

F R O S T & S U L L I V A N



Market
Engineering

Global Software Licensing and Monetization Market, Forecast to 2025

The Rise of Software-Defined Systems and IOT Applications Highlight the Need for not just better Software Licence Management but also Software Monetization

An Abridged Research Report Executive Summary

Produced By:

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April 2019

Key Findings—Software Licensing and Monetization Market (SLM), 2018

As companies move towards software-based selling the need to optimize software monetization through SLM solutions has become business critical



As markets continue to adopt the software-defined everything (SDx) model and the Internet of Things (IoT) phenomenon makes significant inroads, software companies and device vendors are increasingly relying on SLM solutions to engage with new business models, markets and customers.



Industrial automation continues to be the largest embedded segment today, followed by the healthcare, telecommunications and automotive sectors. Software-defined systems that can be reconfigured on the fly to lower operating costs and optimized efficiency are major drivers of the software-defined environment.



Profit margins are growing fastest and revenue growth is most stable for companies that are pivoting to a software mindset and offer usage-based pricing options. SLM is a key enabler of this transition.



Many Independent Software Vendors (ISVs) and embedded vendors continue to attempt to build their monetization layers in-house. However this approach leads to higher total cost of ownership while reducing business agility as compared to commercially available solutions.



Many solutions that are currently hardware based are going to start getting replaced by software based solutions through the forecast period. This is happening across vertical markets.



Counterfeiting, piracy, grey manufacturing, data theft, and malware infection remain serious threats for software and software-powered products. Modern SLM solutions are effective at tackling these threats while preserving product quality, reliability, and performance.

Source: Frost & Sullivan

Executive Summary—Market Engineering Measurements

Total Software Licensing and Monetization Market: Market Engineering Measurements, Global, 2018

Market Overview



Decreasing



Stable



Increasing



Note: All figures are rounded. The base year is 2018. Source: Frost & Sullivan

Market Overview—Segmentation

The SLM market is divided into product segments by form factor of the enforcement mechanism and also by a professional services segment:

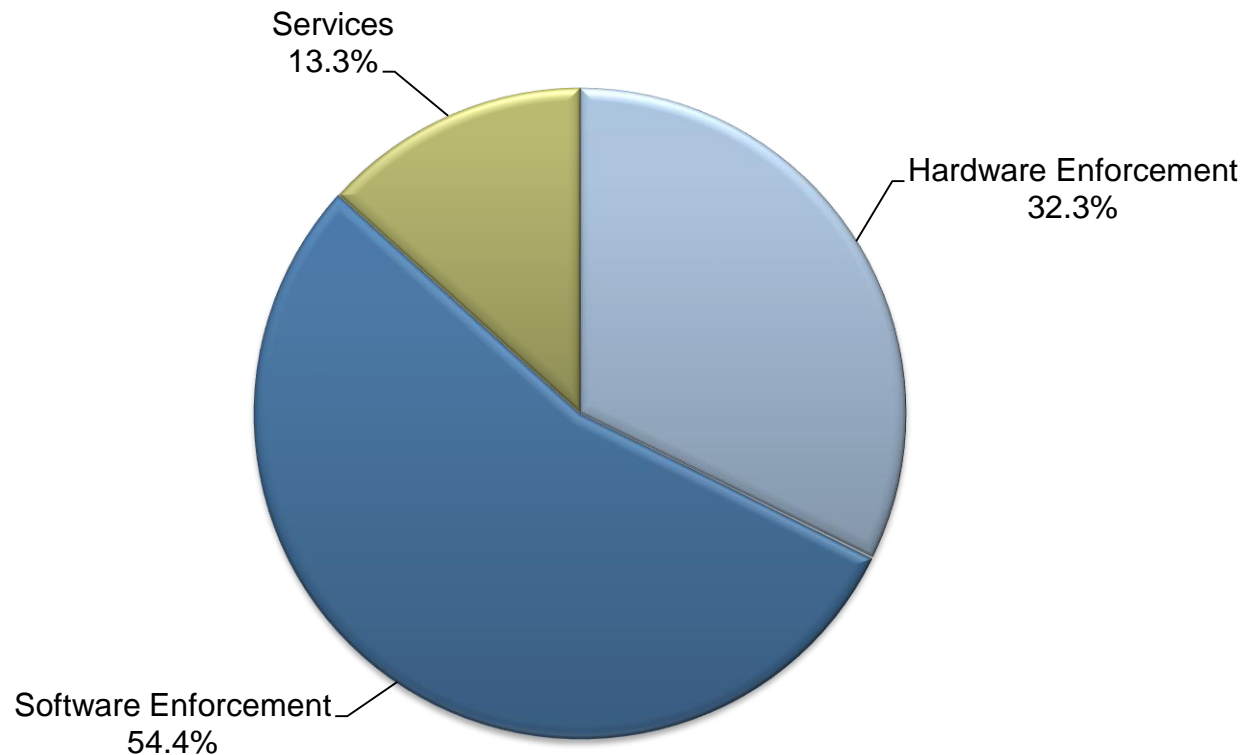
- **Software-based enforcement, or software segment:** This includes revenues from all-software implementations of license management. The use of the term software to describe the software segment of the SLM market should not be confused with the application software, which is the target of protection of SLM systems.
 - This segment includes revenues from enforcement done in the cloud. Enforcement for SaaS or cloud-based offerings is nearly always done in software.
- **Hardware-based enforcement, or hardware segment:** This includes revenues from sale of hardware components (i.e., dongles, as defined earlier) used to enforce software monetization.
- **Additionally, the discussion on professional services, or simply services,** covers revenues from consulting or professional services fees, typically accrued when a publisher initially deploys a given SLM solution. Frost & Sullivan does not consider in the scope of this study any professional service fees accrued by third-party system integrators or consulting firms in the installation and maintenance of commercial SLM systems. The intent of this segment is to accurately capture total revenues accrued by SLM vendors. Accordingly, we account for services revenues in market sizing and provide forecasts for services revenue.

