Installing ARC

System Requirements

ARC and Windows 10 compatibility

ARC is designed to be efficient and can run on lower-end PCs using Microsoft Windows 10. However, "efficient" does not mean that minimal hardware is appropriate for every project. Complex or advanced robots that use multiple sensors, high-resolution video, intensive tracking algorithms, or 3D rendering typically require more CPU power, memory, and GPU capability than very low-spec systems provide.

Synthiam supports current Microsoft operating systems and does not maintain compatibility with versions that Microsoft has discontinued. For mainstream support and testing, Windows 10 is the baseline platform for ARC.

Performance

Recommended minimum hardware: an Intel i5 (or equivalent) CPU, 4 GB of RAM, and Windows 10 or later. When available, the ARC 3D Designer and the 3D instruction interface use GPU hardware acceleration to improve responsiveness and rendering performance.

Video processing is often the largest CPU load. High-resolution streams, multiple simultaneous tracking routines, and complex image-processing pipelines increase CPU and GPU usage significantly. Account for these demands when choosing a PC for robotics development and testing.

For guidance on selecting an appropriate PC, see the Getting Started guide.

Compatibility: Does ARC work on Windows 8?

Windows 8 reached the end of mainstream support from Microsoft on January 9, 2019. Unsupported operating systems no longer receive vendor updates or fixes, so many ARC features may not function correctly on Windows 8 or other unsupported Windows releases.

If your computer runs an older version of Windows, we recommend upgrading to Windows 10. Windows 10, released on July 29, 2015, is the primary version Synthiam tests against and supports for mainstream updates; Microsoft has provided upgrade paths from

earlier Windows versions to Windows 10.

New features: ARC depends on modern OS capabilities for speech recognition, speech synthesis, and machine learning. These features are available or optimized only in newer Windows releases.

Bug fixes: Ongoing updates deliver fixes that improve system and application stability. ARC's reliability depends on running with current public updates that Synthiam tests against.

Security updates: Staying on a supported Windows version ensures you receive security patches that protect your system from known vulnerabilities.

Download & Install

ARC for Windows is available from the Products menu on this website. Multiple editions are available, so you can choose the version that best fits your needs for development, runtime use, or evaluation.
[opt:downloads]

ARC Pro (recommended)

ARC Pro provides the full set of ARC features and is the best choice for users who need complete functionality and ongoing updates. Key benefits include:

- Create, publish, and distribute mobile apps for your robot.
- Use unlimited speech recognition commands for advanced voice control.
- Access cloud storage and integrate high-resolution cameras for object detection and computer vision.
- Receive the latest feature updates and bug fixes as they are released.

This is the most popular edition because it combines full capability with continuous maintenance and support.

ARC Free

ARC Free is designed for evaluation and basic projects. Some advanced features are restricted; refer to the feature comparison for details. It is a good option for learning, testing, and small-scale robot applications.

ARC Runtime (Free)

ARC Runtime is intended for running existing robot applications created in either the Free or Pro editions. It loads robot apps without limiting the number of robot skills or speech-recognition commands.
Important: Runtime does not include the Add Control or Config buttons, and it excludes third-party subscription services and cloud features such as Bing Speech Recognition, Cloud Storage, Azure Text-to-Speech, and Cognitive Vision Recognition. Robot skills that rely on these services may require separate subscriptions or developer access.

ARC Mobile (Android & iOS)

The older ARC Mobile edition is no longer receiving updates or bug fixes and has been replaced by ARC-Lite. For on-device control and a modern remote interface, we recommend using the Remote UI feature in ARC-Lite.
ARC Mobile was designed for remote control while on the go, so it had limitations. It could not load third-party robot skills, and many built-in skills were unavailable. If you previously

relied on ARC Mobile, review the Interface Builder robot-skill documentation to confirm which skills are still supported. ARC-Lite is a closer replacement focused on education, although it retains some of the same limitations.
Go to ARC Downloads

Commandline Installation

This document describes command-line installation, uninstallation, and deployment details for managing ARC installations across multiple PCs in schools or enterprise environments. It covers unattended (silent) installs, non-interactive uninstalls, installer options, and the product GUID used by deployment tools.

Install from the command line (unattended)

Use an unattended (silent) installation to install or upgrade ARC across many machines without interactive prompts. This is ideal for scripted, imaged, or centrally managed deployments.

Steps

1. Open an elevated Command Prompt (Run as administrator) and change to the folder that contains the downloaded installer (for example, a USB drive, network share, or mapped drive).
2. Run the installer with the quiet switch to perform a silent install:

```
"ARC Installer.exe" /quiet
```

The installer will run in the background and bypass interactive prompts, which speeds up updates and automated installations.
Tip: Ensure the installer binary is reachable from the target machine and that you have administrative privileges. If deploying over network shares, verify permissions and network connectivity before starting the installation.

Uninstall from the command line

To remove ARC non-interactively, run an elevated (administrator) Command Prompt and invoke the product uninstaller. The legacy WMIC tool can call the uninstall action for the registered product name:

```
WMIC product where name="ARC by Synthiam" call uninstall
```

WMIC queries installed products by their registered display name, so the name must match exactly. WMIC is deprecated on recent Windows versions; if WMIC is unavailable or you prefer a GUID-based uninstall, use msiexec with the product code (see the Product Code section):

```
msiexec /x {281E4CB7-6897-44DF-A347-1C28741536CF} /qn
```

Note: /qn performs a quiet uninstall. Verify that the GUID matches the installed package on your systems before running msiexec remotely or in scripts.

Installer options

The installer accepts additional command-line parameters for automation and customization. To view the full list of supported options and switches, run the installer with the /? parameter from a command prompt:

```
"ARC Installer.exe" /?
```

Example: running the installer with /? displays available switches, logging options, and other automation parameters.
Use the listed switches to tailor installations at scale — for example, to specify silent install behavior, enable logging, or set custom installation targets. Include logging options when

deploying broadly so you can capture and review any errors.

Product code (GUID) for deployment tools

When deploying ARC with Microsoft System Center Configuration Manager (SCCM) or similar tools, use the product code (GUID) to detect whether ARC is installed and to target upgrades or removals reliably.
ARC product code: `281E4CB7-6897-44DF-A347-1C28741536CF`
SCCM and other deployment systems rely on this GUID to determine installation state, perform detection rules, and execute install/uninstall actions. Use the GUID in scripts or detection queries to avoid relying on display names.

Uninstall ARC

If ARC is behaving unexpectedly, a clean reinstall often resolves the issue. The recommended process is: uninstall ARC, restart the PC to release any in-use files, download the latest ARC installer, and then reinstall. Follow the steps below to perform a clean uninstall and reinstall.

Uninstall ARC (Windows Settings)

1. Right-click the Start menu icon to open the Quick Access menu.

   Open the Quick Access menu by right-clicking the Start icon.

2. Select **Apps and Features** from the menu to view installed applications.

   Choose Apps and Features to manage installed programs.

3. In the Apps list, locate **Synthiam ARC** and click the entry to expand its options.

   Find Synthiam ARC among the installed applications.

4. Click **Uninstall** and follow any prompts to remove ARC from the system.

   Select Uninstall to start the removal process.

5. Restart your PC. Rebooting helps Windows release files that may be in use so they can be fully removed.

Restart the computer to ensure all ARC files are released.

6. Download and install the latest ARC installer. Get the most recent version from HERE. Choose the edition you use (ARC Free or ARC Pro) and run the installer.

