



# Altura

## Whitepaper 2023

Altura White Paper  
November 2023



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## Executive Summary

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Altura is redefining the gaming industry's economic model by pioneering the use of Web3 technologies to deliver real ownership and value to gamers' digital assets. The platform, which arose from the growing dissatisfaction with traditional in-game purchases, empowers developers to seamlessly integrate blockchain into their games, offering an innovative approach to game development and asset monetization.

**Launched in 2021**, Altura has quickly evolved from a fledgling startup to a key player in the Web3 space. The company's status as a Unity verified solution and its introduction of Smart NFTs—a first in the industry—underscore its commitment to leading the charge in next-generation gaming infrastructure. Altura's multi-chain support framework caters to a diverse array of developer preferences, cementing itself as a versatile and inclusive platform.

The heart of Altura's marketplace is its native token, which facilitates a vibrant economy within its ecosystem. The platform's roadmap indicates a continued focus on broadening community engagement and enhancing platform functionalities. With the Web3 gaming market projected to experience exponential growth, Altura is strategically positioned to capitalize on this surge and to reinforce its standing as an industry trailblazer.

In summary, **Altura is poised to lead a transformative shift in the gaming industry**, driven by its robust technology, strategic partnerships, and a steadfast commitment to its community. As the digital landscape evolves, Altura's platform remains a testament to the potential of Web3 technologies to create a more equitable and value-driven gaming economy.



# Introduction

## Modernizing Gaming

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The business model for game developers changed drastically in 2006 when the first microtransaction was sold by a major game publisher, Bethesda in which they sold horse armor in The Elder Scrolls IV: Oblivion for \$2.50. Although initially met with negative criticism from gamers it did not deter game developers from using micro-transactions as an extra stream of revenue. In 2008 microtransactions were popularized within mobile gaming as the main source of revenue in what became the catalyst for microtransactions becoming a staple in every avenue of gaming. (mobile, PC, console Etc). Fast forward to the present day, almost every single popularized game has some form of microtransactions with some of the world's most popular gaming studios, such as EA Sports and Activision Blizzard, having microtransactions account for almost 60% of their revenue.

Similar to at its inception, microtransactions are still continuously criticized on the basis that they are a valueless investment, are non-transferrable, and are completely owned, managed, and controlled by the game studios themselves. This means at any point said game studio wants to release a new title, none of the in-game assets which you have either purchased or earned carry significant value, both in the game or in real life. These criticisms have amplified the idea of digital ownership and offered validity to the premise of integrating Web3 technology into games, using NFTs to bring power back to the player. Altura intends on doing this by providing infrastructure solutions for developers with the tools and solutions they need to build, scale, and monetize their games. Our mission is to enable developers to integrate Web3 into their games and add new monetization channels via web3 technologies. Our vision is to become the leading Web3 gaming infrastructure platform, supporting the growth and development of games being built with Web3 ideologies and principles in mind. Our value proposition is simple and powerful tools, support for multiple blockchain networks, and a thriving community of web3 gamers and enthusiasts.



## Company Overview

# History and Evolution of Altura

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Altura was founded in April of 2021 by Majd Hailat & Maxim Sindall with the goal of providing the necessary infrastructure for game developers to integrate blockchain technology into their games. Majd Hailat was raised in Ontario, Canada, and played video games ever since he was a young child. In his adolescence, he discovered Counter-Strike, a highly competitive first-person shooter with tradable digital assets, known as weapon skins, which would plant the seeds for what was to come. Majd learned to program from an early age and would spend countless hours passionately designing and building applications. During the NFT boom of 2020, Majd & Maxim came up with the idea of Altura and got to work building the platform immediately.

In its early days, Altura faced the countless challenges of a startup, which pushed young founders Majd & Maxim to learn, grow, and develop the necessary personality traits to succeed in the ruthless endeavor of building a successful company. Their deeply ingrained belief in Altura's vision was the backbone they needed to overcome all the challenges that came their way.

Over the coming months, Altura would ship the initial version of the platform, which was a far cry from what it has become today. Altura would continue to ship and iterate on their product; this resulted in Altura amassing a massive community of individuals passionate about Altura's vision of bringing blockchain-backed digital assets to the world of gaming. Altura's team would grow from just Majd & Maxim to over 20 individuals at the peak. Altura would continue to smash incredible milestones and achievements, such as innovative technological advancements like the introduction of Smart NFTs, the first dynamically upgradable NFTs. Other technological innovations included Altura Guard, a revolutionary method of authenticating users in web3 games, and support for over ten blockchains, a far leap over competitors. In March of 2023, Altura would secure a partnership with Unity, making them one of a few web3 Unity verified solutions. This partnership would further skyrocket Altura's reputation and presence in the gaming industry.

Today, Altura stands as the leader in web3 gaming. Looking ahead, the company is poised to continue innovating and providing developers with cutting-edge tools to bring their creations to life.



## Mission Statement

# Mission, Vision & Core Values

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## Our Mission

To provide a powerful platform which amplifies the mass adoption of web3 technology in gaming for both gamers and developers

## Our Vision

To become synonymous with web3 gaming.

## Core Values

- Innovation
  - Integrity
  - Collaboration
  - Respect
  - Resilience
  - Community Engagement
- 

## Team

A team of experienced and talented individuals passionate about gaming and web3 technology leads Altura.

**Majd Hailat**, a Co-founder and CEO of Altura, is a young entrepreneur with a background in computer engineering. He has been programming for over five years and has developed a successful crypto management app. Majd has designed and led the development of Altura's platform and has built and managed Altura's team.

**Tanner Matthews**, the COO & Co-Founder of Altura is Canadian CPA and graduated from the Lazaridis School of Business and Economics with a Bachelor of Business Administration as well as a Graduate Diploma both specializing in accounting. Tanner prides himself on his highly analytical problem-solving mindset which is what has driven him to where he is in his young career. Tanner has been brought on to rigorously prepare Altura for upcoming funding opportunities as the company takes its next steps in becoming the most disruptive player in the web 3 gaming space.

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# Team

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**Abdullah Rangoonwala**, A highly motivated and dedicated professional with a strong work ethic, he began his career at the age of 12 and has since developed a diverse portfolio of experiences across multiple companies. Currently serving as the Head of Engineering at Altura, Abdullah has also held senior positions at Utopian Game Labs, Alphabit and others.

**Alex Kosloff**, our Head of Sales, is a renowned business leader and the Head of Sales at Altura. Within a span of a year and a half, Alex has impressively signed over 100 games and cemented major partnerships with industry giants including Unity, Cronos Labs, Oasys, Arbitrum, Coinbase, and Avalanche. His notable election as one of the six members to the Blockchain Game Alliance underlines his influential role in the blockchain gaming community.

**Nick Tremblay**, Lead Engineer at Altura is a tech enthusiast who ignited his passion for technology at a young age by coding his first software at the age of 11. His journey was marked by a solid academic foundation as a 2015 Schulich Leader, which laid the groundwork for his seamless transition into the entrepreneurial world. In his venture, Nick assumed the role of technical CEO, where he delved deep into the intricacies of building a business from the ground up and honed his skills in developing software that not only met but exceeded enterprise-level requirements, focusing on scalability and robustness. Nick is widely recognized for his unwavering dedication to continuous learning and driving innovation within the tech industry. His particular areas of expertise include Blockchain, software engineering, and cybersecurity, where he consistently seeks to push the boundaries of what's possible.

**Zhao ZhiMing**, a frontend developer at Altura has an abundance of experience in web development with a focus on JavaScript. Zhao has extensive knowledge of front-end JavaScript and browser APIs as well as significant experience with popular frameworks and libraries like React and Redux. His deep full-stack experience includes Node.js and Express, MongoDB as well as more traditional technologies like PHP and MySQL.



## Technology Overview

# What is Altura?

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### Altura makes it easy to build, scale, and monetize Web3 games.

Altura's API and SDKs allow you to create, update, and transfer NFTs in-game without technical complexity or costly investment. Our built-in authentication tools secure your NFT economy, simplify user enrollment, and instill trust in your player base. And with the help of our marketplace solutions, you have the flexibility to sell your NFTs on our thriving marketplace or create your own custom, branded storefront with our white label solution.

#### Why use Altura?

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- **Simplify Web3 integration:** Implementing Solidity, Web3.js, GraphQL, IPFS, and managing blockchain nodes can be complex and time-consuming. With Altura's developer-friendly tools and easy-to-read documentation, you can deploy your web3 stack in a fraction of the time it would take manually.
- **Save time and resources:** Game development teams often spend significant time managing their web3 stack, which can add to your burn rate and increase development costs. Altura's solutions can help you cut these costs and streamline your development process, so you can focus on building your game.
- **Connect with a community of gamers and web3 enthusiasts:** Altura's marketplace and community tools can help you promote your game to a large audience of gamers and web3 enthusiasts. You can also list and sell your NFTs on the Altura marketplace, where thousands of players buy, sell, and trade daily.
- **Build with confidence:** Altura's built-in authentication tools and support for multiple blockchains and NFT standards can help you build a secure and trustworthy NFT economy for your game.



