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THE MARKET DATA COMPANY

US OPRA Options Contracts Security Master Guide

version 1.0.0 (Sep 2025)

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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 data. For questions, feedback, and other concerns, you may reach our team of experts using the following contact information:

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REVISION SUMMARY

Effective Date	Version	Revision Type	Description
Jul 7, 2025	0.1.0	Pre-release	A beta version of the dataset
Sep 12, 2025	1.0.0	Release	An initial version of the dataset

INTRODUCTION

The OPRA Options Contracts Security Master file is a single data file containing all the listed and delisted OPRA options, which include options on stocks, ETFs, ETNs, Indexes, etc., from 2010 to present. The dataset provides comprehensive information for options contracts. It includes key fields such as option root tickers, underlying tickers, contract tickers, option type, strike price, trade dates, and expiration. It also captures settlement details, including deliverable components, cash amounts, and settlement methods for non-standard options (currently, such information is available from 2018). The dataset covers historical data back to 2007.

The OPRA Options Contracts Security Master is organized based on algoseek's unique identifier, called the algoseek ID (ASID), which remains unchanged throughout the specific option contract's life.

With a structured schema, this dataset supports historical tracking of ticker changes, providing precise security mapping over time. Analysts, traders, and quantitative researchers can use it to backtest strategies, manage portfolio risk, and align with corporate actions.

Note: ESS (Equity Special Settlements) information is available only for non-standard options from 2018.

algoseek doesn't guarantee the quality of the data before OSI (Options Symbology Initiative), May 17, 2010.

DATA ORGANIZATION AND FILE FORMAT

There are two data aggregation options for this dataset:

- **year**: one CSV file with data per year (**opt_contr_sec_master_yyyy.csv.gz**, where yyyy is a specific year from 2007 to the present)
- **single file**: one CSV file with data for all years from 2007 up to the present (**opt_contr_sec_master.csv.gz**)

Both aggregation options provide the same data fields.

Security Master file is provided as a flat file/files in CSV format, with each row corresponding to an option contract (for example, AAPL251219C00270000). Due to the large dataset size, each CSV file is gzip-compressed, so the uncompressed data is on average 10 times larger than the compressed data.

The dataset is updated on a daily basis. It can be used to backtrack any historical modifications to an option contract (by ASID) or to restore point-in-time data.

Table 1 shows the complete list of data fields in the Security Master file with sample contents for a few option contract ASIDs, in which rows and columns are inverted for the convenience of the document display.

Table 1: Sample Data from Security Master File

Column Name	Sample Row 1	Sample Row 2	Sample Row 3
ASID	1310000000097288	1310000000244230	1310000002017715
ContractTickers	AAPL251219C00270000	BABA250711C00133000; BABA2250711C00133000	SPXW261218C04640000
ContractTradeDates	20250602:20250703	20250605:20250611;20250612:20250703	20250602:20250703
StartTradeDate	20250602	20250605	20250602
Expiration	20251219	20250711	20250829
Type	C	C	C
Strike	270	133	4640
OptionRootTickers	AAPL	BABA;BABA2	SPXW
UnderASID	1010000000001033	1010000000002538	
UnderTickers	AAPL	BABA	SPX
UnderTradeDates	20070103:29991231	20140919:29991231	
TotalDelivComponents		2	
DeliveryComponents		BABA USD	
SettlementMethod		CNS MON	
StrikePercent		100 0	
DeliverableUnits		100 100	
CashAmount		0.000000 0.950000	
IsStandard	Y	N	Y
NonStandardTradeDates		20250612:20250703	

Table 2 below summarises the name, brief description, and data type for each data field (column) in the OPRA Options Contracts Security Master. The table column “Missing” indicates a default value or behavior in case the data field value is not present or cannot be determined, where “Never” means that a value is always present in the data field.

