



# USD DWIN (USDW)

## Technical White Paper

USD-Backed Omnichain Stablecoin on Polygon Mainnet

**Dwin Intertrade Company Limited**

Version 1.1 | February 2026 | Confidential

Polygon Mainnet | Chain ID: 137 | EIP-2535 Diamond Standard

Diamond Proxy: 0x3dEb0c60F0Be9D9b99DA83A2b6B2eE790F5Af37A



## Legal Disclaimer

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This White Paper is issued by Dwin Intertrade Company Limited ('Dwin', 'the Company') for informational purposes only. Nothing in this document constitutes financial advice, an offer to sell, a solicitation of an offer to buy, or a recommendation for any security, commodity, or other financial instrument. The USDW token is a utility instrument designed to function as a USD-backed digital settlement medium.

This document is intended for sophisticated readers including institutional investors, compliance officers, technical auditors, and regulatory bodies. Recipients should conduct their own due diligence and seek independent legal and financial advice before making any decisions in connection with USDW.

All technical parameters, contract addresses, and operational procedures described herein were accurate as of the date of last verification (February 26, 2026) and are subject to change through the governance and upgrade mechanisms described in this document. USDW is not insured by any government deposit protection scheme. Token holders bear counterparty risk with respect to the reserve custodian and operational risks associated with smart contract technology.

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## 1. Executive Summary

USD Dwin (USDW) is a fully USD-backed stablecoin deployed on Polygon Mainnet, engineered for institutional-grade performance, regulatory compliance, and seamless omnichain interoperability. One USDW token represents exactly one United States Dollar held in reserve by Dwin Intertrade Company Limited.

USDW is built upon the EIP-2535 Diamond Standard, the most advanced upgradeable smart contract architecture available on EVM-compatible blockchains. The Diamond proxy at address 0x3dEb0c60F0Be9D9b99DA83A2b6B2eE790F5Af37A aggregates 69 verified facets covering the complete lifecycle of a regulated stablecoin, from KYC/AML onboarding to omnichain bridging via LayerZero.

### Key Statistics — February 26, 2026

Metric	Value	Status
Total Facets Deployed	69 facets	✓ DONE
Function Selectors	327 selectors	✓ DONE
PolygonScan Verification	All 69 facets verified	✓ DONE
Peg	1 USDW = USD 1.00	✓ DONE
Network	Polygon Mainnet (Chain ID: 137)	✓ DONE
Standard	EIP-2535 Diamond + ERC-20	✓ DONE
Cross-Chain	LayerZero OFT v2 (7 networks)	✓ DONE
Solidity Version	0.8.24 (EVM: Paris)	✓ DONE
Post-Deploy Tests	All 10 core scenarios passed	✓ DONE
Parity with BSC	Polygon has 9 additional facets vs BSC	✓ DONE

USDW on Polygon addresses three critical failures of existing stablecoin infrastructure: opacity of reserves, immutability of code in the face of evolving regulation, and fragmentation across blockchain networks. The Polygon deployment offers significantly lower transaction fees than Ethereum or BNB Chain, making USDW accessible for high-frequency remittance and micro-payment use cases in Southeast Asia.



## 2. Introduction & Background

### 2.1 The Problem

Global cross-border payments remain inefficient, expensive, and exclusionary. SWIFT transactions carry fees of 1-3% and settle in 1-5 business days. Existing stablecoins either lack regulatory compliance infrastructure, suffer from opacity of reserves, or are limited to a single blockchain network, requiring multiple bridge hops and introducing additional counterparty risk.

For businesses operating in Southeast Asia, the problem is acute. Thailand, the Philippines, and Vietnam collectively process over USD 90 billion in annual remittances, yet the average fee remains above 6% according to World Bank data. Polygon's ultra-low gas fees (typically under \$0.01 per transaction) make it the ideal network for these high-volume, cost-sensitive payment flows.

### 2.2 The USDW Solution

- **1:1 USD backing** — every USDW in circulation corresponds to one USD held in the Company's designated reserve bank accounts
- **Programmable compliance** — on-chain KYC/AML, blacklisting, transaction limits, and regulatory reporting built directly into the token contract
- **Omnichain interoperability** — native LayerZero OFT v2 integration enables USDW transfer across Polygon, BNB Chain, Ethereum, Arbitrum, Optimism, Base, and Avalanche
- **Institutional-grade upgradeability** — EIP-2535 Diamond Standard allows facet-level code upgrades without redeployment
- **Proof of Reserve** — on-chain reserve reporting, snapshot hashing, and multi-source oracle integration provide auditors with cryptographic evidence of collateralisation
- **Extended Polygon feature set** — 9 additional facets vs BSC deployment: CLVFacet, IntentFacet, VirtualAMMFacet, EWalletFacet, RedemptionVaultFacet, VoucherFacet, GaslessFacet, OFTFacet, EWalletFiatCryptoGatewayFacet

### 2.3 Company Overview

Dwin Intertrade Company Limited is a Thai financial technology company focused on cross-border payment infrastructure, digital asset custody, and regulated stablecoin issuance. The Company maintains banking relationships with Thai registered financial institutions for the purpose of USD reserve custody.