# Creating a Project

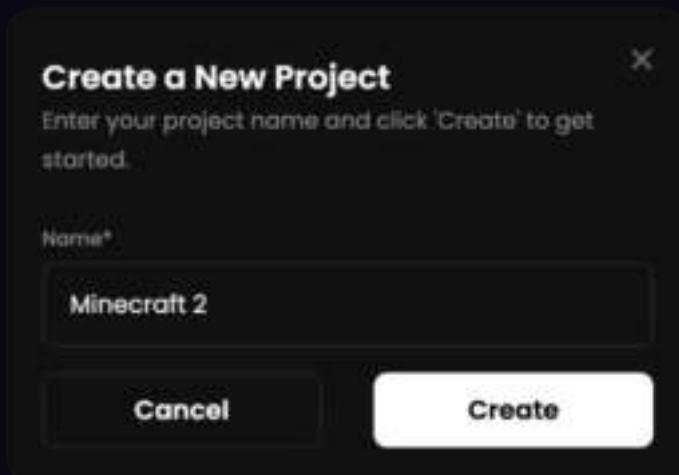
The first step in starting with Altura is creating a developer account.

## How to Create an Account

1. **Navigate to the Developer Dashboard**
2. **Connect your wallet**
3. **Verify your email address.**

Once you have a developer account, you can create a project.

- A project is a container for all of the NFT collections related to your game. Click the "Create Project" button to create a project.





# Blockchain and Gas Fees



**Altura supports 12 blockchains:** Ethereum, Binance Smart Chain (BSC), Polygon, Arbitrum, Optimism, Fantom, Cronos, Polygon, Polygon zkEVM, Avalanche, Telos, Homeverse, and BASE. Each blockchain has unique features and benefits, so it's important to consider which blockchain is best suited for your game or project.

**TestNets:** Altura also supports three testnets: Binance Smart Chain Testnet, Polygon Mumbai Testnet, and Sepolia Ethereum Testnet.

## Switching Blockchains

When minting NFTs or a collection on the Altura marketplace, you can specify the blockchain via the dropdown menu in the navigation bar. It's important to note that once an NFT is minted on a specific blockchain, it is bound to that chain and cannot be transferred to a different one. When using Altura's API or SDKs, you don't need to specify the blockchain your NFTs reside on, as Altura will automatically detect this.

## Gas Fees

Gas fees are the fees paid to miners to process transactions on a blockchain. Gas fees are paid in the native currency of the blockchain, such as Ether for Ethereum or BNB for Binance Smart Chain. Gas fees are a crucial component of any blockchain transaction and are necessary to ensure that transactions are processed in a timely manner.

Additionally, if you're just starting out and want to test your game or application on a blockchain without incurring real gas fees, you can use a faucet to obtain gas on our testnet chains. This will allow you to interact with the blockchain and test your application without spending real funds.



# Minting and Importing NFTs

**NFTs are created on the Altura Marketplace, a separate website from the developer dashboard.**

All NFTs minted on Altura follow the ERC1155 standard.

Altura supports Ethereum, Binance Smart Chain (BSC), Polygon, Arbitrum, Optimism, Fantom, Cronos, Polygon zkEVM, Avalanche, Telos, Homeverse, and BASE blockchains. In the marketplace navigation bar, there is a network selector dropdown. Select the network you want to mint your NFTs to.

## How to mint and import NFTs on the Altura Marketplace.

1. **Connect your wallet to the Altura marketplace.**
2. **Click on the plus button in the navigation bar. This will take you to the create page.**
3. **You will have five options on the create page:**
  - Mint NFT
  - Mint Collection
  - Import Collection
  - Mint Bulk NFTs
  - Create Lootbox
4. **You then have two options to sell your NFTs:**
  - You can mint these NFTs with initial supply above zero and list them for sale. This results in you paying gas fees and being the original minter of these NFTs.
  - You can mint these NFTs with initial supply of zero and lazy mint them. This allows you to have whitelists, tiered sales, zero gas and a more flexible experience.

\*\* We recommend organizing your NFTs into separate collections based on the type of items they are.

This will make it easier for players to browse and find the items they're intuitively looking for.

Additionally, on the Altura marketplace, your game's collections will be grouped under the name of your game, making it even simpler for players to find and explore all the unique items in your game.

Remember that this is the first step in integrating NFTs into your game. Once you have minted your NFTs, you need to link them to your project and integrate them into your game using our API and SDKs.

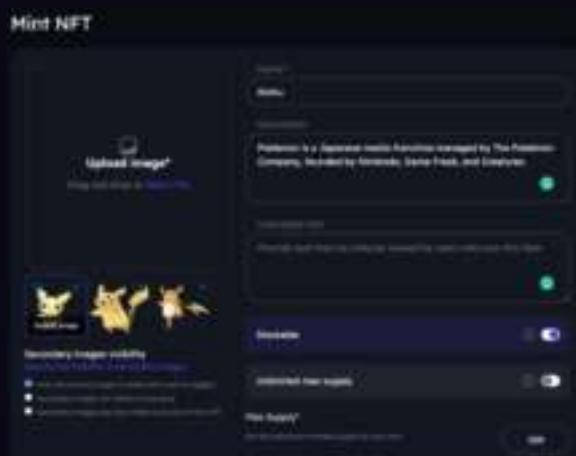
# Minting and Importing NFTs

## Minting Individual NFTs

\*\*To create an NFT, you must first create a collection, as all NFTs must belong to a collection. Alternatively, if you have an NFT collection already minted outside of Altura, you can import that collection into Altura.

When creating an NFT, you will be prompted to provide an image, name, description, and other information about the NFT. You can also add properties to the NFT, specify if it's stackable or non-stackable, set a maximum and minted supply, and more.

Mint NFT form in the [Altura Marketplace](#)



## Properties

Altura NFTs allow you to store and update any information you want to retain about an item in its properties. This could include health, wear, evolution, etc. Properties are divided into two types: static and non-static. Static properties are properties of an NFT that cannot be modified after minting. An example of a static property can be an NFT's rarity. Non-static properties, on the other hand, can be modified after minting; more on this in the Smart NFTs section. An example of a non-static property can be an NFT's health.

## Images

You may also provide several images when minting an item representing the item's varying states (for example, different wear states of a sword); you can then change the primary image to any of the pre-loaded images.

## Stackable and Non-Stackable NFTs:

Unlike ERC721 NFTs, ERC1155 NFTs can have a supply greater than one and can be held by several people simultaneously. When minting an NFT, you can specify if it's stackable or non-stackable. Stackable NFTs will appear as a single item in a user's wallet even if the user owns multiple of that item, while non-stackable NFTs will appear as unique items in the user's wallet.



# Minting and Importing NFTs

## Max Supply and Minted Supply

An item can have a maximum supply greater than its circulating supply. This means that the creator of an NFT can continue to mint more supply until the minted supply is equal to the maximum supply. This allows flexibility in creating a limited supply of NFTs for your game.

## Importing Collections

In addition to minting NFTs, you can import existing NFT collections into Altura. To import a collection, visit the create page on the Altura marketplace and select 'import collection'. Importing your collection means all the NFTs within that collection can be integrated in-game using Altura's API or SDKs. Additionally, they will appear and be tradable on the Altura marketplace and importable into white-label marketplaces.

\*Imported collections will not be treated as Smart NFTs by Altura, and thus the Smart NFT features will not work on imported collections. To use the Smart NFT features, you must mint your collection directly on Altura.\*

\*\*You can import any ERC721 or ERC1155 compliant NFT. You may also import Enjin collections via a project link.\*\*

## Bulk Mint NFTs

Bulk minting of NFTs is a highly efficient process for creating a large number of NFTs at once. Altura supports bulk minting of up to 500 individual NFTs, each with an unlimited supply. This method is streamlined and can be automated with a script, making it easier to handle large volumes.

### Step-by-Step Guide to Bulk Minting

1. Click View Sample File and download the example CSV provided.
2. The CSV is used to enter the properties which you would normally enter one by one when . You can generate this CSV using a script. Each row is a new NFT with a corresponding image you will upload in the next step.
3. After you have created the CSV, you can click next and begin to upload your images. You must select all the images that were mentioned in the CSV and the name should line up identically.
4. You can then upload the CSV file.
5. Then press Mint and they will all be minted successfully.

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# Bulk Mint NFTs

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4. You can then upload the CSV file.
5. Then press Mint and they will all be minted successfully.

### There are nine mandatory fields:

- **Image:** The name of the image file you will upload in the next step.
- **Name:** The name of the NFT.
- **Description:** The description of the NFT.
- **Unlockable Text:** Text that can only be viewed by item owners.
- **Stackable:** TRUE or FALSE depending on whether you would like the item to have the items all share one token ID, or have individual ones.
- **Supply:** The initial supply of the NFT.
- **Max Supply:** The maximum supply of the NFT. It is always one if the item is not stackable. Set the value to UNLIMITED if the item has no maximum supply.
- **Consumable:** TRUE or FALSE. Consumable items can be burned directly by game developers and creators using the Altura API.

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# Bulk Mint NFTs

## Bulk Minting (Cont.)

- **NSFW:** TRUE or FALSE depending on if the item is NSFW. If true it means your item will not appear in the discover section on the homepage, however, it can still be accessed normally any other way. Failing to enable NSFW on an NSFW item will get your account banned.

After these nine mandatory fields, you can enter in your properties in a new column for each property. For example if I wanted colour and rarity, I would add in two new columns colour and rarity.

An example can be seen on the minting page

Sample CSV												
image	name	description	unlockableText	stockable	supply	maxSupply	consumable	nsfw	color	type		
image1.png	Altura Penguin	My NFT Collection	Magic	FALSE	10	10	FALSE	FALSE	red	Sungrassee		
photo1.png	Egg NFT	My Egg Photography	by Flotato	TRUE	5	10	TRUE	FALSE	blue	Legendary		

# Lazy Mint NFTs

## Lazy Mint (Primary Sales)

Lazy minting is an innovative technique used in the minting of Non-Fungible Tokens (NFTs) where an NFT is not minted until it is actually sold. This approach helps the creator avoid incurring the associated gas fees until the point of sale, in contrast to traditional minting processes where these fees are paid upfront. By reducing initial costs and financial risk for creators, lazy minting makes the minting process more accessible.

