Developer Portal

Home | API Products | User Guides | Dashboard | Profile | Sign Out

API Products | Trader API - Individual | Market Data Production

Market Data Production

Specifications | Documentation

APIs to access Market Data

Market Data 1.0.0 OAS3

Trader API - Market data

Contact Schwab Trader API team

Servers

https://api.schwabapi.com/marketdata/v1

Authorize

Quotes Get Quotes Web Service.

GET `/quotes` Get Quotes by list of symbols.

GET `/{symbol_id}/quotes` Get Quote by single symbol.

Option Chains

Get Option Chains Web Service.

GET `/chains` Get option chain for an optionable Symbol

Option Expiration Chain

Get Option Expiration Chain Web Service.

GET `/expirationchain` Get option expiration chain for an optionable symbol

PriceHistory

Get Price History Web Service.

GET `/pricehistory` Get PriceHistory for a single symbol and date ranges.

Movers

Get Movers Web Service.

GET `/movers/{symbol_id}` Get Movers for a specific index.

MarketHours

Get MarketHours Web Service.

GET `/markets` Get Market Hours for different markets.

GET `/markets/{market_id}` Get Market Hours for a single market.

Instruments Get Instruments Web Service.

GET **/instruments** Get Instruments by symbols and projections.

GET **/instruments/{cusip_id}** Get Instrument by specific cusip

Schemas

```
Bond {
    cusip              [...]
    symbol             [...]
    description        [...]
    exchange           [...]
    assetType          [...]
    bondFactor         [...]
    bondMultiplier     [...]
    bondPrice          [...]
    type               [...]
}
```

```
FundamentalInst {
    symbol             [...]
    high52             [...]
    low52              [...]
    dividendAmount     [...]
    dividendYield      [...]
    dividendDate       [...]
    peRatio            [...]
```

pegRatio	[...]
pbRatio	[...]
prRatio	[...]
pcfRatio	[...]
grossMarginTTM	[...]
grossMarginMRQ	[...]
netProfitMarginTTM	[...]
netProfitMarginMRQ	[...]
operatingMarginTTM	[...]
operatingMarginMRQ	[...]
returnOnEquity	[...]
returnOnAssets	[...]
returnOnInvestment	[...]
quickRatio	[...]
currentRatio	[...]
interestCoverage	[...]
totalDebtToCapital	[...]
ltDebtToEquity	[...]
totalDebtToEquity	[...]
epsTTM	[...]
epsChangePercentTTM	[...]
epsChangeYear	[...]
epsChange	[...]
revChangeYear	[...]
revChangeTTM	[...]
revChangeIn	[...]
sharesOutstanding	[...]
marketCapFloat	[...]
marketCap	[...]
bookValuePerShare	[...]
shortIntToFloat	[...]
shortIntDayToCover	[...]
divGrowthRate3Year	[...]
dividendPayAmount	[...]

```
    dividendPayDate         [...]
    beta                    [...]
    vol1DayAvg              [...]
    vol10DayAvg             [...]
    vol3MonthAvg            [...]
    avg10DaysVolume         [...]
    avg1DayVolume           [...]
    avg3MonthVolume         [...]
    declarationDate         [...]
    dividendFreq            [...]
    eps                     [...]
    corpactionDate          [...]
    dtnVolume               [...]
    nextDividendPayDate     [...]
    nextDividendDate        [...]
    fundLeverageFactor      [...]
    fundStrategy            [...]
}
```

Instrument {

```
    cusip                   [...]
    symbol                  [...]
    description             [...]
    exchange                [...]
    assetType               [...]
    type                    [...]
}
```

```
InstrumentResponse {
   cusip                 [...]
   symbol                [...]
   description           [...]
   exchange              [...]
   assetType             [...]
   bondFactor            [...]
   bondMultiplier        [...]
   bondPrice             [...]
   fundamental          FundamentalInst {...}
   instrumentInfo       Instrument {...}
   bondInstrumentInfo   Bond {...}
   type                  [...]
}
```

```
Hours {
   date                  [...]
   marketType            [...]
   exchange              [...]
   category              [...]
   product               [...]
   productName           [...]
   isOpen                [...]
   sessionHours          {...}
}
```

```
Interval {
   start            [...]
   end              [...]
}
```

```
Screener {
   description:     Security info of most moved with in an index
   change           [...]
   description      [...]
   direction        [...]
   last             [...]
   symbol           [...]
   totalVolume      [...]
}
```

```
Candle {
   close            [...]
   datetime         [...]
   datetimeISO8601  [...]
   high             [...]
   low              [...]
   open             [...]
   volume           [...]
}
```

