

**QUANTLAND**

**The Quantland Token**

## ● Introduction

### What is Quantland?

Quantland is a decentralized asset growth platform on the Ethereum network based on the Quantland token (QLT), the value of which is backed by the stablecoin USDC in the Quantland treasury. Quantland actively manages assets in the treasury to generate maximized profits via diversified investment strategies and airdrop a portion of the treasury capital growth to QLT holders on a monthly basis.

The issuance model of QLT allows early participants to earn high APY by staking QLT. In addition, Quantland will be launched with no pre-minting, no presale and no VC allocations to provide all participants with equal opportunities.

Quantland is different from most of the other DeFi 2.0 projects, and is designed to offer a more advantageous value-accruing strategy for the QLT holders, by generating compounding fundamental value for QLT holders because of its ability to make capital gains on assets in the treasury.

Quantland cooperates with Quantrend Technology who provides AI-powered trading strategies that can generate about 40-80% annualized return on asset value to allow fundamental value growth for QLT holders.

Also, QLT's fundamental value will be rather stable since it is backed by stablecoins and rewards to QLT holders will be airdropped in stablecoin.

Quantland holds a unique position in the crypto space, aiming to provide high growth in fundamental value for QLT holders under all market conditions, including bearish markets.

### How do I participate in Quantland?

There are two main ways to participate: **minting** and **staking**.

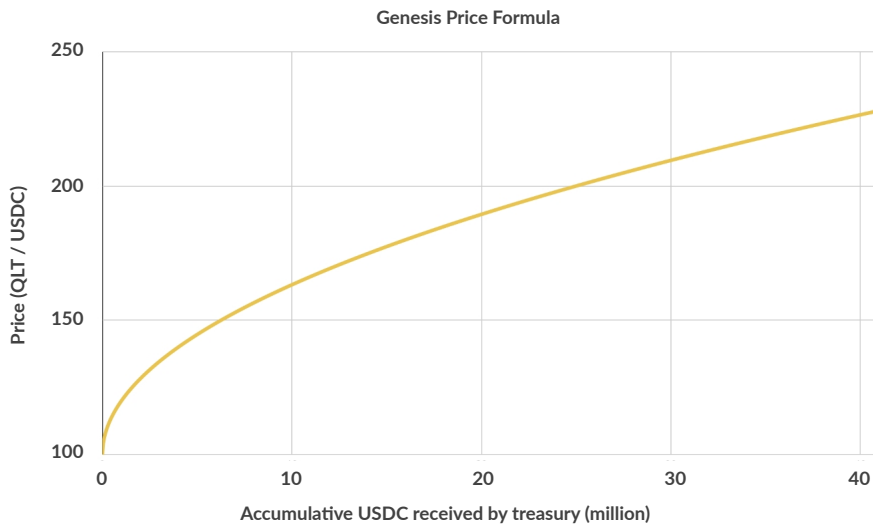
Minters provide USDC, ETH or other crypto assets in exchange for discounted QLT with the option to sell at a higher price later.

Stakers stake their QLT to earn compounding QLT rewards and receive stablecoin airdrops, while also benefit from the rise of the fundamental value of QLT. Overall, early participants can benefit from two things: the high QLT staking APY and the growth of QLT price. As the treasury capital grows, the fundamental value of QLT will go higher.

## ● Minting

### What is minting?

One way users can participate in the Quantland ecosystem is through minting. In general, a minter gets a discount compared to the current QLT market price. After the minting process, each minted QLT will be auto-staked for a designated lock-up period, during which the minter can earn the QLT staking reward. In the genesis phase, as more QLT is minted, its price will increase algorithmically, as shown in the chart below:



## ● Staking

### What is Staking?

With staking, QLT holders can earn compounding QLT rewards and also accumulate their staking power to gain more from future airdrop events. In general, staking QLT for a longer commitment period comes with a higher staking reward rate and a higher multiplier for staking power accumulation. After the commitment period, stakers may choose to perform the “unstake” action and will be able to redeem their staked QLT 72 hours after the action. Otherwise, they can continue to earn a staking reward on their staked QLT.

