About Arm Flexible Access

Arm Flexible Access provides up-front, zero or low cost access to a wide range of Arm IP, tools, and training. Experiment and design with the entire portfolio—license fees are only due at the point of manufacture and calculated only on the IP included in the final SoC design.

The Standard and Entry Tiers of Flexible Access include an extensive range of Arm IP and dedicated support, training, and development tools.

The DesignStart Tier offers $0 access to physical IP and a select mix of Arm IP, forum support, access to online training materials and development tools.

Flexible Access includes free use of thousands of Arm Artisan Physical IP libraries for implementing silicon for manufacture across the broadest range of foundries and process technology nodes.

For more information, visit https://www.arm.com/products/flexible-access.

Early-stage startups can benefit from the Arm Flexible Access for Startups program, giving free access to the Entry Tier of Flexible Access. For more information visit https://www.arm.com/products/flexible-access/startup.

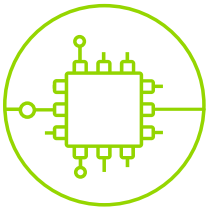
How does Arm Flexible Access work?

Access

- Widest range of Arm IP, tools and services
- Annual access fee covers design rights
- Any or all of the IP package is downloadable at any time

Design

- Freedom to start, change or stop projects as needed
- Model your workload across included IP for best-fit design
- World-wide access to Arm training and support



Manufacture

- Licensing payment only for IP used at tape out, not before
- Transparent and simple business terms

How much does Arm Flexible Access cost?

Tiers	DesignStart	Entry	Standard
Access fees	**$0**	**$80k** per annum **$0 for startups***	**$212k** per annum
License fees (due on project manufacture)	**Calculated per design based on IP used. ****		
Royalty	**Calculated per project and paid per unit shipped ****		

*Qualifying startups with <$20M funding, <$1M annual revenue, privately held

**Thousands of Arm Artisan Physical IP libraries are free of charge

What is included in Arm Flexible Access?

Tier	DesignStart	Entry	Standard
	Ideal for smaller semiconductor design teams doing no more than 1 tape out per year		**Ideal for larger semiconductor development teams with multiple concurrent projects**
IP portfolio	**DesignStart CPU Package: Cortex-M0, Cortex-M23, Cortex-M3 and related Corstone example systems**	**Mainstream Package: Broad portfolio of Cortex CPUs, Mali GPUs, Corstone IP, CoreLink and CoreSight System IP**	
DesignStart Physical IP (Free Library Program)	√	√	√
Support from Arm expert engineers	**Forum support**	√	√
Number of tape-outs per year	**1 (Unlimited for Physical IP)**	**1+ * (Unlimited for Physical IP)**	**Unlimited**
Online training	**2 Seats**	**Unlimited on-demand training seats**	
Tools and models	**1 Hardware Success Kit User License**	**3 Hardware Success Kit User License 6 Software Success Kit User Licenses**	**6 Hardware Success Kit User Licenses 12 Software Success Kit User Licenses**
Membership Fee	**$0**	**$0 for qualifying startups or $80k per annum**	**$212k per annum**

* Entry Tier: Up to 3 tape outs where any of Cortex-M0/M0+/M23/M3/M4 is the main processor, or 1 tape out per year

