

Stock Monitor

User Manual · Developed by T. Boner with support from Claude AI

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1. Introduction

Stock Monitor is a professional desktop application for displaying stock prices, managing portfolios and analysing key metrics. The app runs on Windows (as a standalone .exe) and Linux (as an .rpm package) and requires an internet connection for live price data via Yahoo Finance (approx. 15 minutes delayed).

Tip: Stock Monitor comes with a demo portfolio. The demo portfolio has no password.

2. Installation & Getting Started

2.1 Windows EXE (Standalone)

Download the ZIP file from www.stock-monitor.ch and extract it. Copy the entire folder to any location and run **stock_monitor.exe** – no Python, no installation required.

Note: Always copy the **entire folder** – not just the .exe file. The app requires all files in the folder.

Tip: On first launch, Windows Defender may show a warning. Click "Run anyway" – the app is safe.

Note: The first launch may take up to 20 seconds.

2.2 Linux RPM

Download the RPM package from www.stock-monitor.ch and install it:

· Fedora/RHEL: `sudo dnf install stock-monitor.x86_64.rpm`

- openSUSE: `sudo zypper install stock-monitor.x86_64.rpm`
- Launch: **stock_monitor** from the application menu or terminal

Tip: The RPM package runs on Fedora, RHEL, CentOS, openSUSE and compatible distributions.

2.3 Python Version (for developers)

- Install Python 3.9 or higher (recommended: 3.11 or 3.12)
- Install packages: `pip install PyQt6 pyqtgraph numpy pandas matplotlib yfinance openpyxl reportlab cryptography odfpy requests`
- Launch: `python stock_monitor.py`

3. Language, Number & Date Format

3.1 Language

The app supports German (DE) and English (EN). Switch via the flag buttons in the toolbar. The setting is saved permanently and takes effect immediately.

3.2 Number Format

Selectable via the format button in the toolbar – applies globally to all displays:

- CH: 1'234'567.89 (Swiss apostrophe)
- DE: 1.234.567,89 (dot as thousands, comma as decimal)
- US: 1,234,567.89 (comma as thousands, dot as decimal)

Note: The number format only affects the display. Inputs (purchase price, quantity) must still use a dot as the decimal separator.

3.3 Date Format

Selectable via the calendar button – applies globally to all date displays:

- EU: 28.03.2026
- ISO: 2026-03-28
- US: 03/28/2026

4. Price Display & Charts

4.1 Enter Symbol

Enter the ticker in the input field at the top left and press Enter. Examples:

- US stocks: AAPL, NVDA, MSFT, GOOGL
- Swiss stocks: NESN.SW, ROG.SW, UBSG.SW
- Cryptocurrencies: BTC-USD, ETH-USD, SOL-USD
- ETFs: SPY, VTI, QQQ
- Precious metals: GC=F (Gold), SI=F (Silver)

Tip: The app automatically recognises exchange suffixes – for unknown symbols, .SW, .DE, .TO etc. are tried automatically.

4.2 Search by Company Name

Click the magnifying glass icon and type the company name. The app searches for the matching ticker automatically.

4.3 Select Time Period

Select the desired period from the dropdown next to the symbol: 1D, 5D, 1M, 3M, 6M, 1Y, 2Y, 5Y, 10Y, Max or Custom (free date selection). The custom period is restored on next launch.

4.4 Show Indicators

- MA20 / MA50 / MA200: Moving averages
- Trend: Linear regression over the selected period
- Target: Analyst target price as horizontal line
- Beta / Alpha: Key metrics directly in the chart
- Purchase Price: Personal cost basis as orange dashed line (when stock is in portfolio)

4.5 News Button

Every chart features a News Button that retrieves the latest news from the past 2 days via Yahoo Finance – no API key required. The button lights up green when news is available for today's date. The check runs automatically every 30 minutes.

Tip: The News Button is available in all chart layouts (4, 8 or 16 charts).

4.6 Fullscreen Mode & Advanced Indicators

Double-click on a chart to open fullscreen mode. Additionally available there:

- Candles: Candlestick display (green/red with wick for high/low)
- RSI: Relative Strength Index as separate panel (>70 overbought, <30 oversold)
- BB: Bollinger Bands (upper/lower band + midline)
- DD: Maximum drawdown as separate panel
- 52W High / Low: Annual high and low as reference lines
- Stop-Loss & personal target price: Individual price limits with alert display

Tip: RSI, Bollinger Bands and drawdown are ideal for short-term technical analysis (1D–3M).