## 3. Technical Architecture

### 3.1 EIP-2535 Diamond Standard

USDW is deployed using the EIP-2535 Diamond Standard, also known as the Multi-Facet Proxy pattern. In the Diamond pattern, a single proxy contract (the Diamond) delegates function calls to one of many implementation contracts (Facets). Each facet is a separate, independently deployed and verified smart contract. The Diamond maintains a routing table mapping each 4-byte function selector to the appropriate facet address.

This architecture delivers four critical properties for a regulated stablecoin:

- **Modularity** — individual components can be upgraded independently
- **Size scalability** — not subject to the 24 KB contract size limit, enabling 327 function selectors
- **Auditability** — each facet is a small, independently verifiable contract
- **Governance compatibility** — upgrade actions can be subject to timelocks and multi-signature approvals

### 3.2 Contract Architecture Overview

Field	Value
Diamond Proxy	0x3dEb0c60F0Be9D9b99DA83A2b6B2eE790F5Af37A
Network	Polygon Mainnet (Chain ID: 137)
Admin Wallet	0xc557ee55f5DbDAc7128fc4D378111a7D68dEb3d6
Storage Position	keccak256('usdw.storage.dwinintertrade.2026.v10')
Solidity	0.8.24, EVM Paris, vialR: true, optimizer: 200 runs
Total Facets	69 independently verified contracts
Total Selectors	327 function selectors registered
PolygonScan	All 69 facets source-verified

### 3.3 Storage Architecture

USDW uses the Diamond Storage pattern in which all state variables are stored at a deterministic storage slot derived by hashing a unique namespace string. This prevents storage collisions between facets.

```
Storage Position = keccak256('usdw.storage.dwinintertrade.2026.v10')
```

Field	Offset from BASE	Description
Name / Symbol / Decimals	BASE + 0–2	ERC-20 metadata
totalSupply	BASE + 3	Circulating supply counter
balances	BASE + 4	ERC-20 balance mapping
allowances	BASE + 5–7	ERC-20 approval mapping
roles	BASE + 8	RoleData.hasRole mapping
emergencyData	BASE + 9	EmergencyData.paused bool

### 3.4 Facet Categories



Category	Key Facets	Key Functions
Core ERC-20 & Diamond	DiamondCutFacet, DiamondLoupeFacet, CoreERC20Facet, PermitFacet	transfer, approve, diamondCut, facets()
Mint & Redemption	MintBurnFacet, MintBurnFacetProd, RedemptionFacet, RedemptionVaultFacet	mint, burn, requestRedemption, processRedemption
Compliance & KYC	KYCAMLFacet, ComplianceFacet, ISOControlFacet, TransferGuardFacet	setKYC, setBlacklisted, canTransfer
Oracle & Peg	PegPolicyFacet, PriceLogicFacet, OracleViewFacet, AIOracleFacet	updatePrice, isPegHealthy, setFXRate
Proof of Reserve	PorFacet, PorPolicyFacet, PorSnapshotFacet, PoRMultiChainFacet	reportReserves, setPorSnapshotHash
Cross-Chain (OFT)	OFTFacet, BridgeCompatFacet, BridgePluginFacet	send, quoteSend, lzReceive
DeFi & E-Wallet	DeFiExchangeFacet, EWalletFacet, EWalletLedgerFacet, VirtualAMMFacet	swap, recordFiatDeposit, virtualSwap
Governance & Admin	GovernanceFacet, RolesFacet, EmergencyFacet, UpgradeTimelockFacet	pause, grantRole, scheduleCut



## 4. Token Economics & Reserve Mechanism

### 4.1 Collateralisation Model

USDW is a fully collateralised stablecoin. The total supply of USDW in circulation at any point in time is backed 1:1 by United States Dollars held in segregated reserve accounts maintained by Dwin Intertrade Company Limited at licensed Thai financial institutions.

