Welcome to MacAppMinder! (MAM)

MacAppMinder is the straightforward solution for Apple Mac app developers who want to effectively protect and license their own macOS app(s) when distributed outside the Apple Mac App Store.

This innovative, 'oven-ready', solution prevents software piracy and illegitimate use of your Mac App. It is quick and easy to use, secure, and leaves you in control of your own app's customer licensing and registration. MAM is simpler and cheaper than other solutions. (No compulsory subscription.)

For developers, MAM should take about 15 minutes to set up. (Full guidance supplied.)

➢ Designed for Mac app developers who use Apple Xcode to target

macOS using Swift and SwiftUI

➢ Advantages of MacAppMinder

- You have spent much time, late nights and the regular 'enjoyable brainache' (= challenge!) developing a great Mac app. And now you may want to supply some (or all) of your apps to customers outside the Mac App Store? If so, then you will need to shield your app from piracy and manage the licensing while maintaining control.

- If your app is not properly protected then you may as well just give it away for free, or forget about proper remuneration for your skill and development time. It will be much more difficult to reinvest in your app and make it better and safer for all legitimate users. Don't get us wrong here as there is a real place for open source, free software. But, that takes large resource, 'tons of time', and it may not be what you want (or are able) to do.

- Advantages of the MacAppMinder developer protection and registration system include:

  1. Only you control and monitor your App's license registration keys (no third party and its servers)
  2. MAM is quick, simple to install, flexible and versatile to use.
  3. MAM is secure and relies mainly on code encased within Apple's latest modern binary XCFramework that you just 'drag and drop' as 'one file' straight into your macOS SwiftUI project. (We say 'one file', and that is exactly what it acts like, but it is a macOS framework file bundle of everything in MAM you need.)
  4. Intuitive, with absolute minimum learning curve.
  5. Our system uses no encryption. (i.e. no export compliance reporting problem.)
  6. You can use this on a single or multiple of your mac apps managed from one or more websites. (up to 10 apps, or more if required)
  7. Cheaper than other solutions
  8. Fast, efficient, and lightweight in terms of size. (less than 1 Megabyte)
  9. Fair and straightforward licensing

Miles, why did you create MacAppMinder?

- 'Ignoring' any philosophical explanation of creativity and innovation being a basic, innate part of human nature in order to survive, solve, help, express, or make things better:

  I do like and respect Apple and the Mac App Store. But all the same, still wanted to have some of our Mac app sales outside the Apple Mac App Store, sold directly to customers, in order not to rely on a single method of distribution. This is not an option with iOS apps, and for macOS developers, can leave their apps largely unprotected by default if distributed outside the Mac App Store.

  I realised that Mac apps sold through the Mac App Store are quite well protected for customers from malware by Apple developer signing and the Apple review process. And similarly, apps sold outside the Mac App Store have some protection for users by Apple Gatekeeper technology, recognised developer signing, and Apple notarization.

  However, this would not help developer creators when it came to entities who 'pass downloaded Mac apps around' (or sell them) to those choosing to install without paying. As far as I can see by default, many Mac apps rely mainly on 'an honesty-type system', and there is little to protect a developer's IP and hard work, by preventing pirate copying and illegitimate use via simply passing an app's .app file around. Not everyone is honest!

  After looking around for a simple solution to mind non-App Store Mac apps, any 'solutions' seemed to involve deficiencies; either large ongoing fees, undue complication, lack of control, passing all sorts of data to third parties and/or servers, or some combination of these problems. i.e. you, as the developer, again were still not really in control of protecting your own app.

  Even though I have 30+ years experience of software development with client and server-side projects, I did not really want to code a solution myself. Who readily chooses to 're-invent any wheel?' - and I could foresee numerous problems to overcome. Surely, there would already be a fair, simple and effective solution out there? In my view, there were none; not in terms of my basic criteria. It would take considerable time to design the solution.

