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An illustrative method for comparing five-year phone costs

SPARK VoIP call capacity, annual licensing, and a buyer invoice comparison

Calculate service and license costs first. Add the buyer's actual remaining expenses before comparing the five-year result.

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01

Executive summary

A useful phone-cost comparison starts with the same operating requirement: people who need service, extensions, busy-period calls, devices, required workflows, support, and recovery. A subscription line can be correct and still omit much of the cost of running the system. The buyer's invoice and dated quotes supply the comparison inputs.

SPARK VoIP prices monthly service at $30 per purchased concurrent external call channel, with a separately invoiced annual 3CX license. The channel quantity can be lower than the license's simultaneous-call size. The license must accommodate both the extension count and the system's simultaneous-call demand. SPARK VoIP requires custom pricing above 100 extensions. These are company-supplied October 2026 terms. [1]

This paper calculates four hypothetical configurations from those rates. For 60 extensions, a 16-call PRO license, and 12 external channels, the service-and-license monthly equivalent is $426.25. Holding both rates unchanged for five years produces $25,575 before number charges, taxes, equipment, messaging, and other remaining costs. This is reproducible partial spending, not a complete quote or a price guarantee.

Key findings

01 Monthly external channels and licensed system capacity are separate inputs. [1–3]

02 Adding an extension can require a larger annual license even when external call demand is unchanged. [1, 2]

03 Standard remote installation is included; custom work and equipment are separate. [1]

04 Porting follows the local rate card, passed through after confirmation. Do not assume a fixed fee. [1]

05 An annual license divided by 12 is a comparison equivalent; the license is billed annually. [1]

06 The buyer must fill remaining costs and validate functions before drawing a cost conclusion.

The method presents no other provider's published price and makes no savings-percentage claim. Support buyer call demand, accepted functions, renewal prices, and complete costs with records, tests, and written terms.

02

Size the service and the license separately

Let T be purchased external call channels and S be the 3CX simultaneous-call license size. A channel permits one inbound or outbound external call at a time. Monthly SPARK VoIP service is $30 × T. The company can often provision fewer channels than S; the actual quantity requires traffic evidence and a quote. [1]

A SIP trunk is the carrier connection, not a technical synonym for one call channel. Product configuration permits multiple simultaneous calls on a trunk. The billing unit used here is an external channel. The 3CX license counts internal and external calls toward system capacity and imposes a maximum extension count. Select S for both constraints, with justified busy-period headroom. [2, 3]

External channels, T

Billed monthly at $30 × T. One outside call per channel.

3CX license size, S

Billed annually. Caps all simultaneous calls and the extension count.

T can be lower than S. Size each one from traffic evidence and the extension count, then confirm both in the quote.

Two separate quantities set the two price lines. Original summary of the inputs defined above. [1–3]

Table 1. Annual PRO and AI license inputs

Size S	Max extensions	PRO / year	AI / year
8	40	$395	$575
16	80	$795	$1,095
24	120	$1,095	$1,495
32	192	$1,350	$1,795

Source: SPARK VoIP supplied rates [1], checked against the 3CX USD price list and extension tiers [4] on October 4, 2026. Annual PRO and AI licenses only. Taxes are separate; current buyer terms require a quote.

The table is a sizing reference, not an automatic SPARK VoIP quote above 100 extensions. Count required classroom, lobby, shop-floor, desk, and app-only extensions under the actual licensing rules. A larger license may be needed for internal calling even when external channel demand is light.

Measure the busiest intervals

Use current call logs to identify simultaneous inbound and outbound external calls, internal calls, seasonal peaks, and queued or transferred work. Record measurement dates, sites, and exceptional events. Set a capacity target for the required service outcome, then ask the provider to validate it. The examples below do not establish recommended channel quantities.

The minimum external channel quantity, any minimum monthly charge, and capacity treatment of special workflows require written confirmation. Extension count alone cannot resolve them.

03

Read the two price lines and the exclusions

SPARK VoIP's supplied scope includes hosting and management, purchased SIP capacity, US local and long-distance calling subject to fair use, desktop and mobile apps, standard edition features, support, and standard remote installation. The annual 3CX license is a separate invoice line sold by SPARK VoIP. Confirm the purchased edition and the responsibilities in the proposal. [1]

Table 2. Costs to confirm in the buyer quote

Item	Treatment in this method
Monthly service	`$30 × external channels`; includes the stated standard service scope
Annual 3CX license	Separate annual charge; divide by 12 only for a monthly comparison
Phone numbers	New and retained numbers require the applicable recurring and setup rate
Porting	Local rate card passed through after confirmation; no universal fee assumed
Handsets and fax	Separate; price actual equipment and required fax service
SMS and 10DLC	`$150` one-time registration input plus metered usage; confirm scope and other carrier charges
Custom work	`$125` per hour, quoted before work; standard remote install remains included
Taxes and service fees	Separate taxes, regulatory fees, and 911 charges; obtain address-specific amounts

Source: SPARK VoIP supplied rates and owner clarifications [1]. The quote must identify every inclusion and separate charge; this table is not an invoice.