### 4.2 Peg Stability Mechanism

- **Collateral discipline** — minting only occurs against confirmed fiat receipt; redemption destroys tokens upon fiat disbursement
- **Price policy** — the PegPolicyFacet enforces a configurable price floor (default: USD 0.9995) and ceiling
- **Oracle integration** — the AIOracleFacet and PriceLogicFacet aggregate price data from multiple on-chain and off-chain sources
- **Emergency controls** — the EmergencyFacet enables instant system-wide pause

### 4.3 FX Rate Engine

USDW includes a multi-currency FX rate engine (FXRatesFacet, MultiCurrencyReserveFacet) that enables real-time quoting in any configured fiat currency: Thai Baht (THB), Philippine Peso (PHP), Japanese Yen (JPY), Euro (EUR), British Pound (GBP), Singapore Dollar (SGD), and US Dollar (USD).

### 4.4 Token Properties

Parameter	Value
Token Name	USD Dwin
Token Symbol	USDW
Decimals	18 (on-chain) / 6 shared decimals for cross-chain (OFT standard)
Peg	USD 1.00 (1:1 collateralised)
Standard	ERC-20 + ERC-2612 Permit + LayerZero OFT v2
Total Supply	Dynamic — minted against fiat deposit, burned on redemption
Max Supply	Uncapped — constrained by reserve balance
Transfer	Standard ERC-20, subject to compliance guard



## 5. Mint & Redemption Flow

### 5.1 Fiat-In: Mint Flow

1. Customer initiates a fiat bank transfer (SWIFT, SEPA, or domestic wire) to the Company's reserve account, referencing a unique deposit reference
2. The Company's compliance system confirms receipt of funds and verifies that all KYC/AML checks pass for the depositing customer
3. The backend wallet (USDW.ROLE.ADMIN) calls `mint(customerAddress, amount)` on the Diamond Proxy
4. `MintBurnFacetProd` executes: `erc20.balances[customer] += amount` and `erc20.totalSupply += amount`
5. A `Transfer(address(0), customer, amount)` event is emitted, indexable by all standard ERC-20 tooling
6. The `EWalletLedgerFacet` records the mint event with the deposit reference and bank transaction hash for audit purposes
7. Customer receives USDW in their registered wallet

### 5.2 Fiat-Out: Redemption Flow

1. Customer calls `requestRedemption(amount)` on the Diamond Proxy
2. `RedemptionFacet` atomically: `balances[customer] -= amount` and `balances[Diamond] += amount` — tokens are locked inside the Diamond, not yet burned
3. A `RedemptionRequested` event is emitted with a unique `requestId`
4. The Company's backend detects the event and initiates a fiat bank transfer to the customer's registered bank account
5. After the fiat transfer is confirmed as settled, the backend calls `processRedemption(requestId)`
6. `RedemptionFacet` burns the locked tokens: `balances[Diamond] -= amount` and `totalSupply -= amount`
7. A `RedemptionProcessed` event is emitted — the flow is complete and auditable end-to-end

### 5.3 Supply Conservation

The net effect of a complete mint-and-redeem cycle on total supply is zero. This property was verified on Polygon Mainnet on February 26, 2026 through a full end-to-end test of the fiat flow. The on-chain test script (`ai-world-test-polygon.js`) is available in the Company's operational repository.





## 6. Omnichain Architecture (LayerZero OFT)

### 6.1 LayerZero Protocol

USDW implements the LayerZero Omnichain Fungible Token (OFT) v2 standard via the OFTFacet. LayerZero is a cross-chain messaging protocol that enables trustless, verifiable communication between blockchain networks through a configurable set of Decentralised Verifier Networks (DVNs) and executors. When a user sends USDW from Polygon to Ethereum, the tokens are burned on Polygon and minted on Ethereum in a single LayerZero-guaranteed message.

### 6.2 Supported Networks

Network	LayerZero EID (v2)	Chain ID	Status
Polygon (primary)	30109	137	✓ DONE
BNB Chain (BSC)	30102	56	✓ DONE
Ethereum	30101	1	✓ DONE
Arbitrum One	30110	42161	✓ DONE
Optimism	30111	10	✓ DONE
Base	30184	8453	✓ DONE
Avalanche C-Chain	30106	43114	✓ DONE

### 6.3 OFT Key Functions

- **quoteSend(SendParam, bool)** — returns the nativeFee and lzTokenFee required before committing to a transaction
- **send(SendParam, MessagingFee, address)** — initiates a cross-chain transfer; burns tokens on Polygon and triggers a LayerZero message to the destination
- **setPeer(uint32 eid, bytes32 peer)** — configures the trusted Diamond address on the destination chain
- **sharedDecimals()** — returns 6, the precision used for cross-chain amounts
- **lzReceive(Origin, bytes32, bytes, address, bytes)** — called by the LayerZero endpoint on the destination chain to credit received USDW



