1. Introduction.

Arbitrum Orbit Chains are customizable Layer 2 (L2) or Layer 3 (L3) blockchain solutions built using the Arbitrum Nitro technology stack. They allow developers to create dedicated, scalable chains that settle transactions on Ethereum or Arbitrum's networks (Arbitrum One or Nova). Orbit Chains are designed to offer flexibility in terms of governance, gas tokens, throughput, privacy, and more, making them ideal for projects needing tailored blockchain solutions while leveraging Ethereum's security.

2. What are Arbitrum Orbit Chains?

Arbitrum Orbit chains allow developers to create their own blockchains using the Arbitrum Nitro technology stack, which offers features like fraud proofs, advanced compression, and compatibility with Ethereum's virtual machine (EVM). These chains can be

- **Rollup Chains -** Settle transactions directly on Ethereum (L1) or Arbitrum's L2 networks, ensuring high security.
- **AnyTrust Chains -** Use a Data Availability Committee for lower costs, suitable for high-volume applications like gaming.

Developers can customize aspects like gas tokens, governance, and throughput, making Orbit chains versatile for various use cases. They can settle on Arbitrum One, Nova, or other blockchains like Bitcoin or Binance Smart Chain under the Arbitrum Expansion Program.

Arbitrum Expansion Program

The Arbitrum Expansion Program is a funding and support initiative run by the Arbitrum DAO to help developers grow the Arbitrum ecosystem
It mainly helps:

- Teams who want to build their own Orbit chains (custom blockchains using Arbitrum tech)
- Developers building apps on Arbitrum (like DeFi, games, NFTs, DAOs)
- Infrastructure projects (like wallets, bridges, explorers)

The program gives grants, tools, and promotion to promising projects so they can build faster and scale better all while staying connected to Arbitrum and Ethereum.
It's a key part of Arbitrum's plan to support many Layer 3 chains and bring more users and apps into the ecosystem.

3. How Arbitrum Orbit Chain Generate Revenue?

Orbit chains primarily generate revenue through transaction fees, with potential additional income from Miner Extractable Value (MEV).

- **Transaction Fee**

  - **Mechanism -** Users pay gas fees to perform transactions, such as sending tokens or interacting with smart contracts. These fees can be in a custom ERC-20 token or the native token of the parent chain (e.g., ETH or ARB).
  - **Operator Benefit -** Chain operators, who manage sequencers and validators, collect these fees. Operators can set fee structures to optimize revenue based on demand.
  - **Example -** A DeFi app on an Orbit chain might charge fees for token swaps, which go to the chain's operators.

- **Miner Extractable Value (MEV) -**

  - **Definition -** MEV is the extra profit that a sequencer (or miner/validator) can make by reordering, inserting, or excluding transactions when creating a block.
  - **Mechanism -** Sequencers or validators can reorder transactions to maximize profits, such as capturing arbitrage opportunities in DeFi protocols.
  - **Operator Benefit -** MEV provides additional revenue, particularly for chains with high DeFi activity, though it depends on transaction complexity and volume.

4. Where Does The Revenue Go?

The distribution of revenue depends on where the Orbit chain settles its transactions.

- **What does "Settling on Arbitrum" mean?**

  It means your Orbit chain is posting its rollup data to Arbitrum One or Nova, not to some other blockchain. You're using Arbitrum as your parent chain, keeping you inside the Arbitrum+Ethereum security model.

- **Chains Settling on Arbitrum One or Nova**

  - **Operator Retention -** Operators keep 100% of transaction fees and MEV, as these chains are exempt from revenue-sharing requirements.
  - **Use of Funds -** Operators may use revenue for operational costs (e.g., running nodes), reinvestment (e.g., marketing, development), or distribution to stakeholders (e.g., tokenholders if governed by a DAO).

- **Chains Settling on Other Blockchain**

  - **Revenue Sharing -** Under the Arbitrum Expansion Program, chains settling on non-Arbitrum networks (e.g., Ethereum, Binance Smart Chain) must share 10% of their Protocol Net Revenue with the Arbitrum Foundation.
  - **Net Revenue Definition -** Net revenue is the gross revenue (from transaction fees, sequencing, bridge functionality, etc.) minus settlement costs (e.g., gas fees for posting transactions to the parent chain).

- ○ **Distribution -**

    - ■ **8% to Arbitrum DAO -** Funds ecosystem development, such as protocol upgrades or grants.
    - ■ **2% to Arbitrum Developer Guild -** Supports tools and resources for developers, like the Orbit SDK or Stylus.

- ○ **Example -** If a chain generates $100,000 in fees and incurs $20,000 in settlement costs, the net revenue is $80,000, and $8,000 (10%) is shared with the Foundation.

- ● **Settlement Costs**

    - ○ **Cost Included -** Gas fees for settling transactions on the parent chain and fees for data availability solutions (e.g., for AnyTrust chains).
    - ○ **Impact -** These costs reduce the net revenue, affecting the amount shared with the Foundation.

5. How Arbitrum Is Benefitted?

Arbitrum benefits from Orbit chains in both direct and indirect ways, enhancing its ecosystem's growth and sustainability.

- ● **Indirect Benefit (Chains on Arbitrum One or Nova)**

    - ○ **Ecosystem Growth -** Increased activity on these chains boosts Arbitrum's popularity, attracting more users and developers. This can enhance the value of the ARB token and strengthen the ecosystem's network effects.
    - ○ **Interoperability -** Orbit chains on Arbitrum One or Nova can interact seamlessly, fostering a vibrant ecosystem with shared liquidity and user bases.
    - ○ **Example -** A gaming chain on Arbitrum Nova might attract thousands of users, increasing overall network activity.

- ● **Direct Benefit (Chains on Other Blockchain)**

    - ○ **Revenue Sharing -** The 10% revenue share from chains settling on non-Arbitrum networks provides direct funding to the Arbitrum Foundation.
    - ○ **Use of Funds -**

        - ■ **Protocol Upgrades -** Enhancements like BoLD (reducing censorship timeouts) or Stylus (supporting multiple programming languages).
        - ■ **Developer Support -** Grants and tools via the Developer Guild, encouraging more Orbit chain deployments.
        - ■ **Community Initiatives -** Marketing and events to promote Arbitrum's technology.

- ○ **Example -** Revenue from a chain settling on Binance Smart Chain could fund a new feature in the Nitro stack, benefiting all Arbitrum chains.

- ● **Broader Ecosystem Benefits**

  - ○ **Adoption & Innovation -** The flexibility of Orbit chains encourages developers to build diverse applications, expanding Arbitrum's reach across industries like DeFi, gaming, and NFTs.
  - ○ **Scalability -** Revenue reinvested into infrastructure improvements supports higher throughput and lower costs, making Arbitrum competitive.
  - ○ **Market Expansion -** The Expansion Program allows Orbit chains on non-Ethereum networks, increasing Arbitrum's influence in the broader blockchain space.

6. Revenue Distribution Table.

Settlement Network	Operator Revenue	Arbitrum Foundation Share	Purpose of Shared Revenue
Arbitrum One/Nova	100%	0%	N/A
Other Blockchains	90%	10%	Fund Ecosystem development and developer tools