For porting, SPARK VoIP reports that some local rate cards have no charge and others can charge $15 per direct inward dialing number, or DID. These are examples of local treatment, not a nationwide price or a $15 maximum. The confirmed rate card and affected DID count control the charge. A recurring number fee is a separate input. [1]

Keep the label precise

Service-and-license monthly equivalent	**$30 × T + L / 12**

Use that name for the result. “All-in” would imply the unresolved charges are covered. Fair-use thresholds, excluded destinations, overage rates, routine support hours, installation boundaries, and annual-license exit terms need a dated written scope.

Worked configurations from SPARK VoIP rates

The extension counts and external channel quantities below are hypothetical demand inputs. Annual license rates are company-supplied inputs. None of the four configurations is a tested deployment, capacity recommendation, or customer case study. Each calculation holds the quoted structure unchanged. [1]

Table 3. Conditional service and license spending

Assumed configuration	License and channels	Service / mo	License / yr	Monthly equivalent	Five years
30 extensions	8 PRO 8 channels	$240	$395	$272.92	$16,375
60 extensions	16 PRO 12 channels	$360	$795	**$426.25**	**$25,575**
60 extensions	16 PRO 16 channels	$480	$795	$546.25	$32,775
44 school extensions	16 PRO 8 channels	$240	$795	$306.25	$18,375

Original calculations: monthly equivalent = $30 × T + L / 12; five-year partial cost = $1,800 × T + 5 × L. L is the annual license. Unchanged rates for 60 months are an assumption. Exclusions appear in Table 2. Highlighted row is the base case used in Tables 5 and 6.

For the 30-extension case, calculate 8 × $30 = $240, then add $395 / 12 = $32.9167 to obtain $272.9167 before display rounding. The five-year amount is 60 × $240 + 5 × $395 = $16,375. Multiplying the rounded $272.92 by 60 would introduce a rounding difference; retain full precision in the model.

The 60-extension, 12-channel case fits the stated extension cap, but 12 external calls leave only the remaining licensed capacity for other simultaneous system calls. Test whether that margin is adequate for the site. The 16-channel version does not promise spare licensed capacity for simultaneous internal work. Validate both cases against actual traffic. [2]

3CX does not currently offer an education discount, so the school example uses the standard license price.

05

Complete the five-year cost schedule

For fixed channels and annual rates, SPARK VoIP partial spending is `60 × $30 × T + 5 × L`. The complete modeled total adds `C_S`, the remaining 60-month expenses outside those two lines. It can include number charges, fees, equipment, custom work, retained buyer labor, required services, and exit work. Count each cost once.

For changing prices or demand, sum the actual 60 monthly service charges and the license invoices due during the chosen period. Add each one-time or variable expense at its planned date. Document partial-year license commitments and outstanding exit obligations. Do not force an annual invoice into monthly cash flow merely to simplify a comparison.

Table 4. Remaining cost worksheet for each actual offer

60-month expense	SPARK VoIP amount	Buyer alternative amount	Evidence
Numbers and porting	Enter	Enter	Rate card and DID inventory
Taxes and regulatory / 911 fees	Enter	Enter	Invoice-style address quote
Endpoints and network / power	Enter	Enter	Compatibility, quantities, bids
Custom migration and training	Enter	Enter	Task scope; included work
Messaging, fax, archive, location	Enter	Enter	Required workflows and usage
Internal administration and recovery	Enter	Enter	Hours × loaded labor rate
Exit and remaining commitments	Enter	Enter	Cancellation and renewal terms

Original blank worksheet. “Enter” is unresolved, not zero. Fill distinct costs for each offer; identify included items to prevent double counting.

Standard remote installation is included in SPARK VoIP’s stated scope. Do not add an invented standard-install charge. Custom work, on-site work, equipment, and buyer labor can still be incremental expenses; obtain the actual task quote rather than assign the same allowance to every architecture. [1]

The example totals are undiscounted USD. They apply no inflation, financing, escalation, or present-value adjustment. Finance can add those treatments using dated cash flows and a stated discount rate. A five-year teaching result does not bind annual renewal prices or guarantee the customer's service period.