Standard and Entry Tiers

Product	Description	Learn more about this product
Cortex Processors		
Cortex-A55 Processor	Built on DynamIQ technology, designed for extreme scalability in constrained environments and featured with the latest Armv8-A architecture extensions that introduce new NEON instructions for machine learning, advanced safety features and more support for Reliability, Accessibility and Serviceability (RAS).	https://www.arm.com/products/silicon-ip-cpu/cortex-a/cortex-a55
Cortex-A53 Processor	Low-power processor with 32-bit and 64-bit capabilities, applicable in a range of devices requiring high performance in power-constrained environments. *Reference design & supporting system IP available in Corstone-1000. Subsystem requires minor modifications to integrate this processor.*	https://www.arm.com/products/silicon-ip-cpu/cortex-a/cortex-a53
Cortex-A35 Processor	Ultra-high efficiency smart device processor, the smallest and most power-efficient 32-bit and 64-bit Arm application processor. *Reference design & supporting system IP available in Corstone-1000. Subsystem requires minor modifications to integrate this processor.*	https://www.arm.com/products/silicon-ip-cpu/cortex-a/cortex-a35
Cortex-A34 Processor	Low-power 64-bit only processor with ultra-high efficiency. *Reference design & supporting system IP available in Corstone-1000. Subsystem requires minor modifications to integrate this processor.*	https://www.arm.com/products/silicon-ip-cpu/cortex-a/cortex-a34
Cortex-A32 Processor	Low-power 32-bit only processor with ultra-high efficiency. *Reference design & supporting system IP available in Corstone-700.*	https://www.arm.com/products/silicon-ip-cpu/cortex-a/cortex-a32
Cortex-A7 Processor	Power-efficient processor, designed for a wide range of devices with differing requirements demanding balance between power and performance.	https://www.arm.com/products/silicon-ip-cpu/cortex-a/cortex-a7
Cortex-R82 Processor	Highest-performance Cortex-R processor with memory management unit (MMU), enabling real-time and rich operating systems (OS), such as Linux, on the same core or cluster. As the first Arm 64-bit Cortex-R processor, the Cortex-R82 can address up to 1TB of dynamic random-access memory (DRAM) for efficient, high-performance compute. Ideal for solid-state drives (SSDs), hard-disk drives (HDDs) and built-in storage solutions, as well as computational storage applications.	https://www.arm.com/products/silicon-ip-cpu/cortex-r/cortex-r82
Cortex-R52 Processor	Designed for advanced silicon processes requiring high-performance and cost-effective processing. Delivers real-time performance for functional safety.	https://www.arm.com/products/silicon-ip-cpu/cortex-r/cortex-r52
Cortex-R52+ Processor	Builds on its predecessor, the Arm Cortex-R52, to assist integration and virtualization for functional safety applications, while maintaining software compatibility.	https://www.arm.com/products/silicon-ip-cpu/cortex-r/cortex-r52-plus
Cortex-R8 Processor	Designed for products with high performance requirements where timing deadlines must always be met.	https://www.arm.com/products/silicon-ip-cpu/cortex-r/cortex-r8
Cortex-R5 Processor	Offers high-performance computing solutions for embedded systems that require reliability, high availability, fault tolerance, and real-time responses.	https://www.arm.com/products/silicon-ip-cpu/cortex-r/cortex-r5
Cortex-M85 Processor	Highest performing Cortex-M that integrates Helium vector processing. Delivers highest scalar and vector processing "on-time" for the most demanding use-cases.	https://www.arm.com/products/silicon-ip-cpu/cortex-m/cortex-m85
Cortex-M55 Processor	First Cortex-M processor to integrate Helium vector processing technology. It brings a significant uplift in DSP and ML performance, while meeting the efficiency requirements of constrained endpoint use-cases.	https://www.arm.com/products/silicon-ip-cpu/cortex-m/cortex-m55
Cortex-M7 Processor	The highest performance CPU in the energy-efficient Cortex-M processor family and includes digital signal processing (DSP) instructions.	https://www.arm.com/products/silicon-ip-cpu/cortex-m/cortex-m7
Cortex-M33 Processor	Optimized for cost and power-sensitive microcontroller and mixed- signal applications. Designed for applications requiring efficient security or digital signal control. New Arm Custom Instructions allow optimization for specific workloads. *Reference design & supporting system IP available in Corstone-201.*	https://www.arm.com/products/silicon-ip-cpu/cortex-m/cortex-m33