  If MacAppMinder had been available when I first started searching then I would have 'bitten the hand off' for the solution. (To 'translate' for U.S. and/or other non-UK readers: that does not mean any violence or real biting involved! It means I would have been very happy to obtain a good, effective and 'oven-ready' solution at the time :-)

  So, being experienced, tenacious, with developer skills including PHP, MySQL databases, SQL query language, Objective-C, Swift, SwiftUI, plus the cryptographic techniques and networking skills acquired over time, and with 'necessity being the mother . . .' MacAppMinder was eventually born!

  The MAM project took a further 10 weeks work (following a design based on a prior solution of mine, coded back in 2023). I had to carefully design and develop all frontend and backend code, securely package the core in a modern binary framework, and then test all 'to destruction'. Much emphasis was also put on simplifying and making the system easy to use. It was 'a headache' and took longer than expected, especially with the cat complaining and 'whatever other stuff' happens in life :-)

  It should not be 'rocket science', just to protect what we create. And surely, creative developers like us have better things to do?

  You are welcome to use and benefit from this solution for the relatively small license fee.

  Enjoy MAM in your Mac app!

  Miles Hitcham
  MacAppMinder creator
  Multi-award winning developer.

Software Overview

- **Design**: MacAppMinder is designed specifically for macOS App developers who use Apple XCode and SwiftUI for their macOS project(s), and who wish to distribute some (or all) of their Mac Apps outside the Mac App Store. You also need admin publishing access to Linux/Apache/LiteSpeed server webspace.

  The 'intelligent brain' of the MacAppMinder (MAM) protection licensing system is contained in a modern XCFramework, which once purchased is then just 'dragged and dropped' into your current macOS Xcode project. This file includes registration screens and handles all security and network communications with your web server. The supplied back-end PHP files manage control and record keeping for your licenses stored on your server. It is a smart, integrated system.

- **Security**: No license protection system can be absolutely infallible. However, MacAppMinder utilises extremely powerful methods to secure your app and make sure only legitimate users of your Mac app sold by you outside the Mac Store can use it.

  Some MAM protection methods include (but are not limited to):

  Cryptographic techniques include use of the very strongest level of NSA SHA-2 family of algorithms designed by National Security Agency in the US. More secure even than the cryptography used in Bitcoin ownership validation. (never been cracked! even though introduced 25+ years ago.)

  We could have used NSA's SHA-3 (which is not intended by NSA to replace SHA-2). But that would have meant a less tried-and-tested, less efficient algorithm, and then also all users of MAM using the Xcode macOS platform would be mandated to target macOS 26.0+. These things are always a sensible balance. SHA-2 is extremely robust, is only part of the overall protection, works with macOS 10.15+, and could therefore include and benefit more developers and users. And encasing the frontend in a binary XCFramework (that requires macOS 11.0+) ensures the code is more secure and smaller. So the current MAM requirement is macOS 12 (Monterey or later).

  The backend object-orientated PHP and MySQL database code we provide similarly uses numerous high-end security measures including the more modern and more secure PHP PDO extension for database access and prepared statements. This makes it almost impossible for the system to suffer from malicious SQL injection attacks via any registration form. Brute force attacks are also prevented.

  We do not (and will never) publish the overall algorithm used in MAM for protecting your app(s) (and ours too). Publishing could possibly reduce security for all users. However, even then if they were known, it is still extremely unlikely for a malicious agent to be able to take any real advantage of MAM. Yes, someone could take a lifetime and employ huge resources. But 'there are better things to do'. So overall, it really is a case here of being able to trust MAM!

  Developer: The creator of MAM is an experienced developer of some 30+ years experience with many IT systems, official Apple developer and recipient of numerous awards including most Innovative IT Developer in the UK 2024. So, no 'fly-by-night'. This solution has been very carefully thought out and designed by a developer who also uses the very same app protection and registration system.

- **Control**: Main admin control of your software licenses is secured via you remotely accessing your MySQL license registration database using your own private credentials. From there, you can edit, add, view and download any of your registration and license data. For all this, you can use your existing web service control panel's database phpMyAdmin, or otherwise opt to use an app on your Mac desktop for remote database access. E.g. Sequel Ace (previously forked from the Sequel Pro app) is available outside and within the App Store and is totally free.