CandleList {

candles	[...]
empty	[...]
previousClose	[...]
previousCloseDate	[...]
previousCloseDateISO8601	[...]
symbol	[...]

}

EquityResponse {

description:	Quote info of Equity security
assetMainType	**AssetMainType** [...]
assetSubType	**EquityAssetSubType** [...]
ssid	[...]
symbol	[...]
realtime	[...]
quoteType	**QuoteType** [...]
extended	**ExtendedMarket** {...}
fundamental	**Fundamental** {...}
quote	**QuoteEquity** {...}
reference	**ReferenceEquity** {...}
regular	**RegularMarket** {...}

}

QuoteError {

description: Partial or Custom errors per request

invalidCusips	[...]
invalidSSIDs	[...]
invalidSymbols	[...]

}

ExtendedMarket {

description: Quote data for extended hours

askPrice	[...]
askSize	[...]
bidPrice	[...]
bidSize	[...]
lastPrice	[...]
lastSize	[...]
mark	[...]
quoteTime	[...]
totalVolume	[...]
tradeTime	[...]

}

```
ForexResponse {
   description:       Quote info of Forex security
   assetMainType      AssetMainType [...]
   ssid                   [...]
   symbol                 [...]
   realtime               [...]
   quote              QuoteForex {...}
   reference          ReferenceForex {...}
}
```

```
Fundamental {
   description:       Fundamentals of a security
   avg10DaysVolume        [...]
   avg1YearVolume         [...]
   declarationDate        [...]
   divAmount              [...]
   divExDate              [...]
   divFreq            DivFreq [...]
   divPayAmount           [...]
   divPayDate             [...]
   divYield               [...]
   eps                    [...]
   fundLeverageFactor     [...]
   fundStrategy       FundStrategy [...]
   nextDivExDate          [...]
   nextDivPayDate         [...]
   peRatio                [...]
}
```

```
FutureOptionResponse {
   description:    Quote info of Future Option security
   assetMainType   AssetMainType [...]
   ssid            [...]
   symbol          [...]
   realtime        [...]
   quote           QuoteFutureOption {...}
   reference       ReferenceFutureOption {...}
}
```

```
FutureResponse {
   description:    Quote info of Future security
   assetMainType   AssetMainType [...]
   ssid            [...]
   symbol          [...]
   realtime        [...]
   quote           QuoteFuture {...}
   reference       ReferenceFuture {...}
}
```

IndexResponse {

description:	Quote info of Index security
assetMainType	**AssetMainType** [...]
ssid	[...]
symbol	[...]
realtime	[...]
quote	**QuoteIndex** {...}
reference	**ReferenceIndex** {...}

}

MutualFundResponse {

description:	Quote info of MutualFund security
assetMainType	**AssetMainType** [...]
assetSubType	**MutualFundAssetSubType** [...]
ssid	[...]
symbol	[...]
realtime	[...]
fundamental	**Fundamental** {...}
quote	**QuoteMutualFund** {...}
reference	**ReferenceMutualFund** {...}

}

OptionResponse {

description:	Quote info of Option security
assetMainType	**AssetMainType** [...]
ssid	[...]
symbol	[...]
realtime	[...]
quote	**QuoteOption** {...}
reference	**ReferenceOption** {...}

