the products that meet Acorn's criteria for technical quality.

This proposal aims to provide a working document on which such a procedure could be based.

### REASONS FOR AN "ACORN HARDWARE CONFORMANCE" SCHEME

1. Acorn's R & D resources are limited. Third party developers can provide expansion routes for our main computer platforms that will increase their market penetration. Together, Acorn and the developers can be a powerful force in the marketplace.

Clear recognition of good products should provide them with added prestige and, hopefully, increased sales. This, in turn, will increase the application and market exposure of Acorn's main computer products and could result in both short term and long term commercial benefit for all concerned.

2. The Acorn Hardware Conformance scheme will help to provide some visual differentiation between companies who develop products to Acorn specifications and those who don't and thus help to promote high standards of technical quality.
3. This scheme is not appropriate for classifying third-party products as suitable for sale by Acorn, neither separately nor bundled with Acorn standard product. The requirements for such an approval would be more stringent than those outlined in this document and the criteria for this would need to be defined as part of a separate, higher-level scheme.

### HOW THE "ACORN HARDWARE CONFORMANCE" SCHEME WORKS

The scheme is, in principle, a "Self Certification" scheme.

Companies who seek to claim compliance for one or more of their products, should be confident that these product(s) meet relevant Acorn specifications. If this can be assured, the developer may claim "Acorn Specification Compliant" on packaging, documentation and advertising material.



A logo signifying compliance is also available in artwork form, for display directly on the product, e.g. on the PCB or rear panel. See the example at the end of this document.



Companies intending to claim compliance should contact Acorn Developer Support in advance, giving the name of the product(s) (and version if applicable) and from what date the certified product will be available. Note:- this information is for Acorn records only and does not imply that Acorn shares any responsibility for the validity of the claim. It is entirely the developers' responsibility to ensure that their products meet the requirements of the scheme.

Currently the scheme is limited to standard Archimedes Expansion Cards (Podules). Relevant product should comply with the latest issue of the Expansion Card Specification, Part Number 0472,000 obtainable from Acorn's Developer Support Department. New specifications will be released on an ongoing basis and the scheme extended to cover products that meet these new specifications. e.g. Memory Expansion Interface, CPU Bus Interface, Econet Interface, etc.

Products that fall outside the scope of released Acorn Specifications are not eligible to claim compliance. Developers are advised however, to inform our Developer Support Department of the intention to produce such a product, as this will help Acorn to judge the relative priority of future specifications.

## REQUIREMENTS AND CONDITIONS FOR CONFORMANCE

1. The product must fully meet all relevant Acorn specifications.
2. The developer should keep a technical file on each certified product, showing that all relevant specification issues and requirements necessary for compliance have been considered and verified as adequate. This technical file should be made available to Acorn for examination on request.
3. Critical signals, both on the upgrade and on the base machine, must have adequate rise and fall times, have correct logic high and low thresholds, be free of excessive ringing or noise and be within correct timing limits when the upgrade is fitted to the base machine and the system is operating under worst case conditions.
4. When fitted to a fully expanded base machine and operating under worst case conditions, the zero volt and power supply rails, of both the product and the base machine, must remain within acceptable noise limits.
5. When fitted to a fully expanded base machine and operating under worst case conditions, the product must not cause the base machine to exceed internal temperature limits.
6. When fitted to a fully expanded base machine and operating under worst case conditions, the product must not cause the base machine to exceed its specified power loading spec.
7. When fitted to a fully expanded base machine and operating under worst case conditions, the product must not compromise the computer's performance with respect to any safety or EMC standards with which the base machine is specified to comply.



8. The following categories of upgrade are not eligible unless a certificate of compliance to an acceptable safety standard such as IEC 950, can be provided.
  - (a) mains powered
  - (b) an upgrade that uses or generates voltages higher than 42.4 volts peak or 60 volts DC ie. non-SELV Safety Extra Low Voltages. The above voltage limits apply under normal operating conditions *and* under single fault conditions.
9. Acorn does not accept any responsibility for the correct, safe and reliable operation of the developer's product.
10. Any changes to the design or production process of certified product, including changes to components and materials, must be fully considered for possible impact on conformance requirements. Products that fail to meet specifications after such a change must immediately relinquish use of any claims or symbols signifying compliance.
11. The product should normally be easily removable from the base machine in order to facilitate servicing and warranty repairs, but also see 12 and 13 below.
12. Where upgrade products require modifications to be made to the base machine during installation, either these must be removable and the machine easily returnable to standard without the use of soldering tools, or the product supplier must be or become an Acorn Approved Service Centre and undertake to honour warranty repairs on all machines that have the upgrade fitted, whether the reason for the return is due to a fault with the upgrade or with the base machine.
13. In the case where two or more such upgrades are fitted, the responsibility for warranty repairs will lie with the supplier of the last upgrade to be fitted.
14. In the interest of overall quality and technical development, Acorn reserves the right to update, improve or cancel its technical specifications without prior notice. Registered Developers will be notified of specification changes via the Developer Newsletter. If such a change results in previously compliant products becoming non-compliant, developers will be allowed a six month period to bring their products in line with the amended specification. By the end of this period, all non-compliant product should have any indications of compliance removed from them.
15. When compliance is claimed on packaging, documentation or advertising literature etc. it must be clearly stated for which base product(s) it applies. For example, an Expansion Card may meet requirements on an A400/1, but not necessarily on an A3000, due to the different power and thermal capacities of each product.
16. If a certified product is subsequently highlighted as having quality or reliability problems, or if compliance is suspect, Acorn reserves the right to test and verify the product for compliance, either in-house or by an independent test establishment. If non-compliance is confirmed, the developer will be invoiced for the cost of the evaluation and asked to remove all indication of compliance from the product. If the developer fails to co-operate within a reasonable period, Acorn reserves the right to take whatever action is deemed necessary to uphold the image of the Conformance Mark. This will include cancellation of Developer status and/or a press statement effectively outlawing the offending product.

## **BENEFITS TO A THIRD PARTY DEVELOPER**

1. Increased prestige for his product.
2. Permission to place appropriate Acorn logo on his product.
3. Permission to state "Conforms to Acorn Specifications for the Axxxx" in any advertising material.
4. Normal Acorn warranty\* will be honoured on products that have Acorn specification conformant upgrades.

\* with the restriction that the cost of replacement or repair during the warranty period resulting from any fault found to be directly attributable to the failure of the third party product to comply with Acorn's specifications shall be the responsibility of that third party.

