

# USDW Diamond

## Deployment Checklist

BSC Mainnet · Chain ID: 56 · EIP-2535 Diamond Standard

Last verified: February 25, 2026

### 1. Core Contract Addresses

All contracts deployed on BSC Mainnet and verified on BSCScan.

Item	Value / Address	Status	Notes
<b>Diamond Proxy</b>	0x081684720530e691edb6b3965dE181F44Fcfd8fB	<b>DONE</b>	Main entry point for all calls
<b>DiamondCutFacet</b>	0x50B183E3275f5B81dFEd887b82510E413E9BdDb7	<b>DONE</b>	EIP-2535 upgrade mechanism
<b>DiamondLoupeFacet</b>	0x387382898878f9E9324F84E5001E634f34ECa6d3	<b>DONE</b>	Introspection facet
<b>OwnershipFacet</b>	0xF557B053B28190d5858669Ea0b4518D8C8712Af0	<b>DONE</b>	ERC-173 ownership
<b>MintBurnFacetProd</b>	0x27e32950d30Ba3c11712ecf2d821bbC605bF29C8	<b>DONE</b>	Production mint/burn
<b>CoreERC20Facet</b>	0x9AA7DdDD5DbA8E3491f58221E82AbEc9647637c8	<b>DONE</b>	ERC-20 transfer/approve
<b>RedemptionFacet</b>	0x60fc052b27483889FFaCe1ad8d68690189943b53	<b>DONE</b>	Fiat redemption flow
<b>EmergencyFacet</b>	0x31380d857a0Dcca3d2093EC26c58d2A4aA555525	<b>DONE</b>	Pause/unpause
<b>RolesFacet</b>	0xc61402a5A3075bd424A3AAd26753f531300c0e03	<b>DONE</b>	Role management

### 2. Storage Configuration

Item	Value / Address	Status	Notes
<b>Storage Position</b>	keccak256('usdw.storage.dwinintertrade.2026.v10')	<b>DONE</b>	EIP-2535 diamond storage
<b>BASE slot</b>	0x54fb86d8e5e903641ee5710d20...ff92	<b>DONE</b>	Verified against live chain
<b>totalSupply offset</b>	BASE + 3	<b>DONE</b>	Confirmed via raw storage read
<b>balances offset</b>	BASE + 4	<b>DONE</b>	Confirmed via raw storage read
<b>roles offset</b>	BASE + 8	<b>DONE</b>	RoleData.hasRole mapping
<b>emergency offset</b>	BASE + 9	<b>DONE</b>	EmergencyData.paused bool

### **3. Role Management**

## 4. Fiat Mint / Redeem Flow

## MINT FLOW = Fiat In → USDW Out

1. Customer sends fiat to Dwin Intertrade bank account
  2. Backend confirms fiat receipt and compliance checks pass
  3. Backend wallet (USDW.ROLE.ADMIN) calls `mint(customerAddress, amount)`
  4. MintBurnFacetProd credits `erc20.balances[customer]` and increments `erc20.totalSupply`
  5. Transfer(`address(0) → customer`) event emitted for indexers
  6. Customer receives USDW in wallet

## REDEEM FLOW — USDW In → Fiat Out

1. Customer calls `requestRedemption(amount)` on Diamond
  2. RedemptionFacet locks tokens: `balances[customer] -= amount` / `balances[Diamond] += amount`
  3. RedemptionRequested event emitted with `requestId`
  4. Backend receives event, initiates fiat bank transfer to customer
  5. After fiat confirmed sent, backend calls `processRedemption(requestId)`
  6. RedemptionFacet burns locked tokens: `balances[Diamond] -= amount` / `totalSupply -= amount`
  7. RedemptionProcessed event emitted — flow complete

## 5. Emergency Controls

Item	Value / Address	Status	Notes
<b>Pause contract</b>	pause(uint8 type, string reason)	DONE	Blocks mint/burn/transfer
<b>Unpause contract</b>	unpause(uint8 type, string reason)	DONE	Restores normal operation
<b>Check pause state</b>	isPaused() → bool	DONE	View function
<b>Last pause time</b>	lastPause() → uint256	DONE	Unix timestamp
<b>Last unpause time</b>	lastUnpause() → uint256	DONE	Unix timestamp
<b>Emergency stop</b>	emergencyStop(string reason)	DONE	One-way pause with reason