}

```
QuoteEquity {
    description:        Quote data of Equity security

    52WeekHigh              [...]
    52WeekLow               [...]
    askMICId                [...]
    askPrice                [...]
    askSize                 [...]
    askTime                 [...]
    bidMICId                [...]
    bidPrice                [...]
    bidSize                 [...]
    bidTime                 [...]
    closePrice              [...]
    highPrice               [...]
    lastMICId               [...]
    lastPrice               [...]
    lastSize                [...]
    lowPrice                [...]
    mark                    [...]
    markChange              [...]
    markPercentChange       [...]
    netChange               [...]
    netPercentChange        [...]
    openPrice               [...]
    quoteTime               [...]
    securityStatus          [...]
    totalVolume             [...]
    tradeTime               [...]
    volatility              [...]
}
```

```
QuoteForex {
   description:        Quote data of Forex security

   52WeekHigh              [...]
   52WeekLow               [...]
   askPrice                [...]
   askSize                 [...]
   bidPrice                [...]
   bidSize                 [...]
   closePrice              [...]
   highPrice               [...]
   lastPrice               [...]
   lastSize                [...]
   lowPrice                [...]
   mark                    [...]
   netChange               [...]
   netPercentChange        [...]
   openPrice               [...]
   quoteTime               [...]
   securityStatus          [...]
   tick                    [...]
   tickAmount              [...]
   totalVolume             [...]
   tradeTime               [...]
}
```

```
QuoteFuture  {
   description:        Quote data of Future security

   askMICId              [...]
   askPrice              [...]
   askSize               [...]
   askTime               [...]
   bidMICId              [...]
   bidPrice              [...]
   bidSize               [...]
   bidTime               [...]
   closePrice            [...]
   futurePercentChange   [...]
   highPrice             [...]
   lastMICId             [...]
   lastPrice             [...]
   lastSize              [...]
   lowPrice              [...]
   mark                  [...]
   netChange             [...]
   openInterest          [...]
   openPrice             [...]
   quoteTime             [...]
   quotedInSession       [...]
   securityStatus        [...]
   settleTime            [...]
   tick                  [...]
   tickAmount            [...]
   totalVolume           [...]
   tradeTime             [...]
}
```

```
QuoteFutureOption   {
    description:        Quote data of Option security

    askMICId              [...]
    askPrice              [...]
    askSize               [...]
    bidMICId              [...]
    bidPrice              [...]
    bidSize               [...]
    closePrice            [...]
    highPrice             [...]
    lastMICId             [...]
    lastPrice             [...]
    lastSize              [...]
    lowPrice              [...]
    mark                  [...]
    markChange            [...]
    netChange             [...]
    netPercentChange      [...]
    openInterest          [...]
    openPrice             [...]
    quoteTime             [...]
    securityStatus        [...]
    settlemetPrice        [...]
    tick                  [...]
    tickAmount            [...]
    totalVolume           [...]
    tradeTime             [...]
}
```

QuoteIndex {

```
description:    Quote data of Index security

52WeekHigh          [...]
52WeekLow           [...]
closePrice          [...]
highPrice           [...]
lastPrice           [...]
lowPrice            [...]
netChange           [...]
netPercentChange    [...]
openPrice           [...]
securityStatus      [...]
totalVolume         [...]
tradeTime           [...]
}
```

QuoteMutualFund {

```
description:    Quote data of Mutual Fund security

52WeekHigh          [...]
52WeekLow           [...]
closePrice          [...]
nAV                 [...]
netChange           [...]
netPercentChange    [...]
securityStatus      [...]
totalVolume         [...]
tradeTime           [...]
}
```

QuoteOption {

```
description:    Quote data of Option security
```

description	Quote data of Option security
52WeekHigh	[...]
52WeekLow	[...]
askPrice	[...]
askSize	[...]
bidPrice	[...]
bidSize	[...]
closePrice	[...]
delta	[...]
gamma	[...]
highPrice	[...]
indAskPrice	[...]
indBidPrice	[...]
indQuoteTime	[...]
impliedYield	[...]
lastPrice	[...]
lastSize	[...]
lowPrice	[...]
mark	[...]
markChange	[...]
markPercentChange	[...]
moneyIntrinsicValue	[...]
netChange	[...]
netPercentChange	[...]
openInterest	[...]
openPrice	[...]
quoteTime	[...]
rho	[...]
securityStatus	[...]
theoreticalOptionValue	[...]
theta	[...]
timeValue	[...]
totalVolume	[...]
tradeTime	[...]
underlyingPrice	[...]

```
    [...]
    vega                [...]
    volatility          [...]
}
```