   Download the current ARC installer from the Products/ARC page.

Uninstall from the Command Line

You can uninstall ARC using WMIC from an elevated Command Prompt (run CMD as Administrator). Enter the command below and follow any prompts:

```
WMIC product where name="ARC by Synthiam" call uninstall
```

Note: WMIC may take a moment to list and remove the product. If WMIC does not find the product, use the Windows Settings method above or see the complete removal instructions linked below.

Completely Remove All ARC Components

If you need to remove every trace of ARC (configuration files, registry entries, and leftover folders), follow the complete removal guide: Complete ARC Removal Guide.

Folders & Registry

Where ARC stores files and how to perform a clean uninstall

ARC installs program files and creates folders for shared assets and per-user projects. The locations below explain what is stored where and which items you can remove to fully uninstall ARC.

Overview

ARC separates its files into three categories:

- **Application installation:** the main program executable and libraries the system uses to run ARC.
- **Shared program data:** assets, example projects, skills, and 3D files available to every user on the machine.
- **Per-user personal data:** each Windows account has its own ARC projects and configuration stored in that user's Documents folder.

Registry settings are stored per user so each account can keep independent preferences (theme, editor selection, window layout, and other persistent options).

Folders

The primary ARC folders you may encounter are listed below. Removing these will help you achieve a clean uninstall. Some locations require administrator rights to modify.

- Application installation

  This folder contains the ARC executable and the runtime libraries. It is installed under the Program Files area and typically requires administrator permissions to change or remove.

  Typical path:

  `%ProgramFiles(x86)%\Synthiam Inc\ARC by Synthiam`

(e.g. C:\Program Files (x86)\Synthiam Inc\ARC by Synthiam)

Tip: Use "Add or remove programs" in Windows Settings to uninstall the application first, then remove this folder only if any files remain.

- Program Data (shared assets)

  This shared folder stores downloaded robot skills, example projects, 3D design files, and other assets available to all users on the computer. The ProgramData folder is hidden by default in Windows; you can access it by entering %ProgramData% in File Explorer's address bar.

  Typical path:

  %ProgramData%\Synthiam Inc\ARC by Synthiam
(e.g. C:\ProgramData\Synthiam Inc\ARC by Synthiam)

  Remove this folder to clear shared examples and downloaded assets. Administrator permission is usually required.

- Personal Data (per-user)

  Each Windows user account has an ARC folder inside that user's Documents directory. This contains projects, user-created skills, logs, and other personal configuration files. Deleting this folder will remove that user's projects and settings.

  Typical path (per user):

  C:\Users\<username>\Documents\ARC

  If multiple user accounts exist on the computer, repeat this step for each account whose data you want to remove.

Windows Registry

ARC stores per-user configuration in the Windows registry. These entries include the color theme, default code editor, UI preferences, and other persistent settings. Removing the registry keys will clear that user's ARC preferences.

Registry key (per user):

```
Computer\HKEY_CURRENT_USER\SOFTWARE\ARC by Synthiam
```

View steps to reset ARC user registry

Important: Editing the registry can affect Windows and other programs. Back up the registry (export the key) before deleting anything, and use the built-in support steps when possible.

Steps for a clean uninstall

Follow these recommended steps to completely remove ARC from a Windows machine. Only perform registry and Program Files deletions if you understand the risks and have backups.

1. Uninstall ARC using Windows Settings > Apps > Apps & features (or Control Panel > Programs and Features).
2. Delete the installation folder if it remains: `C:\Program Files (x86)\Synthiam Inc\ARC by Synthiam`. Administrator rights are required.
3. Remove the shared program data folder: `C:\ProgramData\Synthiam Inc\ARC by Synthiam`. This deletes shared examples and downloaded skills.
4. Remove per-user data from each account that should be cleared: `C:\Users\<username>\Documents\ARC`. This deletes projects and personal settings for that user.
5. If desired, remove the user registry key: `HKEY_CURRENT_USER\SOFTWARE\ARC by Synthiam`. Export the key first as a backup, then delete it with regedit or follow the support page instructions.
6. Restart the computer to ensure all changes are applied and any locked files are

released.
If you are unsure about any step, consult the support article linked above or contact Synthiam support for guidance.
Note: Deleting folders or registry keys is permanent and may remove important project data. Back up any files or export registry keys you might need before removing them.

Internet Access Requirements

Information for IT departments, educators, and network administrators

Why ARC Needs Internet Access

Synthiam ARC uses secure cloud services to provide licensing, software updates, project synchronization, and many optional robot skills that rely on online AI or data services. These cloud connections help ARC remain up to date, operate safely, and deliver the most reliable robotics experience.

ARC does not browse unrelated websites or share data with advertisers. Internet access is limited to connections required for ARC features to function. Many robot operations will continue to work offline, but cloud-dependent features (skills, authentication, syncing, and updates) will be limited or unavailable without network access.

What is a Firewall and Why It Matters?

A firewall is a network security system used by schools, companies, and other organizations to control what traffic is allowed into and out of the network. It helps block malicious sites, malware, and unauthorized connections.

Some firewalls block **outgoing** connections (traffic originating inside the network). Even when normal web browsing works, ARC may be unable to reach its required servers unless those destinations are explicitly permitted by the network policy.

If ARC cannot contact its servers, cloud skills may fail to load or authenticate, licensing may not validate, and update or sync services may appear offline. In most cases, IT teams only need to allow ARC's outbound HTTPS connections to restore functionality.

Required Server Access

ARC requires outbound HTTPS (SSL/TLS) connections over **TCP port 443** to the following hosts:

- **https://synthiam.com** — Port 443
- **https://admin.synthiam.com** — Port 443

These endpoints provide licensing, authentication, cloud project synchronization, robot skill management,
and software updates. All communication is encrypted using standard SSL/TLS.

Access Requirements for Cloud-Based Robot Skills

Many optional robot skills connect to third-party cloud AI providers. Examples include:

- OpenAI (ChatGPT and related APIs)
- Azure Cognitive Services
- Google Cloud AI
- Amazon Web Services (AI/ML services)

If these external connections are blocked by network controls, the corresponding cloud skills will not
load or authenticate. IT administrators may need to allow outbound HTTPS access to the specific provider
domains used by installed skills.

Firewall and Network Considerations

Educational institutions and corporate networks commonly restrict outbound traffic. To ensure ARC operates
correctly, IT staff may need to permit outgoing HTTPS connections to:

- **synthiam.com**
- **admin.synthiam.com**
- Any external cloud AI providers used by installed robot skills

Additional considerations

- **SSL inspection / Deep Packet Inspection:**
  Devices that intercept or re-sign SSL/TLS traffic can break ARC's secure connections. If SSL inspection
  is enabled, allow exceptions for the Synthiam endpoints or disable inspection for those hosts.

- **DNS filtering:**
  Security filters (for example, Cisco Umbrella, Fortinet, or Palo Alto) may block required domains unless
  they are whitelisted.

- **Captive portals / Guest Wi-Fi:**
  Guest networks that require web-based login or isolate devices may prevent ARC from connecting to its servers.
  Use an authenticated network or provide exceptions as needed.

- **Proxies:**

ARC follows the host operating system’s proxy settings. Authenticated proxies must be configured at the OS
level so ARC can use them; unauthenticated forward proxies typically work without additional configuration.

- **Offline operation:**
  Local robot control generally continues to work without internet, but cloud skills, online licensing, updates,
  and project synchronization require outbound access.