**Lazy minting also allows for more flexibility, with:**

- Whitelists
- Tiered Sales
- Time Restrictions
- Flexible gasless changes
- Dynamic sale restrictions (1 NFT per wallet)

## Step-by-Step Guide to Lazy Minting

**1. Start the Item Creation Process:** If you already have an item, skip to Step 2. If you don't, navigate to the create tab on Altura and begin by entering the required details for your item under Mint NFT. This process is identical to Minting Individual NFTs or Bulk Mint NFTs. Typically, you would have the initial supply as zero, but as long as the initial supply, and future mints are less than the max supply, you can successfully launch sales.

**2. Manage Your Sales:** Once the item is successfully created, you'll be redirected to the item's dedicated page. Click on the 'Manage Sales' button to start setting up your sales. Here you can create a New Sale.





# Lazy Mint NFTs

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**3. Set Up Your Sale:** You'll need to provide a unique name for the sale and decide on the duration it will run for.

## Define Sale Parameters:

- **Open to All:** This feature controls who is allowed to mint your items. If you want to restrict access, you can deactivate this option and upload a text file containing the wallet addresses of your chosen participants. This feature can be particularly useful for pre-sales or whitelist sales where only a specific group of people are allowed to participate.
- **Unlimited Mint:** This feature determines whether there is a limit to how many items a single wallet can mint. If you wish to control the distribution of your items and prevent a single wallet from acquiring too many, you can deactivate this option and set a limit for each wallet.

**5. Pricing Your Item:** After setting up the sale, proceed by setting the price for your item. The platform may allow you to accept various cryptocurrencies, or even set the sale price as free.

**6. Finalize Your Sale:** With all the details filled out, finalize the sale by clicking on the 'Create' button. Your sale is now live!

## Linking Your Collections

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Now that you have minted your NFTs on Altura's marketplace, it's time to link them to your project.

### What does it mean to link a project?

Linking a collection to a project means that the collections are now grouped under that project and belong to that game. This is an important step as it allows you to use the API key for that project to interact with the project's NFTs. Additionally, the project's collections will be visible on that project's game page on the Altura marketplace and the project's custom marketplace.



# Linking a Collection

## How to Link a Collection to Your Project

1. **Login** to the developer dashboard.
2. **Click** on your project.
3. **Click** on the "Settings" tab on the left sidebar.
4. **Scroll** to the "Linked Collections" section.
5. **Click** the "Add" button.

**LINKED COLLECTIONS**

View and manage the NFT collections linked to your project here. Linking a collection allows you to use the project's API key to mutate the metadata of the NFTs in that collection. Linked collections will also appear in the project's white-label marketplace and your game's page on the Altura marketplace. Click 'Link Collection' to link a new collection to your project.

**Add**

Linked collections section in the developer dashboard  
You will be prompted to select the collections you wish to link.

**Link a Collection**  
Select the NFT collection you want to link to your project from the list below. All collections listed here are owned by members of this project.

**Select**

- AlturaFTX NFTTrade
- MContent
- The Hatchables
- The Hatchables - Key
- Altura Badges
- The Froogs

Once you have selected the collections, they will be added to your project, and you will be able to use the API key to interact with the collection's NFTs.

Continued on Next Page



# Linking a Collection

## How to Link a Collection to Your Project (Cont.)

### LINKED COLLECTIONS

View and manage the NFT collections linked to your project here. Linking a collection allows you to use the project's API key to mutate the metadata of the NFTs in that collection. Linked collections will also appear in the project's white-label marketplace and your game's page on the Altura marketplace. Click 'Link Collection' to link a new collection to your project.

 Altura Penguins Owner: 0xCAF4...EE2B	<a class="button" href="#">Unlink</a>
 The Hatchables Owner: 0xCAF4...EE2B	<a class="button" href="#">Unlink</a>
<a class="button" href="#">Add</a>	

It's also worth noting that collections can be added to a project by any project member, so if there are several members in a project, all of their collections can be added to that project. This allows for easy collaboration and management of in-game assets among multiple team members.

## The Developer Wallet

The developer wallet is a shared wallet between Altura and the developer. Every project has a developer wallet. You can manage your game's assets with the developer wallet, including transferring and minting new NFTs.

## Transferring Assets

The developer wallet has three endpoints for transferring assets: transfer ERC1155, transfer ERC721, and transfer ERC20. These endpoints allow you to transfer assets held by the developer wallet to any other wallet.



# Linking a Collection

## Minting Additional Supply

The developer wallet also has an endpoint for minting an additional supply of NFTs. This endpoint only works on NFTs minted on Altura and only if the developer wallet itself minted the collection. This endpoint allows you to mint an additional supply of an NFT to any user until the maximum supply of that NFT is reached.

## Gas Requirements

It's important to note that gas is required when using any of the specified endpoints, as those endpoints require a blockchain transaction. This means you must deposit gas into the developer wallet for the chain you wish to use.

## Obtaining Your Developer Wallet

To access your developer wallet, visit the developer dashboard, click on your project and select the "Developer Wallet" tab from the left-hand side. From there, you can copy your developer wallet address and start using it to manage your game's assets.

## How to add your developer wallet to MetaMask

### **\*\*You Must Have a MetaMask Wallet Before Continuing\*\***

Visit and log into the developer portal.

1. Click the copy button in the private key section to copy your private key.
2. Open MetaMask, click on your account picture in the top right, then click on import account.
3. Paste your private key and click import.

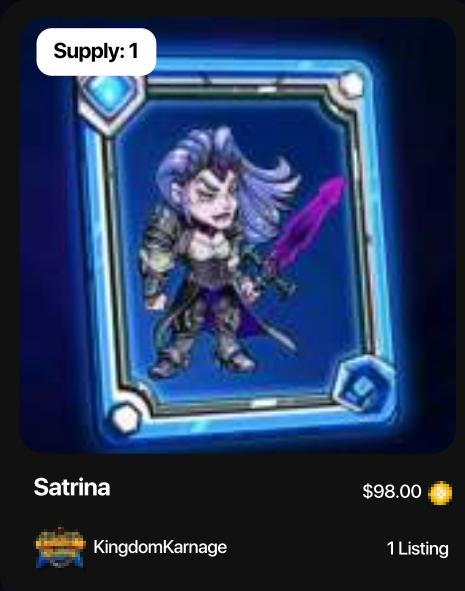
You may mint your game's assets using the developer wallet via MetaMask, as the developer wallet is treated as a project member. Hence, its collections will be importable to a project.

**Easily Deposit and Withdraw Funds from your Integrated Developer Wallet**





# Smart NFTs



A detailed view of a Smart NFT card for an item named "Satrina". The card features a blue ornate frame around a purple-haired character holding a sword. At the top left, it says "Supply: 1". Below the image, the name "Satrina" is displayed next to a small profile picture, and the price "\$98.00" with a yellow coin icon. At the bottom, it shows the collection "KingdomKarnage" and "1 Listing".

Smart NFTs are an evolution of the traditional non-fungible token (NFT), allowing NFTs to become dynamic, programmable, and interactive assets that can change over time. In contrast to conventional NFTs, which have static data, Smart NFTs can be modified after minting to change properties, images, and more. This allows developers to build games and other applications that can interact with NFTs in real time, opening up new possibilities for gaming experiences.

Smart NFTs also provide additional functionality, such as adding or updating properties and images after minting, which can enhance the value of NFTs and provide new revenue streams for creators.

To update NFTs, you can use the API or JavaScript SDK. You'll need to provide the API key from the project to which the collections are linked. Note that the API key can only update NFTs of collections linked to that project.

## Smart NFT Features



A screenshot of a user interface for managing NFT properties. At the top, there are tabs for "Detail", "Info", "Properties" (which is currently selected), "Sale", and "Holders". Below the tabs, there are three main property cards: "Attack" (value 5, +5 button), "Defence" (value 14, +7 button), and "Ability 1" (Speed 3, +2 button). Each card has a green circular button with a plus sign next to it.

### Properties

Altura NFTs allow you to store and update any information you want to retain about an item in its properties. This could include health, wear, evolution, and more. Properties are divided into two types: static and non-static. Static properties are properties of an NFT that cannot be modified after minting. Examples of static properties include an NFT's rarity, edition number, or artist name.

Non-static properties, on the other hand, can be modified after minting using Smart NFT technology. Examples of non-static properties include an NFT's health, level, or experience points. (Continued on Next Page)



# Smart NFTs

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Non-static properties enable developers to create dynamic gameplay experiences and build games that evolve over time.

When minting an NFT, you can define the initial static and non-static properties. Later, using Smart NFT endpoints, you can modify the non-static properties in-game, giving developers a powerful tool for creating complex and engaging game mechanics.

## Images

Altura NFTs allow you to upload multiple images for an NFT and even set one as the primary image. When minting an NFT, you can upload several images and order them as you see fit. The primary image can be any of the uploaded images, not just the first.

Using the Smart NFT endpoints, you can switch the primary image of an NFT. To do this, specify the index of the image you want to switch to using the [\*updatePrimaryImage\*](#) feature. For example, if you want to switch to the third uploaded image, you would specify image index 2.

You can also upload new images after an NFT has been minted. To do this, pass the URL of the new image along with the index you want to place the image in. You can also specify whether you want to automatically set the new image as the primary image or keep the primary image unchanged.

