What size of bandwidth do I need for my telephone service?

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The number of possible concurrent calls is determined by the available up speed bandwidth.

Each call uses approximately 100kb of bandwidth, therefore if you had a broadband connection with 0.5Mb of up speed, the total number of calls at any one time would be 5.

When determining how many lines your office may need, there are several factors that can help guide your decision. Here is a few of main ones:

1. Is Your Current Number of lines Sufficient?
Do customers or employees ever complain about busy signals or not being able to get an available line for an outgoing call? If so, find out how many channels you currently have. (If you are using traditional telephone technology, these are known as PRI/BRI circuits)

2. Get Usage Reports from Your Current Provider
Some traditional providers can sometimes produce reports that show usage. But because they're not from fully digital sources, usage reports can sometimes be unreliable - often only providing only a snapshot of usage rather than quality historical information.

3. The 3:1 Rule for Larger Companies
For companies with 100 employees or more, a traditional ratio of phones to call paths is 3:1.

Why? Several reasons:
• These kinds of companies have a range of heavy, medium and light users.
• On average, even heavy users are on the phone no more than three hours per day.
• Typically not everyone is in the office at the same time.

For larger companies, it's extremely rare for everyone to be on the phone at the same time. Therefore, you can get away with a higher phone to trunk line ratio.

4. Smaller Companies Need a Lower Ratio
But for smaller offices of less than 50 people, the 3:1 rule breaks down. And it's easy to see why.

The smaller the office, the greater the chance that everyone is going to be on the phone. And in fact, for very small offices you often need more lines than you have phones.

Use this little table as a rough guide:

Number of Phones	SIP Channels Needed	Minimum Up Speed Bandwidth Requirements
2	4	400K
5	6	600K
10	6	600K
25	12	1.2Mb
50	23	2.3Mb
100	30	3.0Mb

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Note: This information is meant as a general guide. Every office and business has their own unique requirements.