Summary

To enable full functionality, Synthiam ARC requires outbound HTTPS access to its secure servers (TCP port 443).
Cloud-enabled robot skills may require additional access to the service providers they use. In restricted
network environments, IT administrators should allow the hosts listed above and consider exceptions for
SSL inspection, DNS filtering, captive portals, and proxy authentication.

With appropriate network configuration, ARC will operate reliably and cloud-based skills will function as intended.

Updating ARC

ARC updates

Periodically, ARC is updated with new features, bug fixes, and security patches. ARC is distributed through three separate channels, each updated on its own schedule.

How to update

When a new ARC update for Windows is available, a notification is shown at application startup. The notification displays the latest version information and several actions: update immediately, postpone the notification for a chosen period, or view the release notes to review what changed in the update.
Example update notification. The numbered items correspond to the actions described below.

1. **Update now:** Automatically download and install the latest ARC version.
2. **Skip for later:** Choose a timeframe to postpone the update notification.
3. **Confirm skip:** Acknowledge skipping updates for the specified period.
4. **View release notes:** Open the release notes to see included features, bug fixes, and security changes.

Delaying update notices

You may delay the update notification for up to six months. Be aware that waiting this long can increase the risk that ARC could stop functioning if an update depends on third-party resources or other external dependencies that change during the delay.
Important: The Teams edition receives only mandatory updates and will only be updated when a required fix or security patch is necessary.

ARC Subscription Plans & Licensing

Overview

ARC Subscription Summary

ARC undergoes continued development with new features and bug fixes to lead the robot industry.
To make this possible, a subscription model compensates programmers, hardware for implementation, and web/cloud servers.
We are happy to have you supporting our platform development by becoming an ARC Pro subscriber.
Thank you!

ARC Editions

ARC Pro (recommended)

Unlock all ARC features with the Pro edition. Create mobile apps, unlimited speech recognition commands, cloud storage, high-resolution cameras for object detection, and more.
This is the most popular installation of ARC because it also receives the latest updates and bug fixes.

ARC Free

Either Pro or free users can use teams & Free. The main difference between Teams and Pro is the update cycle. Most schools will choose this edition because it is updated only every 6-12 months.
The downside to this edition is that it takes longer to experience fixes and new features.

ARC Runtime (Free)

The runtime edition allows loading any robot apps, whether created by free or Pro edition. This edition has no limitations to the number of robot skills, speech recognition, etc.
This edition is meant to run existing robot applications created for your robot. One noticeable difference with this edition is the lack of Add Control and Config buttons.
Your project can be loaded, and the pre-programmed functionality can be used by yourself or anyone else. Read more about ARC Runtime on this page.

ARC Mobile (Android & iOS)

This edition is no longer supported for updates and fixes. We recommend using the new Remote UI feature.
The Mobile edition of ARC was created for on-the-go remote control of robots and is therefore limited in functionality.
The mobile edition does not contain the ability to load 3rd party robot skills, and many built-

in skills are unavailable.
Review the Interface Builder robot skill manual to see what skills are available.

Go to ARC Downloads

ARC Runtime Edition

Have you finished building a robot app or want to run an existing robot app with no limitations? The runtime edition of ARC is designed for completed robots in which development is no longer required.
If development is no longer necessary, then you are no longer required to need a subscription. This version of ARC runs existing projects with no limitations.

The runtime edition allows loading any robot apps, whether created by free or Pro edition. This edition has no limitations to the number of robot skills, speech recognition, etc. This edition is meant to run existing robot applications created for your robot. One noticeable difference with this edition is the lack of Add Control and Config buttons. Your project can be loaded, and the pre-programmed functionality can be used by yourself or anyone else.

Updating

The ARC Runtime edition receives the same update schedule and bug-fix priority as the ARC Pro edition.

Downloading ARC Runtime

The ARC Runtime is available for download on the ARC Downloads page. See the screenshot below that highlights the ARC Runtime edition available for download.

Limitations

ARC Runtime does not provide development interfaces for your robot project. This means you cannot add robot skills to the project. Saving and configuring robot skills is also disabled.
The Blockly and Roboscratch interfaces enable you to create small programs with the existing robot skill configuration.
Any robot skills that require a subscription for online services, such as Bing Speech Recognition or Vision, will still need a subscription in ARC Runtime.
If you are distributing a robot to others, the available features of ARC Runtime make it possible for them to experiment with and use your robot product.

Additional ARC Editions

There are three editions of ARC available, which are documented on this page.

Earn Credit

At Synthiam, our community members embody the spirit of generosity and collaboration. Whether they share their expertise, assist fellow members, or actively engage in our vibrant online forums, their selfless contributions don't go unnoticed. In recognition of these invaluable efforts, we present Synthiam Credits as a token of appreciation. These credits open doors to enhancing your ARC Pro subscription or indulging in some stylish Synthiam Swag, adding even more value to your experience!

Earn Synthiam Credit

Reward yourself for doing the right things, as Synthiam proudly provides multiple pathways to earn credits. Seize the opportunity to accumulate credits through various achievements, paving the way for an affordable ARC Pro subscription or acquiring coveted Synthiam Swag products. Your contributions matter; we believe in rewarding your commitment to our thriving community.

Access the Synthiam Credit page by selecting the account from the top-right of the webpage and selecting Credit, or select this link: Earn Credit - Synthiam

- View your credit balance
- See different activities to earn credit
- Access details about your Referral Program settings
- View your history of receiving credits
- FAQ about how the Synthiam Credits work.

Am I Locked In

You may be wondering if you build a robot with Synthiam ARC, will you have to pay a subscription fee forever to use the robot? Well, the answer is no - because that would be rude of us :). Once your robot is built and programmed, we have an edition of ARC named Runtime. You can use that edition forever to power your robot at no cost, except for 3rd party services (ie cognitive services).

Your ARC subscription can be canceled at any time. An ARC subscription will subscribe you to a recurring monthly or yearly payment plan to use unlocked features of the platform. We will email you seven days before your next billing cycle to notify you that the renewal payment will be billed automatically.
You can cancel the subscription and prevent automatic billing of the subscription schedule.

As a recap, you only need an ARC subscription to program/edit/create robot projects. Once your robot project is complete, cancel your ARC subscription and install the ARC Runtime edition.
The ARC Runtime edition will run any robot project in read-only mode.
ARC Runtime edition allows your robot to live on forever!

Go to ARC Downloads to get ARC Runtime

Terminology

Definition of terms that are mentioned in the ARC licensing system:

Subscription - A per-seat license model with a monthly/annual payment to unlock all features of the ARC Software.

Seat (license) - The number of available seats within a subscription. Each seat is specific to a PC and can be managed on the subscription account page.

Associated Account - Additional Synthiam accounts can share your Subscription and assign your seats to their computers. You can view what account the seats have been assigned to on the subscription account page.

Premium Support - Direct access to ARC robot support experts to solve your programming challenge. Your tickets are given priority attention.

Payment

The payment screen has two options for payment. Using #1 & #2 highlighted above, you can enter the credit card or visa debit card details. Option #3 allows additional payment options directly through our financial provider.
Please note: to use Apple Pay or Google Pay, you must log in and use one of those devices during checkout. The device is connected to the payment system, and therefore you checkout in a web browser on that device.