## Name & Description

Another property that can be updated with Smart NFTs is an item's name and description. Simply provide the item ID and the updated name and description, and the NFT metadata will be updated accordingly. This feature can be particularly useful when you want to update an item's information to reflect changes in the game.

## Loot boxes

Loot boxes are an exciting feature in the NFT and gaming space. They're essentially virtual mystery boxes containing NFT items. These items can vary in rarity and value, adding an element of surprise and excitement. Here's a step-by-step guide on how to create a loot box.



# Loot Boxes

## Step-by-Step Guide to Creating Loot Boxes



### Step 1: Provide Loot Box Details:

Input the necessary details for your loot box. This usually includes providing an image for the key and the box itself, along with naming and describing them. The names and descriptions for the key and box are identical. Once done, you will be navigated to your loot box page.



### Step 2: Add Items to Your Loot Box:

By clicking the "Add item" button, you can include desired items from your collection to your loot box.



### Step 3: Specify Item Details:

After adding each item, provide its details, specifically the supply quantity and its rarity level.

4. **Transfer NFT to Loot Box Contract:** The final step involves approving the transfer and transferring the NFT to the Loot box contract. Completing this will successfully add your item to your loot box.
5. **Launch Your Loot Box:** Once the loot box is created, the next step is to launch it. This involves providing details about the quantity of keys available, the supported payment currency, and the price for each key.



# Getting Your API Key

## Getting Your API Key

Your API key is essential for accessing the developer wallet for your project and updating NFT metadata and properties.

Log in to the developer dashboard and select your project to obtain your API key.

### API KEY

Your API key allows you to access Altura's APIs and integrate Altura into your project. Click 'Regenerate' to create a new key.

Q2Q4ZM8-1JX4G9S-QZV0YQT-MWHS2K...



Regenerate

\*API key section in the developer dashboard

Pass your API key via the REST API via the query parameters as "apiKey" or via the request headers as "ALTURA\_API\_KEY". Here's an example of how you can use it:

- **Query parameters:** ?apiKey=XXXXXXX-XXXXXXX-XXXXXXX-XXXXXXX
- **Request headers:** ALTURA\_API\_KEY: XXXXXX-XXXXXXX-XXXXXXX-XXXXXXX

It is important to note that all project members have access to the API key and can regenerate it. Additionally, the old key is invalidated if an API key is regenerated. You should keep your API key safe and secure to ensure the integrity of your project's NFTs and developer wallet.

The Altura API is free to use and currently has no rate limit, meaning you can use it as much as you want without worrying about additional costs



# Integrating Altura

Altura provides a variety of ways to integrate NFTs into your game, including our REST API, JavaScript SDK, and Unity SDK. Depending on the nature of your game and its platform, one option may be more suitable for you than the others.

## Altura offers three main categories of features:

### Get-Only Features

These features allow you to fetch data from Altura, such as fetching users, items, & collections, fetching a user's items & balances, getting an item's holders & blockchain events, and more. These features can be accessed via the REST API, JavaScript SDK, and Unity SDK.

### Smart NFT Features

These features allow you to update an NFT's property values, change an NFT's primary image, and update an NFT's name and description. These features can only be accessed via the REST API and JavaScript SDK and require an API key.

### Developer Wallet Features

These features allow you to transfer ERC721, ERC1155, & ERC20 tokens, mint additional supply of NFTs, and more. These features can only be accessed via the REST API and JavaScript SDK and require an API key.

## Rest API

The REST API can be used on both the front end and back end of your game and only requires an API key to access the smart NFT and developer wallet features.

The JavaScript SDK can be used in both the front and back end of your game, depending on your needs. Read-only mode allows access to the get-only features and can be used in a web environment such as React. In full mode, it allows access to all features, including the smart NFT and developer wallet features, and is best used in a Node.js environment on the backend. To switch between full and read-only modes, provide or omit an API key when initializing the SDK. This flexibility allows developers to choose the best solution for their game's needs.

The Unity SDK is best used on the client side, as it only contains the read-only features.



# Integrating Altura

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## Examples of how different types of games and development environments can use Altura:

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Developers can use Altura in various ways in their game, such as NFTs as in-game items, weapons, or armor that players can use to improve their character's stats or abilities. Or, they could use NFTs as collectible items that players can find and add to their in-game inventory. Additionally, developers can use the get-only features on the client side and reserve their server for the additional features if necessary.

- A mobile game developer could use the Unity SDK on the client side to fetch data and display NFTs in the game while using the REST API on the backend to handle developer wallet transactions and smart NFT updates.
- An online multiplayer game developer could use the JavaScript SDK in full mode on the backend to handle all aspects of NFT integration, including fetching data, developer wallet transactions, and smart NFT updates.
- A social media platform developer could use the REST API on the backend to fetch data and handle smart NFT updates while using the JavaScript SDK in read-only mode on the front end to display NFTs and verify user ownership.

\*\* You never need to specify the blockchain network your NFTs are on when using Altura. Altura automatically detects this.



# Authenticating Users

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For users to interact with their NFTs, you need to obtain their public wallet address or generate a wallet address for them.

On the web, developers can use our JavaScript SDK's connector API to connect to web3 wallets such as MetaMask. This allows users to easily connect their existing wallets and interact with NFTs within the game.

We offer Altura Guard II to authenticate users on mobile, desktop, or other platforms. Altura Guard is a simple and easy-to-use method that can be used on any platform and allows developers to generate a wallet for the user within the game.

Another popular option for Web3 games is to allow users to play the game without web3 and then give them the option to connect their wallets later on to access the web3 functionality. This allows users to try the game before committing to using web3.

Overall, there are various ways to authenticate users and no one-size-fits-all solution. It's important to consider the specific needs of your game and user base when deciding on the best authentication method. We recommend using Altura Guard as a simple and easy-to-use method that can be used on any platform.



# Altura Guard II

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Altura Guard II introduces social login and wallet connection features to enhance user experience and security in Web3 gaming. By utilising OpenLogin and Web3Auth's tech stack, our non-custodial social login system allows users to derive private keys from OAuth logins, whilst ensuring their private key remains secure and safe. Altura Guard II technology simplifies connections between users and games with a simple 5-word combination, offering seamless transactions, signatures and connection across any EVM chain.

Altura Guard II stands out with its wallet agnostic approach, providing users with the freedom to approve transactions using any wallet or social login. The goal is to establish a standard for gaming practices while eliminating unnecessary complications for users.

## **Social Login: Secure and Non-Custodial**

Thanks to OpenLogin's verifier and Web3Auth's tech stack, we've managed to implement a non-custodial Social Login system. It enables users to derive a private key from OAuth logins (e.g., Google, X (formerly Twitter) via node operators.

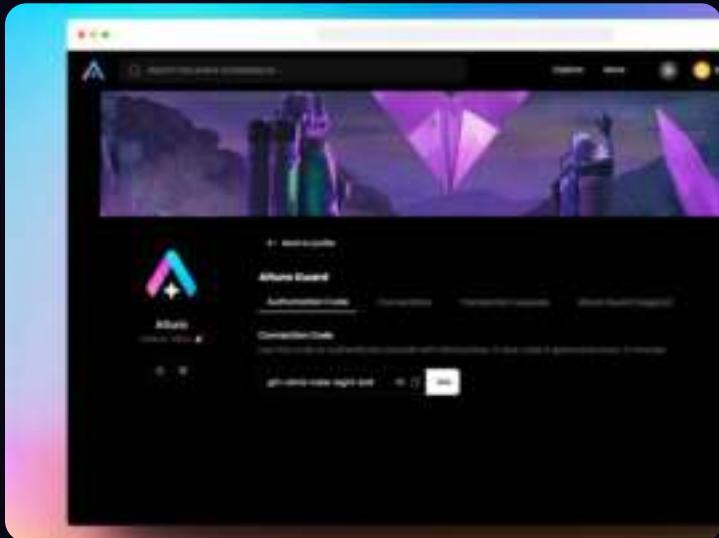
The user's private key is divided into shares using Shamir's Secret Sharing, split across the Web3Auth node network, and reconstructed upon successful login. The private key is assembled locally, and all transactions are signed locally as well. This ensures the user's private key isn't exposed to our servers or any third party. The user can take control of their keys at any time through the Altura Marketplace and use them with MetaMask or any other wallet.

## **Altura Guard II: Logging into Games & Standardizing Web3 Gaming Transaction Signing**

We're introducing our connection technology to streamline connections between users and games. Users can connect to games by entering a 5-word combination, like "grave-dig-happy-crisp-car." Altura Guard will then instantly connect to the users account and allow them to request transactions until the user or game revokes access.



# Altura Guard II



The 5-word combination will refresh every 60 seconds to prevent any spamming of a user.

There are about 28.3 quadrillion possible authentication codes which refresh every 60 seconds.

The words list is compiled with ease and security in mind. The words used are common, smaller english words which allow users to easily type it on whatever game they need rather than a random string of letters and numbers.

**When connected, the game will not have access to anything but the users wallet address and the ability to suggest transactions. No transactions can be made without the users express signature on Altura Guard.**

Our Altura Guard will simulate each transaction before allowing users to approve or reject, offering the highest level of security for our users when signing transactions. Users will know exactly what they're signing: approved tokens and NFTs, transferred tokens and NFTs, gas fees, balance changes, etc. This way, users won't unknowingly sign fraudulent transactions. It will also prevent any failed transactions to ensure the user doesn't lose out on gas fees because the game developer messed up a tx.