  Your license and registration database includes a main table that will contain a record of your registration keys and the limits you set, plus another 'registration attempts' table with a full log of all

individual attempts that have been requested by the users of your app(s) when using the license keys you provide. The log includes details including registrations that have been successful and also those declined (maybe for going beyond the license request limits). If you also want a log for other illegitimate requests for a license then there is an optional 'switch' for logging that too, which uses a PHP error reporting file so as not to 'clog up' the main database tables. You are fully control all your license keys and registration code restrictions from this database. It is also easy to manage registrations for multiple macOS apps.

Pricing option

- £25 Payment (Subscription options also available if preferred. Just ask)

To order

- MacAppMinder is currently only available from OnlySelect.com
  Purchase at: https://www.onlyselect.com/shop/macappminder
  (or email the developer directly at miles@hitcham.com if you have any problems)

  Your purchase includes any updates released within a year of purchase.

Delivery includes

1. Apple XCFramework universal binary 'file' containing all the frontend registration and networking pre-compiled code required to securely and intelligently communicate between your macOS app and your website webspace. Simply 'drag and drop' this file into your existing macOS SwiftUI project. (The term 'universal binary' in this particular case means the code will work properly whether you target Intel-based Macs, Apple Silicon-based Macs with M-series chips, or both these architectures.)

2. All the PHP backend code to manage network communications between your App and your own MYSQL database.

3. MySQL database structure to import straight into your own newly created database, and ready for use.

4. Full detailed instructions with steps to set up within your Mac app Xcode project and on your webspace. (It really is very easy to use and install and should take 5-10 minutes each for frontend client and backend server parts.)

Requirements for use

- You need to be an Apple Developer Program member and be developing a Mac app using Apple SwiftUI. Plus have access to Linux/Apache/LiteSpeed web server space with publishing access and backend PHP and MySQL database facilities. Most webspace (including cPanel hosting) has this.

  (Note: this MAM **solution is not appropriate for iOS apps** and **is only suitable for macOS Apps sold outside the Mac App Store**. We believe that Apple expressly prohibits developers adding any key-based licensing protection or independent registration system for Mac Apps sold through their Mac App store.)

- **macOS**: The MAM product in 2026 currently supplied requires macOS 12 (Monterey or later) as a deployment target. Your macOS app target will also ultimately depend on what other features you use within your app. Additionally, it is always recommended by Apple (including for security reasons) to use the latest Xcode and SDKs for optimal compatibility and security.

- **PHP**: While it is preferable and recommended to use the latest version of PHP you have access to (for security reasons), our system will work with PHP 5.5+ onwards

- **Swift**: The version of Swift your app is built with will be governed by your main app code. MAM works with Swift version 5, 6 or later (Swift 5.0 was the first Swift version to support XCFrameworks.)

How does the MacAppMinder system work?

- This licensing system is flexible and there are different ways it can be used:

  But a common scenario would be that you, as the app developer, issue a license registration code (which you have already included in your secure online MAM registration database) to a new purchaser of your app.

  On installing your app, the end user customer then enters their registration name, email and the registration code details into the Registration form which appears when they first launch your app. If all is filled in correctly, then the app is automatically authenticated via your web hosting database, and for continued use on that computer.

  The detailed record of the registration is logged in your web database and a coded license is stored locally on their mac computer. The app customer will not need to authenticate online again unless they install your app on another computer. And you can at any time limit the number of times any re-authentication can occur via your own MAM database. It is simply not possible to copy or move the local license they have from one computer to another without re-authenticating as per your policy and license terms. So, sharing of already authenticated apps is not possible. You are completely in control of your own app's protection, registration and licensing!

How do I Install MAM?: (Difficulty level: very easy for any developer)

This is a shorter overview, and after purchase you receive more detailed instruction. Installation is easy and should take about 15 minutes in total including both the Xcode project client-side and back-end web hosting database side:

1. **For your Xcode macOS project**:
   'Drag and drop' the supplied MacAppMinder.xcframework bundle file into your Xcode project's target and add the provided MacAppMinder.swift file to your existing project. (The latter contains the simple configuration parameters to adjust MAM operation for your needs, together with the main MAM controller that uses the XCFramework code.)

