CORTEX7

Cryptocoin charting and trading platform with robots.

Designed and engineered by Fraser Ashworth.

User manual for version 2.31

Website: http://www.ledset.com
Forum: http://www.cortex7.net

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Introduction

What is Cortex7

Cortex7 is a trading and charting application capable of directly interfacing with cryptocoin exchanges. It has fast and intuitive charting with various technical indicators and a variety of auto-trading robots.

The fully licensed application is capable of auto-trading on any modest Windows 7 computer. That computer must be turned on and online 24/7 to take advantage of auto-trading.

Market prediction?

Any security traded on any exchange is a system in which the exchange wins and the exchange users (on average) lose. Provided the exchange charges trading fees then this is a certainty.

To be a winning trader you either cavort with lady luck or you take steps to bias the odds in your favour.

One step is to stay abreast of current market sentiment by reading all the news sources available. For example if eBay were to publish a statement that "Bitcoin is accepted" then we can expect a rise in the fiat price of Bitcoin.

Another good idea is to perform technical analysis on the securities price history, this is where Cortex7 comes in:

Despite what some say, no market is truly random, but most markets are very chaotic. Deep within this chaos there always exists some semblance of order, and so bots can make net gains.

Remember; not every bots prediction and trade will be "perfect", but overall they can keep you on the right side of the exchange fees and bring in a net profit. In gambling this is known as "advantage".

With all of the above in mind; I advise any new user to "dry trade" for a month or two in order to gain confidence and get to know the software.

For best results Cortex7 is NOT fit and forget, to run it well you should check in on it as often as possible, daily while you are familiarising yourself with it.

Application Installation

Installing

Download the latest version of Cortex7 from here:

http://www.ledset.com/cortex7/download/index.htm

Double-click the Cortex7_setup.exe file.

For your own security make sure that all installation steps are authenticode signed by “Fraser Ashworth”, this ensures that the software has not been altered in any way and guarantees that the software has no malicious code inserted that might try and steal coins or fiat money from you.

Follow the instructions in the installer window. You can choose any disk location to install the software.

Uninstalling

To remove the software you can use the “Uninstall” short-cut that appears in the Cortex7 program folder in the windows start menu. Alternatively you can use windows control panel to uninstall the software. Both methods will perform exactly the same task.

During installation and execution, Cortex7 writes working data to this folder:

C:\ProgramData\Cortex7

This data comprises mainly of 1 second VWAP trade history data stored in a raw binary format. For permanent removal of Cortex7 you will have to remove some of these files by hand, the uninstaller does not remove these files automatically. For complete removal you can simply delete the whole folder.

Registry entries

Registry entries are placed on your machine at registry location:

HKEY_CURRENT_USER\Software\Ledset\Cortex7. After uninstallation there may be some entries remaining, in which case you can simply delete the whole registry folder using windows REGEDIT program.

Licensing

Demo license

The free demo version of Cortex7 operates as a great charting tool with live order books, much like other Bitcoin charting clients.

The free version is always available for download here:

http://www.ledset.com/cortex7/download/index.htm

In this mode of operation the user is granted a free license. Advanced features including bots and neural networks are enable once the user purchases a full license (see below).

Full license

After purchasing a full license the program becomes fully unlocked and the advanced features are enabled.

If you have not already purchased a licence key then you can do so here:

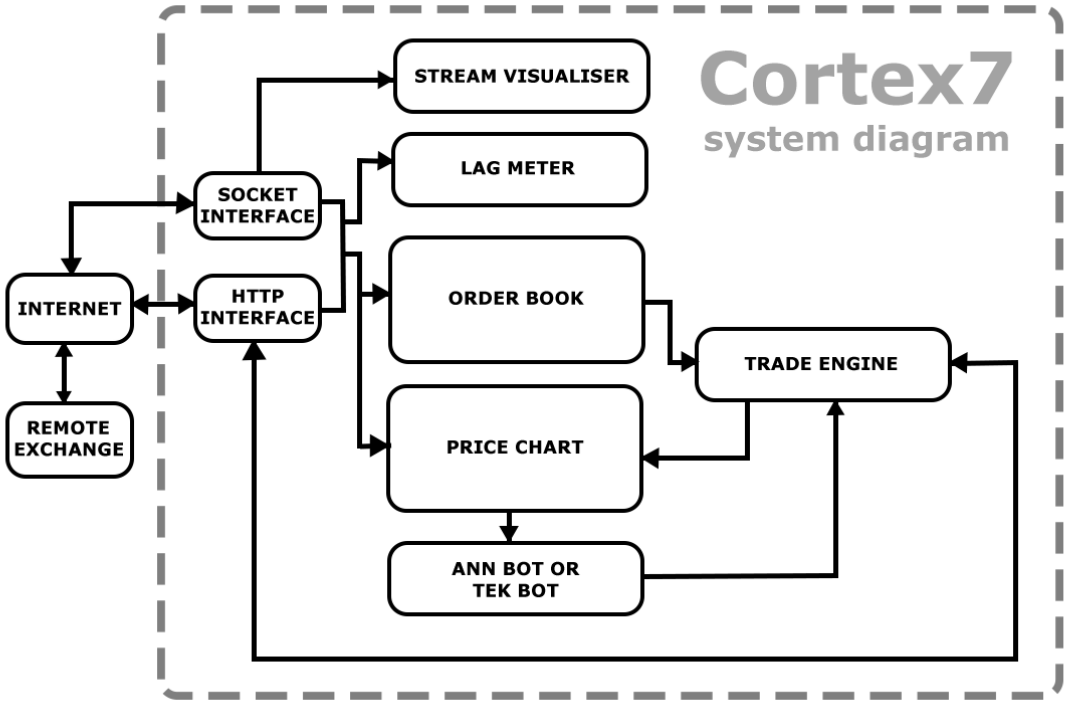
http://www.ledset.com/cortex7/register/index.htm

Make sure you enter your registration name and key exactly as it appears in your license file email. It is recommended that you use “cut and paste” to transfer the details accurately.

If Cortex7 accepts the key but then restarts unregistered then perform these steps:

1. Go to the program folder where the software is installed.
2. Right click on "Cortex7.exe" and select "Properties".
3. Click the "Compatibility" tab.
4. Tick the box "Run as Administrator".
5. Start Cortex7 and try to register again.

General System Architecture



System Overview

Cortex7 connects to the exchange over the internet. It connects via a HTTP request interface and where possible a stream interface (websocket or socketIO).

The stream visualiser reads all data received via the socket interface and graphically presents this to the user, it does not interact with any other component.

The lag meter shows the current exchange lag over the stream socket, if the socket interface is not available then it sends requests over HTTP for the latest lag value every 5 seconds. The lag meter does not interact with any other component.

The order book and price chart are updated by all new data arriving over the stream socket if connected.

The price chart also polls the exchange at time intervals in order to “solidify” the chart with solid data from the exchanges database.

The ANN and TEK bots watch the live chart; every time the live chart has new

data added (by the socket or HTTP) they process it. If this new data produces a trade signal then the bots send this signal to the trade engine.

The trade engine reads the order book once a second and calculates the current VWAP bid/ask price found in the order book for the current budget set. This VWAP price is used by the trade engine to constantly run it stop loss/gain system.

When the trade engine receives a signal from a bot:

1. It maintains trade parity, i.e. trades will only be placed buy,sell,buy,sell...
2. It checks the chart price against the VWAP book price, if the chart price exceed the VWAP book price by 2% or more then the trade is not placed, only logged in the system log.
3. If criteria 1 & 2 are met then the trade request is sent via HTTP to the exchange.
4. The trade engine polls the exchange every few seconds for the acknowledgement of the trade.
5. When acknowledgement is received the trade engine adds the trade to its history window and also to the main chart as a circle.

Getting Started

CX7 Workspace files

The application allows you to create and work with CX7 workspace files.

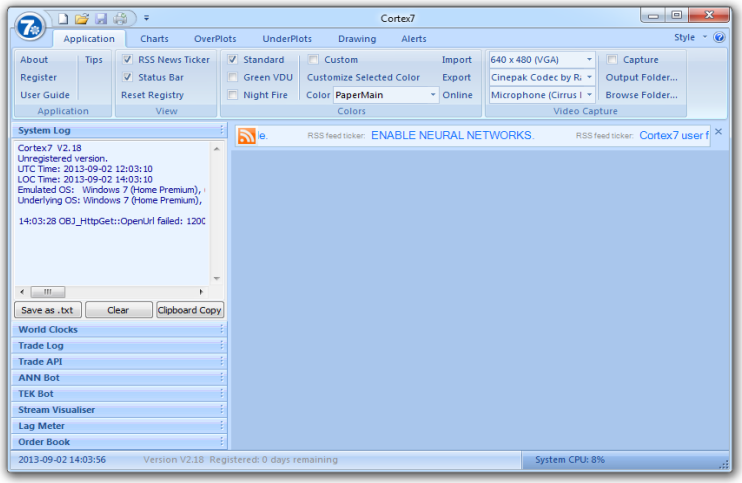
A CX7 workspace is a file that can contain multiple different charts, or just one chart.