Table 2: CSV File Fields Schema for Security Master

Field	Type (Format)	Missing	Description
ASID	integer	Never	algoseek unique security identifier
ContractTickers	string	Never	List of option contract tickers used. If security had its ticker changed, the field would have multiple tickers separated by a semicolon “;”
ContractTradeDates	string (yyyymmdd: yyyymmdd;…)	Never	Start and end dates for each option root ticker for a specific option contract. End date = 29991231 when the contract is still active
StartTradeDate	string (yyyymmdd)	Never	Start date of the option contract
Expiration	string (yyyymmdd)	Never	The expiration date of the option contract
Type	string	Never	Option type (Call or Put) displayed as “C” or “P”
Strike	decimal	Never	Fixed price for buying or selling an option contract
OptionRootTickers	string (tricker1; ticker2;…)	Never	List of option root tickers used. If security had its ticker changed, the field will have multiple tickers separated by a semicolon “;”
UnderASID	integer	Blank	algoseek unique security identifier for equity
UnderTickers	string (tricker1; ticker2;…)	Blank	List of underlying tickers used. If security had its ticker changed, the field will have multiple tickers separated by a semicolon “;”
UnderTradeDates	string (yyyymmdd: yyyymmdd;…)	Blank	Start and end dates for each underlying ticker. End date = 29991231 when the ticker is still being used
TotalDelivComponents	string (integer1;integer2;...)	Blank	The total number of components of delivery associated with the settlement of the traded non-standard option root ticker. If the non-standard root ticker changed, the field will have multiple number of components of delivery separated by a semicolon “;” **Note:** available only for non-standard options from 2018
DeliveryComponents	string (ticker1 USD;ticker2 USD;...)	Blank	Specific components of delivery for the traded non-standard option root ticker, separated by space “ ”. If the non-standard root ticker changed, the field

			will have multiple deliveries separated by a semicolon “;” **Note:** available only for non-standard options from 2018
SettlementMethod	string (settl1 settl2;settl1 settl2;...)	Blank	How exercise and assignment activity will be settled for the traded non-standard option root ticker, separated by space “ ”. If the non-standard root ticker changed, the field will have multiple groups of settlement methods separated by a semicolon “;” **Note:** available only for non-standard options from 2018
StrikePercent	string (perc1 perc2;perc3 perc4;...)	Blank	The percentage of the strike price allocated for each settlement in the delivery, separated by space “ ”. If the non-standard root ticker changed, the field will have strike price allocations separated by a semicolon “;” for each delivery **Note:** available only for non-standard options from 2018
DeliverableUnits	string (unit1 unit2;unit3 unit4;...)	Blank	The per-contract number of deliverable units of cash, stocks, bonds, or currencies to be delivered or received upon settlement for the traded non-standard option root ticker, separated by space “ ”. If the non-standard root ticker changed, the field will have multiple groups of deliverable units separated by a semicolon “;” **Note:** available only for non-standard options from 2018
CashAmount	string (cash1 cash2;cash3 cash4;...)	Blank	The per-contract cash amount is to be allocated upon settlement for the traded non-standard option root ticker, separated by space “ ”. If the non-standard root ticker changed, the field will have multiple groups of cash amounts separated by a semicolon “;” **Note:** available only for non-standard options from 2018
IsStandard	string	Never	Code to differentiate standard and non-standard options. “Y” - for standard options, “N” - for non-standard options
NonStandardTradeDates	string (yyyymmdd: yyyymmdd;…)	Blank	Start and end dates for each non-standard option root ticker

OPTION CONTRACTS TRACKING DETAILS

Skipped Contracts

- Option root symbol is the test or settlement symbol
- Option contract expiration day is zero ('00000'), 20990101
- Option contract has already expired

Tracking Coverage

- Underlying ticker changes are covered for options with an underlying ASID
- Underlying ticker changes, along with moving it to the OTC, are not covered
- Option root ticker changes to non-standard tickers are covered, except in cases when the base root ticker is changed (XYZ -> ABC1). For example, because of specific corporate events like Mergers or 5-character underlying tickers (ABCDY -> ABCD1)
- Option root ticker changes before OSI (around 20100517) are handled automatically as root ticker changes under the same underlying ASID. Some cases may not be covered