US Options Open Interest Guide

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algoseek | the market data company

We provide research market data for machine learning and quantitative trading

CONTACT US

We are here to help you do great things with our market and reference data. For questions, feedback, and other concerns, you may reach our team of experts using the following contact information:

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INTRODUCTION

algoseek's Open Interest dataset for US Options on Equity, ETF, ETN, and ADRs is based on the extraction of open interest events from the Options Pricing Authority (OPRA) feed, which includes the consolidated last sale and quotation information from the 16 option exchanges that the Securities and Exchange Commission has approved.

OPRA DATA FEED

OPRA is a securities information processor that disseminates, on a current and continuous basis, information about transactions that occurred on the options markets.

Each trade that is executed on an options exchange, as well as each price change quoted on an options exchange is reported to OPRA. Also, OPRA calculates and identifies the National Best Bid and Best Offer (NBBO – highest bid and lowest offer). OPRA consolidates this information and disseminates it via computer-to-computer linkages to the financial community in the U.S. and abroad.

DATA ORGANIZATION AND FILE FORMAT

algoseek provides Options Open Interest data in plain-text CSV files. Data files have fixed headers on top and rows of data corresponding to individual events. By default, data is organized into one file per symbol per trading day. For example, all data for ticker AAPL on Mar 3, 2020, are stored in one CSV file.

Table 1 (below) provides the name, description, and data type for each data field (column) in the Options Open Interest data file.

Table 1: CSV File Fields Schema

Field	Type (Format)	Description
Date	string (yyyymmdd)	Trading date in yyyymmdd format
Timestamp	string (HH:MM:SS.mmm)	Event timestamp in milliseconds **Excel Note:** Excel displays incorrect timestamps unless the Timestamp column is imported as text.
Ticker	string	Symbol name
CallPut	string	Option type (Call or Put) displayed as "C" or "P"
StrikePrice	decimal	Fixed price for buying or selling an option contract

ExpirationDate	string (yyyymmdd)	Expiration date of option contract in yyyymmdd format
EventType	string	Byte code. 34 - calls, 2 - puts
Action	string	Recorded as OI - open interest
Price	decimal	Recorded as zero for open interest
Quantity	integer	Underlying asset quantity

Timestamp

Event timestamp is in milliseconds, ET. Field format: HH:MM:SS.mmm where

HH: Hour

MM: Minute

SS: Seconds

mmm: Milliseconds

For example, 09:31:01.723