4.7 Set Stop-Loss & Target Price

In fullscreen mode, personal stop-loss and target price limits can be set per stock. When the stop-loss is breached, a warning appears in the app.

4.8 Export Chart

Use the export button to save the current chart as PDF, Excel (.xlsx) or ODS.

4.9 Favourites

Select saved stocks directly from the favourites dropdown. Use **Manage** to add or remove favourites.

5. Multi-Chart View

5.1 Choose Layout

Select the desired layout in the main window: 4, 6, 8, 9 or 12 charts (Full HD) or up to 16 charts (4K).

Tip: On Full HD (1920×1080) a maximum of 12 charts is recommended. On 4K monitors up to 16 charts can be displayed cleanly.

5.2 Global Control

Time period, MA lines, trend line, target price, Beta and Alpha can be toggled for all charts simultaneously via the toolbar.

5.3 Auto-Refresh

Automatic updates can be set to 30 seconds, 1 minute or 5 minutes.

5.4 Save & Load Configuration

The current chart configuration can be saved as a .smp profile and reloaded later – also on another PC. The app saves the profile automatically on exit.

5.5 Performance Comparison

Shows all active charts in a side-by-side bar chart – ideal for comparing returns of different stocks at a glance. A 3D variant is also available.

6. Watchlist

The Watchlist allows quick comparison of performance for any number of symbols in a bar chart – independent of the portfolio.

6.1 Manage Symbols

- Enter symbol + Enter: Add symbol directly to the list
- Magnifying glass: Company name search or direct add
- Favourites quick-select, remove and clear all available
- Save / Load: Save and load watchlist as JSON file

6.2 Calculate & Chart

Select period (1M to Max) → click Calculate. All symbols are retrieved in parallel. Green bars = positive, red bars = negative. Hover tooltip shows company name, P&L; and GICS sector.

6.3 GICS Sector Filter

After calculating, the results can be filtered by GICS sector via dropdown – without recalculating. Results can be exported as PDF, Excel (.xlsx) or ODS.

7. Index Comparison

The index comparison shows portfolio performance directly compared with up to 3 reference indices in a line chart.

- Available indices: S&P; 500, NASDAQ, DOW, DAX, SMI, FTSE 100, Nikkei, Euro Stoxx 50 etc.
- Freely selectable time period
- Normalised display (starting point = 100%) for direct comparison
- Export as PDF, Excel or ODS

Tip: Ideal for seeing whether your portfolio beats the market or lags behind benchmarks.

8. Currency Converter

The integrated currency converter supports 23 fiat currencies and 4 cryptocurrencies (BTC, ETH, XRP, SOL). Rates are loaded live via Yahoo Finance. Enter amount, select source and target currency – the value is converted instantly. The converter remembers the last currencies used.

9. Market Hours & Holidays

Visible directly in the fullscreen chart: is the exchange currently open or closed? Stock Monitor shows opening hours, pre-market, after-hours and all market holidays – for over 30 exchanges worldwide, automatically detected from the ticker symbol.

- Green: Exchange open
- Red: Exchange closed
- Yellow: Pre-market or after-hours
- Local exchange time and your local time at a glance
- All market holidays for the current year including next opening day
- Cryptocurrencies: 24/7 – always open

10. Portfolio Management

10.1 Open Portfolio

Open the portfolio management via **Administration** in the overview bar.

10.2 Add Position

- Click **+ Add position**
- Enter symbol (e.g. AAPL)
- Enter purchase date, number of shares and purchase price
- Click **Add** – the position appears immediately in the overview

10.3 Automatic Price Updates

All prices are updated automatically via Yahoo Finance – no manual maintenance of prices, splits or dividends required. If connection problems occur, the last cached data is displayed (indicated by "from cache" in the status bar).

10.4 Swissquote CSV Import

Export transaction history from Swissquote as CSV and load via **Import Swissquote CSV**. The app calculates cost basis automatically using the FIFO method.

Tip: The CSV import automatically recognises buys, top-ups and sells. Positions are merged.

10.5 Generic CSV Import

A generic CSV import is available for other banks and brokers. Supported formats:

- DeGiro, Postbank, ZKB, Comdirect, Flatex, Interactive Brokers, Trading 212 and more
- Format is detected automatically
- Unknown formats: guided column mapping in a few clicks
- Buys, sells, splits and dividends are detected automatically

10.6 Switch Currency

Switch between USD, CHF and EUR at the top left of the portfolio overview. All values are automatically converted at the current exchange rate.