## Wallet Agnostic: Hassle-Free User Experience

The real magic lies in our wallet agnostic approach. Users can approve transactions using social login, MetaMask, Wallet Connect, Trust Wallet, or any other wallet they prefer. Our goal is to set a standard for gaming practices, not create additional hurdles for our users. Users can use Altura Guard in any and all games without having to switch their preferred wallet. To sum it up, Altura Guard II's integration of Social Login and wallet connection technology will make Web3 gaming more seamless, secure, and enjoyable for our users. The wallet agnostic approach ensures a hassle-free experience for everyone, regardless of their preferred wallet or social login.

# The Altura Marketplace



**Altura's marketplace offers a user-friendly experience that gives players the ability to easily browse and purchase NFT collections within games and creators the stage to showcase their projects to an audience of 50,000 players, increasing the profile and reach of your project.**

The Altura marketplace was carefully designed to make it easy for all different types of gaming projects to be monetized on our platform.



# The Altura Marketplace

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## Overview

### Blockchain Support

The Altura Marketplace, like the rest of the Altura platform, supports seven different blockchains: Ethereum, Base, BNB Smart Chain, Polygon, Arbitrum, Optimism, Fantom, and Avalanche.

### Seaport Contract

Altura leverages the Seaport marketplace contract, developed by OpenSea, which is the most secure & gas-efficient marketplace engine. It is, on average, 30% more gas efficient than other marketplace engines

### Order-Book System

NFTs, with a supply greater than 1 (ERC1155 only), can have multiple listings. When listing an NFT, users can specify the currency, price & amount of the NFT they want to sell.

### Offers system

Buyers can make an offer to buy an NFT at a specific price (and currency), and can set when their offer expires

### Currencies:

native-chain coin + stablecoins

Users can list their NFTs in the native coin of the chain (ETH, BNB, MATIC, FTM, AVAX) and stablecoins on that chain (USDC, USDT & BUSD (on BSC))



# The Altura Marketplace

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## Notification system

Receive notifications when you sell an NFT (receiving notifications for when an NFT you own receives an offer coming soon).

## Likes & views

Users can like NFTs and view their liked NFTs on their profile pages. You may also see how many likes and unique views an NFT has.

## Dark & light mode

Toggle the entire design of the marketplace between light and dark with a single button.

## Detailed NFT product page & information

View an NFTs multiple images (if applicable), description, properties (shows a lock icon for static properties), unlockable content, price history chart, lowest price, sell orders, offers, creator, holders (and their balance), your balance, your listing count, sales royalty, max supply, circulating supply, holder count, total listings count, blockchain events.

## View an NFTs multiple images (public & owner-only)

When minting NFTs, users can upload multiple images and can enable these numerous images to be viewed by anyone or only by users who own the NFTs. Swipe through images via a carousel.

## NFT Functionality

- List, buy, offer and accept offers
- Send NFTs to other users
- Mint additional supply of an NFT (if max supply not reached)
- Change the price of your listing without delisting



# The Altura Marketplace

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## Unlockable Content

When minting NFTs, you may add unlockable content: text owners of the NFT can only see.

## Powerful User Profile Page

View and sort: the NFTs you own, the NFTs & collections you created, your listings, NFTs you liked, and your on-chain NFT activity. Also view your Altura Guard code & ALU balance

## User Profile Customization

Customize your profile with a profile picture, name, bio & social link.

## Powerful On-Chain Activity Viewing

- Activity page: filter events collection(s) and by event type
- View events for a particular NFT (NFT product page)
- View events for a particular user (user page)

## USD Conversions and Normalization

-View the prices, listings, and offers of NFTs in USD and the actual currency

- When sorting NFTs by price, it sorts by the USD price, regardless of the currency
- USD prices are updated often

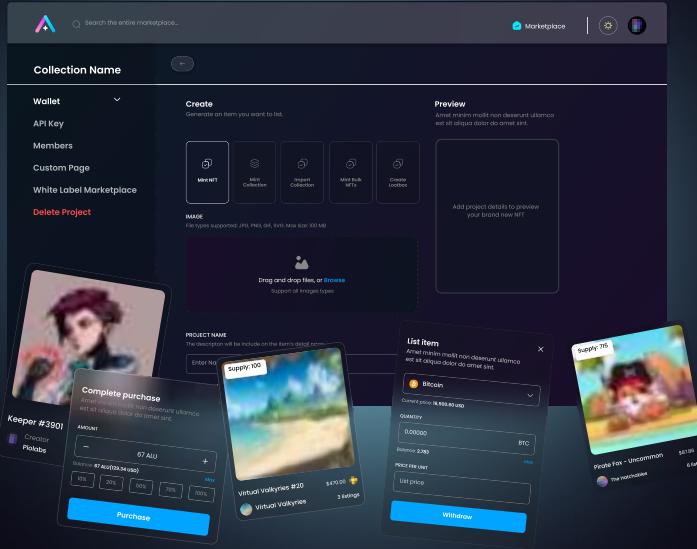
## Pricing

Developers can list their NFTs on the marketplace and receive royalties for each sale. Altura takes a 4% fee for each transaction on the marketplace.

\*\* For information on how to [list your game on the Altura Marketplace](#), & [get your collections verified](#) please follow the associated links.



# White Label Marketplace



## White Label Marketplace

The Altura White Label Marketplace is the perfect solution for game developers and NFT community projects alike. Whether you're looking to create a dedicated marketplace for your game's in-game items or want to give your NFT community project a home, our white-label marketplace has you covered.

### Here's how to get started:

1. **Start by signing up for the Altura developer portal and creating a new project.** This will give you access to the tools you need to create and manage your marketplace.
2. **Create or import your collections** onto the Altura platform.
3. **Link your collections** to your project.
4. **Click on the custom marketplace tab.** From here, you can start your free trial and begin customizing your marketplace. Upon trial completion, you can choose from one of our flexible subscription options, starting at just \$299/mo.



# White Label Marketplace

1 Month (\$399/month)  
From August 1st, 2023 — September 1st, 2023

3 Months (\$379/month)  
From August 1st, 2023 — November 1st, 2023

6 Months (\$349/month)  
From August 1st, 2023 — February 1st, 2024

1 Year (\$299/month)  
From August 1st, 2023 — August 1st, 2024

Add Currency  
Select a network from the dropdown below and view the available currencies for that network. You can also add a custom currency by clicking "Add Custom Currency".

BSC

WBTC Binance Coin

BUSD Binance USD

Add custom currency

Add Custom Domain

Instructions for configuring your custom domain:  
Add a CNAME record for your domain with the below configuration. It will take a few minutes for the change to take effect.

Name	Value
cool-marketplace-1	merchandise.alturafi.com

Set

**5. Altura's White Label Marketplace provides a number of customizations right out of the box. You can easily:**

- a. Upload a logo for your marketplace, set a name, and choose from one of 10 custom themes.
- b. Set the currencies used on the marketplace, which will determine what currencies users can list their NFTs in. This allows for a seamless buying and selling experience for your users.
- c. Or you can even import your custom tokens to be used on the marketplace.

**6. Altura's White Label Marketplace also gives you the flexibility to use your own custom domain name.**

You can add a custom domain by clicking on the "Add Custom Domain" button. You can enter your custom domain in the format "prefix.yourdomain.com" and click "Save Changes" to use it.

You must configure your custom domain before it can be used; instructions for configuring your custom domain can be found in the developer dashboard.

Once your marketplace is set up, you can begin promoting it to your audience and start monetizing your NFTs. Altura takes a 2.5% fee on all transactions made on your whitelabel marketplace.



# API & SDK Reference

## Reference Guide

Endpoint Address

<https://api.alturanft.com/api/v2> / EndPoint

## GET Requests

Verify Altura Guard code

Get User

Get Many Users

Get a User's items

Get a single item by address and tokenId

Get many items

Get an item's holders

Get an item's transaction history

Get a single collection by address

Get many collections

Get many collections

Get a User's ERC20 Balance

Get a User's Native Token Balance

## Developer Wallet Endpoints

Bulk Transfer ERC1155

Mint Additional Supply of ERC1155

Mint New ERC1155 NFT

Transfer ERC721

Transfer ERC20

Consume (burn) an item

## Smart NFT Endpoints

Update an Item's Property

Add New Properties

Remove Properties

Bulk Update an Item's Properties

Switch an Item's Primary Image

Add a New Image

Update a Collection's Metadata

Update an Item's Name & Description



# API & SDK Reference

## GET Requests

### Endpoint Address

<https://api.alturanft.com/api/v2> / EndPoint

Verify Altura Guard code

Get User

Get Many Users

Get a User's items

Get a single item by address and tokenId

Get many items

Get an item's holders

Get an item's transaction history

Get a single collection by address

Get many collections

Get many collections

Get a User's ERC20 Balance

Get a User's Native Token Balance

### Verify Altura Guard code

GET

/user/verify\_auth\_code/:address/:code

Verifies if a user's inputted Altura Guard code matches their wallet address



The response code will be 200 regardless of if the user authenticated successfully or not. In the response body, there is a boolean field - authenticate - which is true if their code is correct and false otherwise

### Get User

GET

/user/verify\_auth\_code/:address/:code

Returns a single user

### Get Many Users

GET

/user/verify\_auth\_code/:address/:code

Returns an array of users



# GET Requests

## Endpoint Address

<https://api.alturanft.com/api/v2 /EndPoint>

## Get a User's items

GET

/user/items/:address Returns an array of items



The user's balance for each item is returned as `userBalance`.