## 6. Infrastructure Configuration

Item	Value / Address	Status	Notes
<b>Primary RPC</b>	<a href="https://bsc.publicnode.com">https://bsc.publicnode.com</a>	DONE	Reliable, non-stale reads
<b>Chain ID</b>	56 (BSC Mainnet)	DONE	
<b>Hardhat config</b>	hardhat.config.js	DONE	BSC_RPC_URL in .env
<b>Explorer API key</b>	ETHERSCAN_API_KEY in .env	DONE	BSCScan V2 API
<b>Deployer wallet</b>	0xc557ee55f5DbDAc7128fc4D378111a7D68dEb3d6	DONE	Holds all admin roles
<b>Private key</b>	DEPLOYER_PK in .env	DONE	Keep secure — never commit
<b>.env committed?</b>	NEVER commit .env to git	VERIFY	Add to .gitignore

## 7. Full Facet Registry (66 Facets)

All facets verified on BSCScan. Total selectors registered: 283+

Contract	Address	Selectors	BSCScan
<b>DiamondCutFacet</b>	0x50B183E3275f5B81dFEd887b82510E413E9BdDb7	1	✓ Verified
<b>DiamondLoupeFacet</b>	0x387382898878f9E9324F84E5001E634f34ECa6d3	4	✓ Verified
<b>OwnershipFacet</b>	0xF557B053B28190d5858669Ea0b4518D8C8712Af0	3	✓ Verified
<b>CoreERC20Facet</b>	0x9AA7DdDD5DbA8E3491f58221E82AbEc9647637c8	9	✓ Verified
<b>MintBurnFacetProd</b>	0x27e32950d30Ba3c11712ecf2d821bbC605bF29C8	2	✓ Verified
<b>RedemptionFacet</b>	0x60fc052b27483889FFaCe1ad8d68690189943b53	3	✓ Verified