10.7 Sort

Click a column header to sort by that column. Stocks and cryptocurrencies are sorted separately.

10.8 Transaction History

Click the number in the quantity column to open a window with all purchases of that stock: purchase date, number of shares, purchase price, value and currency.

10.9 Performance & Sector Contribution

Perf. Contribution %: Each position's share of total performance (P&L; of this stock ÷ total purchase value × 100).

Sector Contribution %: Cumulative contribution of all positions in the same GICS sector. Hover tooltip shows details.

11. Portfolio Charts

- Stock allocation: Weighting of each position as a pie chart
- Performance bar chart: Percentage gain/loss per position
- Sector distribution: GICS sectors with company listing per segment
- Sector performance: Return per GICS sector for the selected period

11.1 Regional World Map

Interactive Leaflet.js world map shows the geographic portfolio distribution. The size and colour of markers shows the weighting of each country. Click a marker to open position details including company address and website.

Tip: The world map is interactive – zoom and click markers to see position details.

12. Portfolio Metrics

Metrics are accessible via the corresponding buttons in the portfolio overview. The calculation period can be freely selected for all metrics. Results can be exported as PDF, Excel or ODS.

12.1 Alpha Analysis (Jensen's Alpha)

Alpha measures the risk-adjusted excess return compared to the S&P; 500.

- Alpha > +5%: Strong outperformance
- Alpha 0–5%: Slight outperformance
- Alpha < 0%: Underperformance vs. S&P; 500

Note: Alpha says nothing about absolute return. The portfolio can have positive Alpha and still make losses.

12.2 Beta Analysis

Beta measures portfolio volatility relative to the S&P; 500.

- Beta < 0.5: Very defensive
- Beta 0.8–1.2: Market-conforming
- Beta > 1.5: Very aggressive / high volatility

Tip: Crypto assets often have Beta > 2 and can significantly skew the overall Beta.

12.3 Sharpe Ratio

The Sharpe Ratio measures how much return the portfolio achieves per unit of risk (benchmark: 5% risk-free rate).

- Sharpe > 2.0: Excellent
- Sharpe 1.0–2.0: Good
- Sharpe 0–1.0: Acceptable
- Sharpe < 0: Worse than risk-free investment

12.4 Portfolio Performance (TWR/MWR)

TWR (Time-Weighted Return) eliminates the influence of deposits/withdrawals and shows pure investment performance. **MWR** (Money-Weighted Return / IRR) considers the timing and size of deposits/withdrawals.

12.5 Monte Carlo Simulation

Probabilistic price forecast based on Geometric Brownian Motion (GBM) with 10,000 simulations.

- Shows confidence intervals: 10% / 25% / 50% / 75% / 90%
- Freely selectable period (1M to 5Y)
- Crypto and commodities optionally excludable
- Display in portfolio currency (USD / CHF / EUR)
- Export as PDF, Excel or ODS

Note: The Monte Carlo Simulation is a statistical forecast based on historical volatility – not financial advice and not a reliable price predictor.

12.6 Excess CAPE Yield (ECY)

Valuation indicator: CAPE yield (1/Shiller P/E) minus 10-year bond yield. Shows whether stocks are over- or undervalued relative to bonds.

- ECY > 3%: Stocks attractively valued (green)
- ECY 0–3%: Neutral (yellow)
- ECY < 0%: Stocks expensive relative to bonds (red)

13. Portfolio Balance & AI-Balance

13.1 Rebalancing

The Balance button calculates buy/sell recommendations to bring the portfolio to the optimal weighting based on historical performance.

13.2 Targeted Rebalancing

Enables filtered rebalancing by GICS sector or currency. The app calculates the required buys and sells to bring the portfolio to the desired composition.

13.3 AI-Balance

AI-Balance extends the rebalancing suggestion with two AI signals:

- Analyst consensus: Strong Buy / Buy / Hold / Sell (source: Yahoo Finance)
- News sentiment: Keyword analysis of the last 30 days

The slider adjusts the weighting between historical performance (left) and AI signal (right). Recommendation: 60% performance / 40% AI.

Note: AI-Balance is not a financial advisor. The news analysis is based on keyword matching and can be incorrect.

13.4 Portfolio Comparison

Up to 4 portfolios can be compared graphically:

- Bar chart: Total performance per portfolio
- Line chart: Value development over time with zoom
- Alpha, Beta, Sharpe Ratio and performance live in the zoom area per portfolio

14. AI Portfolio Analysis

Click the **AI Analysis** button in the portfolio overview to start an AI-powered comprehensive analysis with Google Gemini AI.