06

Compare with the buyer's own bill

For a flat per-user offer, let `U` be the number of billable users, `R` the buyer's actual monthly rate per billable user, and `C_B` the alternative's remaining five-year expenses. `U` need not equal payroll or physical phone count. Shared devices, common-area service, existing entitlements, add-ons, and contract terms can alter the bill. Use the actual licensed quantities.

Let `M = $30 × T + L / 12`. With fixed inputs and matched operating scope:

SPARK VoIP total	`= 60 × M + C_S`
Buyer alternative total	`= 60 × U × R + C_B`
Break-even per-user rate R*	`= (60 × M + C_S - C_B) / (60 × U)`

At the stated `U`, an actual `R` above `R*` gives a lower modeled SPARK VoIP total; an `R` below `R*` gives a lower modeled alternative total. The conclusion is conditional on complete expenses, comparable required functions, and unchanged recurring inputs. Do not compare a complete invoice on one side with partial service-and-license spending on the other.

Table 5. Remaining expenses move the break-even rate

Assumed C_S − C_B	Break-even per user / month	Interpretation
$0	$7.10	**Equal remaining costs**
+$6,000	$8.77	SPARK VoIP has higher remaining costs
-$6,000	$5.44	SPARK VoIP has lower remaining costs

Original stress calculation: `U = 60, T = 12, L = $795, M = $426.25`. The remaining-cost differences are teaching assumptions, not measured market ranges. Thresholds are displayed to cents; compare using full precision.

No other provider's rate is supplied. The equal-cost threshold is `$426.25 / 60 = $7.104167` per billable user per month. The threshold does not establish the buyer's actual price, matched scope, or savings.

If the buyer has a flat package rather than a per-user price, compare its monthly amount with `M + (C_S - C_B) / 60`. For variable user counts, metered charges, or changing renewals, use the full monthly schedule and compare final totals; a single static threshold can mislead.

07

Test external call demand and extension growth

The chart varies purchased external channels under an unchanged 16-call PRO license and 60 extensions. Every point is a hypothetical price calculation. It does not establish sufficient capacity or predict traffic. The buyer must validate total licensed-call demand independently.

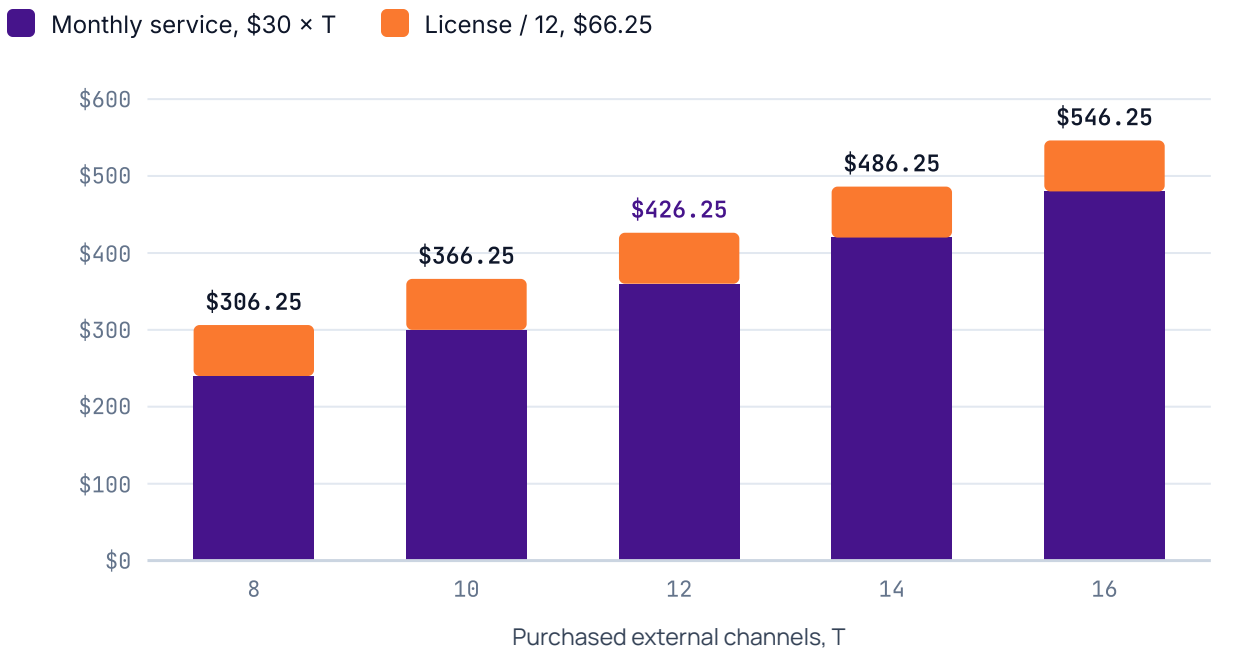


Figure 1. Monthly equivalent rises with external channel quantity. Original calculation from Table 6. The annual license is $795 at every point. Taxes, number charges, and other expenses are excluded. No point is a tested capacity recommendation.