The Check-out Process

1) Visit the ARC product page.
2) Click the View Plans button to view ARC Pro subscription plans.
3) Select the duration of the subscription plan. Note that there's a 10% discount for an annual subscription.
4) Select how many seats (licenses) you would like for your ARC subscription. The default pricing is for 2. That means ARC will be able to run on two different machines simultaneously.
5) Click the "continue to purchase" button.
6) Login or Register a new account.
6) Select your payment method (*PayPal, Apple Pay, Microsoft Pay, Google Pay, or Credit Card*).
7) Checkout.
8) Enjoy the benefits of your ARC Pro subscription!

*Note: Once the payment is processed, the Subscription may take up to 5 minutes before ARC can authenticate. Additionally, the "Pro Member" community status label may take up to 1 hour to update.

Activate PC (assign seat)

ARC Pro subscriptions are assigned to computers and are called Seat Licensing. When loading ARC Pro on a computer for the first time, you will be prompted to activate a seat for that particular computer. Press the "activate" button and a seat license will be applied to the

computer.

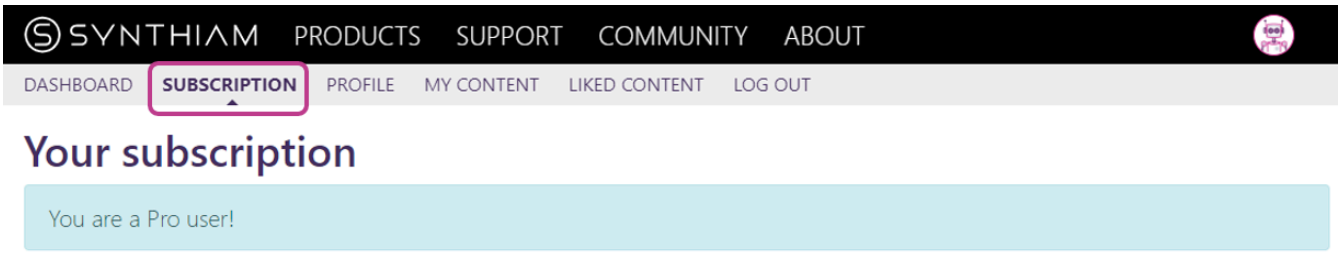
Managing Seats

View your subscription portal by pressing the Account option in the top right, and selecting Subscriptions from the menu. Here, you can view your subscription activity and manage seats assigned to the license.
The name of each computer is displayed. Pressing the Revoke button will remove the computer from the license.
Steps - manage seats from a web browser

1. In ARC on the main PC, open the Help tab click Manage Subscription.This opens your subscription portal. (You can also open the portal directly at: https://synthiam.com/Account/Subscription)
2. Sign in with the account that owns the subscription.
3. In the subscription portal you will see a list of assigned seats (computer names).Locate the main PC entry that is currently consuming a seat.
4. Click the Revoke / Release Seat Token button for that computer to free its seat.The seat is immediately released and becomes available to activate on another machine.

Manage Subscription

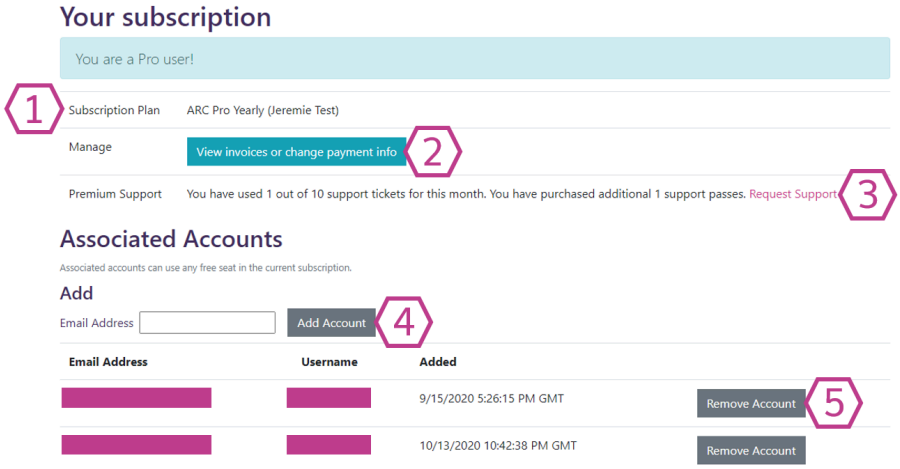
Use the subscription portal under your account settings to manage your ARC subscription on the website.