Cortex-M4 Processor	Designed to address applications requiring digital signal processing, with a blend of efficient, easy-to-use control and signal processing capabilities. *Supporting system IP available in Corstone-101.*	https://www.arm.com/products/silicon-ip-cpu/cortex-m/cortex-m4
Cortex-M3 Processor	Designed for cost-sensitive and power-constrained solutions in a broad range of devices. Balanced between area, performance, and power. *Reference design & supporting system IP available in Corstone-101.*	https://www.arm.com/products/silicon-ip-cpu/cortex-m/cortex-m3
Cortex-M23 Processor	Smallest and lowest-power microcontroller with Arm TrustZone security, ideal for applications requiring software isolation and security. *Reference design & supporting system IP available in Corstone-102.*	https://www.arm.com/products/silicon-ip-cpu/cortex-m/cortex-m23
Cortex-M0+ Processor	The smallest footprint and lowest power requirements of all Cortex-M processors, suitable for a wide variety of applications, including sensors and wearables. *Reference design & supporting system IP available in Corstone-101.*	https://www.arm.com/products/silicon-ip-cpu/cortex-m/cortex-m0-plus
Cortex-M0 Processor	Small footprint and high efficiency, ideal for simple, cost-sensitive devices. *Reference design & supporting system IP available in Corstone-101.*	https://www.arm.com/products/silicon-ip-cpu/cortex-m/cortex-m0
Ethos Machine Learning Processors		
Ethos-U65	Ethos-U65 enables new AI capabilities into edge and endpoint devices in applications including high resolution smart cameras, smart home solutions, voice assistants, drones, and wearables with 2x the performance over Ethos-U55, and achieving 1TOPs using our microNPU architecture. Ethos-U65 is designed for use with DRAM based systems, which leads to higher bandwidth availability. This allows Ethos-U65 to be used with all classes of embedded systems: higher performance Cortex-A based SoCs or low power Cortex-M based SoCs for battery powered devices (with or without DRAM)	https://www.arm.com/products/silicon-ip-cpu/ethos/ethos-u65
Ethos-U55	Ethos-U55 is a first generation uNPU for accelerating neural networks. It is targeted at the embedded market and works alongside Cortex-M processors. Ethos-U55 hits multiple performance points with 4 different possible configurations and hence can target a wide variety of applications like smart home appliances, DTV, smart speakers etc.	https://www.arm.com/products/silicon-ip-cpu/ethos/ethos-u55
Corstone IP		
Cortex processor reference packages and supporting system IP. Simplifies silicon design and reduces time to market.		
Corstone-1000	Corstone-1000 is a reference package that integrates Cortex-A and Cortex-M processors. It is meant to help efficiently build a secure and efficient 64-bit Linux-capable IoT System-on-Chip (SoC), targeting applications such as endpoints, gateways, embedded applications. Its system architecture combines a choice of the Cortex-A53, Cortex-A35 or Cortex-A32 processor with up to two Cortex-M based systems. It includes a verified subsystem with advanced power management, authenticated debug, a stand-alone Secure Enclave for PSA hardware root of trust, and a dedicated firewall IP for enhanced security. All required system IP and a reference software stack are included, enabling rendering and further modifications of the design.	https://www.arm.com/products/silicon-ip-subsystems/corstone-1000