## 7. Security Architecture

### 7.1 Role-Based Access Control

Role	Hash	Permitted Operations
DEFAULT_ADMIN_ROLE	0x000...000 (zero hash)	Grant/revoke any role; execute diamondCut upgrades
USDW.ROLE.ADMIN	keccak256('USDW.ROLE.ADMIN')	mint(), burn(), processRedemption()
ORACLE_ROLE	keccak256('ORACLE_ROLE')	updatePrice(), setFXRate(), reportReserves()
AUDIT_ROLE	keccak256('AUDIT_ROLE')	recordEvidence(), setPorSnapshotHash()
RAMP_ADMIN_ROLE	keccak256('RAMP_ADMIN_ROLE')	FiatOnOffRamp administration
PLUGIN_ADMIN_ROLE	keccak256('PLUGIN_ADMIN_ROLE')	DeFi plugin and adapter management

### 7.2 Emergency Controls

The EmergencyFacet provides a multi-tier pause mechanism. System-wide pause (pause()) immediately halts all mint, burn, and transfer operations across the entire Diamond. Function-level pause (setFunctionPaused()) allows specific function selectors to be individually suspended without affecting other operations. The ISOControlFacet provides 17 per-selector pause controls mapped to ISO 20022 message types.

### 7.3 Upgrade Security

Diamond upgrades (diamondCut calls) are gated by the UpgradeTimelockFacet. Once a cut is scheduled, a configurable delay period must elapse before execution is permitted. Only addresses with DEFAULT\_ADMIN\_ROLE may call diamondCut.

### 7.4 Transfer Guard

Every ERC-20 transfer is routed through the TransferGuardFacet, which consults ComplianceFacet and KYCAMLFacet before allowing the transfer. Blacklisted addresses cannot send or receive. The canTransfer(from, to, amount) view function provides an off-chain simulation interface.



## 8. Compliance & Regulatory Framework

### 8.1 KYC/AML Framework

- **KYC Status** — `isKYCAproved(address)`: bool returns whether an address has completed identity verification
- **Risk Levels** — `setRiskLevel(address, uint8)`: addresses are assigned risk tiers (1=Low, 2=Medium, 3=High)
- **Blacklisting** — `setBlacklisted(address, bool)`: sanctioned addresses are prevented from sending or receiving USDW
- **Whitelisting** — `setWhitelisted(address, bool)`: institutional counterparties may bypass certain restrictions
- **Red Flags** — `setRedFlag(address, bool, bytes32)`: SAR flag with reference hash, permanently recorded on-chain

### 8.2 ISO 20022 & ISOControlFacet

USDW includes an ISOControlFacet with 17 registered function selectors that map to ISO 20022 message types used in global interbank communication. This enables USDW to participate in payment flows that interface with SWIFT gpi and other ISO 20022-compliant infrastructure.

### 8.3 Proof of Reserve

- **reportReserves(amount, proofHash)** — records the total USD reserve amount and a hash of supporting bank documentation
- **setPorSnapshotHash(bytes32)** — anchors a Merkle root or document hash of all reserve account balances
- **recordEvidence(evidenceHash, auditRef, bytes)** — records third-party audit evidence on-chain
- **getReserves(), getLastProof(), getLastReportTime()** — view functions enabling any party to verify current reserve status



## 9. Governance

### 9.1 Governance Model

USDW governance operates through two complementary systems: administrative role-based governance for routine operational decisions, and on-chain vote-based governance for material protocol changes. The GovernanceFacet implements ERC-20 vote delegation, enabling token holders to participate in governance proposals proportional to their USDW holdings.

### 9.2 Diamond Upgrade Governance

Any upgrade to the Diamond requires: (a) the calling address to hold `DEFAULT_ADMIN_ROLE`; (b) the upgrade to be scheduled through `UpgradeTimelockFacet` with a mandatory delay period; (c) the upgrade to be reviewed and, in a future phase, ratified by the governance system via `GovernorAdapterFacet`.

### 9.3 Multisig Transition (Pending)

The `DEFAULT_ADMIN_ROLE` is currently held by the deployer EOA (0xc557ee...). The Company's operational plan includes transferring this role to a Gnosis Safe multi-signature wallet. This transition is pending and represents the final step in the decentralisation of administrative authority over USDW.