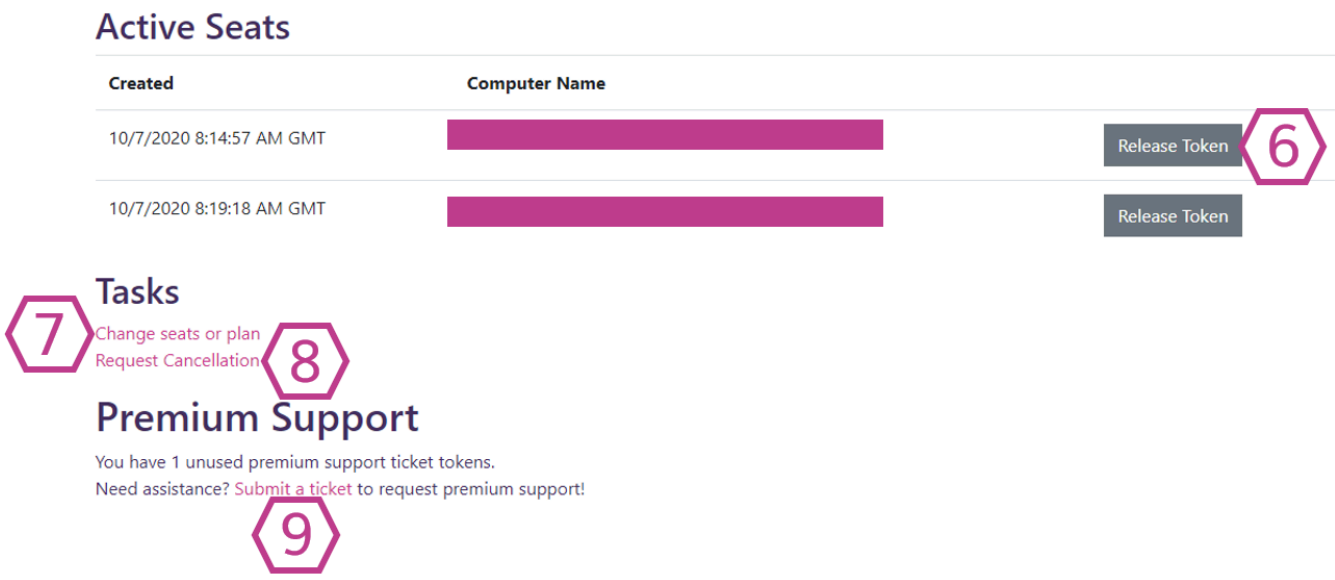


Subscription Portal

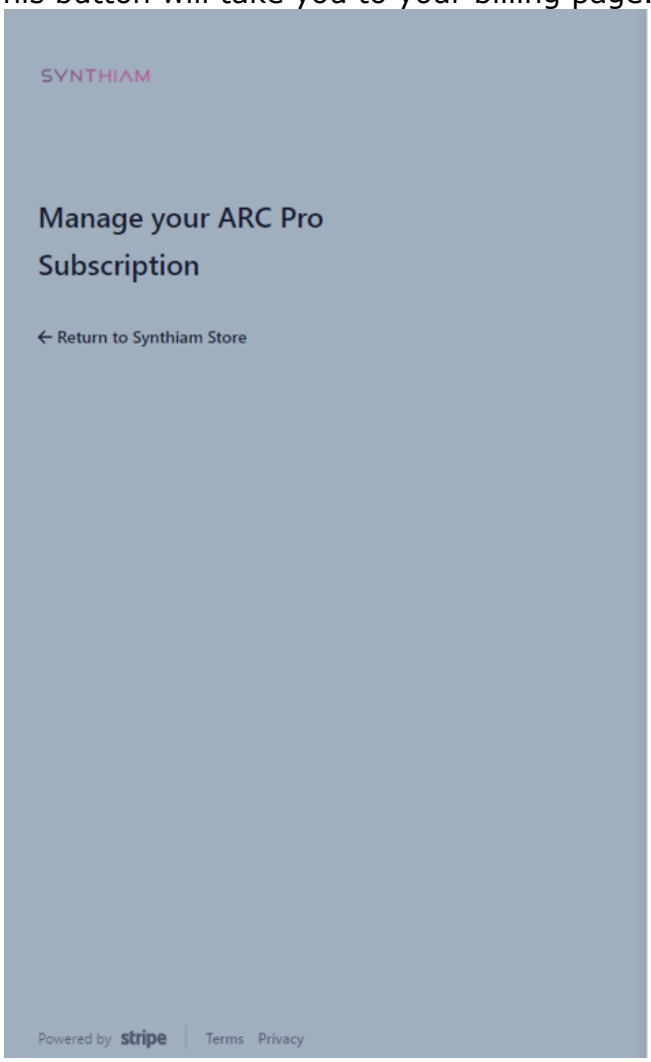
Within ARC, you can manage ARC subscriptions using the Help tab in ARC and clicking the "Manage Subscription" button.

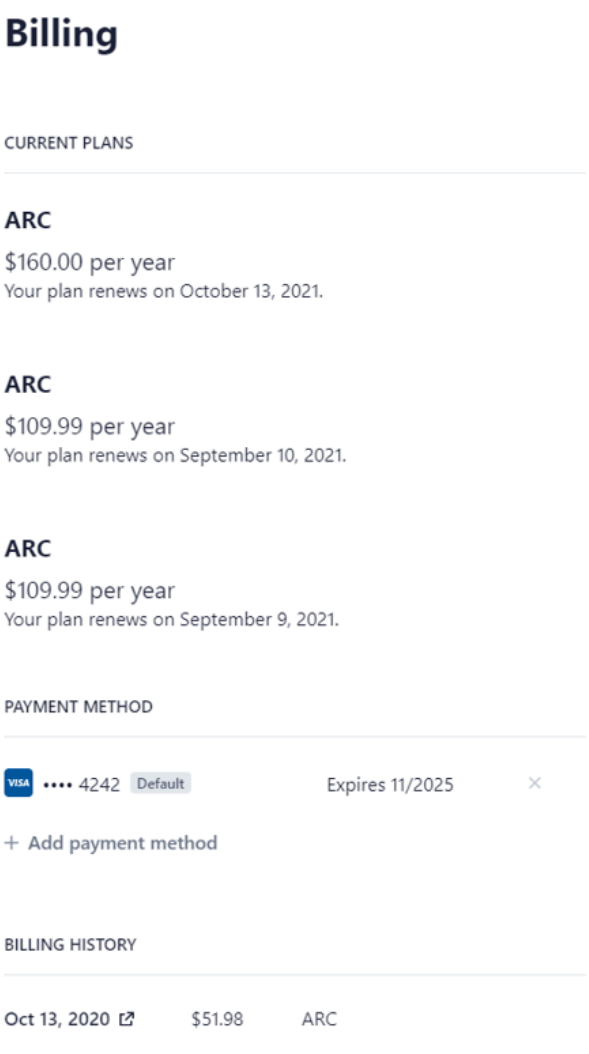
From the subscription portal, you can manage several things:





1. Your Subscription Plan
Your Subscription plan shows how many seats you have subscribed to under your account. Your plan is always adjustable (via the Product page) if you want to add or remove seats from your Subscription.
2. View invoices or change payment info Button
This button will take you to your billing page.





Here you can see the plans you have subscribed to, view your payment methods (and add a new one), and view your billing history.

4. Add Associated Account Button
This button lets you add other people or email addresses as associated accounts to use your subscription seats.
5. Remove Associated Account Button(s)
These buttons let you remove associated accounts from your Subscription. This will terminate the access of these accounts to your Subscription.

6. Release Seat Token Button(s)
These buttons will allow you to remove a seat token that your account or an associated account has activated. Each claimed token will take an available subscription seat.
7. Change Seats or Plan Link
Pressing this link will take you to the Plan page to change your Subscription. However, you cannot change your plan or seat count online. You will be directed to contact us, and we will make the appropriate changes manually for you.
8. Cancel Unsubscribe from Subscription
This link will take you to the Cancellation page to allow you to cancel or unsubscribe from your Subscription. If you are considering cancellation, don't hesitate to contact us before you go. If the cost is too high, we can always work something out. We want to ensure you always have a positive experience and continue making the world a better place through robotics!

Activating & License Cache

Force Activate Subscription

If using ARC Teams, you can force a subscription update. Otherwise, you will not be prompted for a subscription until a project is loaded that exceeds the Free edition requirements. By doing this, it will remove the upgrade advertising banners.

License Cache

ARC stores a local subscription license cache on the file system, so you may load the software without an internet connection. The cache license file is valid for 14 days before requiring renewal.
The ARC option preference "*Enable Auto Subscription Refresh*" is enabled by default, which refreshes the local cache every hour when an internet connection is available.
Use the "*Refresh Subscription Cache*" button to force refreshing to ensure your ARC local subscription cache is updated.
Moving the subscription cache to update is helpful in preparation before using a robot without an internet connection for an extended period.
However, if a computer will never have internet connectivity, consider using the ARC Runtime edition.

The subscription cache will be automatically updated when there is an internet connection. The ARC "Enable Auto Subscription Refresh" option is enabled by default. To change this setting, visit the Options -> Preferences menu.

Learn More About ARC Editions

There are occasions when an internet connection is not available for some users. Using ARC without an internet connection will depend on the type of EZB used with ARC. Some EZB's, such as EZ-Robot EZB controllers, support WiFi connectivity.
A computer with a single WiFi adapter may not have an internet connection when connected to the EZ-Robot controller.
If using a WiFi EZB, consider adding a second USB WiFi adapter or ethernet internet connectivity.
Many Robot Skills also require internet connectivity.
Controllers that support USB, such as Arduino, do not need a WiFi adapter and maintain the PC's internet connectivity.

View ARC Compatible EZB Controllers

COPPA Compliance

You have joined a powerful robot software platform supported by a friendly and knowledgeable community. Synthiam provides tools and services for hobbyists, educators, and businesses, and is designed to be a dependable resource for home, classroom, and commercial use.
Please use Synthiam Community and Cloud Services in accordance with our Terms of Use and all applicable laws. Synthiam is committed to protecting the privacy and safety of all users.
Why Synthiam ARC For Your School

Education Use and Privacy Controls

Synthiam is widely used in educational environments and has been deployed in schools in more than 80 countries. We take user privacy seriously and provide account controls that limit which features can access community and cloud services based on age and privacy requirements.
Whether community and cloud features can be enabled depends on age to comply with the Children's Online Privacy Protection Act (COPPA). This determines what information an account holder may create and make publicly available on the platform.
By default, the platform collects only crash and debug reports related to the software. These reports do not contain personal information. Any other information stored on Synthiam's platform is added intentionally by the user, such as by enabling Community access, confirming they are 13 or older, and manually posting content to the forum.