Table 6. Source data for the channel cost chart

External channels	Service / month	Monthly equivalent	Five-year partial
8	$240.00	$306.25	$18,375
10	$300.00	$366.25	$21,975
12	$360.00	$426.25	$25,575
14	$420.00	$486.25	$29,175
16	$480.00	$546.25	$32,775

Source: SPARK VoIP supplied rates [1] and original arithmetic. Unchanged rates and quantities for five years are assumptions.

At unchanged rates, one added external channel costs $30 per month or $1,800 over 60 months. Required channels, license changes, and other fees still need a quote.

08

Account for growth and the contract boundary

Growth can raise cost in two different ways: higher external traffic can add monthly channels; more extensions or total simultaneous calls can require a larger annual license. Neither follows automatically from every hire. A new user who fits both limits may leave these two price lines unchanged, but devices, numbers, and other expenses can still increase.

MORE OUTSIDE CALLS

+$30 / mo

per added external channel; $1,800 over 60 months

MORE EXTENSIONS

+$300 / yr

16-call to 24-call PRO tier; $25 monthly equivalent

For example, moving from 60 to 91 required extensions crosses the supplied 16-call tier's 80-extension cap. The 24-call PRO rate is $1,095 rather than $795, a $300 annual difference. At unchanged external channels, that is a $25 higher monthly comparison equivalent. This

illustration assumes the next tier meets total call demand and the stated rate applies to the buyer. Above 100 extensions, SPARK VoIP uses a custom quote. [1, 4]

Model three demand paths

Use unchanged staffing, more extensions, and a higher busy-period call load without more staff as separate cases. Keep extensions and external channels in separate columns. Obtain the license tier, rate, and capacity needed at each step. If an upgrade occurs partway through the model, use the quoted timing and proration rather than charge the larger rate for all five years.

Table 7. Commitments that change the schedule

Commitment	Question for the signed scope
Monthly service	Minimum quantity or spend; notice period; price-change terms
Annual license	Renewal dates; upgrade proration; refund or transfer rules
Usage and fair use	Thresholds, excluded destinations, metered charges, overages
Support and installation	Routine hours, emergency coverage, included tasks, escalation
Number cutover	SPARK VoIP and customer test; customer signs off before go-live. Temporary numbers and old-system forwarding on SPARK VoIP's date; port completion moves numbers and removes forwarding. Slow or failed ports do not move go-live. Confirm port eligibility, forwarding and rate card in writing.
Exit and records	Number release, data export, retention, cancellation duties

Original contract checklist. Each answer requires current buyer-specific written evidence; a marketing statement cannot establish the obligation.

SPARK VoIP's monthly service is month to month. Confirm cancellation notice and treatment of the separately invoiced annual license in writing. SPARK VoIP tests the system, then the customer tests it and signs off before go-live. On go-live day, the new system gets temporary numbers and the old system forwards calls to it. When the ports complete, the numbers move and forwarding comes off. SPARK VoIP sets the go-live date; a slow or failed port does not move it. Get port eligibility, forwarding and the applicable rate card in writing. [1]

Compare operating models with equal requirements

A lower partial subscription can lose its advantage after migration, retained labor, required add-ons, or incompatible devices. A broader bundle or an existing entitlement can make another offer less expensive for this buyer. A support relationship or app preference can justify paying more, but document the accepted benefit outside the cost arithmetic.

Table 8. Architecture-specific costs and responsibilities

Operating model	Cost inputs to collect	Responsibility to test
Per-user cloud service	Actual licensed quantity, plan, add-ons, usage, commitments	Included workflows, administration, carrier escalation, exit
Managed PBX service	System license, channels, numbers, managed scope	Buyer/provider duties, capacity, backups, restoration
Self-managed PBX	License, hosting, carrier, equipment, internal labor	Patches, monitoring, credentials, recovery and off-hours response
Retained legacy system	Lines, maintenance, spares, support, planned refresh	Failure exposure, support lifecycle, required integrations

Original scope comparison. These are possible purchase models, not verified provider results or price rankings. Use each buyer's actual bills and quotes.