All Technical Analysis and Bot settings are saved in the CX7 file, so when you open one up your workspace will be just as you saved it.

CX7 workspaces are fully transferable with no hard dependencies on the host computer. This means CX7 files can be transferred between users without issue.

Creating a new workspace

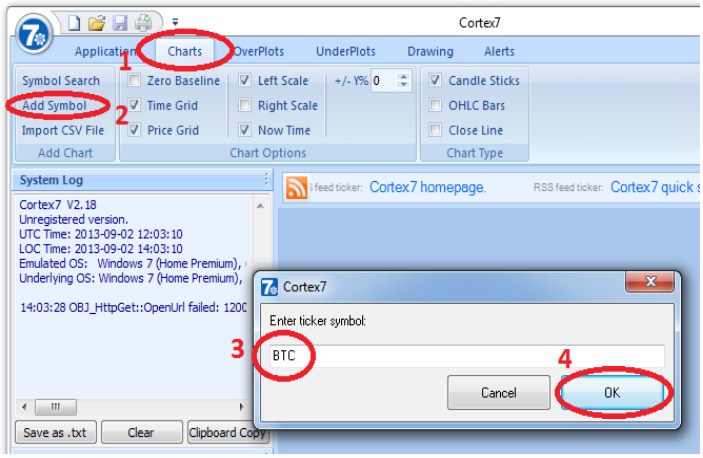
When you start Cortex7 you will be presented with a blank workspace as shown.



In order to create a workspace you simply need to create a new chart.

Creating a new chart

In this example we will create a new chart for MtGox Bitcoin:



1. Select "Chart" tab.
2. Click "Add Symbol".
3. Enter your symbol.
4. Click "OK".

5. Select Exchange.
6. Select Currency.
7. Select Period.
8. Click "OK".

The first time you select a new exchange or currency code the download time may be large.

Subsequent charts using the same exchange and currency code will be fast because Cortex7 keeps the entire trade history cached locally on your disk and only needs to refresh it when new data is available.

Navigating charts

The following navigation methods are available:

You can use the vertical and horizontal scrollbars of the chart. The horizontal bar scrolls through time. The vertical bar will zoom in/out of time.

When the chart has focus (when you have left clicked it once) you can also use your keyboards cursor keys to navigate around the charts time.

The Top Ribbon Bar

The top ribbon bar has adjustments that can be made for the whole workspace. When you make an adjustment it is seen in all charts currently in the workspace. The state of the top ribbon bar is saved in your CX7 file.

Application

This bar contains settings for the look and feel of the application. It also contains a video capture module for making charting videos etc.

Charts

This bar allows you to configure all of the charts in your workspace.

Over plots and Under plots

Over plots are superimposed over the main chart. Under plots appear as sub charts below the main chart, they share the same time range as the main chart. Below are links describing each technical indicator in more detail:

Bollinger Bands:

http://en.wikipedia.org/wiki/Bollinger_bands

Price Channel:

http://www.onlinetradingconcepts.com/TechnicalAnalysis/PriceChannels.html

Moving Average:

http://en.wikipedia.org/wiki/Moving_average

Volume:

http://en.wikipedia.org/wiki/Volume_%28finance%29

RSI:

http://en.wikipedia.org/wiki/Relative_strength_index

MACD:

http://en.wikipedia.org/wiki/MACD

Full Stochastic Oscillator:

http://en.wikipedia.org/wiki/Stochastic_oscillator

Drawing

This panel is a work in progress, at the moment it only supports drawing of lines. These lines exhibit maths rounding errors when extended a long way. This will be fixed and more drawing tools will be implemented.

Alerts

Here you can enable alerts to be triggered whenever an auto-trade is made. If your trade engine budget is set to zero then these alerts will still be triggered. Using a zero budget you can use the alerts to do supervised hand trading when away from your PC.

To set up the email alerts I recommend setting up a new google mail account and using it as your SMTP sender. Have it send to your regular email account.

To set up Gmail I recommend these settings:

Server:	smtp.gmail.com
Port:	465
Security:	SSL
User Name:	your_new_gmail_user_name
Password:	your_new_gmail_password
Recipient Address:	your_user_name@any_email_provider.com

Your user name and password is stored in the windows registry using encryption.

The Main Chart Window

TODO...