If `includeListed=true`, `userBalance` will be the sum of the user's balance and their listings of that item

## Get a single item by address and tokenId

GET

/item/:address/:tokenId Returns a single item

## Get many items

GET

Returns an array of items /item

## Get an item's holders

GET

/item/holders/:address/:tokenId Returns an item's holders and their balances

## Get an item's transaction history

GET

/item/events/:address/:tokenId Returns the blockchain history of an item



# GET Requests

Endpoint Address

**https://api.alturanft.com/api/v2 /EndPoint**

Get a single collection by address

**GET** /collection/:address Returns a single collection

Get many collections

**GET** /collection Returns an array of collections

Get a User's Item Balance

**GET** /item/:address/:tokenId Getting item balance of user

Get a User's ERC20 Balance

**GET** /item/balance Getting item balance of user

Get a User's Native Token Balance

**GET** /native/balance Returns Natives Balance



# Developer Wallet Endpoints

## Endpoint Address

**<https://api.alturanft.com/api/v2 /EndPoint>**

Bulk Transfer ERC1155

Mint Additional Supply of  
ERC1155

Mint New ERC1155 NFT

Transfer ERC721

Transfer ERC20

Consume (burn) an item

## Bulk Transfer ERC1155

**POST**

**/item/transfer** Bulk transfer: transferring several ERC1155 token from the same collection

This endpoint can only be used to transfer several ERC1155 tokens from the same collection to a single recipient.



The **TOKEN\_IDS** and **AMOUNTS** the array should correspond via their index.  
For example **TOKEN\_IDS = [1, 2, 3]** and **AMOUNTS = [1, 1, 2]** will transfer one item of **tokenId1**, one item of **tokenId2** and 2 items of **tokenId3**

## Mint New ERC1155 NFT

**POST**

**/item/new** Create and mint a new NFT to a specific recipient



Only works if your Altura Developer Wallet is authorized on the collection contract.



# Developer Wallet Endpoints

## Endpoint Address

<https://api.alturanft.com/api/v2 /EndPoint>

## Mint Additional Supply of ERC1155

**POST**

**/item/mint** Mints additional supply of an existent NFT



Only works if the circulating supply is less than the maximum supply

## Transfer ERC721

**POST**

**/erc721/transfer** Transfers a single ERC721 from your developer wallet to another user

## Transfer ERC20

**POST**

**/erc20/transfer** Transfers ERC20 tokens from your developer wallet to another user

## Consume (burn) an item

**POST**

**/item/consume** Consume an item directly from its owner wallet



Only works if the item was created as consumable



# Smart NFT Endpoints

Endpoint Address

<https://api.alturanft.com/api/v2 /EndPoint>

Update an Item's Property

Add New Properties

Remove Properties

Bulk Update an Item's Properties

Switch an Item's Primary Image

Add a New Image

Update a Collection's Metadata

Update an Item's Name & Description

## Update an Item's Property

POST

[/item/update\\_property](/item/update_property) Updates the value of an item's property

This method allows you to change the value of an item's property given the name of the property (key). This can be used to update an item's state (i.e., health, wear, strength, consumed state, etc.)



You cannot change the value of static properties.

## Add New Properties

POST

</item/add/property> This method allows you to add a new property to an item



# Smart NFT Endpoints

## Endpoint Address

<https://api.alturanft.com/api/v2 /EndPoint>

## Remove Properties

**POST**

[/item/delete/property](#) This method allows you to remove a property from an item

## Bulk Update an Item's Properties

**POST**

[/item/update\\_property](#) Updates multiple value's of an item's properties

This method allows you to change the value of multiple properties of a given item at once. This can update an item's state (i.e., health, wear, strength, consumed, state, etc.)



You cannot change the value of static properties.

## Switch an Item's Primary Image

**POST**

[/item/update\\_property](#) Updates multiple value's of an item's properties

This endpoint allows you to change an item's image to one of the other images provided upon mint. This feature may be used to update an item's state (i.e., the image can reflect an item's wear, evolution, type, etc.)

Every item has an `imageIndex` property. This property represents the index of the selected image amongst all the provided images. Every item also has an `imageCount` property that represents the total number of uploaded images.



Remember, `imageIndex` starts at 0 and not 1. Therefore the highest `imageIndex` is `imageCount - 1`



# Smart NFT Endpoints

## Endpoint Address

<https://api.alturanft.com/api/v2 /EndPoint>

## Add a New Image

POST

/item/append\_images Adds a new image to an items otherImage's array

This method allows you to append a new image to an existing item at a specified index and optionally set the newly appended image as the primary image.



SET\_AS\_PRIMARY is an optional Boolean value. If set true, the newly appended image is set as the item's primary image.

## Update a Collection's Metadata

GET

/collection/update Returns collection new data

## Update an Item's Name & Description

POST

/item/updateItem Update an item's name and description

This method allows you to change the name and description an item



SET\_AS\_PRIMARY is an optional Boolean value. If set true, the newly appended image is set as the item's primary image.



# Transaction Requests Endpoints

## Endpoint Address

<https://api.alturanft.com/api/v2 /EndPoint>

## Polling Transaction Response

**POST**

**/alturaguard/getResponse** Once the game initiates a transaction, you will receive a request ID. To check the status of this request, use both your request ID and user token to poll for the response.

## Revoke Connection

**POST**

**/alturaguard/delete** Revoke the Altura Guard II connection

## Check Connection

**POST**

**/alturaguard/status** Check if the Altura Guard II connection is active

## Submitting a signature request

**POST**

**/alturaguard/request** This method allows you to send a signature request.

```
const message = utf8ToHex("Altura Guard II Sign Message Demo", true);
```



You need to encode the message in hex before requesting a signature.



# Transaction Requests Endpoints

## Submitting a native transaction request

**POST****/alturaguard/request** This method allows you to send a native transaction request.

Before requesting a transaction, ensure that you encode the value in hexadecimal format.

```
const amountToSend = BigInt("10000000000000000000"); //0.1 NATIVE TOKEN (ETH/BNB/AVAX etc)
const value = "0x" + amountToSend.toString(16)
```

You also need to add the necessary parameters before requesting a transaction.

**const from = userAddress**

The address you're sending from (connected users address)

**const to = "0x000"**

The address you're sending the transaction to

**const data = "0x"**

The data which is always 0x when sending a native transaction

Next, create the transaction object

```
const tx = {
  from,
  to,
  data,
  value,
},
```

Finally, obtain the chain ID, which can be found at the following URL: (<https://chainlist.org>)

```
const chainId = 1; // ETH chain id
```



You need to encode the message in hex before requesting a signature.



# Transaction Requests Endpoints

## Submitting a contract transaction request

**POST****/alturaguard/request** This method allows you to send a native transaction request.

Before requesting a transaction, ensure that you encode the value in hexadecimal format.

```
const value = "0x0"
```

You also need to add the necessary parameters before requesting a transaction.

```
const from = userAddress
```

The address you're sending from (connected users address)

```
const to = "0x0000000000000000000000000000000000000000000000000000000000000000"
```

The address you're sending the transaction to

Now we need to get the data to send to represent the contract data. In this example we are approving 0.1BUSD

```
// create the tx object
// BUSD contract address: 0x78867BbEeF44f2326bF8DDd1941a4439382EF2A7
const contractAddress = "0x78867BbEeF44f2326bF8DDd1941a4439382EF2A7";

// Approve function ABI
const abi = [
  {
    inputs: [
      {internalType: "address", name: "spender", type: "address"},
      {internalType: "uint256", name: "amount", type: "uint256"},
    ],
    name: "approve",
    outputs: [{internalType: "bool", name: "", type: "bool"}],
    stateMutability: "nonpayable",
    type: "function",
  },
];
const contract = new ethers.Contract(contractAddress, abi);

// Set the parameters for the transaction
const spender = userAddress; // the address of the spender (user connected)
const amount = ethers.parseEther("0.1"); // the amount to approve
const data = contract.interface.encodeFunctionData("approve", [
  spender,
  amount,
]);
```



# Transaction Requests Endpoints

Endpoint Address

<https://api.alturanft.com/api/v2 /EndPoint>

Next, create the transaction object.

```
const tx = {  
  from,  
  to,  
  data,  
  value,  
},
```

Finally, obtain the chain ID, which can be found at the following URL: (<https://chainlist.org>)

```
const chainId = 1; // ETH chain id
```

## API & SDK Reference

Please follow the Associated Links to review the following reference information more in depth:

[API Reference](#)  
[Unity SDK Reference](#)  
[JS SDK Reference](#)



# Market Analysis

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## Market Definition

The market being analyzed below is the web3 gaming industry, which includes the development and use of blockchain technology in creating, distributing, and monetizing video games and other interactive digital content. This market is also known as the blockchain gaming or decentralized gaming market.

The scope of this market includes all companies, organizations, and individuals involved in developing, deploying, and using web3 technology for gaming purposes. This includes game developers, publishers, platforms, and marketplaces that offer web3-based games or support the integration of web3 technology into existing games. It also includes gamers and users who engage with web3 games and their digital assets (e.g., non-fungible tokens or NFTs). The boundaries of this market are defined by the use of web3 technology in gaming. This excludes games that do not use web3 technology or that use web3 technology for purposes other than gaming (e.g., decentralized finance or DeFi). It also excludes non-interactive digital content, such as video or audio recordings, that may be blockchain-based but are not considered games.

## Market Size and Growth

The web3 gaming industry has seen significant growth in recent years, with the adoption of blockchain technology in gaming gaining momentum. According to data from DappRadar, the number of daily unique active wallets (UAW) in web3 games has increased from around 500,000 in 2020 to over 1.4 million in 2021. This represents a YoY growth of 180%.

In terms of market revenue, the web3 gaming industry generated \$4.5 billion in NFT trading volume in 2021, according to DappRadar. This represents a YoY growth of 600%. It is worth noting that this figure only includes the trading of NFTs and does not include other sources of revenue for web3 games, such as in-game purchases or subscriptions.