14.1 What is analysed?

- Strengths and weaknesses: Automatic identification of positive and negative portfolio characteristics
- Diversification: Assessment of sector distribution and concentration risks
- Market environment: Assessment of current market conditions and impact on the portfolio
- Recommendations: Concrete suggestions for portfolio optimisation

14.2 Set up API Key

A Google Gemini API key is required for AI analysis. Enter and save it via **Administration API Key**. The API key is available free of charge via Google AI Studio.

Note: AI analysis requires an active internet connection and a valid Google Gemini API key. The analysis is not financial advice.

15. Dividends

15.1 Dividend Calendar

Shows all upcoming ex-dividend dates for positions in the portfolio. Sorted by next payment date. Keeps track of upcoming distributions.

15.2 Dividend History

A 12-year dividend history is available as a bar chart for each stock in the portfolio:

- 12 annual bars with the current year shown hatched
- CAGR label (Compound Annual Growth Rate of the dividend)
- Details: Amount per payment, frequency (quarterly/annual), dividend yield and next ex-date
- Automatic annual projection for the current year

16. Portfolio Notes

■ New: Integrated journal for decisions and observations

The notebook lets you record thoughts, decisions, and observations directly alongside your portfolio – encrypted, portable, and always at hand. The **Notes** button is located in the Portfolio Overview.

16.1 How it works

- **Button:** ■ Notes in the portfolio overview
- Entries are **portfolio-specific** – notes switch automatically when you switch portfolios
- Newest entries appear **at the top**
- Each entry carries a **timestamp** (date & time)
- Entries can be individually **deleted**
- Export as **.txt file** (■ As text) or as **PDF** (■ As PDF)
- Notes are stored **encrypted** inside the .smpf file

Tip: Use the notebook to record buy/sell decisions, jot down price targets, or document your current market observations.

16.2 Adding a Note

- Enter text in the input field at the bottom of the notes dialog
- Click **Add** or press Enter
- The note immediately appears with a timestamp at the top of the list

16.3 Exporting Notes

- ■ As text: Saves all notes as a readable .txt file
- ■ As PDF: Creates a formatted PDF with all notes including timestamps

17. Tax Module

The tax module enables the creation of country-specific tax forms as PDF based on portfolio data.

17.1 Supported Countries and Forms

- Switzerland: DA-1 securities schedule (with canton selection)
- Germany: Anlage KAP (with federal state selection)
- Austria: E1kv certificate (with tax office region)
- UK: Schedule B / SA108
- USA: Form 1040 / 1042-S (with state selection, NIIT, wash-sale warning)

17.2 PDF Export

Completed tax forms are exported as PDF. Data is taken from the active portfolio.

17.3 Encryption

Tax module data is stored encrypted with AES-256-GCM (same standard as portfolio files).

Note: The generated forms are aids and do not replace professional tax advice. The accuracy of the data is the responsibility of the user.

18. Encrypted Portfolio (.smpf)

18.1 Save Portfolio

Assign a password via **Save**. The file is encrypted with AES-256-GCM and can only be opened with the correct password.

Tip: Keep the password safe – without the password the data cannot be recovered.

18.2 Open Portfolio

Select the .smpf file via **Open** and enter the password. Incorrect passwords are detected immediately.

18.3 Multiple Portfolios

Each .smpf file is independent with its own password. Multiple portfolios (e.g. personal / business) can be maintained in parallel.

18.4 Portability

Portfolio files can be copied to another PC and opened there. The password can be changed at any time.

19. Export Functions

Export is available in: Charts, portfolio metrics, watchlist, Monte Carlo, index comparison, tax module and other dialogs.

- **PDF:** Charts and portfolio data as PDF (ReportLab)
- **Excel (.xlsx):** Portfolio overview or metrics with embedded chart (openpyxl)
- **ODS:** OpenDocument Spreadsheet – compatible with LibreOffice / OpenOffice (odfpy)

20. Help & Support

The integrated help dialog (**? Help** in the toolbar) contains a complete user manual with over 30 chapters, search function and table of contents. Content is available in German and English.

- Website: www.stock-monitor.ch
- Email: info@stock-monitor.ch
- GitHub: github.com/StockMonitorCH/stock-monitor

Note: Disclaimer: Stock Monitor is a tool for personal portfolio analysis – not financial advice. All investment decisions are solely the responsibility of the investor. The developer accepts no liability for financial losses. All price data is sourced via Yahoo Finance (approx. 15 minutes delayed). A stable internet connection is required.