The staking rewards include two parts: QLT Reward and Airdrop Reward.

**QLT Reward** — QLT stakers can earn compounding QLT rewards every hour. The formula can be found in Equations page.

**Airdrop Reward** — When the asset value in the treasury grows, airdrops in stablecoin will be rewarded to QLT stakers. The airdrop rewards are planned to be released on a monthly basis. The airdrop reward formula can be found in Equations page.

## Treasury

### Reserve

When a minter provides USDC to mint QLT, the minter and the treasury will each receive an equal amount of QLT. The treasury's QLT reserves will be used for the following:

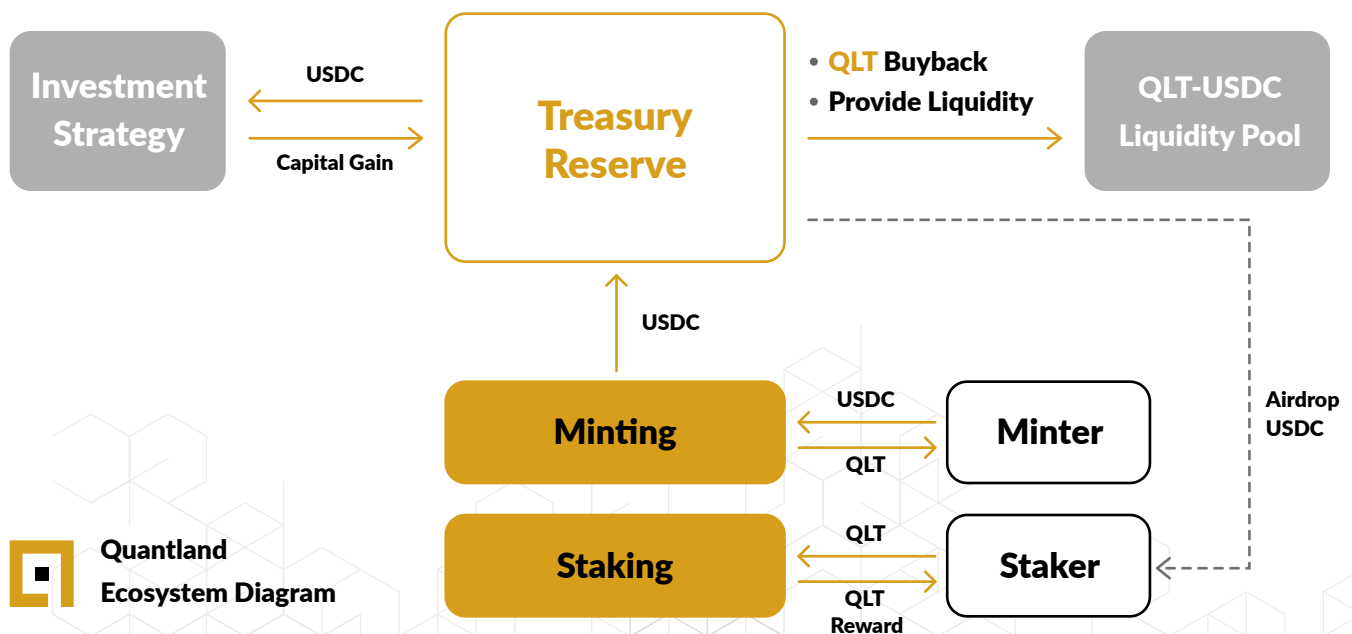
- Marketing and Business Development: 15% of the QLT reserves will be used for Quantland's marketing and business development purposes
- Ecosystem Operation: 10% of the QLT reserves will be allocated for the Quantland team to maintain the ongoing operation of the ecosystem
- Liquidity Provision: a portion of the remaining QLT reserves will be used to provide liquidity in the liquidity pool to stabilize the QLT price

### Governance

To stabilize the QLT price, the treasury may adopt the following policies:

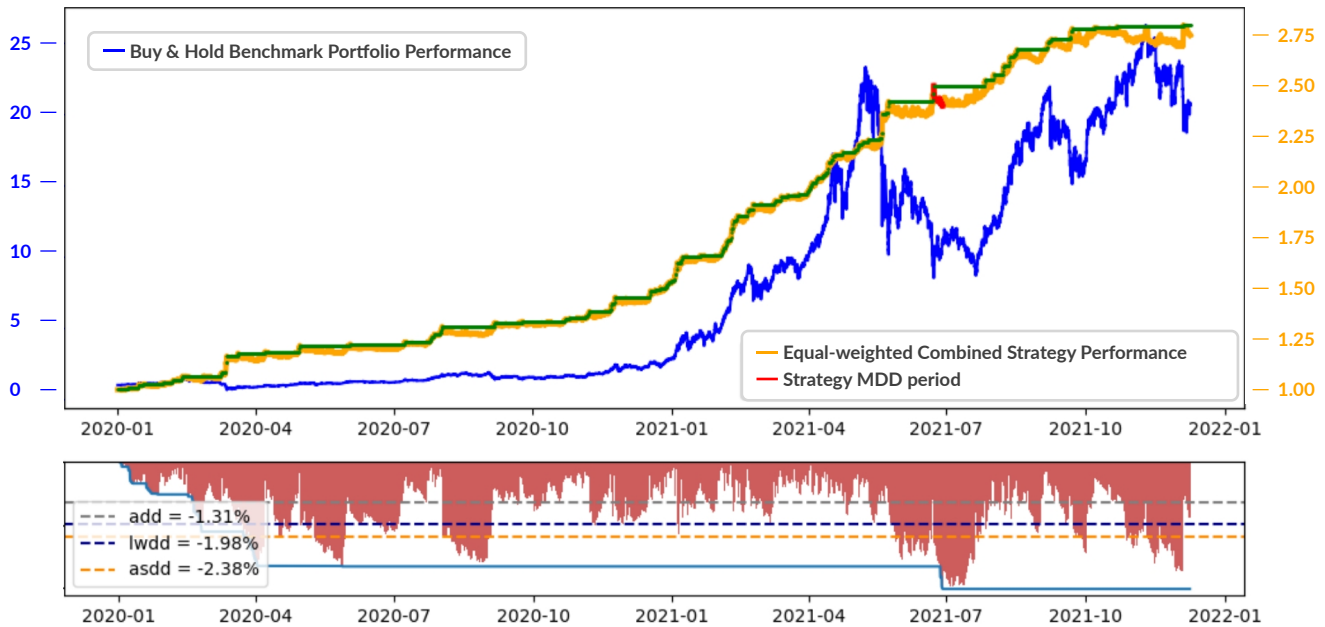
- Increase the staking reward rate when the staking rate of QLT is too low.
- Decrease the minting discount when the market price of QLT is undervalued.
- Buy back QLT from the market when its price is undervalued.

## Ecosystem



## Quantrend Technology

Quantrend Technology (Quantrend) is a quantitative trading firm in the cryptocurrency space. Quantrend's quantitative strategies apply modern deep learning AI technology to generate consistent alpha with low decay. Quantrend's system is built with the Rust programming language to ensure fast and stable performance. With 300+ CTA (Commodity Trading Advisor) and HFT (High Frequency Trading) strategies, the portfolio's annualized performance is about 40-80% regardless of bullish or bearish market conditions.



Performance of CTA portfolio launched in April 2021



Performance of HFT portfolio launched in November 2021

## ● Investment Strategies

### CTA Portfolio

CTA strategies generate alpha through AI-enhanced quantitative trading strategies: trend-following, mean-reversion, market-neutral (pair trading, funding fee), arbitrage (spot/futures mis-pricing, triangular, cross-exchange), and alternative data strategies. When constructing the CTA portfolio, we maximize the portfolio's reward-to-risk ratio and achieve risk parity by applying machine learning algorithms to assign strategy weights based on their correlation and return profiles.

