

M-Series Modules EOL Notice - FAQs

Why is Skyworks discontinuing the M-series IEEE-1588 module products?

The modules are made up of a combination of Skyworks parts and parts purchased from other manufacturers. The current semiconductor supply chain issues mean that many manufacturers are offering restricted supplies of their parts on extended lead times, or in some cases are not able to supply parts at all. Unfortunately, this impacts a key device on all the M-series modules meaning that Skyworks cannot continue to manufacture these modules once existing component stocks have been exhausted.

Which products exactly are impacted?

This action affects all the M-series module products, which consist of:

- M64
- M68
- M88-32, M88-128 & M88-256 and derivative ordering codes

Along with the evaluation and prototyping boards (M-EVK and P60).

Will there be an option to place a last-time buy order for future shipment?

Unfortunately not. In normal circumstances when the decision is made to end production of a product an industry-standard process is followed that includes defined windows for placing final orders and receiving final delivery. However, in this case the reason for the discontinuance means that Skyworks doesn't have the ability to build any additional modules to service new orders.

What about orders for the modules that are currently pending?

Skyworks has limited component stock to build additional modules and will use this to satisfy as many open orders as possible. For lower volume orders (less than 50 units) we hope to be able to fulfil these orders in their entirety, whereas for larger orders it may be necessary to only partially fulfil them. However, while this is the intended plan Skyworks cannot commit that open orders will be fulfilled or when.

Can I cancel an existing order for the M-series modules?

Yes, any existing order for the M-series modules can be canceled if you no longer want the product.

Is Skyworks planning to introduce new IEEE-1588 module solutions?

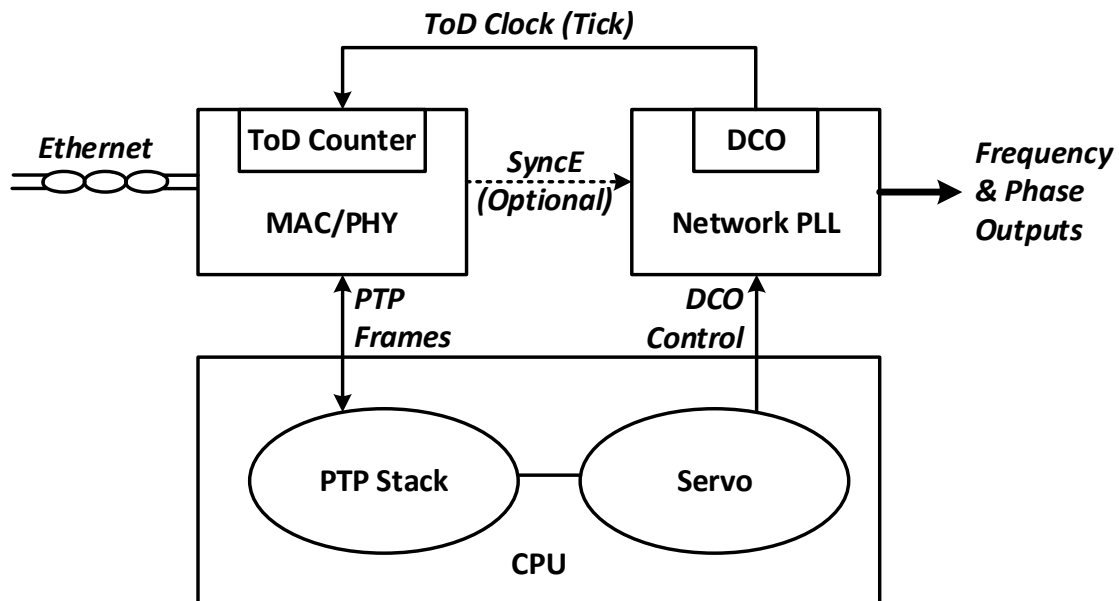
We have extensively investigated the possibility of creating next-generation IEEE-1588 modules but at this time we do not have any plans to release such products. As the applications for IEEE-1588 based synchronization have expanded the market has matured and we believe that there are now more cost-effective and flexible solutions for achieving the functionality that the M-series modules provide.

