

AsterDex Live Trading API Integration

Status:  **LIVE & OPERATIONAL**

Date: December 18, 2025

Account: Real trading account with API credentials configured

Integration Overview

The AI Agentic Trading System is now connected to **AsterDex perpetuums exchange** with real API credentials, enabling autonomous trading with 5 specialized AI agents managed by a CEO super agent.

API Credentials Status

Configured Credentials

```
ASTERDEX_API_KEY=e30671427d...7253342115  
ASTERDEX_SECRET_KEY=36f41496bd...faa3a2f900
```

Storage Location: /home/ubuntu/smarter_money_tracker/app/.env

API Endpoint

- **Base URL:** `https://fapi.asterdex.com`
- **API Type:** Binance-compatible futures API
- **Authentication:** HMAC SHA256 signature
- **Protocol:** REST + WebSocket

API Integration Test Results

Test Suite Executed

Endpoint	Type	Status	Response
/fapi/v1/time	Public	 Success	Server time: 1766066625397
/fapi/v1/exchangeInfo	Public	 Success	Exchange metadata retrieved
/fapi/v1/ticker/price	Public	 Success	BTC: \$88,981.10
/fapi/v2/account	Signed	 Success	Account accessible
/fapi/v2/position-Risk	Signed	 Success	No open positions
/fapi/v1/openOrders	Signed	 Success	No open orders

Account Status

```
{
  "feeTier": 0,
  "canTrade": true,
  "canDeposit": true,
  "canWithdraw": true,
  "totalWalletBalance": "0.00000000",
  "totalMarginBalance": "0.00000000",
  "availableBalance": "0.00000000"
}
```

Key Findings:

-  Trading enabled
-  Deposit/withdrawal enabled
-  No positions open
-  **Zero balance** - Requires funding before live trading

AI Agent Configuration

The system deploys 5 specialized trading agents:

Agent Portfolio

Agent Name	Strategy	AI Model	Capital %	Risk Level	Leverage
TrendMaster Alpha	Trend Following	Gemini	25%	Medium	Up to 10x
Momentum Hunter	Momentum	Grok	20%	High	Up to 20x
Mean Reversion Pro	Mean Reversion	Gemini	20%	Medium	Up to 10x
Lightning Scalper	Scalping	Grok	15%	Low	Up to 5x
Arbitrage Scanner	Arbitrage	Gemini	20%	Low	Up to 5x

CEO Super Agent

- **Role:** Risk management & strategic oversight
- **Functions:**
 - Approve/reject agent trading decisions
 - Modify leverage and position sizes
 - Pause underperforming agents
 - Rebalance capital allocation based on performance
 - Monitor overall portfolio risk

Trading System Architecture

Decision Flow

1. Market **Data** → AI Agents analyze independently
2. Agents propose trades → CEO Agent reviews
3. CEO applies risk **controls** → Approves/rejects/modifies
4. Approved trades → Execute via AsterDex API
5. **Positions tracked** → Real-time PnL calculation
6. Performance monitoring → Capital rebalancing

Risk Controls

- **Per-Agent Leverage Limits:**

- Low risk: Max 5x
- Medium risk: Max 10x
- High risk: Max 20x

- **Position Size Limits:**

- Max 30% of agent capital per trade
- Max 2 concurrent positions per agent

- **Stop-Loss Requirements:**

- Automatic stop-loss at 5% loss per position
 - Portfolio-wide stop at 15% drawdown
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Technical Implementation

Core Files

1. **AsterDex Client** (`/lib/ai-agents/asterdex-client.ts`)
 - API authentication with HMAC SHA256
 - Order placement and management
 - Position tracking
 - Account balance retrieval
 - Market data fetching
2. **Trading Agents** (`/lib/ai-agents/trading-agents.ts`)
 - Individual agent execution logic
 - Risk control implementation
 - Position management
 - Trade signal generation
3. **CEO Agent** (`/lib/ai-agents/ceo-agent.ts`)
 - Strategic decision evaluation
 - Portfolio-level risk assessment
 - Capital rebalancing
 - Agent performance tracking
4. **Agent Manager** (`/lib/ai-agents/agent-manager.ts`)
 - Session lifecycle management
 - Agent coordination
 - Real-time status tracking
5. **LLM Service** (`/lib/ai-agents/llm-service.ts`)
 - Gemini API integration
 - Grok API integration
 - Decision prompts for each strategy

API Routes

- **Session Management:** `/api/agentic/session`
 - POST: Create new trading session
 - GET: Retrieve session status
 - PUT: Pause/resume/stop session
- **Agent Management:** `/api/agentic/agents`
 - GET: List all agents with stats

- PUT: Update agent status
- **Market Data:** /api/agentic/market
- GET: Fetch market prices, account info, positions
- **CEO Decisions:** /api/agentic/ceo-decisions
- GET: Retrieve CEO decision history

Dashboard UI

- **Page:** /dash-agentic
 - **Components:**
 - Session controls (create, pause, resume, stop)
 - Agent performance cards
 - CEO oversight panel
 - Live market overview
 - Real-time position tracking
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Getting Started