QuoteRequest {

```
    description:    Request one or more quote data in POST body
    cusips          [...]
    fields          [...]
    ssids           [...]
    symbols         [...]
    realtime        [...]
    indicative      [...]
}
```

QuoteResponse {

```
    description:    a (symbol, QuoteResponse) map.  SCHW is an
                    example key
    < * >:          QuoteResponseObject {...}
}
```

```
QuoteResponseObject {
   oneOf ->      EquityResponse {...}
                 OptionResponse {...}
                 ForexResponse {...}
                 FutureResponse {...}
                 FutureOptionResponse {...}
                 IndexResponse {...}
                 MutualFundResponse {...}
                 QuoteError {...}
}
```

```
ReferenceEquity {
   description:     Reference data of Equity security
   cusip              [...]
   description        [...]
   exchange           [...]
   exchangeName       [...]
   fsiDesc            [...]
   htbQuantity        [...]
   htbRate            [...]
   isHardToBorrow     [...]
   isShortable        [...]
   otcMarketTier      [...]
}
```

```
ReferenceForex {
    description:    Reference data of Forex security

    description          [...]
    exchange             [...]
    exchangeName         [...]
    isTradable           [...]
    marketMaker          [...]
    product              [...]
    tradingHours         [...]
}
```

```
ReferenceFuture {
    description:    Reference data of Future security

    description              [...]
    exchange                 [...]
    exchangeName             [...]
    futureActiveSymbol       [...]
    futureExpirationDate     [...]
    futureIsActive           [...]
    futureMultiplier         [...]
    futurePriceFormat        [...]
    futureSettlementPrice    [...]
    futureTradingHours       [...]
    product                  [...]
}
```

ReferenceFutureOption {

description:	Reference data of Future Option security
contractType	ContractType [...]
description	[...]
exchange	[...]
exchangeName	[...]
multiplier	[...]
expirationDate	[...]
expirationStyle	[...]
strikePrice	[...]
underlying	[...]

}

ReferenceIndex {

description:	Reference data of Index security
description	[...]
exchange	[...]
exchangeName	[...]

}

ReferenceMutualFund {

description:	Reference data of MutualFund security
cusip	[...]
description	[...]
exchange	[...]
exchangeName	[...]

}

ReferenceOption {

description:	Reference data of Option security
contractType	**ContractType** [...]
cusip	[...]
daysToExpiration	[...]
deliverables	[...]
description	[...]
exchange	[...]
exchangeName	[...]
exerciseType	**ExerciseType** [...]
expirationDay	[...]
expirationMonth	[...]
expirationType	**ExpirationType** [...]
expirationYear	[...]
isPennyPilot	[...]
lastTradingDay	[...]
multiplier	[...]
settlementType	**SettlementType** [...]
strikePrice	[...]
underlying	[...]

}

RegularMarket {

description:	Market info of security
regularMarketLastPrice	[...]
regularMarketLastSize	[...]
regularMarketNetChange	[...]
regularMarketPercentChange	[...]
regularMarketTradeTime	[...]

}

AssetMainType `string`

Instrument's asset type

Enum:

  Array [8]

EquityAssetSubType `string`

nullable: true

Asset Sub Type (only there if applicable)

Enum:

  Array [11]

MutualFundAssetSubType `string`

nullable: true

Asset Sub Type (only there if applicable)

Enum:

  Array [4]

ContractType `string`

Indicates call or put

Enum:

  Array [2]

SettlementType `string`

option contract settlement type AM or PM

Enum:

Array [2]

ExpirationType `string`

M for End Of Month Expiration Calendar Cycle. (To match the last business day of the month), Q for Quarterly expirations (last business day of the quarter month MAR/JUN/SEP/DEC), W for Weekly expiration (also called Friday Short Term Expirations) and S for Expires 3rd Friday of the month (also known as regular options).