Corstone-315	A package to help SoC designers build Cortex-M85/Ethos-U65 based systems faster. Corstone-315 combines an example subsystem, System IP, software, and tools to streamline IoT device development. Corstone-315 integrates Cortex-M85 along with an optional Ethos-U65 NPU and Mali-C55 ISP to build low-power, low-cost, high-performance endpoint AI devices that support CNNs.	https://www.arm.com/products/silicon-ip-subsystems/corstone-315
Corstone-310	An example system designed around Cortex-M85 with system-wide TrustZone for Arm v8-M over AXI and power management capability. The memory system is also optimized to support Ethos-U55.	https://www.arm.com/products/silicon-ip-subsystems/corstone-310
Corstone-300	Arm Corstone-300 is a reference package and system IP package providing a starting point for signal processing and machine learning applications. It is designed around the Arm Cortex-M55 processor, and demonstrates system-wide TrustZone over AMBA AXI and integrated power management. The IP, along with FPGA and FVP platforms, and open-source software such as TF-M, gives a both a head start and reduces risk in SoC development.	https://www.arm.com/products/iot/soc/corstone-300
Corstone-201	Reference package and system IP for building a secure system on chip with the Cortex-M33 processor. The Corstone-201 contains various system IP components and a reference design subsystem integrating the processor, memory, debug, security and power control. It is designed for the mainstream market targeting performance balanced with power efficiency.	https://www.arm.com/products/iot/soc/corstone-201
Corstone-102	The Arm Corstone-102 provides a flexible reference package and system IP for small, low cost and energy efficient SoC development. Based on the Arm Cortex-M23 processor, the Corstone-102 is targeted at the constrained market segment for secure IoT applications.	https://www.arm.com/products/iot/soc/corstone-102
Corstone-101	The Arm Corstone-101 contains a reference package based on the Cortex-M3, as well as various other system IP components. It provides all of the fundamental system elements to design a SoC around Arm Cortex-M0/Cortex-M0+/Cortex-M3/Cortex-M4 processors.	https://www.arm.com/products/iot/soc/corstone-101
Mali Multimedia Processing		
Mali-G310 Graphics Processor	G310 is the latest ultra-efficient Mali GPU, offering a high degree of scalability with 5 shader core configurations (V1-V5). G310 can be scaled in both area and performance to create competitive products, ranging from low-perfomance IoT and wearable solutions, all the way up to premium 4K DTV solutions, and more. In addition, G310 introduces key features such as lossy compression and HDR format support.	https://www.arm.com/products/silicon-ip-multimedia/gpu/mali-g310
Mali-G52 Graphics Processor	Designed to bring premium visual experiences to mainstream markets with heightened machine learning capabilities.	https://www.arm.com/products/silicon-ip-multimedia/gpu/mali-g52
Mali-G31 Graphics Processor	The first ultra-efficient GPU based on the Bifrost architecture targeting smaller applications such as IoT.	https://www.arm.com/products/silicon-ip-multimedia/gpu/mali-g31
Mali-C55 Image Signal Processor	Mali-C55 is a highly configurable, energy-efficient Image Signal Processor (ISP) for IoT markets. It provides outstanding precision and dynamic range with excellent image quality in a small silicon footprint. It's easy to integrate between Mali-C55 and ML accelerators. Ideal for various use scenarios, from Smart Vision, Smart Home hub, and consumer/commercial security camera to Smart Display products.	https://www.arm.com/products/silicon-ip-multimedia/image-signal-processor/mali-c55
Mali-C52 Image Signal Processor	State-of-the-art image signal processing with class-leading high dynamic range image quality in real-time. Can be optimized for performance or area.	https://www.arm.com/products/silicon-ip-multimedia/image-signal-processor/mali-c52
Mali-C32 Image Signal Processor	High precision and high dynamic range image signal processor. Optimized for area. Ideal for low-power, cost-sensitive embedded vision devices.	https://www.arm.com/products/silicon-ip-multimedia/image-signal-processor/mali-c32

Mali-C10 Image Signal Processor	Mali-C10 is a highly configurable Geometrical Distortion Correction engine, capable of performing up to four simultaneous geometric warp functions, each displayed in a sub-window, at video resolutions up to 4K UHD. The Mali-C10 GDC engine is suitable for video surveillance, fisheye correction, automotive reversing cameras, and panoramic correction and dome cameras.	
AFBC Codec Cores	AFBC is a lossless image compression format that provides random access to pixel data to a 4x4 pixel block granularity. It is employed to reduce memory bandwidth both internally within the GPU and externally throughout the SoC	https://www.arm.com/technologies/graphics-technologies/arm-frame-buffer-compression
AFBC Standalone System IP	Ready to be integrated with non-Arm multimedia IP blocks to bring the advantages of Arm Frame Buffer Compression (AFBC) across the SoC. AFBC minimizes multimedia system bandwidth requirements, significantly reducing SoC power consumption.	
AFRC Codec Hardware	AFRC is a lossy image compression format. AFRC can be used for compressing external texture inputs and framebuffer outputs from the GPU. Configurable compression ratio provides guaranteed bandwidth reduction for such surfaces and memory footprint saving.	