Sample Account Activation Email

When an account is created through the website, ARC, or the mobile app, the registered email address receives an activation message. The email explains two activation choices so the account holder can choose how the account will interact with Synthiam's cloud and community features.
Example activation email showing separate links to enable cloud services and to enable community access.

Choosing an Activation Option

The two activation options are based on the account holder's age and COPPA compliance. Select the option that matches the user's age and privacy preferences.

1. **For users 12 years old and under — Activate cloud services only.** Cloud access allows saving ARC projects, viewing saved project history, and using cloud-based cognitive services such as vision processing, emotion detection, printed-text recognition, and

speech recognition. Cloud access does not allow posting to the public forum or sharing content publicly. To enable these cloud features without community access, click the cloud services activation link in the email.
2. **For users 13 years old and over — Activate cloud services and community access.** This option enables both cloud services and access to the community forum. Community access lets you ask questions, share projects and robot skills, earn community credits, and participate in discussions. Community credits can be applied toward ARC Pro subscriptions and merchandise. Community access is strictly prohibited for anyone under 13. Do not activate community access if the account holder is under 13 or does not agree to the Synthiam community requirements and Terms of Use.

Accessibility WCAG Conformance Report

Synthiam Accessibility Conformance Report

WCAG Edition
Based on VPAT® Version 2.5Rev

> **Note:** Download a PDF copy for offline viewing here.

Product Information

Name of Product / Version: Synthiam ARC Teams / Pro / Free (v2026.02.21.00+)
Report Date: March 6, 2026

Product Description

Synthiam ARC (Autonomous Robot Control) Desktop is a robotics development environment for programming, controlling, and interacting with robots. It includes a visual programming editor, scripting capabilities, and extensive hardware integration to support development workflows and robot operation.

Contact Information

- hello@synthiam.com
- +1-587-800-3430
- https://synthiam.com/About/Contact

Notes

Synthiam ARC Desktop provides extensive documentation, including manual pages for features and robot skills, written instructions, and instructional videos. The application supports configurable themes and respects Windows display scaling to improve accessibility. The interface supports keyboard navigation, touchscreen interaction, and Windows screen readers such as Narrator.
Synthiam welcomes accessibility feedback. If you encounter barriers while using ARC, please contact Synthiam support at hello@synthiam.com. We will work with users to provide reasonable accommodations and improve accessibility in future updates.

Evaluation Methods Used

The evaluation of Synthiam ARC Desktop combined manual testing and automated accessibility scanning. Testing focused on common user workflows (project editing, robot control, Blockly programming, and general navigation) and included the following methods:

- Manual keyboard navigation testing
- Review of UI labeling and control accessibility
- Hover-over detailed descriptions for options
- Automated accessibility scanning tools
- Verification with Windows Narrator screen reader

- Inspection of UI components used by the application framework
- Review of color contrast and visual indicators

Applicable Standards / Guidelines

This report covers the degree of conformance with the following accessibility standards and guidelines:

Standard / Guideline	Included in Report
Web Content Accessibility Guidelines 2.0	Level A — **Yes** Level AA — **Yes** Level AAA — **No**
Web Content Accessibility Guidelines 2.1	Level A — **Yes** Level AA — **Yes** Level AAA — **No**
Web Content Accessibility Guidelines 2.2	Level A — **Yes** Level AA — **Yes** Level AAA — **No**

Terms

The terms used in the conformance information are defined as follows:

- **Supports:** Functionality meets the criterion without known defects or provides an equivalent facilitation.
- **Partially Supports:** Some functionality meets the criterion, but other parts do not.
- **Does Not Support:** The majority of functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product was not evaluated against the criterion (used only for WCAG Level AAA criteria).

WCAG 2.x Report

When reporting conformance with WCAG 2.x Success Criteria, conformance is scoped for full pages, complete processes, and accessibility-supported ways of using technology as described in the WCAG 2.0 Conformance Requirements.

Table 1: Success Criteria — Level A

Notes are provided in the Remarks and Explanations column to clarify the evaluation outcome for each criterion.

Criteria	Conformance Level	Remarks and Explanations
1.1.1 Non-text Content (Level A)	Partially Supports	Images, icons, and robot visualizations typically include descriptive labels or hover-help. Documentation pages include explanations and videos. Some graphical elements within robot visualization areas do not yet provide equivalent alternative text.
1.2.1 Audio-only and Video-only (Prerecorded) (Level A)	Not Applicable	The software does not provide standalone prerecorded audio-only or

		video-only media. Instructional videos are supplemental and hosted on documentation pages.
1.2.2 Captions (Prerecorded) (Level A)	Partially Supports	Most instructional videos include captions where the hosting platform provides them. Caption availability depends on the video host.
1.2.3 Audio Description or Media Alternative (Prerecorded) (Level A)	Not Applicable	ARC Desktop does not depend on prerecorded video content for core functionality.
1.3.1 Info and Relationships (Level A)	Supports	UI elements are organized into clearly labeled groups and windows with descriptive titles and hover-help descriptions.
1.3.2 Meaningful Sequence (Level A)	Supports	Navigation through dialogs and configuration pages follows a logical order supporting sequential workflows.
1.3.3 Sensory Characteristics (Level A)	Supports	Instructions do not rely solely on color or other sensory cues; labels and documentation links clarify required actions.
1.4.1 Use of Color (Level A)	Supports	Color is not the only means of conveying information. Text labels, icons, and descriptive help accompany color-coded elements. Themes include higher-contrast options.
1.4.2 Audio Control (Level A)	Not Applicable	The application does not automatically play audio longer than three seconds.
2.1.1 Keyboard (Level A)	Supports	The software supports keyboard navigation for dialogs and controls. Touchscreen interaction is also supported.
2.1.2 No Keyboard Trap (Level A)	Supports	Users can enter and exit interface elements using standard keyboard controls without becoming trapped.
2.1.4 Character Key Shortcuts (Level A 2.1 & 2.2)	Supports	Single-key shortcuts are limited and do not interfere

		with assistive technology usage.
2.2.1 Timing Adjustable (Level A)	Supports	Most interactions and configuration workflows do not rely on time-limited input.
2.2.2 Pause, Stop, Hide (Level A)	Supports	Animated or continuously updating interface elements (e.g., robot status) can be paused by stopping robot activity or closing the related window.
2.3.1 Three Flashes or Below Threshold (Level A)	Supports	The software does not use flashing elements that would violate this criterion.
2.4.1 Bypass Blocks (Level A)	Supports	Navigation allows users to move directly between windows and functional sections.
2.4.2 Page Titled (Level A)	Supports	Configuration windows and dialogs contain descriptive titles indicating their purpose.
2.4.3 Focus Order (Level A)	Supports	Navigation order follows the logical layout and grouping of controls.
2.4.4 Link Purpose (In Context) (Level A)	Supports	Documentation and help links include descriptive labels that indicate their destination.
2.5.1 Pointer Gestures (Level A 2.1 & 2.2)	Supports	Mouse and touch interactions do not require complex gestures.
2.5.2 Pointer Cancellation (Level A 2.1 & 2.2)	Supports	Mouse and touch actions can be canceled or adjusted before committing.
2.5.3 Label in Name (Level A 2.1 & 2.2)	Supports	Most controls include visible labels that match the programmatic accessible name.
2.5.4 Motion Actuation (Level A 2.1 & 2.2)	Not Applicable	The software does not rely on motion gestures for operation.
3.1.1 Language of Page (Level A)	Supports	The application interface is provided in English.
3.2.1 On Focus (Level A)	Supports	Interface elements do not trigger unexpected actions