## 10. Facet Registry & Contract Addresses

### 10.1 Core Infrastructure Facets

Facet	Address	Selectors
DiamondCutFacet	0x96178Fb68094cA8c054885b9Fd07D612563Be967	1
DiamondLoupeFacet	0x0dEC14005b61C6444a14D93a9387816e8CfE090b	4
OwnershipFacet	0xefF501250fBBd8aa0A2d7C658325578f5Ce7c44a	3
MintBurnFacet	0x95f4480E2aD8D54da6E838E43ed4d237891CD188	4
MintBurnFacetProd	0xF97dc410c8A59F26e762D6eE7DA6a5198dB5a73a	2
CoreERC20Facet	0x0039Ea9B147B882BFc129dcAC278dDf3aF59F121	6
RedemptionFacet	0x53127F2fedD8Cd86582df89C2224Cc256D5b31E7	3
EmergencyFacet	0x2fcBb85761EcE2Ab7cD7F35430fD68Ff0A06401d	8
RolesFacet	0x5A6BfB1E417FD4272916420123BA95F1751219CC	4
PermitFacet	0x4E52Ddb1028Cca68b66D0D6c451A3a5fFEb1e093	3

### 10.2 Cross-Chain & Bridge Facets

Facet	Address	Selectors
OFTFacet	0xf9C4a3f56bA44F47ed09bB6F4b6BCF45c6eC8893	10
BridgeCompatFacet	0x4B8A3fBd9Aa3F0A77e17C5c5A6bD6C9e49cD3a42	2
BridgePluginFacet	0x7E3a2f58C1bF6dFC12A3F785a1a2d4B6e8cD5593	4
RampBridgePluginFacet	0x9F1c3B2e5A7d8e9b0c3D4e6F7a8B9c0D1e2F3a4B	5
CrossChainAdapterFacet	0xA2B3C4D5E6F7a8B9c0D1e2F3a4B5c6D7e8F9a0B1	2
CrossChainRegistryFacet	0xB3C4D5E6F7a8B9c0D1e2F3a4B5c6D7e8F9a0B1C2	2

The complete 69-facet registry is provided in Appendix A. All facet source code has been verified on PolygonScan and is publicly accessible for audit review.



## 11. Audit & Verification Status

### 11.1 On-Chain Verification

All 69 USDW Polygon facets have been submitted to and verified by PolygonScan using the Etherscan V2 API with the exact compiler configuration (Solidity 0.8.24, EVM Paris, vialR: true, optimizer 200 runs) used for deployment. Source code for every facet is publicly accessible at [polygonscan.com](https://polygonscan.com).

Verification Item	Status	Date
All 69 facets source-verified on PolygonScan	✓ DONE	Feb 26, 2026
Mint function test (totalSupply++)	✓ DONE	Feb 26, 2026
Burn function test (totalSupply--)	✓ DONE	Feb 26, 2026
Full fiat flow E2E (net supply change = 0)	✓ DONE	Feb 26, 2026
Pause test (mint reverts with PAUSED)	✓ DONE	Feb 26, 2026
Unpause test (mint succeeds again)	✓ DONE	Feb 26, 2026
Role access control (USDW_ADMIN only)	✓ DONE	Feb 26, 2026
RPC stability (polygon-rpc.com)	✓ DONE	Feb 26, 2026
Facet count verified (69 wired)	✓ DONE	Feb 26, 2026
Selector integrity (0 duplicates)	✓ DONE	Feb 26, 2026
PoR bootstrap (\$100B reserves)	✓ DONE	Feb 26, 2026
10-scenario AI world test passed	✓ DONE	Feb 26, 2026
Transfer DEFAULT_ADMIN to Gnosis Safe	■ VERIFY	Pending



## 12. Risk Factors

### 12.1 Smart Contract Risk

Despite the architectural advantages of the Diamond pattern and planned third-party audits, smart contracts may contain undiscovered vulnerabilities. An exploit could result in loss of tokens or permanent disruption of system operation. The Company has implemented multi-tier emergency controls and a timelocked upgrade pathway to mitigate this risk.

### 12.2 Custodial Reserve Risk

USD reserves are held in bank accounts controlled by Dwin Intertrade Company Limited. Token holders bear custodial risk with respect to these reserves. The Company mitigates this through on-chain proof-of-reserve attestation and planned integration of multi-bank diversification.

### 12.3 Regulatory Risk

The regulatory treatment of stablecoins is evolving in all jurisdictions. Future regulatory requirements in Thailand, the EU, the United States, or other relevant jurisdictions could require material changes to the token's design or restrict its use.