Source: Frost & Sullivan

Market Overview—Segmentation by Function

Key Takeaway: Software and Services components continue to grow while Hardware Enforcement will start tapering off after peaking in 2020

Total Software Licensing and Monetization Market: Percent Revenue Breakdown by Component Function, Global, 2018



Note: All figures are rounded. The base year is 2018. Source: Frost & Sullivan

Market Drivers

Total Software Licensing and Monetization Market: Key Market Drivers, Global, 2019–2025

Drivers	1–2 Years	3–4 Years	5–7 Years
Increasing number of companies chasing higher margins are changing their business model to software-based selling, spurring interest in SLM	H	H	H
Anti-piracy and anti-counterfeiting initiatives drive adoption of SLM	H	H	H
Growing adoption of SLM to monetize embedded/ intelligent devices grows total market revenues	M	M	H
Increased transition from homegrown to commercial SLM systems results in growing revenue streams	L	M	M
Organic growth in revenues for software and embedded products using SLM increases SLM market revenues	L	L	L

Impact: H High; M Medium; L Low

Drivers and restraints are shown in order of impact

Source: Frost & Sullivan

Market Restraints

Total Software Licensing and Monetization Market: Key Market Restraints, Global, 2019–2025

Drivers	1–2 Years	3–4 Years	5–7 Years
Continued use of in-house solutions negatively impacts market revenue growth.	M	M	M
A shift from hardware-based selling to software-based selling requires a change in business processes and mentalities within an organization.	H	M	L
Upfront integration costs remain a deterrent to adoption by medium and some larger businesses.	M	M	M
Lack of confidence in commercial solutions and limited appreciation for value proposition restrain adoption and growth.	M	M	M

Impact: H High; M Medium; L Low

Source: Frost & Sullivan

Impact of Restraints Explained

Homegrown licensing solutions continue to be a challenge in the market. It takes time for companies to realize that their homegrown licensing approach is hard to justify before they turn to SLM vendors. A homegrown solution is tempting but can prove to be costly to implement and maintain: the addition of a new licensing model, for example, may require a full development cycle. This can severely burden development teams, impact roadmaps and draw out time-to-market for new product releases.