# Market Analysis

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Regarding market projections, the web3 gaming industry is expected to grow in the coming years. According to a report by Markets to Markets, The global Blockchain Gaming Market size as per revenue was exceeded \$4.6 billion in 2022 and is poised to hit around \$65.7 billion by the end of 2027, recording a CAGR of 70.3% for anticipated period, 2022–2027. This growth is driven by factors such as the increasing ubiquity of smartphones and rising internet connectivity, the adoption of cloud gaming, and the continued technological advancements in gaming.

## Market Segmentation

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The web3 gaming industry can be segmented in various ways, depending on the factors that are relevant to the analysis. Some possible ways to segment the market include

1. **Geography:** The web3 gaming industry is global, with players and developers from different regions. However, the market size and growth rate may vary by region. For example, the Asia Pacific region is the largest gaming market in the world, accounting for 46% of global gaming revenue in 2021. North America and Europe are the next largest markets, with 25% and 21% of global gaming revenue, respectively.
2. **Demographics:** The web3 gaming industry attracts players of all ages and backgrounds. However, certain segments of the population may be more likely to engage with web3 games than others. For example, data from the Entertainment Software Association (ESA) shows that the majority of gamers in the United States are male (62%) and between the ages of 18–35 (46%).
3. **Product type:** The web3 gaming industry offers various products and services, including web3-based games, digital assets (NFTs), and related tools and platforms. These products can be segmented on their features, functionality, and target audience. For example, some web3 games may target casual players, while others may target hardcore gamers. Some NFTs may be collectibles, while others may be used for in-game items or other purposes.



# Market Analysis

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4. **Customer Type:** The web3 gaming industry has two main types of customers: game developers and players. Game developers may be independent studios, large publishers, or organizations that create and distribute web3 games. Players are individuals who play and engage with web3 games. These two customer groups may have different needs, preferences, and behaviors, impacting their willingness to use web3 gaming infrastructure. For example, game developers may prioritize ease of use, scalability, and security, while players may prioritize game quality, variety, and community.
5. **Market Trends:** The web3 gaming industry is dynamic and constantly evolving, with new trends and developments emerging over time. Some key trends in the market include the growing popularity of web3 games, the increasing popularity of NFTs, The growth of blockchain-based games, The rise of play-to-earn/ play-and-earn models, and the rise of blockchain-based gaming platforms and marketplaces.

## Customer Analysis

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Our target customer segments are game developers looking to integrate web3 into their games and add new monetization channels via web3 technologies. These developers are typically small-to-large-sized businesses with limited resources and experience with web3 technologies. They are seeking simple and robust solutions that enable them to integrate web3 easily. Our target customer values ease of use, a comprehensive and powerful platform, support for multiple blockchain networks, a strong community, and access to funding and exposure for their games. They are willing to pay for a platform that provides these features and benefits. They are also interested in using NFTs to provide their players with true ownership of in-game items and the ability to convert them into real-world value.



# Market Analysis

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To better understand our target customer's needs, preferences, and behavior, we interviewed game developers interested in web3 technology. From this research, we found that our target customer prioritizes the following features and benefits:

- Simplicity and ease of use: Our target customers are looking for simple and easy solutions enabling them to quickly and easily integrate web3 into their games. They value solutions that are developer-friendly and require minimal technical expertise or investment.
- Comprehensive and powerful: Our target customers are also looking for comprehensive and powerful solutions, providing them with the tools and support they need to build and scale their games. They value solutions that offer a range of features and capabilities, enabling them to monetize their games and grow their player base.
- Support for multiple blockchain networks: Our target customers are also interested in solutions that support multiple blockchain networks, allowing them to choose the blockchain that best fits their needs and build on any chain. They value solutions that offer flexibility and support the growth and innovation of the web3 gaming ecosystem.
- Active and engaged community: Our target customers also seek solutions that are part of an active and engaged community of gamers and web3 enthusiasts. They value solutions that provide opportunities to promote their games and connect with other developers and gamers.



# Competitive Analysis

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## ImmutableX

### Strengths:

1. **Zero / Low Gas Fees:** ImmutableX offers zero gas fees / low gas fees for minting, transferring, or trading NFTs on the Ethereum blockchain, which is a significant advantage for developers and users.
2. **Ethereum-Grade Security:** Provides high-level security that is comparable to Ethereum, which is crucial for user trust and adoption.
3. **Scalability:** Supports up to 9,000 transactions per second, making it highly scalable and suitable for mainstream-ready web3 games.
4. **Carbon Neutrality:** As a carbon-neutral platform, it appeals to environmentally-conscious stakeholders in the gaming and blockchain community.
5. **Funding and Size:** With a substantial funding of over \$250m and a sizable team, ImmutableX has the resources to innovate and scale.
6. **Grants Programs:** Offers grants to support the development of web3 projects, potentially fostering a strong developer ecosystem.

### Weaknesses:

1. **Blockchain Limitation:** ImmutableX forces the use of a specific blockchain, which could limit flexibility for developers who want to work across multiple blockchains.
2. **Lack of White-label Solutions:** Does not provide whitelabel marketplace solutions, which could limit brand personalization for customers.
3. **Adaptability:** The specialisation in Ethereum may make it less adaptable to changes in the broader blockchain ecosystem.
4. **Lack of External Infrastructure:** All of Immutable's infrastructure and development tools are created and controlled internally, leading to little community innovation and internal innovation derived from a lack of competition



# Competitive Analysis



## Stardust

### Strengths:

1. **Gaming-Focused Infrastructure:** Stardust provides a suite of tools specifically designed to integrate blockchain technology into games, which positions it as a specialised service provider in the gaming sector.
2. **API and NFT Management:** The platform offers a robust API for player and NFT management, crucial for gaming developers looking to incorporate blockchain elements seamlessly.
3. **Multiple Blockchain Integrations:** By supporting multiple blockchain networks, Stardust offers developers the flexibility to work with various ecosystems, enhancing interoperability within the gaming industry.
4. **Low-Code Solutions:** Stardust's low-code platform enables faster time-to-market for games, which is a key competitive advantage in the fast-paced gaming industry.
5. **Custodial Wallet Solution:** The Stardust Vault simplifies onboarding Web2 users into Web3 games, potentially lowering the entry barrier for traditional gamers.
6. **Predictable Pricing:** Offers predictable per-transaction pricing, which can be advantageous for budgeting and financial planning for game developers.
7. **Fully Regulated:** Stardust is fully regulated as a US entity and is therefore a safe solution for larger corporations / studios.

### Weaknesses:

1. **Marketplace Limitations:** Unlike some competitors, Stardust does not provide its own marketplace for trading NFTs, which could be a drawback for developers seeking a one-stop solution.
2. **Marketing and Community Engagement:** May need to enhance its marketing efforts and community building to increase its visibility and user base within the gaming community.
3. **Developer Documentation:** Complicated developer documentation can be a barrier to entry for developers who are new to blockchain technology.



# Competitive Analysis



Enjin

## Strengths:

1. **Comprehensive Ecosystem:** Enjin provides a full suite of products for creating, distributing, integrating, and managing NFTs within the gaming industry, which could be highly attractive to game developers and businesses.
2. **Established User Base:** With over 2.3 million wallet installs and a large number of created assets, Enjin has a significant head start in terms of market penetration and community presence.
3. **Marketplace and Wallet Services:** Offering both a marketplace and a secure wallet for NFTs gives Enjin a competitive edge, as it provides a one-stop solution for users' needs.
4. **Efinity Development:** The development of Efinity, a decentralised infrastructure on the Polkadot blockchain, positions Enjin at the forefront of scalable blockchain solutions.
5. **Brand and Design:** The new design and flow of the Enjin wallet app enhance user experience, which is critical in the gaming industry for retaining users.

## Weaknesses:

1. **Platform Lock-in:** Enjin's specialised implementation of NFTs could create a lock-in effect, where users and developers are dependent on the Enjin ecosystem, limiting interoperability with other platforms.
2. **Complexity for Developers:** The unique aspects of Enjin's approach to NFTs and collections might present a learning curve for developers used to standard protocols.
3. **White-label Marketplace:** The lack of white-label marketplace solutions may be a disadvantage for clients looking to create brand-specific NFT platforms.



# Competitive Analysis



**Sequence**

## Strengths:

- Integrated Wallet:** Sequence offers a wallet with features like social/email login and non-custodial architecture, which enhances user experience and security, making it attractive for gamers and developers alike.
- Multi-chain Support:** With support for multiple blockchains, Sequence provides flexibility and broadens its appeal to developers who wish to avoid being tied to a single blockchain.
- Developer Tools:** The availability of SDKs for various platforms including Unity and Unreal, caters to a large section of game developers, easing the integration of blockchain features.
- White Label Solutions:** Sequence provides white label marketplace solutions that are essential for brands looking to create custom marketplaces for NFT trading, offering them a degree of autonomy and brand consistency.
- Infrastructure Services:** Sequence's scalable blockchain RPC infrastructure for node management is a significant asset for developers looking for robust and reliable backend services.

## Weaknesses:

- Market Presence:** With a smaller team and potentially less marketing activity, Sequence may struggle to achieve the same level of visibility and market penetration as its larger competitors.
- Complex Developer Experience:** If the developer documentation and integration process are complex, it could deter potential users, especially those with less technical expertise.
- Lack of Own Marketplace:** Not providing its own marketplace for trading NFTs could be seen as a disadvantage compared to competitors who offer comprehensive, end-to-end platforms.