CoreLink Interconnect

CoreLink CCI-550 Cache Coherent Interconnect	Full coherency with up to six clusters including big.LITTLE and coherent accelerators. High performance and power efficiency with integrated snoop filter.	https://www.arm.com/products/silicon-ip-system/corelink-interconnect/cci-550
CoreLink CCI-500 Cache Coherent Interconnect	Full coherency with up to four clusters including big.LITTLE and coherent accelerators. High performance and power efficiency with integrated snoop filter.	https://www.arm.com/products/silicon-ip-system/corelink-interconnect/cci-500
CoreLink CCI-400 Cache Coherent Interconnect with CPE-425	Provides full cache coherency between two clusters of multi-core CPUs. Enables big.LITTLE processing and I/O coherency for devices.	https://www.arm.com/products/silicon-ip-system/corelink-interconnect/cci-400
CoreLink NI-700 Network Interconnect	Corelink NI-700 is a Configurable and Scalable Network-on-Chip(NoC) for High Bandwidth accelerators,rest-of-SoC connectivity and peripherals.	https://developer.arm.com/Processors/CoreLink%20NI-700
CoreLink NIC-450 Network Interconnect	Highly configurable topology with network-on-chip properties for building high-performance, optimized, AMBA-compliant SoC connectivity, including QoS and Thin links.	https://www.arm.com/products/silicon-ip-system/corelink-interconnect/nic
CoreLink NIC-400 Network Interconnect	Highly configurable topology with network-on-chip properties for building high-performance, optimized, AMBA-compliant SoC connectivity.	https://www.arm.com/products/silicon-ip-system/corelink-interconnect/nic
CoreLink DPE-400 Data Parity Extn	Licensable extension of CoreLink NIC-400 Network Interconnect, DPE-400 provides transportation of read and write data payload parity information, using the AXI WUSER and RUSER, and AHB HWUSER and HRUSER, signals.	https://developer.arm.com/documentation/100591/0100/dpe-400-overview
CoreLink ADB-400 AMBA Domain Bridge	An asynchronous bridge between two components or systems that can be in a different power, clock, or voltage domains.	https://developer.arm.com/ip-products/system-ip/corelink-interconnect/corelink-network-interconnect-family
CoreLink PCK-600 Power Control Kit	Power Control Kit with a suite of system IP to ease system power and clock management infrastructure integration.	https://www.arm.com/products/silicon-ip-system/system-controllers/pck-600
CoreLink XHB-400 AXI4-AHB Bridge	Converts AXI4 protocol to AHB-Lite protocol via an AXI4 slave interface and an AHB-Lite master interface.	https://developer.arm.com/ip-products/system-ip/corelink-interconnect/corelink-network-interconnect-family
CoreLink XHB-500	XHB-500 provides an AMBA AXI5 to AHB5 bridge and an AHB5 to AXI5 bridge.	https://developer.arm.com/docs/101375/latest/introduction/about-the-xhb-500-bridges

CoreLink SIE-300	Provides a set of configurable AXI5 security-aware components that can protect peripherals and memories that are unaware of security, so that a peripheral or memory is only accessible to trusted software. The SIE-300 also provides clock synchronizing bridges and an access control gate.	https://developer.arm.com/ip-products/system-ip/corelink-interconnect/corelink-sie-300
CoreLink System Controllers		
CoreLink AHB Cache	AHB Cache can be implemented as a processor cache (data or generic), or a system cache. It can be used for both code and data. The cache provides AHB5 data interfaces and an APB configuration interface, both with TrustZone for Armv8-M support.	https://developer.arm.com/ip-products/system-ip/system-controllers/cache-controllers
CoreLink SIE-200 AHB System IP	The CoreLink SIE-200 system IP includes a collection of interconnect, peripheral, and TrustZone controller components to help build secure AHB systems more easily.	https://developer.arm.com/ip-products/system-ip/corelink-interconnect/corelink-sie-200
Corelink DMA-350	CoreLink DMA-350 is an AXI DMA controller targeted at endpoint AI systems, particularly those based on the Cortex-M55 processor. It has been designed to enable efficient data movement, thereby reducing system power consumption and improving performance.	https://developer.arm.com/Processors/CoreLink%20DMA-350
CoreLink DMA-330 AXI DMA Controller	A high-performance DMA controller that can boost the performance and reduce the power consumption in AXI-based systems.	https://www.arm.com/products/silicon-ip-system/embedded-system-design/dma-330
CoreLink DMA-230 AHB Micro DMA Controller	Low gate count (3-10k gates) micro-DMA engine targeting AHB-based Cortex-M systems.	https://www.arm.com/products/silicon-ip-system/embedded-system-design/dma-230
CoreLink GIC-625 Generic Interrupt Controller	The GIC-625 is a generic interrupt controller that handles interrupts from peripherals to the cores, and interrupts between cores. The GIC supports up to 8 clusters and supports the GICv3 and GICv3.1 architecture.	https://developer.arm.com/documentation/102143/0100
CoreLink GIC-600 Generic Interrupt Controller	Detects, manages, virtualizes, and distributes interrupts for Armv8.0-A processors. Configurable - up to 512 processor threads per chip, up to 16 chips, and 960 shared interrupts.	https://www.arm.com/products/silicon-ip-system/system-controllers/gic
CoreLink GIC-500 Generic Interrupt Controller	Detects, manages, virtualizes, and distributes interrupts for Armv8.0-A processors. Configurable up to 128 single-threaded cores and 960 shared interrupts.	https://www.arm.com/products/silicon-ip-system/system-controllers/gic
CoreLink GIC-400 Generic Interrupt Controller	Detects, manages, and virtualizes interrupts for Armv7 processors. Configurable up to 8 cores and 480 shared interrupts.	https://www.arm.com/products/silicon-ip-system/system-controllers/gic
PL192 Vectored Interrupt Controller	An advanced vectored interrupt controller supporting up to 32 vectored interrupts with programmable priority level and masking.	https://developer.arm.com/ip-products/system-ip/system-controllers/peripheral-controllers
CoreLink TZC-400 TrustZone Address Space Controller	Performs security checks on transactions to memory or peripherals, configurable up to 8 regions.	https://www.arm.com/products/silicon-ip-security/address-space-controllers
CoreLink L2C-310 AXI Level 2 Cache Controller	High-performance, AXI level 2 cache controller designed and optimized to address Arm AXI processors, normally used with Cortex-A5.	https://www.arm.com/products/silicon-ip-system/embedded-system-design/l2c-310
CoreLink MMU-600 System Memory Management Unit	Highly scalable with support for millions of translation contexts. Designs can be scaled from small to large-scale systems while maintaining a common driver framework. TrustZone Media Protection protects high-value 4K premium content.	https://www.arm.com/products/silicon-ip-system/system-controllers/mmu
CoreLink MMU-500 System Memory Management Unit	System memory management unit that includes caching and memory virtualization. Enforces memory protection and access control, and is designed for use in a virtualized system where multiple guest operating systems are managed by a hypervisor. Supports Armv8-A and Armv7-A.	https://www.arm.com/products/silicon-ip-system/system-controllers/mmu