Frost & Sullivan continues to identify a gradual increase in the use of formal SLM solutions across all classes of software publishers and device vendors. That said, B2C software continues to be largely protected using in-house solutions—many of which leverage licensing API hooks in ERP and CRM software for back-office operations but rely on self-built enforcement or do not use enforcement at all. B2B software aggressively leverages commercial SLM in some areas such as CAD/CAM and animation, and shows adoption of commercial SLM across nearly all verticals. Nonetheless, there continues to be noteworthy use of homegrown systems. On a related note, Frost & Sullivan has seen growth in sales activity for lower-end dongle solutions with simple server-side components. This growth has been driven by uptake by small and medium businesses seeking to control piracy as they expand into global markets and/or seek to maximize their revenues in their home markets.

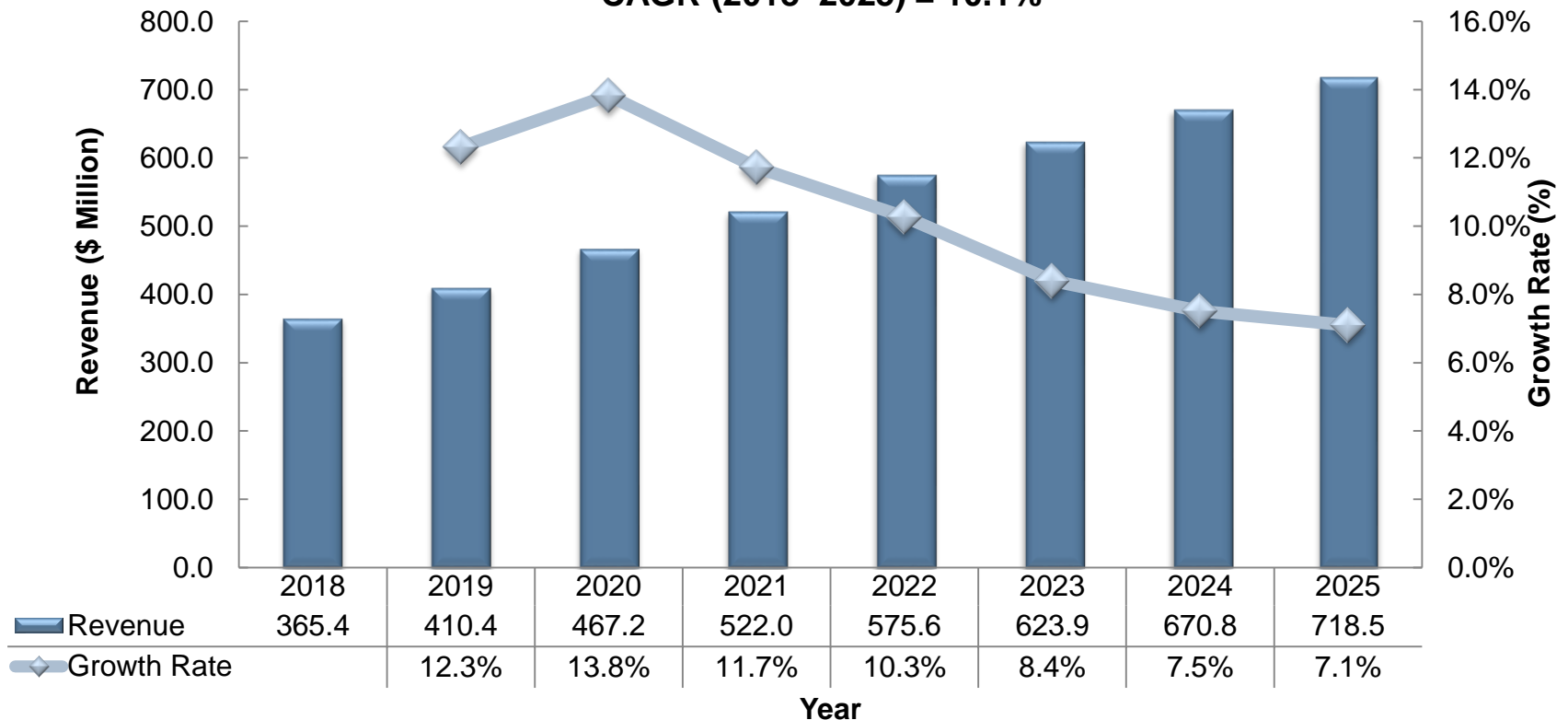
Source: Frost & Sullivan

Total SLM Market—Revenue Forecast

Key Takeaway: The rise of embedded/IoT applications and software-defined systems will propel the market for the immediate future but reduction in hardware enforcement will temper revenue growth rates later in the forecast period.