### HFT Portfolio

HFT strategies deliver alpha through analyzing order books using the Deep Neural Network approach. They include maker, taker, and hybrid strategies. By discovering imbalance in the market microstructure, we can predict short-term market movements with high accuracy and achieve consistent returns through low-latency execution.

### DeFi Portfolio

DeFi strategies can help achieve a more diversified portfolio. They include LP farming, lending, DEX arbitrage strategies, and so on.

### Crypto Project Portfolio

The treasury may also invest in promising crypto projects to achieve long-term growth of the treasury capital.

## ● Fundamental Value

The fundamental value of Quantland can be forecasted with the below assumptions: the initial deployed treasury capital is 100M USD, with capital gains of 20% to be airdropped to QLT holders and another capital gains of 20% to be reinvested for treasury capital growth on a yearly basis.

Accordingly, in each of the next 20 years, the treasury capital and airdrop rewards will increase with compounding growth, as calculated in the table below. The accumulated airdrop amount gives an estimation of Quantland's market cap, 3,733.76M USD.

	Year 1	Year 2	Year 3	...	Year 18	Year 19	Year 20
Treasury Capital (M)	100	120	144	...	2,218.61	2,662.33	3,194.80
Treasury Capital Growth (M)	20	24	28.8	...	443.72	532.47	638.96
Airdrop Amount (M)	20	24	28.8	...	443.72	532.47	638.96
Accumulated Airdrop Amount (M)	20	44	72.8	...	2,562.33	3,094.80	3,733.76

## Game Theory

The Quantland ecosystem can be thought of as a simultaneous game with actions below:

- **Stake** : Stakers receive staking rewards in QLT and airdrops in USDC.
- **Mint** : Minters contribute stablecoins to the treasury when they mint new QLT. The growth of treasury's deployed investment capital increases QLT's fundamental value in the long run.
- **Buy** : Buying increases QLT price.
- **Sell** : Selling decreases QLT price.

Based on the above analysis, we can assign the payoffs of each action:

- **Stake** : +0 for QLT holders; +1 for the staker himself.
- **Mint** : +1 for QLT holders; +0 for the minter himself.
- **Buy** : +1 for QLT holders; +0 for the buyer himself.
- **Sell** : -1 for QLT holders; +0 for the seller himself.

The only **Nash equilibrium** is when for all players keep "staking," as shown in the table below:

	Mint & Stake	Buy & Stake	Sell
Mint & Stake	( 3, 3 )	( 3, 3 )	( 1, 0 )
Buy & Stake	( 3, 3 )	( 3, 3 )	( 1, 0 )
Sell	( 0, 1 )	( 0, 1 )	( -1, -1 )

## Team

The Quantland team combines the expertise from both the technology space and the quantitative trading space. We are a group of passionate problem solvers who turn out-of-the-box ideas into pragmatic business solutions. Please find the team's professional and educational background below:

**Google, Yahoo!, Hewlett-Packard Company, KKBOX, WorldQuant, Aberdeen Standard Investments, Citibank.**



### **Kaede Tai / Founder**

25+ years of software engineering experience in the internet industry.  
6 years of blockchain experience.  
1 year of HFT trading experience in the hedge fund industry.

Technical Partner: Quantrend Technology

Quantrend Technology (Quantrend) is a quantitative trading firm in the cryptocurrency space. Quantrend's quantitative strategies apply modern deep learning AI technology to generate consistent alpha with low decay. Quantrend's system is built with the Rust programming language to ensure fast and stable performance.