Contract	Address	Selectors	BSCScan
<b>EmergencyFacet</b>	0x31380d857a0Dcca3d2093EC26c58d2A4aA555525	8	✓ Verified
<b>RolesFacet</b>	0xc61402a5A3075bd424A3AA26753f531300c0e03	4	✓ Verified
<b>RoleAdminActionsFacet</b>	0xb3DA64FA7b043BC17D838ECD18177fa6B7d822B7	2	✓ Verified
<b>PermitFacet</b>	0x07e9C591dB9C63bBc31E130C62806190d90A9f50	3	✓ Verified
<b>TransferGuardFacet</b>	0x64015AA7fCB2Fec0f9Ac09F3412de4B466e9F29B	1	✓ Verified
<b>LockingFacet</b>	0x0629Aee58aC6AD0C2938c3EC3CF10D40d3394709	4	✓ Verified
<b>VestingPluginFacet</b>	0x7ce903fddbAB694740dEAAD72783843482a5C6f8	4	✓ Verified
<b>ConfigFacet</b>	0xcB7F2dBC1C561345EE13Ea295D609eFca6AA1008	4	✓ Verified
<b>FeatureFlagsFacet</b>	0x1a004a75d1d1bfD8D36CD880BBB1aa5902daC21C	2	✓ Verified
<b>AdminUtilsFacet</b>	0x7B7a041A65502882DD869bC55EBd719F0cde50De	2	✓ Verified
<b>GovernanceFacet</b>	0xe4db377849a9D308098A8ba2BA9cBCa21a19a979	4	✓ Verified
<b>GovernorAdapterFacet</b>	0x8614f23827e96Bc03087DbB550e560f31a8c5304	7	✓ Verified
<b>UpgradeTimelockFacet</b>	0x0c6C8238b7E5a8C321660392A64C01fE03A97201	2	✓ Verified
<b>UpgradeabilityCompatFacet</b>	0x83C1ed74676f7c839E0EDAd6DC58869157D55a14	3	✓ Verified
<b>PegPolicyFacet</b>	0xa9e82De588b0F8CAA65f1746577C968A24260C3	6	✓ Verified
<b>PegReferenceFacet</b>	0x3475356713CE43a59Af61DDDb01DBE0C56711295	2	✓ Verified
<b>PriceLogicFacet</b>	0x3cFEbE48e2414F26f65dF2a8fd63505C4be42e81	7	✓ Verified
<b>PriceSourcesFacet</b>	0xd7ea2eA1FBdFE8bB665234Af73D709E038C3015c	1	✓ Verified
<b>OracleViewFacet</b>	0x3F8BFa7bE1214C6e0C0A5181C843bA37E5888f5F	3	✓ Verified
<b>AIOracleFacet</b>	0x673fAdAEF85aC970a405A47B631a2F5818CdBD	1	✓ Verified
<b>PorFacet</b>	0x6Ed7D49397Fd9525AE3c3d0B6642Ed700D311508	4	✓ Verified
<b>PorPolicyFacet</b>	0xFcB9Ab29B6961d39b578F1128a08032Fbd1277bc	4	✓ Verified
<b>PorSnapshotFacet</b>	0xe362Cd90237A8274BCde006B7d5D20874461eb2D	3	✓ Verified
<b>PoRMultiChainFacet</b>	0x63Fe69bdF0965a4610943525Db70b935137c5686	6	✓ Verified
<b>ISOControlFacet</b>	0x945A74ffEc4B9699C96C3eE48B9A214C912E7AA6	17	✓ Verified
<b>ComplianceFacet</b>	0x7829bDF5Bc82d45a4Bbd7c8a712482A48740E4a	8	✓ Verified
<b>KYCAMLFacet</b>	0x34cB7D7914dee71E79381517Ade5431fdE31A899	4	✓ Verified
<b>CatalogComplianceFacet</b>	0xa4186C75Aa301d2d6E4962F0c20cEA438A74424A	5	✓ Verified
<b>AuditBoardFacet</b>	0xCc17382587F0aCDFFBf6093C4975e5489fCa7Bd7	2	✓ Verified
<b>AuthenticityGuardFacet</b>	0xf01866aa0fc114C4f328dAaa470b4dAE620247D2	2	✓ Verified
<b>FiatOnOffRampFacet</b>	0xb855804CecD362fEaF9D455252d4d83846ae6558	3	✓ Verified
<b>EWalletFiatCryptoGatewayFacet</b>	0xed4927bAE08F50069154DA3Fe9A2Ec967De4D930	2	✓ Verified
<b>EWalletFiatLedgerFacet</b>	0xAff21c9C3826a4391b9f1C7DDede3dBfBf872B52	2	✓ Verified
<b>EWalletLedgerFacet</b>	0x01318A6F18569Cc8DF54218717867711a61895a	14	✓ Verified
<b>EWalletFacet</b>	0x1948Cf7c737070AeBc44053C2F6DC8682c62D8f0	8	✓ Verified
<b>GatewayRegistryFacet</b>	0xa83eC282FD108200849092eaaC0861cF3Cb9AacC	2	✓ Verified
<b>AdapterRegistryFacet</b>	0xa77c6c489c894B0D58572d9f0A6C347FACe9Cb4a	4	✓ Verified
<b>FeesFacet</b>	0xA63BcDf89F98e82e46e10186f2f2edA4E34D7353	12	✓ Verified
<b>TreasuryWalletFacet</b>	0x58792165ea1C3eea53c034E2CC2cD074Be2D5E00	3	✓ Verified

