

bxcalcux Package (v0.3)

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1 Overview

This package allows one to create a new unit of length that can be used in length expressions of the calc package. For example,

```
\newcalcunit{thou}{0.07227pt}% thousandth of inch
\setlength{\lengthA}{10thou}
```

will assign 0.72266 pt to `\lengthA`.¹

Supported format L^AT_EX.

Supported engine Any engine, but some commands (including `\newcalcunit`) requires ε -T_EX.

Prerequisite packages calc package; bxtoolbox package (from BXbase bundle).

2 Package Loading

Use `\usepackage` as usual, with no options.

```
\usepackage{bxcalcux}
```

3 Usage

- `\newcalcunit{⟨unit⟩}{⟨dimen⟩}` : Declares a new unit `⟨unit⟩` as equal to `⟨dimen⟩`. The unit name must consist only of alphabets. You can use relative units such as `0.5em` in `⟨dimen⟩`, and such relative units are resolved in evaluating calc expressions. This command is only available on ε -T_EX-extended engines.
- `\DeclareCalcUnit{⟨unit⟩}{⟨text⟩}` : Declares a new unit `⟨unit⟩` as equal to the unit expressed by a token string `⟨text⟩`, which must form a “unit of dimen” (in T_EX terminology). Here is an example.

```
\DeclareCalcUnit{ls}{\baselineskip}% current line skip
```

This command does *not* require ε -T_EX.

¹Note that using `0.001in` instead of `0.07227pt` will give rather inaccurate results, since `0.001in` is evaluated to 0.7277 pt.

4 Notices

- Usually unit names are treated as case-insensitive; but as exception, unit names with a single letter are case-sensitive.
- You must not create a unit name that coincides with a prefix of existing (built-in or created) units or any keywords that could be used in `calc` expressions (such as `plus`, `fil`, etc.); otherwise unexpected things would occur.