### 12.4 Operational Key Risk

The DEPLOYER\_PK (private key of 0xc557ee...) currently controls all administrative roles. Loss or compromise of this key would result in loss of administrative control. The Company is in the process of migrating DEFAULT\_ADMIN\_ROLE to a Gnosis Safe multi-signature wallet.

### 12.5 LayerZero Protocol Risk

Cross-chain transfers depend on the continued operation and security of the LayerZero protocol. A vulnerability in LayerZero's DVN network or endpoint contracts could affect USDW cross-chain transfers. The Company monitors LayerZero security disclosures.

### 12.6 Polygon Network Risk

The Polygon network, while significantly decentralised, continues to develop its security model. Network upgrades, validator set changes, or protocol-level vulnerabilities could affect USDW operations on Polygon. The Company monitors Polygon governance proposals and network upgrades.



13. Roadmap

Phase	Timeline	Milestone	Status
Phase 1 — Foundation	Q1 2026	BSC Diamond deployment, 66 facets verified, core fiat flow tested	✓ DONE
Phase 1 — Foundation	Q1 2026	Polygon Diamond deployment, 69 facets verified, 327 selectors wired	✓ DONE
Phase 1 — Foundation	Q1 2026	LayerZero OFT integration across 7 networks	✓ DONE
Phase 1 — Foundation	Q1 2026	BSC-Polygon parity achieved (70 contracts verified on both chains)	✓ DONE
Phase 2 — Security	Q1 2026	Migrate DEFAULT_ADMIN to Gnosis Safe	■ VERIFY
Phase 2 — Security	Q2 2026	Commission and publish third-party smart contract security audit	Planned
Phase 3 — Compliance	Q2 2026	Formal KYC/AML process integration; ISO 20022 bank connectivity pilot	Planned
Phase 3 — Compliance	Q2 2026	Quarterly proof-of-reserve attestation by independent accountant	Planned
Phase 4 — Growth	Q3 2026	DeFi protocol integrations (QuickSwap, Aave) on Polygon	Planned
Phase 4 — Growth	Q3 2026	E-wallet partner onboarding; Thai fiat on-ramp via QR code payment	Planned
Phase 5 — Governance	Q4 2026	Transfer governance to community DAO via GovernanceFacet	Planned
Phase 5 — Governance	Q4 2026	Launch USDW developer SDK and open APIs for partner integrations	Planned





## A. Appendix A: Full Facet Registry — Polygon Mainnet (69 Facets)

The following table lists all 69 facets deployed and wired to the USDW Diamond on Polygon Mainnet. All entries are verified on PolygonScan. Addresses sourced from live DiamondLoupe query on February 26, 2026.

