

# UnoswapV3Router

## Derives

- [IUniswapV3SwapCallback](#)
- [Permitable](#)
- [EthReceiver](#)

## Functions

### constructor

function

constructor ( address weth )

public

#### Parameters:

Name Type Description weth address

### uniswapV3SwapToWithPermit

function

uniswapV3SwapToWithPermit ( address

payable recipient , contract

IERC20 srcToken , uint256 amount , uint256 minReturn , uint256 [ ] pools , bytes permit )

external

returns

( uint256 returnAmount ) Same as uniswapV3SwapTo but calls permit first, allowing to approve token spending and make a swap in one transaction.

#### Parameters:

Name Type Description recipient address payable Address that will receive swap funds srcToken contract IERC20 Source token amount uint256 Amount of source tokens to swap minReturn uint256 Minimal allowed returnAmount to make transaction commit pools uint256[] Pools chain used for swaps. Pools src and dst tokens should match to make swap happen permit bytes Should contain valid permit that can be used in IERC20Permit.permit calls. See tests for examples

### uniswapV3Swap

function

uniswapV3Swap ( uint256 amount , uint256 minReturn , uint256 [ ] pools )

external

returns

( uint256 returnAmount ) Same as uniswapV3SwapTo but uses msg.sender as recipient

#### Parameters:

Name Type Description amount uint256 Amount of source tokens to swap minReturn uint256 Minimal allowed returnAmount to make transaction commit pools uint256[] Pools chain used for swaps. Pools src and dst tokens should match to make swap happen

### uniswapV3SwapTo

function

uniswapV3SwapTo ( address

payable recipient , uint256 amount , uint256 minReturn , uint256 [ ] pools )

public

returns

( uint256 returnAmount ) Performs swap using Uniswap V3 exchange. Wraps and unwraps ETH if required. Sending non-zero msg.value for anything but ETH swaps is prohibited

#### Parameters:

Name	Type	Description
recipient	address payable	Address that will receive swap funds
amount	uint256	Amount of source tokens to swap
minReturn	uint256	Minimal allowed returnAmount to make transaction commit
pools	uint256[]	Pools chain used for swaps. Pools src and dst tokens should match to make swap happen

### uniswapV3SwapCallback

function

uniswapV3SwapCallback ( int256 amount0Delta , int256 amount1Delta , bytes )

external Called to msg.sender after executing a swap via IUniswapV3Pool#swap.

In the implementation you must pay the pool tokens owed for the swap. The caller of this method must be checked to be a UniswapV3Pool deployed by the canonical UniswapV3Factory. amount0Delta and amount1Delta can both be 0 if no tokens were swapped.

#### Parameters:

Name	Type	Description
amount0Delta	int256	The amount of token0 that was sent (negative) or must be received (positive) by the pool by the end of the swap. If positive, the callback must send that amount of token0 to the pool.
amount1Delta	int256	The amount of token1 that was sent (negative) or must be received (positive) by the pool by the end of the swap. If positive, the callback must send that amount of token1 to the pool.
data	bytes	Any data passed through by the caller via the IUniswapV3PoolActions#swap call

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