BP140 AXI Internal Memory Interface	AXI to on-chip SRAM interface.	https://developer.arm.com/docs/dto0009/a
BP141 TrustZone AXI Memory Interface	AXI to on-chip SRAM interface with support for Arm TrustZone protection for secure memory regions.	https://developer.arm.com/products/system-ip/system-controllers/other-system-controllers

Peripheral Controllers

PL011 UART Universal Asynchrounous Receiver/Transmitter	Peripheral controllers for UART, SPI and real-time clock.	https://developer.arm.com/ip-products/system-ip/system-controllers
PL022 SPI Synchronous Serial Port		https://developer.arm.com/ip-products/system-ip/system-controllers
PL031 RTC Real Time Clock		https://developer.arm.com/ip-products/system-ip/system-controllers

CoreSight Debug & Trace

CoreSight SoC-600 Debug and Trace	For high-bandwidth debug and trace solutions. Includes remote and local debug access, trace routing and termination, cross-triggering and time stamping.	https://www.arm.com/products/silicon-ip-system/coresight-debug-trace/soc-600
CoreSight SoC-600M Debug and Trace	Debug and trace components for multi-core Cortex-M based SocS. Includes remote and local debug access, trace routing and termination, cross-triggering and time stamping.	https://www.arm.com/products/silicon-ip-system/coresight-debug-trace/soc-600M
CoreSight SoC-400 Debug and Trace	Configurable components, including debug access trace generation manipulation and output, cross triggering, and time stamping.	https://www.arm.com/products/silicon-ip-system/coresight-debug-trace/soc-400
CoreSight SDC-600 Secure Debug Channel	Addresses device security needs by allowing silicon and tool vendors to enforce protection and police debug access, and by working closely with cryptographic elements and debug certificate authentication.	https://www.arm.com/products/silicon-ip-system/coresight-debug-trace/sdc-600
CoreSight ELA-600 Emb Logic Analyzer	Embedded Logic Analyzer with highest data tracing efficiency and capacity. Improves system efficiency with run-time signal monitoring and control.	https://www.arm.com/products/silicon-ip-system/coresight-debug-trace/coresight-ela-600
CoreSight ELA-500 Emb Logic Analyzer	Embedded Logic Analyzer providing an effective way to observe low-level signals in an SoC, offering a way to zoom into the root cause of data corruption.	https://www.arm.com/products/silicon-ip-system/coresight-debug-trace/coresight-ela-500
CoreSight STM-500 System Trace Macrocell	Trace source for real-time software instrumentation with no impact on system behavior or performance. Extends the low-cost, real-time visibility of software and hardware execution to all software developers. Supports 64-bit memory interfaces.	https://www.arm.com/products/silicon-ip-system/coresight-debug-trace/coresight-stm-500
CoreSight System Trace Macrocell	System Trace Macrocell supporting 32-bit memory interfaces.	https://developer.arm.com/ip-products/system-ip/coresight-debug-and-trace/coresight-components/system-trace-macrocell
CoreSight Trace Memory Controller	A configurable trace component to terminate trace buses into buffers, FIFOs, or alternatively, to route trace data over AXI to memory or off-chip to interface controllers.	https://www.arm.com/products/silicon-ip-system/coresight-debug-trace/coresight-tmc