# Competitive Analysis



Altura

## Strengths:

1. **User-Friendly Developer Tools:** Altura provides straightforward APIs and SDKs, enabling easy integration of web3 technologies into games without requiring deep blockchain expertise.
2. **Multi-Blockchain Support:** The support of over twelve different blockchains offers unparalleled flexibility for developers to choose the most suitable environment for their games. Whether is gasless chains, low gas chains or decentralised giants, Altura allows you to use them all.
3. **White-label Marketplace Solutions:** Altura offers customizable marketplace solutions, allowing developers to establish their own branded NFT marketplaces and maintain control over user experience.
4. **Community and Ecosystem:** With a significant community of gamers and enthusiasts, Altura has a strong ecosystem for immediate market feedback and user acquisition.
5. **Altura Guard System:** A proprietary system for logging in and signing transactions in-game with your existing wallet enhances the security and user experience without needing separate external wallets.
6. **Free API/SDK Usage:** All of Altura's developer tools (except Whitelabel Marketplaces) are completely free of charge to use.

## Weaknesses:

1. **Market Recognition:** As a relatively new entrant, Altura may lack the market recognition that longer-established companies like Enjin possess.
2. **Marketing Reach:** Continued efforts are necessary to grow and maintain its community presence to compete with the market outreach of its competitors.
3. **Bootstrapped:** Having no external funding, Altura may have less capital to allocate towards marketing and engineering than that of its competitors.



# Competitive Analysis

## Altura's Competitive Edge

Altura could be considered superior to its competitors for several reasons, especially in terms of accessibility and flexibility. Its platform simplifies the integration of web3 technologies, making it more approachable for developers who may not have in-depth blockchain expertise. This ease of use is a crucial differentiator because it lowers the entry barrier for game developers who are interested in blockchain technology but intimidated by its complexities.

Furthermore, Altura's support for a wide range of blockchains means that developers are not restricted to a single blockchain environment, offering them the freedom to choose the right blockchain for their specific needs. This is particularly beneficial in a rapidly evolving industry where flexibility can significantly impact a project's success.

The white-label marketplace solutions provided by Altura allow for greater brand control and can enable developers to create more immersive and branded experiences for their users. This is a compelling feature in the gaming industry, where branding can play a significant role in user engagement and loyalty.

Additionally, the active community surrounding Altura offers an immediate audience for developers' games, which is an invaluable asset for indie developers or smaller studios looking for traction in a crowded market.

Lastly, the Altura Guard system enhances the security and convenience of in-game transactions, improving the overall user experience. This attention to the user experience, combined with strong security features, can make Altura particularly appealing for both developers and gamers.

In summary, Altura's developer-friendly approach, multi-blockchain support, and strong community engagement are significant advantages that can position it as a preferred choice for game developers looking to leverage blockchain technology.



# Business Model

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**Altura's business model generates revenue by driving traffic to Altura's marketplace and taking a transaction fee on each individual NFT sale, or by charging a monthly fee for Games to host a completely customizable white label marketplace while taking a slightly smaller marketplace transaction fee on NFT sales originating from the games WLM.**

- Marketplace Transaction Fees - Altura Marketplace
  - 4% transaction fee taken on each NFT sale
- White Label Marketplace
  - Monthly Fee charged to host WLM
    - Fee ranges \$299 - \$399 monthly based on term

Altura's business model is poised to scale with the growth of web3 technology within gaming. This is supported by the fact that increased traction and adoption of web3 will drive the tokenization of in-game assets increasing marketplace volume across the entire industry. And Altura is set up perfectly to capitalize on this growth with our current market positioning. As the market continues to grow this will open up further opportunities to expand our business model to areas such as charging for API usage, but we believe this will only become a suitable revenue stream later in the industry's life cycle.



# Tokenomics

**ALU**

<b>Project Name</b>	Altura
<b>Symbol</b>	ALU
<b>Type</b>	BEP20
<b>Chain</b>	BSC
<b>Total Supply</b>	990,000,000
<b>Current Utility</b>	<p><b>Marketplace Transaction Fee Discount</b></p> <ul style="list-style-type: none"><li>• 2.5% marketplace fee for purchases made in ALU vs. 4% fee for purchases made in all other currencies</li></ul>
<b>Proposed Utility</b>	<p><b>Q2 – 2024</b></p> <ul style="list-style-type: none"><li>• <b>Community Tiers</b><ul style="list-style-type: none"><li>• Bronze Tier – 100K – 1 Million tokens</li><li>• Silver Tier – 1–3 Million tokens</li><li>• Gold Tier – 3+ Million tokens</li></ul></li></ul> <p><b>Details of Community Tiers to be released closer to roll out.</b></p> <p><b>-Q4 – 2024</b></p> <p><b>-Further Utility to Be Announced</b></p>



# Legal Notice

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## Legal Notice

This white paper is intended to provide post-token sale information regarding Altura ("the Company") and its proprietary token ALU ("the Token"). The purpose of this document is to convey information about the Company's business operations and the utility of the ALU Token within the Altura ecosystem.

## Notice to Token Holders

The ALU Token is not a security or a regulated instrument. The token has been created to be used as a utility token within the Altura platform and ecosystem. This white paper does not constitute a prospectus or offer document, and it is not intended to constitute an offer of securities or a solicitation for investment in securities in any jurisdiction.

The information set forth herein is provided in summary form and is not exhaustive. It is intended to be used for informational purposes only and is not binding. The Company disclaims any responsibility for any direct or consequential loss or damage of any kind whatsoever arising directly or indirectly from the reliance on any information contained in this white paper.

## Regulatory Stance

The regulatory status of cryptographic tokens, blockchain, and distributed ledger technology is unclear or unsettled in many jurisdictions. It is difficult to predict how or whether regulatory agencies may apply existing regulation with respect to such technology and its applications, including the ALU Token and the Altura ecosystem. It is likewise hard to predict how or whether legislatures or regulatory agencies may implement changes to law and regulation affecting distributed ledger technology and its applications, including the ALU Token and the Altura ecosystem.



# Legal Notice

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## Risk Acknowledgment

Holding and using ALU Tokens involves various risks, particularly as the ALU Token and the Altura platform can be affected by different regulatory treatments internationally. Each potential token holder is urged to consult their legal, financial, tax, and other professional advisors and to make independent judgments regarding the risks involved in holding or using ALU Tokens.

## Intellectual Property

The Altura name, logo, and all associated trademarks and designs are the property of Altura. They cannot be used or reproduced without the express written consent of the Company.

## Amendments

This white paper is subject to change, and the Company reserves the right to modify any of the provisions within this document. The latest version of the white paper, available through the Company's official communication channels, supersedes any previous versions immediately upon release.

## No Warranty

The ALU Token is provided "as is" and "as available," without warranties of any kind, either express or implied. The Company makes no representations or warranties in relation to this white paper or the accuracy, reliability, or completeness of any material contained herein.

By acquiring, holding, or using ALU Tokens, you acknowledge that you understand and have taken into consideration the risks and limitations set forth in this notice.



# Disclosure of Risks

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## Disclosure of Risks

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Below outlines the potential risks associated with the use and purchase of ALU ("the Token"), which is a utility token designed for use within the Altura ecosystem. The Token is not a digital currency, security, commodity, or any other kind of financial instrument and has not been registered under the securities laws of any country, including the securities laws of any jurisdiction in which a potential token holder is a resident.

## Market and Utility Risks

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The value of the Token is subject to changes in utility within the ecosystem. It is designed for use as a means of exchange within Altura Ecosystem, and there can be no assurance that it will hold any particular value outside of this platform. The Token is not intended for speculation, and any secondary market or exchange for trading the Token may be highly volatile and could diminish the Token's utility.

## Regulatory Risks

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The regulatory status of utility tokens is still unclear or unsettled in many jurisdictions. It is possible that the Token could be deemed a security or subject to additional regulations in the future, which could affect its utility and functionality within Altura Ecosystem.

## Security Risks

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As with any digital asset, there is a risk of loss of Tokens due to unauthorized access, hacking, or theft. Holders are responsible for implementing reasonable measures for securing the wallet, vault, or other storage mechanism used to receive and hold Tokens purchased from Altura or from third parties.



# Disclosure of Risks

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## Technological Risks

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Below outlines the potential risks associated with the use and purchase of ALU ("the Token"), which is a utility token designed for use within the Altura ecosystem. The Token is not a digital currency, security, commodity, or any other kind of financial instrument and has not been registered under the securities laws of any country, including the securities laws of any jurisdiction in which a potential token holder is a resident.

## Liquidity Risks

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There is no guarantee that there will be liquidity for the Token on any marketplace or exchange. Altura does not endorse any third-party exchange and makes no representation or warrant as to the Token's liquidity on such marketplaces.

## Forking and Protocol Risks

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The blockchain operating Altura Ecosystem could fork or change, which may significantly affect the supply, functionality, or value of the Token.



# Disclosure of Risks

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## Tax Risks

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The tax characterization of Tokens is uncertain and may vary amongst jurisdictions. Purchasers must seek their own tax advice in connection with purchasing or holding Tokens, which may result in adverse tax consequences to purchasers, including withholding taxes, income taxes, and tax reporting requirements.

## No Other Rights

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Ownership of the Tokens carries no rights, express or implied, other than the right to use them as a means to enable usage of and interaction within the Altura Ecosystem. In particular, you understand and accept that Tokens do not represent or confer any ownership right or stake, share, or security or equivalent rights.

By purchasing the Tokens, you expressly acknowledge and assume these risks and represent that you have an understanding of the usage and intricacies of participating in a cryptocurrency and blockchain-based systems.



Conclusion



# Altura

[AlturaNft.com](https://AlturaNft.com)

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