   You then add 2 short lines of code to your main entry point app file, and 6 lines to your project's main ContentView SwiftUI file. We supply all details of this code and parameters required.

   Lastly, you will need to set/tick both the Incoming (Server) and Outgoing (Client) Network Connection tick box options in the Xcode 'App Sandbox' section of the 'Signing and Capabilities' tab of your project's app target. (This enables your app to properly communicate with your own web hosted database when required for license registration purposes.)

   And 'that is it' for the MAM client Xcode project installation part!

2. **For the web hosting database 'backend/server' side**:
   Create a new blank MySQL database and user with password via your web hosting control panel. Then using the panel, add that new user to that database making sure you provide the user with all database privileges. (There is usually a single tick box for this)

Via the web hosting control panel database admin tool (phpMyAdmin in cPanel) now import the supplied MacAppMinder.sql file into your newly created database. (It contains a database empty of records, but with the required tables and structure.)

Next, using desktop (S)FTP software (or your web hosting File Manager) you upload the supplied 'mamreg' directory (containing all necessary MAM .PHP files) to your website domain's document root folder (commonly the public_html folder of your website domain). There are numerous (S)FTP apps available for this and Sequel Ace (previously forked from the Sequel Pro app) is available both in and outside the Mac App Store, and is free. If you are a developer, the chances are you already have your own FTP client software anyway.

Now you have all the necessary files on your web domain to make the backend Server side of MAM work, and it only remains to enter your user and database credentials either directly into the main mamreg.php file, or otherwise make the credentials accessible via a PHP include file. (We advise clearly on how to do this securely within the full instructions, while also providing other tips).

You may want to change a few other configuration default settings constants in the main PHP file E.g. to report (or not) certain errors and govern whether IP addresses of registration attempts are recorded. You will also need to start adding the registration key codes you will be providing to purchasers of your app.

Before successful operation between back and frontend of the MAM solution, you register your MAM developer license with us for your app by editing a few setting parameters within the XCode MacAppMinder.swift file in your XCode project. These include a parameter to specify your web database URL and another related to how you want the registration screen for users to look including specific colours and the description of your app. (You can accept the sensible defaults.)

And that's it! for the whole setup. Again, it is very easy and described with full instruction.

I would have originally much preferred this 15 minute setup + £25, to any other option available. (In fact, I would have paid more than 10x that to properly protect and license our apps. But 'there you go!')

FAQs

- **Is MAM easy to install and set up?**
  Yes, very easy. if you are a macOS developer then it should take about 10-20 minutes. (email us if you have any problem.)

- **Is MAM easy to hack?**
  No, almost impossible for all intents and purposes. It is extremely 'watertight' when properly installed.

- **What happens if we change our domain name, or the URL to our website?**
  Changing your main web domain is a major change for many reasons. But assuming you cannot keep your old website up, and also no longer have the domain and cannot even redirect the URL. You would need to enter the new URL as a parameter into the next app update supplied to your users. But even then, your customer's existing 'older' app versions would still work fine unless they wanted to install that same app version on another computer. You would in this 'worst-case scenario' need to make updates available to your users, containing reference your new domain and URL.

- **What if I develop more than one Mac app?**
  No problem. (You can add up to 10 apps initially, and more by further arrangement).

- **What if I have no webspace or skills to publish/manage a website with a MYSQL database?**
  No problem. Ask us and you can subscribe to a service where as part of your subscription you will get the required Xcode SwiftUI and XCFramework to easily add to your projects, plus we will manage the backend server database element for you.

- **Are you just saying that Mac Apps are better sold outside the Mac App Store?**
  No. The Apple App Store can be a great and secure place for customers to find apps. In my view, for developers, it provides a positive, professional and well organised space through which to showcase and sell your apps. Apple handles the billing and the global product exposure / marketing-side can also be a plus. Smaller developers are also catered for via the Apple small business program, where annual app store sales below a certain level attract a current lower 15% (vs 30%) commission.