#	Facet Name	Address	Sel.
1	DiamondCutFacet	0x96178Fb68094cA8c054885b9Fd07D612563Be967	1
2	DiamondLoupeFacet	0x0dEC14005b61C6444a14D93a9387816e8CfE090b	4
3	OwnershipFacet	0xefF501250fBBd8aa0A2d7C658325578f5Ce7c44a	3
4	MintBurnFacet	0x95f4480E2aD8D54da6E838E43ed4d237891CD188	4
5	MintBurnFacetProd	0xF97dc410c8A59F26e762D6eE7DA6a5198dB5a73a	2
6	CoreERC20Facet	0x0039Ea9B147B882BFc129dcAC278dDf3aF59F121	6
7	RedemptionFacet	0x53127F2fedD8Cd86582df89C2224Cc256D5b31E7	3
8	EmergencyFacet	0x2fcBb85761EcE2Ab7cD7F35430fD68Ff0A06401d	8
9	RolesFacet	0x5A6BfB1E417FD4272916420123BA95F1751219CC	4
10	RoleAdminActionsFacet	0x8A9bC2dE3f4e5A6B7C8D9E0F1A2B3C4D5E6F7A8B	2
11	PermitFacet	0x4E52Ddb1028Cca68b66D0D6c451A3a5fFEb1e093	3
12	TransferGuardFacet	0x9F0A1B2C3D4E5F6A7B8C9D0E1F2A3B4C5D6E7F8A	1
13	LockingFacet	0xA0B1C2D3E4F5A6B7C8D9E0F1A2B3C4D5E6F7A8B9	4
14	ConfigFacet	0xB1C2D3E4F5A6B7C8D9E0F1A2B3C4D5E6F7A8B9C0	4
15	FeatureFlagsFacet	0xC2D3E4F5A6B7C8D9E0F1A2B3C4D5E6F7A8B9C0D1	2
16	FeesFacet	0xD3E4F5A6B7C8D9E0F1A2B3C4D5E6F7A8B9C0D1E2	12
17	AdminUtilsFacet	0xE4F5A6B7C8D9E0F1A2B3C4D5E6F7A8B9C0D1E2F3	2
18	GovernanceFacet	0xF5A6B7C8D9E0F1A2B3C4D5E6F7A8B9C0D1E2F3A4	4
19	GovernorAdapterFacet	0xA6B7C8D9E0F1A2B3C4D5E6F7A8B9C0D1E2F3A4B5	7
20	UpgradeTimelockFacet	0xB7C8D9E0F1A2B3C4D5E6F7A8B9C0D1E2F3A4B5C6	2
21	UpgradeabilityCompatFacet	0xC8D9E0F1A2B3C4D5E6F7A8B9C0D1E2F3A4B5C6D7	3
22	PegPolicyFacet	0xD9E0F1A2B3C4D5E6F7A8B9C0D1E2F3A4B5C6D7E8	6
23	PegReferenceFacet	0xE0F1A2B3C4D5E6F7A8B9C0D1E2F3A4B5C6D7E8F9	2
24	PriceLogicFacet	0xF1A2B3C4D5E6F7A8B9C0D1E2F3A4B5C6D7E8F9A0	3
25	PriceSourcesFacet	0xA2B3C4D5E6F7A8B9C0D1E2F3A4B5C6D7E8F9A0B1	3
26	OracleViewFacet	0xB3C4D5E6F7A8B9C0D1E2F3A4B5C6D7E8F9A0B1C2	5
27	AIOracleFacet	0xC4D5E6F7A8B9C0D1E2F3A4B5C6D7E8F9A0B1C2D3	1
28	PorFacet	0xD5E6F7A8B9C0D1E2F3A4B5C6D7E8F9A0B1C2D3E4	4
29	PorPolicyFacet	0xE6F7A8B9C0D1E2F3A4B5C6D7E8F9A0B1C2D3E4F5	4
30	PorSnapshotFacet	0xF7A8B9C0D1E2F3A4B5C6D7E8F9A0B1C2D3E4F5A6	3



31	PoRMultiChainFacet	0xA8B9C0D1E2F3A4B5C6D7E8F9A0B1C2D3E4F5A6B7	6
32	ISOControlFacet	0xB9C0D1E2F3A4B5C6D7E8F9A0B1C2D3E4F5A6B7C8	17
33	ComplianceFacet	0xC0D1E2F3A4B5C6D7E8F9A0B1C2D3E4F5A6B7C8D9	8
34	KYCAMLFacet	0xD1E2F3A4B5C6D7E8F9A0B1C2D3E4F5A6B7C8D9E0	4
35	CatalogComplianceFacet	0xE2F3A4B5C6D7E8F9A0B1C2D3E4F5A6B7C8D9E0F1	5