Total Software Licensing and Monetization Market: Revenue Forecast, Global, 2018–2025

CAGR (2018–2025) = 10.1%



Note: All figures are rounded. The base year is 2018. Source: Frost & Sullivan

Revenue Forecast by Segment

Key Takeaway: Software-based solutions will steadily grow at the cost of hardware over the forecast period, as demand for services increases as well

Total Software Licensing and Monetization Market: Revenue Forecast by Form Factor Segment, Global, 2018–2025

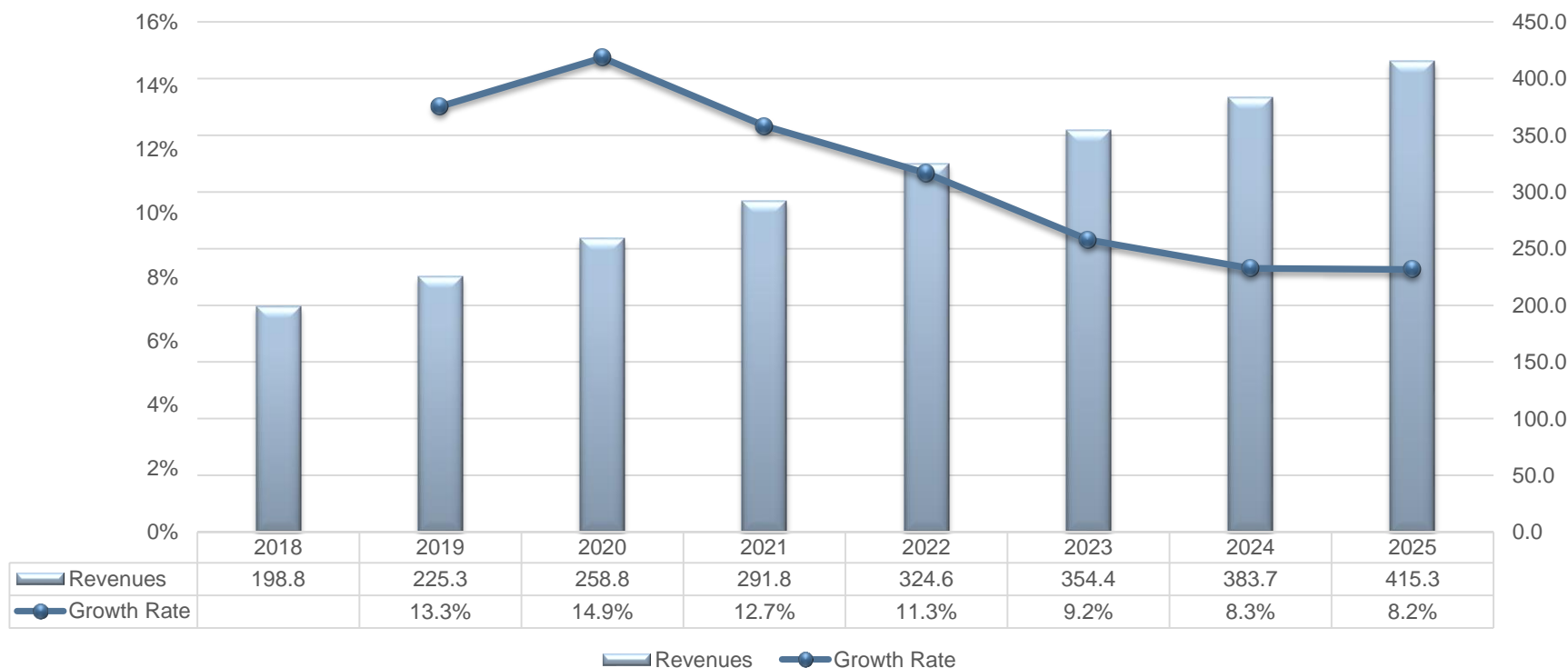
	Hardware (\$ Millions)	Growth Rate	Software (\$ Millions)	Growth Rate	Services (\$ Millions)	Growth Rate
2018	118.0	--	198.8	--	48.6	--
2019	130.1	10.2%	225.3	13.3%	55.0	13.2%
2020	145.3	11.7%	258.8	14.9%	63.1	14.7%
2021	159.2	9.6%	291.8	12.7%	71.0	12.6%
2022	172.1	8.1%	324.6	11.3%	78.9	11.1%
2023	184.1	6.9%	354.4	9.2%	85.5	8.4%
2024	195.2	6.1%	383.7	8.3%	91.9	7.5%
2025	205.5	5.3%	415.3	8.2%	97.7	6.3%
CAGR	8.2%		11.1%		10.5%	