  However, if a developer comes to the decision to sell some portion (or all) of their macOS apps outside the Mac App Store, by selling them directly to customers from their own website, it is then imperative the developer be able to reliably control licensing and registration of their own software.

  This is where MacAppMinder comes in.

  The reason(s) for any developer supplying their Mac app directly and outside the Mac App Store can include the app not being accepted for sale by Apple Review, maybe due to Apple's many different, quite strict, and/or changing criteria. Or maybe an app is removed from the App Store due to less recent download levels, or no recent update (possibly because the app has been designed more carefully and has less bugs?) Or it may be a planned feature(s) of your App is not feasible (or even possible) within the Apple Sandbox environment. Developers may feel a larger proportion of the earned app income should go towards the developer. Or believe that there are not many App Store views or sales because they have a disadvantaged and/or unfair position in terms of exposure on the App Store. i.e. believe that the Apple App Store ranking criteria or listing methods are not transparent and/or manipulated in some way, even though their App may be much more functional and better designed than similar apps on the App Store.

  However, a developer may simply just want to test out non-App Store sales and not have to rely on a single source of sales revenue for their own macOS app development.

  As an app developer, you may want to operate without any constant fear your Apple app(s) and the longer-term programming you have invested in, whilst embracing/cooperating with Apple technologies, could suddenly become a problem for Apple, or you could be threatened with removal from the App Store at relatively short notice.

  So the possible reasons can be many.

  In any event, some advantages of non-app store sales for your macOS apps are:

  - You have optional full Mac system access (file access, networking, system APIs)
  - You can keep all revenue after payment processing and other costs. (not just 70% or 85%)
  - You can completely set the price of your app (not have to use Apple's pricing tiers.)
  - You deal directly with and communicate with the customer.
  - You can ship updates immediately when they are ready. (no review process and delay.)
  - Not subject to all your apps on the selling platform being ranked by some non-transparent process.
  - Not subject to your app sales/investment removal with little notice due to fluctuations in sales.
  - Not subject to you not being allowed to firmly protect the license and registration of your app.
  - You can decide on the payment frequency of any subscriptions and updates, and refund policy.

  Most successful independent macOS apps sell direct: Sketch, Nova, Tower, CleanShot X all include some form of perpetual licensing with optional renewal for updates. i.e. licenses can be sold on the basis of a fair, 'one-off' fee allowing continual usage and indefinite license ownership. This commonly covers a year of further updates released. Customers can have more control and developers have more certainty, independence plus more resource to reinvest in app development for customers.

License

- After license payment, you are welcome to use your MacAppMinder developer license for your own use only within your own macOS SwiftUI app(s) supplied by you outside the Mac App Store to your customers. Please note: Apple does not allow developers to control registrations of users of your macOS apps sold via the Apple Mac App Store. MAM is **not suitable for Mac App Store sales**.

- The standard straightforward MAM license covers up to 10 of your own macOS Apps developed by you as a single developer or team. (Ask if you need more than 10 of your apps protected.)

- Just do not sell, do not distribute, do not publish, and do not attempt to copy or reverse engineer any part of the MacAppMinder software solution. The license is only supplied to you as the purchaser of the license for your own use in connection with development of your own macOS app(s). Any infringement of, and any attempt to circumvent our license will be pursued. (Please refer also to the disclaimer at the end of this document.)

For any questions, suggestions or requests

- Contact us at: info@onlyselect.com

- You may want a customised version of MAM due to specific requirements, or prefer subscription (vs single payment), or need consultancy. You may request that we manage MAM for you, want our code adapted to different kinds of macOS apps. It never hurts to ask! We always like to help where possible.

Acknowledgements

- Apple continue to innovate and provide great technologies and tools for developers. The XCFramework (introduced by Apple in 2019 and utilised here by MacAppMinder) is another example of this. It helps us provide a robust developer license protection system for your SwiftUI Mac app without you loosing control or paying larger ongoing fees to protect your Mac apps sold outside the Mac App Store.

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