## Equations

### **Mint Price Formula**

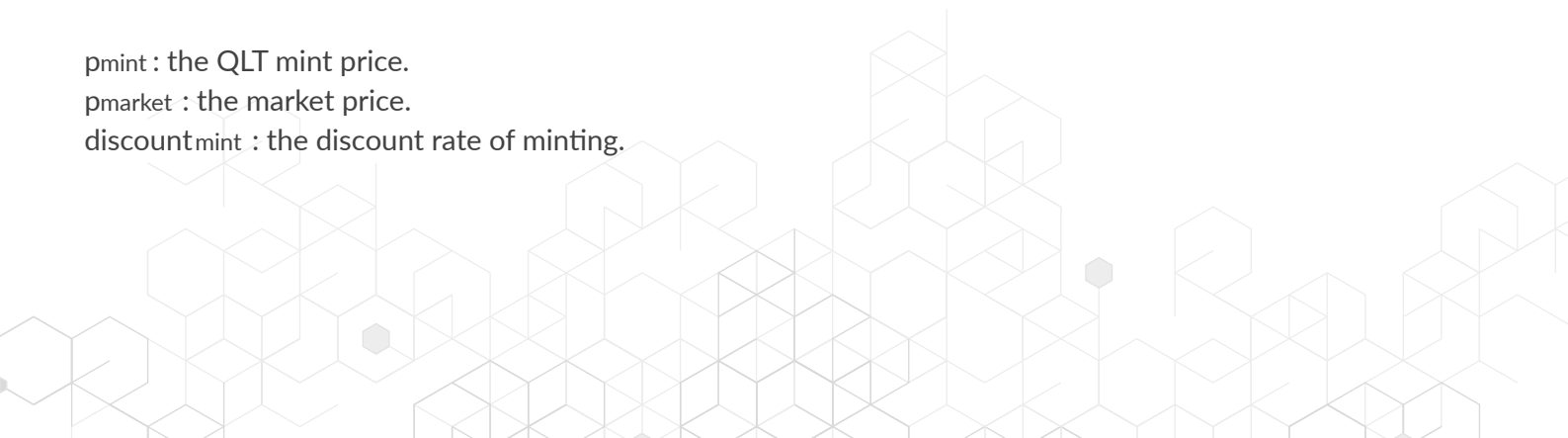
The discounted mint price is set to encourage QLT minting. The mint price formula is,

$$p_{mint} = p_{market} * (1 - discount_{mint})$$

$p_{mint}$  : the QLT mint price.

$p_{market}$  : the market price.

$discount_{mint}$  : the discount rate of minting.





## Staking Rewards Formula

### QLT Reward

Different staking plans have different reward rates. The longer the commitment period, the higher the reward rate. The formula to calculate the amount of rewarded QLT is shown below.

$$Reward_{stake} = q_{staked} * [(1 + r_{stake})^{hours\_staked} - 1]$$

$Reward_{stake}$  : the amount of rewarded QLT.

$q_{stake}$  : the staked QLT amount.

$r_{stake}$  : the hourly staking reward rate.

### Airdrop Reward

The airdrop reward is planned to be released on a monthly basis three months after launch. A QLT staker is entitled to the airdrop reward only if he keeps staking QLT until the release of the airdrop reward. The airdrop reward is calculated as:

$$Reward_{airdrop} = \frac{staking\_power}{\sum staking\_power_i} * Q_{airdrop}$$

$Reward_{airdrop}$  : the airdrop reward entitled to the staker.

$\sum staking\_power_i$  : the sum of all QLT stakers' staking power.

$Q_{airdrop}$  : the total amount of airdrop.

### Staking Power

$$staking\_power = q_{staked} * staking\_time * staking\_power\_multiplier$$

Generally, a longer staking commitment period corresponds to a higher staking power multiplier.

### APY Calculation

Staking rewards are calculated to derive the annual percentage yield (APY).

$$APY = [(1 + r_{stake})^{8760} - 1] * 100\%$$

$r_{stake}$  : the hourly staking reward rate, and 8760 is the number of hours per year.

## • Disclaimer

### Not Investment Advice

The Quantland Wiki does not provide investment advice or a recommendation or solicitation to buy or sell any investment and should not be used in the evaluation of the merits of making any investment decision. Participating in any crypto asset protocol comes with the associated token volatility risk. Please conduct comprehensive research and assessments before swapping for QLT.

### Cryptocurrency Investment Risk

Cryptocurrency investment may involve a higher degree of risk and the market movements are usually more volatile.





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