Note: All figures are rounded. The base year is 2018. Source: Frost & Sullivan

Software Enforcement—Revenue Forecast

Key Takeaway: Software enforcement revenue will roughly double over the forecast period.

Software Licensing and Monetization Market: Revenue Forecast, Software Enforcement Segment, 2018- 2025
CAGR (2018- 2025)= 11.1%

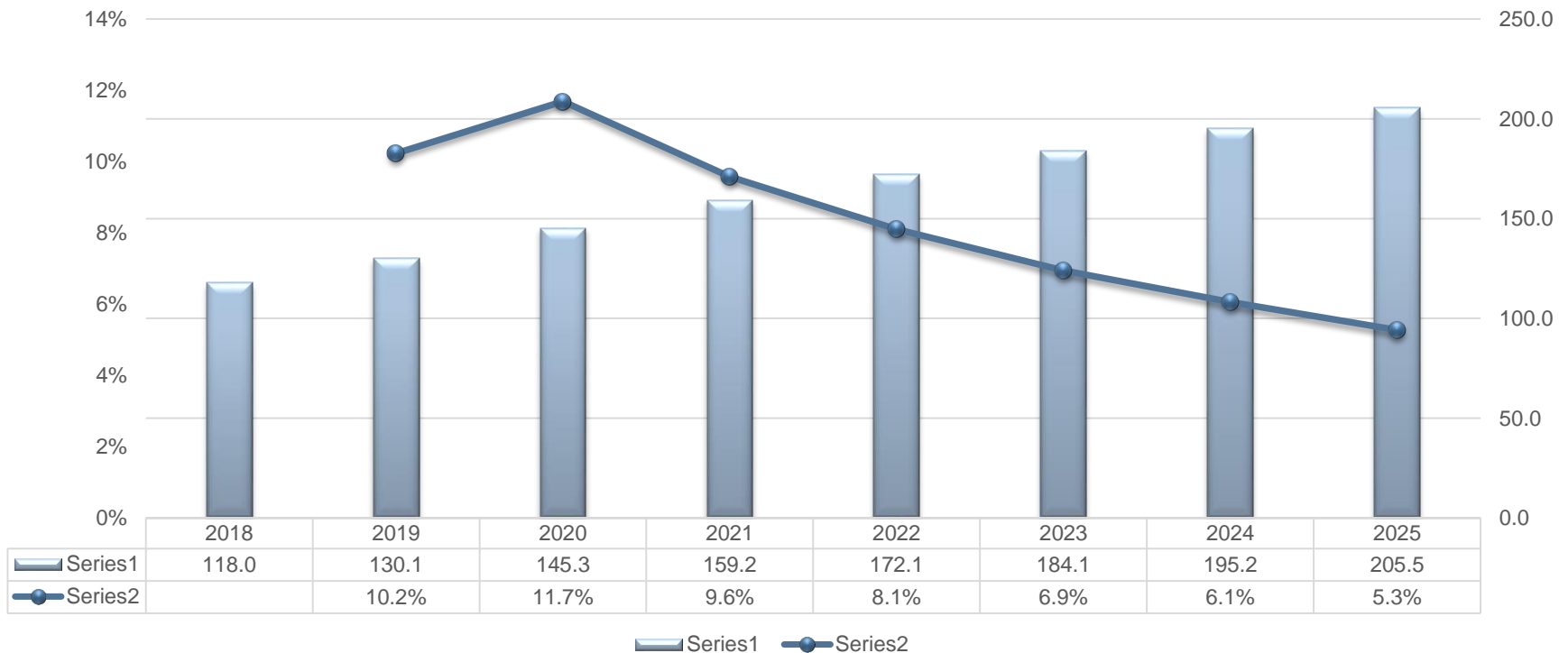


Note: All figures are rounded. The base year is 2018. Source: Frost & Sullivan

Hardware Enforcement—Revenue Forecast

Key Takeaway: Hardware revenue rises more gradually, but rises nevertheless, over the forecast period.

Software Licensing and Monetization Market: Revenue Forecast, Hardware Enforcement Segment, 2018- 2025
CAGR (2018- 2025)= 8.2%



Note: All figures are rounded. The base year is 2018. Source: Frost & Sullivan

Revenue Forecast by Segment Discussion

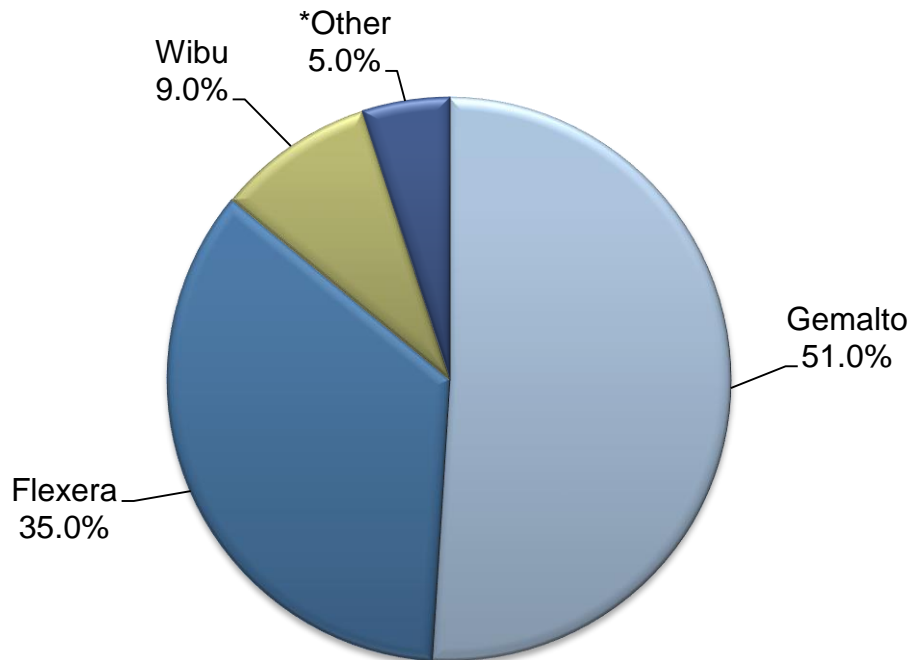
- Over the forecast period, revenue in all 3 segments by form factor—hardware, software, and services—will grow. Software segment revenues, which already account for over half of total market revenues, are expected to continue to grow on the strength of increased preference for hardware-free enforcement, increased use of IP connectivity in lieu of hardware security, and growing ability to leverage hardware roots of trust built into processors. Hardware revenues will also grow but at a slower clip than the software segment.
- Services revenues are highest during initial deployment, and so as the market matures and gains broader adoption, ongoing services revenue growth will reflect the growth of the market. All things considered, services revenues, which are accrued equivalently regardless of what type of enforcement method is selected, are expected to increase steadily over the forecast period. It should be noted that there is a strong community of independent consulting firms that provide professional services for planning and implementing software monetization solutions. Such vendors are not counted in the market sizing—Frost & Sullivan only counts service revenues from those vendors whose primary offering in this market is a product.
- Unit forecasts for the software segment are difficult to estimate, since pricing models vary significantly across vendors. Some prices are based on units licensed while others are priced as a sliding scale percentage of total revenue generated by the licensed product. As usage-based pricing of published software becomes more and more prevalent, the complexity of pricing models for SLM solutions is rising even further—in some cases, monetization solutions are bundled with analytics offerings, which further muddies the waters.

