FusionOrder module

This module provides low-level utilities for working with Fusion orders. It contains order parameters and can be submitted on-chain to create escrows.

Creation

From params

```
import {
    AuctionDetails,
    FusionOrder,
    now,
    Address,
    id,
} from "@1inch/solana-fusion-sdk";

const order = FusionOrder.new(
    {
        srcMint: Address.NATIVE,
        dstMint: new Address("EPjFWdd5AufqSSqeM2qN1xzybapC8G4wEGGkZwyTDt1v"),
        srcAmount: 1000000000000000000n,
        minDstAmount: 1420000000n,
        estimatedDstAmount: 1420000000n,
        id: id(),
        receiver: Address.fromBigInt(1n),
    },
    AuctionDetails.noAuction(now(), 180), // expired in 3m
);
```

From JSON

```
import { FusionOrder } from "@1inch/solana-fusion-sdk";

const order = FusionOrder.fromJSON({
    id: 3384470318,
    fee: {
        protocolFee: 0,
        integratorFee: 0,
        protocolDstAta: null,
```

```
        integratorDstAta: null,
        surplusPercentage: 0,
        maxCancellationPremium: "1",
    },
    dstMint: "boopkpWqe68MSxLqBGogs8ZbUDN4GXaLhFwNP7mpP1i",
    srcMint: "EPjFWdd5AufqSSqeM2qN1xzybapC8G4wEGGkZwyTDt1v",
    receiver: "4hYy2LUC7j2g469vmoXZJjnsvkBdRXNWYxFYiBm5Lfk9",
    srcAmount: "7504317665",
    minDstAmount: "30695497527417",
    expirationTime: 1746162263,
    dstAssetIsNative: false,
    dutchAuctionData: {
        duration: 24,
        startTime: 1746162227,
        initialRateBump: 503,
        pointsAndTimeDeltas: [{ rateBump: 433, timeDelta: 120 }],
    },
    srcAssetIsNative: false,
    estimatedDstAmount: "30695497527417",
    cancellationAuctionDuration: 1,
});
```

Getters

Getter	Description
`fees`	Returns `[FeeConfig](https://github.com/1inch/solana-fusion-sdk/blob/master/src/fusion-order/fee-config/fee-config.ts)` or `null` if no fees are set.
`resolverCancellationConfig`	Returns `[ResolverCancellationConfig](https://github.com/1inch/solana-fusion-sdk/blob/master/src/fusion-order/resolver-cancellation-config/resolver-cancellation-config.ts)` or `null` if resolver cannot cancel the order.
`srcMint()`	Returns source mint `[Address](https://github.com/1inch/solana-fusion-sdk/blob/master/src/domains/address.ts)`.
`dstMint()`	Returns destination mint `Address`.
`srcAmount()`	Returns source amount (`bigint`).
`minDstAmount()`	Returns minimum destination amount (`bigint`).
`estimateDstAmount()`	Returns estimated destination amount (`bigint`).
`receiver()`	Returns destination `Address`.
`deadline()`	Returns UNIX timestamp of order expiration (`number`).
`auctionStartTime()`	Returns UNIX timestamp of auction start time (`number`).

Getter	Description
`auctionEndTime()`	Returns UNIX timestamp of auction end time (`number`).
`auctionDetails()`	Returns auction parameters as `[AuctionDetails]` `(https://github.com/1inch/solana-fusion-sdk/blob/master/src/fusion-order/auction-details/auction-details.ts)`.
`id()`	Returns order ID (`number`).
`srcAssetIsNative()`	Returns `true` if source asset is native SOL.
`dstAssetIsNative()`	Returns `true` if destination asset is native SOL.

Methods

build

Description: Transforms the order into contract order implementation.

toJSON

Description: Serializes order to JSON. Can be restored with `[fromJSON]` `(https://github.com/1inch/solana-fusion-sdk/blob/master/src/fusion-order/README.md#from-json)`.

getOrderHash

Description: Calculate `sha256` of order parameters.

Returns: Raw hash as `Buffer`.

getOrderHashBase58

Description: Calculate `sha256` of order parameters.

Returns: Base58-encoded hash as `string`.

getEscrow

Description: Returns escrow ATA address for source token.

Arguments:

- [0] maker `AddressLike`
- [1] srcTokenProgram `AddressLike owner` of src token mint
- [2] programId `AddressLike` FusionSwap program ID

Returns: The escrow ATA address as the Address object.

calcTakingAmount

Description: Calculates `dstAmount` for given `srcAmount` at block `time`.

Arguments:

- [0] srcAmount `bigint` source amount to fill.
- [1] time `number` UNIX timestamp in sec at which fill will be executed.

Returns: How much resolver must provide as `dstAmount: bigint`.

getUserReceiveAmount

Description: Calculates how much user will receive in destination token.

Arguments:

- [0] srcAmount `bigint` source amount to fill.
- [1] time `number` UNIX timestamp in sec at which fill will be executed.

Returns: Amount user receives in `dstToken`.

getIntegratorFee

Description: Calculates how much `dstToken` integrator will receive.

Arguments:

- [0] srcAmount `bigint` source amount to fill.
- [1] time `number` UNIX timestamp in sec at which fill will be executed.

Returns: Fee paid to integrator as `feeAmount: bigint`.

getProtocolFee

Description: Calculates how much `dstToken` protocol will receive.

Arguments:

- [0] srcAmount `bigint` source amount to fill.
- [1] time `number` UNIX timestamp in sec at which fill will be executed.

Returns: Fee paid to protocol as `feeAmount: bigint`.

isExpiredAt

Description: Checks if order is expired at given time.

Arguments:

- [0] time `number` UNIX timestamp in seconds.

Returns: `isExpired: true` if order expired at given time.

getCalculator

Description: Builds AmountCalculator based on order params.

Returns: The AmountCalculator object