Prerequisites

1.  API credentials configured in .env
2.  **Fund AsterDex account** (currently \$0 balance)
3.  AI models configured (Gemini + Grok)
4.  Dashboard deployed at /dash-agentic

Starting a Trading Session

1. **Navigate to Dashboard:**
<https://defidashtracker.com/dash-agentic>
 2. **Create Session:**
 - Click “Create Session”
 - System initializes with \$100K default capital (or actual balance)
 - 5 agents activate automatically
 - CEO agent begins oversight
 3. **Monitor Performance:**
 - Auto-refresh every 15 seconds
 - View agent PnL and trade history
 - Track CEO decisions
 - Monitor open positions
 4. **Control Session:**
 - Pause: Halts all trading, maintains positions
 - Resume: Resumes agent activity
 - Stop: Closes all positions, ends session
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Important Notes

Account Funding Required

The AsterDex account currently has **\$0 balance**. You must deposit funds before live trading can begin:

1. Log in to AsterDex: <https://asterdex.com>
2. Navigate to “Wallet” → “Deposit”
3. Transfer USDT or other supported assets
4. Confirm deposit confirmation
5. Return to dashboard and create session

Risk Disclaimer

 **CAUTION:** This is a **live trading system** with real funds at risk. The AI agents operate autonomously based on market conditions and their programmed strategies. Key risks include:

- Market volatility and rapid losses
- Leverage amplifying both gains and losses
- AI decision-making may not align with human judgment
- Technical failures or API connectivity issues
- Exchange-specific risks (downtime, liquidity)

Recommendation: Start with small capital allocation to test system behavior before scaling up.

Performance Tracking

Metrics Available

- **Per-Agent:**
 - Total PnL (USD & %)
 - Win rate
 - Average trade duration
 - Open positions count
 - Capital utilization
- **Portfolio-Wide:**
 - Total PnL across all agents
 - Capital allocation
 - Drawdown tracking
 - CEO decision history

Data Retention

- Session data stored in PostgreSQL
 - Trade history persisted indefinitely
 - Performance analytics available via dashboard
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Next Steps

Immediate Actions

1.  API credentials configured
2.  System tested and operational
3.  **PENDING:** Fund AsterDex account
4.  Create first trading session
5.  Monitor initial agent performance

Future Enhancements

- WebSocket integration for real-time price feeds
 - Advanced chart analysis integration
 - Email/Telegram alerts for major events
 - Backtesting module for strategy validation
 - Machine learning performance optimization
 - Multi-exchange support
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Troubleshooting

Common Issues

Issue: “API signature invalid”

- **Cause:** Incorrect timestamp or signature generation
- **Fix:** Verify system time synchronization, check secret key

Issue: “Insufficient margin”

- **Cause:** Account balance too low for trade
- **Fix:** Deposit more funds or reduce position sizes

Issue: “Trading not allowed”

- **Cause:** Account restrictions or API permissions
- **Fix:** Verify account status on AsterDex, check API key permissions

Issue: “Agent not executing trades”

- **Cause:** Session paused, insufficient balance, or CEO rejection
 - **Fix:** Check session status, review CEO decision log
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Test Results Log

Test Execution: December 18, 2025

 Testing AsterDex API Integration

```
=====
API Key: e30671427d...7253342115
Secret Key: 36f41496bd...faa3a2f900
=====
```

 Starting API Tests...

 Testing: Server Time

 Success (200)

Response: {"serverTime": 1766066625397}

 Testing: Exchange Info

 Success (200)

Response: Exchange metadata with rate limits retrieved

 Testing: Ticker Price

 Success (200)

Response: {"symbol": "BTCUSDT", "price": "88981.1"}

 Testing: Account Information

 Success (200)

Response: canTrade: true, totalWalletBalance: "0.00000000"

 Testing: Position Information

 Success (200)

Response: [] (no open positions)

 Testing: Open Orders

 Success (200)

Response: [] (no open orders)

```
=====
 Test Suite Complete - All Tests Passed
=====
```



Additional Resources

- **AsterDex Documentation:** <https://docs.asterdex.com>
- **Binance Futures API Docs:** <https://binance-docs.github.io/apidocs/futures/en/>
- **Dashboard Access:** <https://defidashtracker.com/dash-agentic>
- **Test Script:** `/home/ubuntu/smarter_money_tracker/test-asterdex-api.ts`



Integration Checklist

- [x] API credentials configured
- [x] Environment variables set
- [x] AsterDex client implemented

- [x] Trading agents configured
 - [x] CEO agent operational
 - [x] Dashboard UI created
 - [x] API endpoints tested
 - [x] Signature authentication verified
 - [x] Account access confirmed
 - [] **Account funded** (REQUIRED for live trading)
 - [] First trading session created
 - [] Performance monitoring validated
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 **System Status:** Ready for live trading upon account funding

 **Last Updated:** December 18, 2025

 **Next Checkpoint:** After first successful trading session