Certified Libraries and FuSa RTS		
FuSa RTS	With FuSa RTS, developers receive a robust real-time operating system (RTOS), independent processor abstraction layer (CMSIS-Core) and verified C library that are highly optimized for Cortex-M processors by Arm architecture experts.	https://developer.arm.com/tools-and-software/embedded/fusa-run-time-system
Certified C Library	Subset of the standard C library comprising of approximately 200 functions that have been specifically implemented and optimized for use in safety development. Qualified for IEC 61508 (Industrial) – SIL 3 ISO 26262 (Automotive) – ASIL D, EN 50128 (Railways) – SIL 4 IEC 62304 (Medical) – Class C. Comes with its own Qualification Kit which comprises of the Safety Manual and Defect Report.	https://developer.arm.com/tools-and-software/embedded/arm-compiler/safety
Artisan Physical IP		
Cortex-M85 PIK for TSMC 22ULL	Reference flow offering a low-risk path to implementation of the Cortex-M85 with Artisan Physical IP on TSMC 22ULL process node.	https://www.arm.com/products/silicon-ip-physical
Cortex-M55 PIK for TSMC 22ULL	Reference flow offering a low-risk path to implementation of the Cortex-M55 with Artisan Physical IP on TSMC 22ULL process node.	
Cortex-M33 PIK for TSMC 22ULL	Reference flow offering a low-risk path to implementation of the Cortex-M33 with Artisan Physical IP on TSMC 22ULL process node.	
Ethos-U55 PIK for TSMC 22ULL	Reference flow offering a low-risk path to implementation of the Ethos-U55 with Artisan Physical IP on TSMC 22ULL process node.	

Artisan Physical IP – Free Library Program

For details of the thousands of Physical IP libraries included in the Artisan Physical IP - Free Library Program see https://www.arm.com/products/silicon-ip-physical

	5 nm	7 nm	12 nm	14 nm	22 nm	28 nm	40 nm	45 nm	55 nm	65 nm	80 nm	90 nm	110 nm	130 nm	150 nm	152 nm	160 nm	180 nm	250 nm
TSMC		●	●		●	●	●		●	●	●	●	●	●	●	●	●	●	●
Samsung	●	●		●		●		●		●									
Global Foundries/ IBM			●	●		●	●	●	●	●		●	●	●				●	●
UMC					●	●	●		●	●	●	●		●	●			●	●
SMIC						●	●			●		●	●	●	●			●	
XMC									●										
SK hynix												●							
Silterra													●	●	●			●	
HHGrace													●	●				●	
DB HiTek													●	●				●	
Vanguard													●					●	●
MagnaChip														●				●	
CSMC														●					
TowerJazz														●				●	
HeJian																	●	●	
1st Silicon																		●	●
HHNEC																		●	

For each geometry in this table, multiple process flavours may exist. Not all Arm Artisan Physical IP for each process flavour within the listed geometries and marked with a dot are available as part of the Free Library Program included in the DesignStart Tier of AFA. Additional fee-based IP may be available for technologies not marked in this table.

Please contact your Arm Account Manager for further information.