		when receiving focus.
3.2.2 On Input (Level A)	Supports	User input does not unexpectedly change context.
3.2.6 Consistent Help (Level A 2.2 only)	Supports	Help icons and documentation links are consistently placed throughout the interface.
3.3.1 Error Identification (Level A)	Supports	Status messages, popups, and debug logs provide feedback about errors and system status.
3.3.2 Labels or Instructions (Level A)	Supports	Configuration fields include descriptive labels and hover-help with detailed instructions.
3.3.7 Redundant Entry (Level A 2.2 only)	Supports	Settings are grouped and user configuration values are retained to minimize repeated entry.
4.1.1 Parsing (Level A) WCAG 2.0 and 2.1 — Always answer "Supports"; WCAG 2.2 — not applicable	Supports	For WCAG 2.0 and 2.1, editorial errata indicate this criterion is always supported. See the WCAG errata links for details.
4.1.2 Name, Role, Value (Level A)	Supports	UI controls expose descriptive names, roles, and values for assistive technologies.

Table 2: Success Criteria — Level AA

Notes are provided in the Remarks and Explanations column to clarify the evaluation outcome for each criterion.

Criteria	Conformance Level	Remarks and Explanations
1.2.4 Captions (Live) (Level AA)	Not Applicable	ARC Desktop does not provide live streaming media.
1.2.5 Audio Description (Prerecorded) (Level AA)	Not Applicable	Operation of the software does not depend on prerecorded video content.
1.3.4 Orientation (Level AA 2.1 & 2.2)	Supports	The application supports standard and scaled display configurations and adapts to system display settings (e.g., Windows DPI scaling).
1.3.5 Identify Input Purpose	Supports	Form inputs include

(Level AA 2.1 & 2.2)		descriptive labels and contextual help to identify their purpose.
1.4.3 Contrast (Minimum) (Level AA)	Supports	The application supports configurable themes, including high-contrast themes or custom color schemes to improve visibility.
1.4.4 Resize Text (Level AA)	Supports	The interface respects Windows DPI and text scaling settings so users can enlarge text and interface elements (commonly up to 200% or more depending on system configuration).
1.4.5 Images of Text (Level AA)	Supports	Text is rendered using system fonts rather than images of text.
1.4.10 Reflow (Level AA 2.1 & 2.2)	Partially Supports	The application is optimized for standard desktop resolutions (e.g., 1080p). Interface scaling is supported through Windows DPI scaling, but there may be scenarios that require additional reflow optimization.
1.4.11 Non-text Contrast (Level AA 2.1 & 2.2)	Supports	UI elements provide sufficient contrast and can be adjusted through built-in theme settings.
1.4.12 Text Spacing (Level AA 2.1 & 2.2)	Supports	Spacing and text size scale with system DPI settings.
1.4.13 Content on Hover or Focus (Level AA 2.1 & 2.2)	Supports	Detailed help descriptions are available via hover-over help icons throughout the interface.
2.4.5 Multiple Ways (Level AA)	Supports	Users can navigate using menus, window lists, documentation links, and search features.
2.4.6 Headings and Labels (Level AA)	Supports	Settings are grouped under descriptive headings to aid navigation and comprehension.
2.4.7 Focus Visible (Level AA)	Supports	The active interface element is visually highlighted to indicate focus.

2.4.11 Focus Not Obscured (Minimum) (Level AA 2.2 only)	Supports	Interface focus is maintained within visible windows and is not obscured by other content.
2.5.7 Dragging Movements (Level AA 2.2 only)	Supports	Dragging is not required for most configuration workflows; alternative controls are available.
2.5.8 Target Size (Minimum) (Level AA 2.2 only)	Supports	Control sizes scale with Windows display scaling and are designed for both mouse and touchscreen interaction.
3.1.2 Language of Parts (Level AA)	Supports	The application interface uses consistent language throughout.
3.2.3 Consistent Navigation (Level AA)	Supports	Navigation patterns remain consistent across the application.
3.2.4 Consistent Identification (Level AA)	Supports	Controls and icons maintain consistent meaning throughout the application.
3.3.3 Error Suggestion (Level AA)	Supports	Status messages and debug logs provide helpful information to resolve issues.
3.3.4 Error Prevention (Legal, Financial, Data) (Level AA)	Supports	Confirmation dialogs and validation help prevent unintended changes to critical data.
3.3.8 Accessible Authentication (Minimum) (Level AA 2.2 only)	Supports	The login process uses standard email/password authentication with labeled fields, keyboard navigation, screen-reader support, and password manager autofill. Sessions may be remembered to reduce repeated credential entry. No CAPTCHA or puzzle-based steps are required.
4.1.3 Status Messages (Level AA 2.1 & 2.2)	Supports	System status messages and debug logs provide continuous feedback on system activity and changes.

Legal Disclaimer

This Accessibility Conformance Report is provided for informational purposes only and reflects Synthiam's assessment of the product at the time of publication. For official licensing, terms, conditions, and privacy information, see: https://synthiam.com/Legal/Terms.

Education Purchase Information

There may be grants and funding programs available through your ministry to support STEM purchases for educational institutions. Some grants require applications to qualify.
Synthiam has trained staff who can work with your team on grant applications to help reduce ARC subscription costs.
In addition, some schools require a product presentation to demonstrate capabilities to decision-makers.
Synthiam is always happy to provide demos of our software and its educational value in robotics and programming literacy.

Why Synthiam ARC For Your School

Volume License Discounts

Synthiam is a leading robot software platform, and we want to ensure your students have access to the best tools for learning robotics and programming literacy.
Our team will work with you to arrange a volume license that fits your budget. If you are considering an ARC volume subscription, we can provide a trial and assign an associate to understand your requirements for volume usage.

Synthiam Makes Teaching Robotics Easy

Robotics is a broad field that includes AI/ML, electronics, programming, engineering mathematics, physics, and human interface design. We understand how overwhelming it can feel to teach robotics without knowing where to start.
Because robotics is still an emerging discipline, educators often struggle to find clear examples and beginner-friendly tutorials.
Additionally, many online examples are application- or hardware-specific and require prior knowledge or dependencies that may be outside your learning objectives.

To ensure the greatest success for Synthiam’s education partners, we assign an associate to understand your goals and requirements. This makes it easy to find relevant examples and tutorials without disrupting your classroom activities.

For example, you may need sample projects for implementing a navigation solution as part of a volume subscription. Your Synthiam associate will help locate the appropriate documentation and tutorials on Synthiam’s website. If suitable tutorials do not exist, our team may create them, as our content is shaped by ongoing collaboration with educators.

If you’d like to speak with an associate, let us know and we’ll help you accelerate your organization’s STEM and robotics programs.

Contact Us

W9 Forms

Synthiam is a Canadian federally incorporated company and cannot provide U.S. W-9 tax forms.
(read more)

W-8BEN-E

You can download Synthiam's completed W-8BEN-E form here.