Enum:

Array [4]

FundStrategy `string`

nullable: true

FundStrategy "A" - Active "L" - Leveraged "P" - Passive "Q" - Quantitative "S" - Short

Enum:

Array [6]

ExerciseType `string`

option contract exercise type America or European

Enum:

Array [2]

DivFreq integer

nullable: true

Dividend frequency 1 – once a year or annually 2 – 2x a year or semi-annualy 3 - 3x a year (ex. ARCO, EBRPF) 4 – 4x a year or quarterly 6 - 6x per yr or every other month 11 – 11x a year (ex. FBND, FCOR) 12 – 12x a year or monthly

Enum:

Array [8]

QuoteType string

nullable: true

NBBO - realtime, NFL - Non-fee liable quote.

Enum:

Array [3]

ErrorResponse {

errors [...]

}

Error {

id [...]

status [...]

title [...]

detail [...]

source **ErrorSource** {...}

}

```
ErrorSource {
    description:        Who is responsible for triggering these
                        errors.
    pointer             [...]
    parameter           [...]
    header              [...]
}
```

```
OptionChain {
    symbol              [...]
    status              [...]
    underlying          Underlying {...}
    strategy            [...]
    interval            [...]
    isDelayed           [...]
    isIndex             [...]
    daysToExpiration    [...]
    interestRate        [...]
    underlyingPrice     [...]
    volatility          [...]
    callExpDateMap      {...}
    putExpDateMap       {...}
}
```

```
OptionContractMap {
    < * >:              OptionContract {...}
}
```

```
Underlying {
    ask                     [...]
    askSize                 [...]
    bid                     [...]
    bidSize                 [...]
    change                  [...]
    close                   [...]
    delayed                 [...]
    description             [...]
    exchangeName            [...]
    fiftyTwoWeekHigh        [...]
    fiftyTwoWeekLow         [...]
    highPrice               [...]
    last                    [...]
    lowPrice                [...]
    mark                    [...]
    markChange              [...]
    markPercentChange       [...]
    openPrice               [...]
    percentChange           [...]
    quoteTime               [...]
    symbol                  [...]
    totalVolume             [...]
    tradeTime               [...]
}
```

```
OptionDeliverables {
    symbol              [...]
    assetType           [...]
    deliverableUnits    [...]
    currencyType        [...]
}
```

```
OptionContract {
    putCall             [...]
    symbol              [...]
    description         [...]
    exchangeName        [...]
    bidPrice            [...]
    askPrice            [...]
    lastPrice           [...]
    markPrice           [...]
    bidSize             [...]
    askSize             [...]
    lastSize            [...]
    highPrice           [...]
    lowPrice            [...]
    openPrice           [...]
    closePrice          [...]
    totalVolume         [...]
    tradeDate           [...]
    quoteTimeInLong     [...]
    tradeTimeInLong     [...]
    netChange           [...]
    volatility          [...]
    delta               [...]
    gamma               [...]
    theta               [...]
```

```
    vega                      [...]
    rho                       [...]
    timeValue                 [...]
    openInterest              [...]
    isInTheMoney              [...]
    theoreticalOptionValue    [...]
    theoreticalVolatility     [...]
    isMini                    [...]
    isNonStandard             [...]
    optionDeliverablesList    [...]
    strikePrice               [...]
    expirationDate            [...]
    daysToExpiration          [...]
    expirationType            ExpirationType [...]
    lastTradingDay            [...]
    multiplier                [...]
    settlementType            SettlementType [...]
    deliverableNote           [...]
    isIndexOption             [...]
    percentChange             [...]
    markChange                [...]
    markPercentChange         [...]
    isPennyPilot              [...]
    intrinsicValue            [...]
    optionRoot                [...]
}
```

```
ExpirationChain {
    status                    [...]
    expirationList            [...]
}
```

```
Expiration {
    description:        expiration type

    daysToExpiration        [...]
    expiration              [...]
    expirationType      ExpirationType  [...]
    standard                [...]
    settlementType      SettlementType  [...]
    optionRoots             [...]
}
```

Terms Of Use | Privacy Notice