Safety Packages

Cortex-A55 Safety Package	Safety Packages provide information used by chip developers when creating SoCs for functional safety applications and for easing the process of obtaining safety certification. They contain documentation specific for an individual processor. Cortex-A55, Cortex-A53, Cortex-R52+, Cortex-R52, Cortex-R5, Cortex-M33, Cortex-M4, Cortex-M3, and Cortex-M0+ Safety Packages also provide access to their respective Software Test Library (STLs) to enable integration of the library.	https://www.arm.com/why-arm/technologies/safety
Cortex-A53 Safety Package		
Cortex-A35 Safety Package		
Cortex-A32 Safety Package		
Cortex-A34 Safety Package		
Cortex-R52+ Safety Package		
Cortex-R52 Safety Package		
Cortex-R5 Safety Package		
Cortex-M85 Safety Package		
Cortex-M55 Safety Package		
Cortex-M33 Safety Package		
Cortex-M23 Safety Package		
Cortex-M7 Safety Package		
Cortex-M4 Safety Package		
Cortex-M3 Safety Package		
Cortex-M0+ Safety Package		

Training

Arm On-Demand Online Training	Arm on-demand training provides access to a wealth of training content, speeding up silicon development and providing the knowledge you need, when and where you need it. Topics including Arm CPU Architectures, Cortex-M hardware, AMBA bus protocols, Arm tools and models are delivered via over 1000 pieces of content and accompanying knowledge checks. Transcripts for online training are available in Korean, Simplified and Traditional Chinese and Japanese. Contact your account manager for access.	https://developer.arm.com/Training/Arm%20On-demand%20Training%20-%20Flexible%20Access

DesignStart Tier

Product	Description	Learn more about this product
Cortex Processors		
Cortex-M3 Processor	Designed for cost-sensitive and power-constrained solutions in a broad range of devices. Balanced between area, performance, and power. *Reference design & supporting system IP available in Corstone-101.*	https://www.arm.com/products/silicon-ip-cpu/cortex-m/cortex-m3
Cortex-M23 Processor	Smallest and lowest-power microcontroller with Arm TrustZone security, ideal for applications requiring software isolation and security. *Reference design & supporting system IP available in Corstone-102.*	https://www.arm.com/products/silicon-ip-cpu/cortex-m/cortex-m23
Cortex-M0 Processor	Small footprint and high efficiency, ideal for simple, cost-sensitive devices. *Reference design & supporting system IP available in Corstone-101.*	https://www.arm.com/products/silicon-ip-cpu/cortex-m/cortex-m0
Corstone IP		
Cortex processor reference packages and supporting system IP. Simplifies silicon design and reduces time to market.		
Corstone-102	The Arm Corstone-102 provides a flexible reference package and system IP for small, low cost and energy efficient SoC development. Based on the Arm Cortex-M23 processor, the Corstone-102 is targeted at the constrained market segment for secure IoT applications.	https://www.arm.com/products/iot/soc/corstone-102
Corstone-101	The Arm Corstone-101 contains a reference package based on the Cortex-M3, as well as various other system IP components. It provides all of the fundamental system elements to design a SoC around Arm Cortex-M0/Cortex-M0+/Cortex-M3/Cortex-M4 processors.	https://www.arm.com/products/iot/soc/corstone-101

Artisan Physical IP – Free Library Program

for details of the thousands of Physical IP libraries included in the Artisan Physical IP - Free Library Program see https://www.arm.com/products/silicon-ip-physical

	5 nm	7 nm	12 nm	14 nm	22 nm	28 nm	40 nm	45 nm	55 nm	65 nm	80 nm	90 nm	110 nm	130 nm	150 nm	152 nm	160 nm	180 nm	250 nm
TSMC		●	●		●	●	●		●	●	●	●	●	●	●	●	●	●	●
Samsung	●	●		●		●		●		●									
Global Foundries/ IBM			●	●		●	●	●	●	●		●	●	●				●	●
UMC					●	●	●		●	●	●	●		●	●			●	●
SMIC						●	●			●		●	●	●	●			●	
XMC									●										
SK hynix												●							
Silterra													●	●	●			●	
HHGrace													●	●				●	
DB HiTek													●	●				●	
Vanguard													●					●	●
MagnaChip														●				●	
CSMC														●					
TowerJazz														●				●	
HeJian																	●	●	
1st Silicon																		●	●
HHNEC																		●	

DesignStart Training

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