VAT (Value Added Tax)

Synthiam is a Canadian company and is not VAT registered, as VAT applies to businesses registered within the EU/UK VAT system.
If your purchasing department requires tax information for payment processing, we can provide our Canadian GST/HST registration number instead.
For customers outside Canada, Canadian GST/HST is typically not charged on invoices. Any local taxes (such as EU reverse-charge VAT) are handled by your institution in accordance with local regulations.

How Can We Help?

Let us know how we can help bring Synthiam ARC into your classroom or school. We can assist with grant applications, provide demos to decision-makers, and arrange volume license discounts.

Contact Us

What kind of robot do you want to teach with?

Working with Synthiam gives you access to over 300 technology and robot partners. Your assigned associate will be your single point of contact for advice on selecting products that meet your educational goals and arranging volume purchases.

1. Use a Robot Product

Skill Level: *Beginner, Intermediate*

ARC lets you program a pre-built robot or kit. This option allows you to get started right out of the box with minimal setup.
Below are a few popular ARC-compatible robot products. Select a robot to view information, purchase links, and manuals.

[opt:hardwareType:2]

2. Build a DIY Robot

Skill Level: *Advanced*

Building a DIY robot has traditionally been a daunting task. Synthiam makes DIY robotics more approachable by providing easy-to-use software that works with many popular hardware platforms. This lets you spend more time focusing on creativity and innovation rather than setup and compatibility issues.

We've created a step-by-step Getting Started Guide to help you build your own robot. Click the button below to begin.

Make a DIY Robot

Education & School Benefits

A flexible, easy-to-use platform for teaching robotics, programming, and automation through project-based learning and realistic simulation. Designed for classrooms, clubs, and extracurricular programs, ARC supports a wide range of hardware and instructional approaches.

Overview video: introduction to Synthiam ARC, including classroom examples and project ideas.

1.

Introduction

Technological change is rapidly reshaping industry and the workplace. To prepare students, educators need practical tools that teach contemporary technical skills through real projects. Synthiam ARC is a comprehensive platform for robotics and automation that supports project-based learning. It helps students develop problem-solving, programming, and design skills by guiding them through hands-on projects that reflect real engineering workflows.

2.

Accessibility and ease of use

ARC accommodates learners at every level with a layered interface. Beginners can use a visual drag-and-drop environment to assemble sophisticated robot behaviors without writing extensive code. Advanced students and instructors can extend projects with scripts and custom modules. This approach reduces the initial learning curve, encourages experimentation, and builds confidence as skills progress.

3.

Hardware versatility

The platform supports a broad range of hardware, including Robotis systems, EZ-Robot Revolution, and Arduino-based devices. Educators can choose components that fit their budget and curriculum while keeping a consistent software experience. This flexibility simplifies classroom integration and enables diverse project types, from basic sensor experiments to complex autonomous systems.

4.

Interdisciplinary learning

ARC naturally integrates STEM subjects—science, technology, engineering, and mathematics—with design thinking and systems reasoning. Students combine programming, electronics, and mechanical design to solve authentic engineering challenges. Projects promote collaboration, iterative design, and creative problem solving, making it easy to connect robotics to broader curricular goals.

5.

Engaging, interactive practice

Hands-on learning is central to ARC. Built-in simulation tools let students test and refine programs virtually before deploying to physical robots, shortening iteration cycles and reducing hardware wear. Real-time control and monitoring support collaborative projects, classroom competitions, and peer review, reinforcing critical thinking and teamwork.

6.

Real-world relevance

Students develop practical skills such as automation logic, sensor integration, system debugging, and programming—skills that apply to manufacturing, healthcare, logistics, and research. Early exposure to these topics builds technical proficiency and a resilient problem-solving mindset, preparing learners for further study and career paths in technology-driven fields.

7.

Community and support

Synthiam ARC is supported by an active community of educators, developers, and hobbyists. Teachers can access tutorials, sample projects, lesson plans, and forums for troubleshooting and idea sharing. These community resources accelerate onboarding, provide classroom-ready materials, and offer real-world examples to enrich instruction.

8.

Conclusion

Synthiam ARC is a practical and adaptable platform for teaching robotics, programming, and automation. Its intuitive interface, wide hardware compatibility, and emphasis on both simulation and physical testing make it an excellent choice for educational settings. Integrating ARC into curricula helps students build technical skills and resilient problem-solving approaches that support further education and workforce readiness.

Get Synthiam ARC for your school

Synthiam is a trailblazer of technology

Synthiam has introduced hardware and software that have changed how robots are designed, programmed, and operated. By lowering the technical barrier to advanced robotics, the platform has expanded access for educators, hobbyists, and researchers, enabling faster prototyping and more imaginative projects.

Trailblazing Robot Controllers: EZ-B v3 and EZ-B v4

The EZ-B v3 and EZ-B v4 controllers represent major steps toward making robotics more approachable. They combine simplified wiring, integrated power and servo management, and user-friendly connectors to reduce setup time and hardware complexity. Built with prototyping and classroom use in mind, these controllers make it easier to connect sensors, servos, cameras, and peripherals without extensive electronics experience.

Practical benefits include reliable motor and servo control, built-in communication options (Wi-Fi/Bluetooth), and modular expansion possibilities that let projects scale from simple experiments to sophisticated robots.

Empowering Creativity with ARC Software

ARC (Autonomous Robot Control) provides a graphical, drag-and-drop environment combined with an extensible library of prebuilt Robot Skills. This lets users create complex robot behaviors quickly—without needing deep knowledge of low-level programming—so they can concentrate on design, testing, and iteration.

Key features

Modular Robot Skills: Reusable skill modules that can be combined, customized, and shared across projects to accelerate development and standardize capabilities.

Cross-skill coordination: Use `ControlCommand()` to orchestrate multiple skills, trigger sequences, or implement complex conditional behaviors that span components.

Robot Skill Store: A centralized marketplace where developers publish plugins and users discover, download, and install community-contributed functionality.

3D Robot Designer: A graphical, three-dimensional planning tool for assembling robots, configuring sensors and actuators, and visualizing motion and ranges before deployment.

Multi-controller compatibility: ARC supports different controller types in the same system, enabling hybrid builds that mix EZ-B units with other hardware to create more capable robots.

Advancing Robotics with High-Level Technologies

ARC's architecture shifts CPU-intensive workloads—such as computer vision, speech recognition, mapping, and advanced planning—to a connected PC. Offloading heavy computation to a host machine (which can leverage GPUs and modern ML frameworks) keeps robot hardware simple and affordable while delivering powerful capabilities.

This design also makes it easier to update algorithms and integrate new machine-learning models as they become available, since improvements can be deployed on

the PC rather than requiring onboard hardware changes.

Community-Driven Innovation

Synthiam cultivates an open ecosystem where users contribute code, skills, and applications that others can reuse. Community sharing speeds development, encourages best practices, and surfaces creative approaches across many use cases.

Developer contributions: Creators publish Robot Skills as plugins to the Robot Skill Store, helping to build a rich, searchable library of reusable components.

ARC Robot App Store: Full applications and project packages can be shared, enabling newcomers to install complete solutions and learn from working examples.

Impact and reach

By combining accessible controllers, an extensible software platform, and a community marketplace, Synthiam has accelerated robotics education, hobbyist innovation, and academic research. These tools and the supporting community have helped form a global network of educators, students, makers, and researchers exploring practical and creative robotics applications.