What can I do to replace the M-series modules in an existing design, or for a new design?

The best method to replace the module's functionality will depend on the architecture of the application, and in many cases a non-module solution will be more appropriate and with a lower overall cost than could have been achieved with the M-series modules.

In general, a PTP solution requires multiple hardware and software components working together:

- A low-bandwidth PLL for Synchronous Ethernet wander filtering and frequency generation (hardware)
- A digitally controlled (DCO) or numerically controlled (NCO) oscillator to allow the local clock frequency to be aligned to that of the PTP master (hardware)
- The ability to timestamp ingress and egress Ethernet frames at either the PHY or MAC layer and optionally a GNSS 1PPS for grandmaster support (hardware)
- A time-of-day (ToD) counter to provide the time reference to the timestampers (hardware)
- A CPU to run the software components (hardware)
- A PTP stack implementation (software)
- A time and frequency recovery servo (software)



Example PTP Solution

The M-series modules incorporate all of these features into an integrated solution. While this can simplify the design and integration in some cases it can also result in duplicated resources, such as the CPU, and lead to inflexibility, for example the module Ethernet ports are restricted to 1 Gbps maximum. Hence, the ability of a discrete solution in which the component parts are considered separately to increase flexibility and reduce unit cost.

The Skyworks NetSync™ family of network synchronizer clock PLLs provides the Synchronous Ethernet wander filter and DCO functions in a single high-performance device and is available for wireless and wireline applications.

For higher volume, telecom applications (those utilizing Ethernet fabrics at 10 Gbps or faster and not requiring PTP profiles other than the ITU-T defined ones or the IEEE 1588 default profile) then Skyworks AccuTime™ IEEE-1588 solution (<https://www.skyworksinc.com/en/Application-Pages/accutime-ieee-1588-software>) can be used to provide both the PTP stack and servo functions. AccuTime is deployed on multiple CPUs and SoC's that are commonly used in such applications. Typically, these devices provide the environment to run AccuTime as well as incorporating Ethernet frame and 1PPS timestamping and the ToD counter. An example of an application where this option would be suitable is an O-RAN DU or RU.

For non-telecom applications, such as those in power or broadcast video, the Linux-based open source PTP solution “ptp4l” is suitable for many applications. If the existing hardware includes a suitable CPU running Linux and a timestamping Ethernet interface with in-built ToD counter then the addition of a NetSync device is typically all that is needed to allow ptp4l to be used. Alternatively, if no suitable hardware platform is available then a number of vendors produce highly integrated microcontroller devices that can be used in conjunction with NetSync to provide hardware functionality close to that of the M-series modules. In the second half of 2022 Skyworks expects to support use of AccuTime's superior servo in conjunction with ptp4l for applications that need to be able to handle levels of network noise beyond those supported by the ptp4l standard servo, but where it is not desirable to implement the full AccuTime solution.

Contact Skyworks for more information on NetSync and AccuTime.

(Note: Mention of any third-party vendor products doesn't imply endorsement of them by Skyworks or infer suitability for a given application.)

Can Skyworks help me with the redesign work?

Skyworks does not provide engineering services or support for other parties' products. We do of course provide extensive support for our own products, including the NetSync clock devices. For the AccuTime software we provide comprehensive documentation and a porting guide to allow customers to integrate it into their own hardware platform. Additionally, we have evaluation boards available for the NetSync devices and have work with CPU and SoC vendors to create AccuTime demonstration platforms.

Who can I contact for more information or help?

For all enquiries relating to product availability, pricing and ordering, you should contact the Skyworks salesperson or independent sales representative you currently work with, or a Skyworks distributor for your region. For existing orders please contact the distributor through which the order was placed.

For technical support on Skyworks timing products we have an online support portal that can be accessed at:

<https://skyworks.service-now.com/csm>. Once registered, you can create support cases which will automatically be routed to the appropriate team for the particular product.

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