Source: Frost & Sullivan

Total Market Competitive Analysis—Market Share by Revenue

Key Takeaway: Market concentration has increased in the past two years, dominated by Gemalto, Flexera and Wibu

Total Software Licensing and Monetization Market: Percent Revenue Breakdown, Global, 2018



* A complete list of all vendors in the market can be [found here](#)

Note: All figures are rounded. The base year is 2018. Source: Frost & Sullivan

Market Share Analysis—Discussion of Key Market Participants

Market Leader: Gemalto has continued to exert its market dominance in the total SLM market. Not only does the company dominate the hardware enforcement segment but is also one of the leading providers of software enforcement solutions. The company has witnessed strong adoption and success of its Sentinel platform in the US and European markets. The product's success is largely driven by the flexibility it provides end users through the value proposition of its single-solution offering for all business models. End user feedback gathered through this research validates the versatility Gemalto's solutions provide compared to more traditional solutions as well as the positive impact of the company's focus towards post-sales customer support.

Sentinel solutions were developed to be a technology enabler across multiples verticals. This web-based system allows both software vendors and device manufacturers to consolidate all their products' functionalities on a single platform. Gemalto's Sentinel technology empowers vendors to:

- Offer flexible business models, capture new revenue opportunities and minimize revenue leakage
- Simplify supply chain processes, ensure business continuity, and reduce risk and operational overhead
- Generate meaningful business data and reports
- Increase customer satisfaction, reduce churn and strengthen brand loyalty

With Gemalto's continued customer focus, the company is expected to maintain its market leadership position for the foreseeable future.

Source: Frost & Sullivan

Market Share Analysis—Discussion of Key Market Participants (continued)

Market Challenger: Flexera continues to have a strong market position largely because of the software enforcement segment, particularly in North America and Europe. Flexera's Monetization platform enables software and device manufacturers to implement a wide range of digital monetization models for Cloud, SaaS, on-premises and embedded applications. Monitoring, reporting, and analytics capabilities enable data collection and intelligence from software and IoT devices. In addition to its licensing and entitlement management functionality, the platform also offers software delivery and updates for both connected and intermittently connected devices.

Flexera has a long history in the software industry and it the de-facto standard for many segments. The company dominates the high-end desktop software segment, particularly verticals such as electronics design automation (EDA) and computer-aided design/computer-aided manufacturing (CAD/CAM). Over the last 10 years, Flexera has significantly grown its business in the Intelligent Device and IoT industry, especially in the Enterprise and Industrial IoT. Flexera expanded over the last few years, now offering a global go-to-market approach with teams in North America, Europe and APAC.

The continued use of in-house solutions across verticals and increasing popularity of IoT and SDx provides the company with a lot of opportunity to make inroads in new markets and expand its market presence.

Source: Frost & Sullivan

Market Share Analysis—Discussion of Key Market Participants (continued)

Market Contender: Wibu's strength is in dongle-based license management, and it offers a broad and versatile range of hardened dongle products based on its CodeMeter technology. The company emphasizes local customer support in Europe and North America as well as speed and accuracy of order fulfillment. Headquartered in Germany, its primary market is Europe; the company is steadily pursuing the North American market and aggressively reaching out to the APAC region with a focus on Japan. The company continues to invest in developing software-based solutions for broader applicability while also continuously raising the security bar on its hardware line forward. CodeMeter capabilities now extend to the cloud. As Wibu continues to innovate, Frost & Sullivan expects the company to continue to continue to gain market share over the forecast period.

The remaining market is fragmented between a number of smaller vendors. These vendors build on a unique competency in one or more factors spanning technology approach, geographic region, price, simplicity, and/or application area. These niche vendors have been unable to make any significant inroads in the collective market share of the top 3 vendors. Frost & Sullivan does not foresee this changing over the forecast period.

Source: Frost & Sullivan