Preserve retained baseline spending

Inventory existing licenses, network service, devices, and staff work. An expense retained under every option belongs in the disclosed baseline; a decision-specific increase belongs in the incremental comparison. Do not allocate an entire existing suite to one phone option if it will remain in place for unrelated work. Do not set internal administration to zero merely for a managed offer.

Validate required functions

Before accepting a cost ranking, test busy routes, caller ID and callbacks, required messaging and recordings, emergency-location design, remote access, integrations, and recovery. A product feature alone does not establish that the purchased service includes the required configuration or records. Specialized analog building services need their own engineering and code review; external voice-channel pricing does not establish their suitability.

Compare equivalent dated offers and accepted functions before ranking vendors. The defensible choice is the complete cost and operating fit supported by buyer evidence.

10

Turn the method into a buyer decision

Prepare one common requirement sheet, then collect actual invoices and written proposals against it. Give finance the source documents and the formula cells, not a single unexplained total. A reviewer should be able to reproduce both the base case and the cases that change the result.

Table 9. Evidence status for a reviewable cost model

Input class	Evidence and status
Company rate	SPARK VoIP supplied October 2026 rates; retain current dated quote before purchase
Measured buyer demand	Call peaks, extensions and actual usage; measure from buyer records
Quoted expense	Itemized number, fee, equipment, project and renewal terms; confirm in proposal
Assumption	Unchanged rates, hypothetical demand and stress costs; label in the worksheet
Calculated output	Formula-derived partial cost or threshold; conditional on its inputs
Accepted function	Witnessed workflow and recovery result; test for the buyer

Original evidence framework. An assumption is not a quote; a calculation does not improve the evidentiary status of its inputs.

Recommended sequence

01 Inventory required users, extensions, devices, peak calls, and current entitlements.

02 Obtain channel and license sizing, rate cards, included tasks, taxes, and renewal terms.

03 Validate the required workflows and record provider and buyer responsibilities.

04 Build the 60-month schedule; add remaining expenses once and retain source identifiers.

05 Test growth, unequal remaining expenses, and higher renewals as stated assumptions.

06 Select the operating fit and complete modeled cost that the evidence supports.

A purchasing method, not a savings claim

This paper supplies a method and SPARK VoIP rate illustrations. It establishes no market-average cost, verified customer savings, guaranteed price, or universal advantage for a pricing model.

The remaining quote inputs determine the buyer's result.

References

Primary sources were reviewed through October 4, 2026. Company rates establish stated commercial inputs; product documents establish licensing structure. Buyer records and contracts must establish the actual purchase. Numbered citations distinguish source claims from original calculations.

[1] SPARK VoIP. Company-supplied pricing and service description, October 2026, with owner clarifications on external call channels, separate taxes and fees, and local rate-card porting. Supplied October 4, 2026. This source supports the stated SPARK VoIP inputs, not an independently audited invoice or five-year commitment.

[2] 3CX. 3CX Licensing Explained. Annual system licensing, internal and external simultaneous calls, maximum extension limits, and separate supplier services.
Read source

[3] 3CX. SIP Trunk Options. Concurrent-call settings for a carrier trunk; a trunk can support more than one channel.
Read source

[4] 3CX. Full Pricelist Per Year, reviewed October 4, 2026. USD PRO and AI annual rates and maximum extension tiers match the supplied inputs. Taxes are excluded and prices can change; the current quote or portal cart controls.
Read source

Methodology and research limits

The method uses SPARK VoIP's company-supplied October 2026 service rates and scope, with primary 3CX technical and licensing sources. The PRO and AI annual rates and extension tiers were checked against the 3CX USD price list [4]. Basic and 3CX hosting charges are outside the model. No other provider's price or verified customer savings study supports the comparison.

Scenario extension counts, external channels, remaining-cost differences, and unchanged five-year rates are assumptions. Costs and thresholds were recomputed from the stated formulas using full precision before display rounding. The chart's full input series appears in Table 6. The figures and tables are original analytical tools, not observed market data.

No buyer invoice, full quote, measured call demand, or completed deployment test establishes the scenario outcome. Minimum service commitments, recurring number fees, fair-use limits, tax amounts, and annual-license exit treatment remain quote inputs. Confirm port eligibility, forwarding, and the rate card in writing. Do not replace unknown values with zero.

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Publication context

The method is educational. The company-supplied rate inputs can change and do not establish the terms of a buyer contract. A complete procurement result needs matched functions, dated rates, resolved exclusions, and a reproducible schedule. Price and service representations should match the signed scope.

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