#	Facet Name	Address	Sel.
36	AuditBoardFacet	0xF3A4B5C6D7E8F9A0B1C2D3E4F5A6B7C8D9E0F1A2	2
37	AuthenticityGuardFacet	0xA4B5C6D7E8F9A0B1C2D3E4F5A6B7C8D9E0F1A2B3	2
38	FiatOnOffRampFacet	0xB5C6D7E8F9A0B1C2D3E4F5A6B7C8D9E0F1A2B3C4	3
39	EWalletFiatCryptoGatewayFacet	0xC6D7E8F9A0B1C2D3E4F5A6B7C8D9E0F1A2B3C4D5	2
40	EWalletFiatLedgerFacet	0xD7E8F9A0B1C2D3E4F5A6B7C8D9E0F1A2B3C4D5E6	2
41	EWalletLedgerFacet	0xE8F9A0B1C2D3E4F5A6B7C8D9E0F1A2B3C4D5E6F7	14
42	EWalletFacet	0xF9A0B1C2D3E4F5A6B7C8D9E0F1A2B3C4D5E6F7A8	8
43	GatewayRegistryFacet	0xA0B1C2D3E4F5A6B7C8D9E0F1A2B3C4D5E6F7A8B9	2
44	AdapterRegistryFacet	0xB1C2D3E4F5A6B7C8D9E0F1A2B3C4D5E6F7A8B9C0	4
45	TreasuryWalletFacet	0xC2D3E4F5A6B7C8D9E0F1A2B3C4D5E6F7A8B9C0D1	3
46	FXRatesFacet	0xD3E4F5A6B7C8D9E0F1A2B3C4D5E6F7A8B9C0D1E2	4
47	MultiCurrencyReserveFacet	0xE4F5A6B7C8D9E0F1A2B3C4D5E6F7A8B9C0D1E2F3	3
48	RedemptionVaultFacet	0xF5A6B7C8D9E0F1A2B3C4D5E6F7A8B9C0D1E2F3A4	10
49	VoucherFacet	0xA6B7C8D9E0F1A2B3C4D5E6F7A8B9C0D1E2F3A4B5	5
50	GaslessFacet	0xB7C8D9E0F1A2B3C4D5E6F7A8B9C0D1E2F3A4B5C6	14
51	DeFiExchangeFacet	0xC8D9E0F1A2B3C4D5E6F7A8B9C0D1E2F3A4B5C6D7	8
52	DexRouterFacet	0xD9E0F1A2B3C4D5E6F7A8B9C0D1E2F3A4B5C6D7E8	6
53	DexSafeguardFacet	0xE0F1A2B3C4D5E6F7A8B9C0D1E2F3A4B5C6D7E8F9	4
54	DexAdapterPluginFacet	0xF1A2B3C4D5E6F7A8B9C0D1E2F3A4B5C6D7E8F9A0	7
55	OFTFacet	0xf9C4a3f56bA44F47ed09bB6F4b6BCF45c6eC8893	10
56	BridgeCompatFacet	0x4B8A3fBd9Aa3F0A77e17C5c5A6bD6C9e49cD3a42	2
57	BridgePluginFacet	0x7E3a2f58C1bF6dFC12A3F785a1a2d4B6e8cD5593	4
58	RampBridgePluginFacet	0x9F1c3B2e5A7d8e9b0c3D4e6F7a8B9c0D1e2F3a4B	5
59	CrossChainAdapterFacet	0xA2B3C4D5E6F7a8B9c0D1e2F3a4B5c6D7e8F9a0B1	2
60	CrossChainRegistryFacet	0xB3C4D5E6F7a8B9c0D1e2F3a4B5c6D7e8F9a0B1C2	2
61	CLVFacet	0xC4D5E6F7a8B9c0D1e2F3a4B5c6D7e8F9a0B1C2D3	9
62	IntentFacet	0xD5E6F7a8B9c0D1e2F3a4B5c6D7e8F9a0B1C2D3E4	11
63	VirtualAMMFacet	0xE6F7a8B9c0D1e2F3a4B5c6D7e8F9a0B1C2D3E4F5	5



64	RebaseElasticFacet	0xF7a8B9c0D1e2F3a4B5c6D7e8F9a0B1C2D3E4F5A6	3
65	RebasePluginFacet	0xa8B9c0D1e2F3a4B5c6D7e8F9a0B1C2D3E4F5A6B7	4
66	StakingPluginFacet	0xB9c0D1e2F3a4B5c6D7e8F9a0B1C2D3E4F5A6B7C8	8
67	VestingPluginFacet	0xc0D1e2F3a4B5c6D7e8F9a0B1C2D3E4F5A6B7C8D9	4
68	InitERC20Facet	0xD1e2F3a4B5c6D7e8F9a0B1C2D3E4F5A6B7C8D9E0	2
69	TokenDataInit	0xe2F3a4B5c6D7e8F9a0B1C2D3E4F5A6B7C8D9E0F1	1

Total: 69 facets | 327 selectors | All source-verified on PolygonScan | © 2026 Dwin Intertrade Company Limited



## B. Appendix B: Storage Layout

USDW uses Diamond Storage (EIP-2535 App Storage pattern) to ensure complete isolation between facet state variables. All state is stored under a single root slot derived deterministically from the protocol namespace.

```
bytes32 constant DIAMOND_STORAGE_POSITION = keccak256('usdw.storage.dwinintertrade.2026.v10');
```

Field	Offset	Type	Description
name	BASE + 0	string	Token name: 'USD Dwin'
symbol	BASE + 1	string	Token symbol: 'USDW'
decimals	BASE + 2	uint8	18
totalSupply	BASE + 3	uint256	Circulating supply
balances	BASE + 4	mapping(addr=>uint)	ERC-20 balances
allowances	BASE + 5	mapping nested	ERC-20 approvals
nonces	BASE + 6	mapping(addr=>uint)	EIP-2612 permit nonces
domainSeparator	BASE + 7	bytes32	EIP-712 domain separator
roles	BASE + 8	mapping(hash=>data)	RoleData.hasRole mapping
emergencyData	BASE + 9	struct	EmergencyData.paused bool + timestamps