Contract	Address	Selectors	BSCScan
<b>FXRatesFacet</b>	0x4dAC24Ae3D81c0FF1cF6B68f61223C188c95b947	4	✓ Verified
<b>MultiCurrencyReserveFacet</b>	0xB4DE4d738c8b2AA93d95f67275e7e9B15D60B4D7	3	✓ Verified
<b>RedemptionVaultFacet</b>	0xbE50499aF1d6D4864c06fc3CaD22dFd120404Ada	10	✓ Verified
<b>VoucherFacet</b>	0xdA2e4242A078cA7Db95A464B8Da85DFBbE1B64D8	5	✓ Verified
<b>GaslessFacet</b>	0xDC1524C6058314897A3796f4f132043A4778085A	14	✓ Verified
<b>DeFiExchangeFacet</b>	0xaeD169381845F359Ff77cbe09b082A8c3d85cfD	8	✓ Verified
<b>DexRouterFacet</b>	0xDef35c6A307D48AB267d5409daC18739ACA0D638	6	✓ Verified
<b>DexSafeguardFacet</b>	0x4a04f6a328d9A3D3F5Cf973222b2259c18189b79	4	✓ Verified
<b>DexAdapterPluginFacet</b>	0x7B5E3903a9a464d8DB787ce06dB2E162C255a305	7	✓ Verified
<b>OFTFacet</b>	0xf1D6Ae0aa8F5f311ac173dB6eED1FEB99e244524	10	✓ Verified
<b>BridgeCompatFacet</b>	0xb1537e5ea31bfa86d5DafA0bE13f37D3Cfb40555	2	✓ Verified
<b>BridgePluginFacet</b>	0x647d6D7bfcc0cBC17B24E4b04ebbF26Cc3564AdDf	4	✓ Verified
<b>RampBridgePluginFacet</b>	0x8A443cd46B55F4e48818376e3ec238055Bc00618	5	✓ Verified
<b>CrossChainAdapterFacet</b>	0xcbC7346060EbF59dd6E48365Fa8936F55d50A81	2	✓ Verified
<b>CrossChainRegistryFacet</b>	0x22456cb02C07b6bcDAC94F4D8D20D5BD4e4d716e	2	✓ Verified
<b>CLVFacet</b>	0xebd0B74F2Da9ec9bB4C649C72f24112E079Fc869	11	✓ Verified
<b>IntentFacet</b>	0xe4E9F10F20E0d11cBE198DEea485285714211c3A	11	✓ Verified
<b>VirtualAMMFacet</b>	0x1AfBd233F0C6c25E16A980560633AE89F98898b0	5	✓ Verified
<b>RebaseElasticFacet</b>	0x7B263A004f9b65412D3447E8F56Ee6505facA0d4	3	✓ Verified
<b>RebasePluginFacet</b>	0x757C3E3335433849F01285B3f3f5b8A527E12223	4	✓ Verified
<b>StakingPluginFacet</b>	0x6Ad32B4B6E102082Df7b0EC0c1a366A7bB9fbb65	6	✓ Verified

## 8. Post-Deployment Checklist

Item	Value / Address	Status	Notes
<b>Mint test</b>	mint(admin, 1 token) → totalSupply++	DONE	Verified Feb 25 2026
<b>Burn test</b>	burn(admin, 1 token) → totalSupply--	DONE	Verified Feb 25 2026
<b>Fiat flow E2E</b>	mint → requestRedemption → processRedemption	DONE	Net supply change = 0
<b>Pause test</b>	pause() → mint reverts with PAUSED	DONE	Verified Feb 25 2026
<b>Unpause test</b>	unpause() → mint succeeds again	DONE	Verified Feb 25 2026
<b>Role check</b>	Only USDW_ADMIN can mint/burn	DONE	Access control active
<b>BSCScan verify</b>	All 66 facets verified	DONE	Source code public
<b>RPC stability</b>	bsc.publicnode.com	DONE	Non-stale reads confirmed
<b>.env security</b>	Private key not in git	VERIFY	Check .gitignore

Item	Value / Address	Status	Notes
Remove UNKNOWN facet	0xB01f233bc9fce4627e909E9ee6a603B2660763d	VERIFY	Old debug facet still registered
Backend wallet roles	Grant USDW_ADMIN to hot wallet	VERIFY	Use manage-roles.js
Multisig for DEFAULT_ADMIN	Transfer to Gnosis Safe	VERIFY	Recommended for production

## 9. Operational Scripts

All scripts located in D:\USDW\_NEW\_INNO\scripts\

Script	Purpose	Usage
manage-roles.js	Grant / revoke roles	Edit GRANT/REVOKE arrays then run
test-fiat-flow.js	End-to-end fiat mint/redeem	Run after any MintBurn upgrade
test-pause.js	Test pause/unpause flow	Run to verify emergency controls
final-verify.js	Mint + burn sanity check	Quick smoke test after changes
verify-all-facets.js	Map facet addresses to names	Audit deployed facet registry
batch-verify.js	BSCScan verify all facets	Run after new facet deployments
check-roles.js	Show role holders	Audit access control
deploy-prod-mintburn.js	Deploy + wire MintBurnFacetProd	Use for future MintBurn upgrades

## 10. Important Notes

**SECURITY:** Never commit .env to git. The DEPLOYER\_PK controls all admin roles.

**RPC:** Always use bsc.publicnode.com — bsc-dataseed.binance.org returns stale state.

**UPGRADES:** Use diamondCut with action=Replace (1) to update existing facets. Use action>Add (0) for new selectors only.

**POWERSHELL:** Always use [System.Text.UTF8Encoding]::new(\$false) when writing .sol files to avoid BOM errors.

**UNKNOWN FACET:** 0xB01f233bc9fce4627e909E9ee6a603B2660763d is a debug artifact. Remove with diamondCut action=Remove (2).