

# DesignLibre

## Component Library

DRAG-AND-DROP COMPONENTS & INTERACTION SYSTEM

Version 1.0

Comprehensive specification for all pre-built components,  
their properties, states, and interaction capabilities.

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# 1 Component Library Overview

## 1.1 Architecture

The DesignLibre component library provides drag-and-drop components that map directly to UnoCSS utility classes. Each component is:

- **Atomic**: Built from primitive utilities, fully decomposable
- **Configurable**: Properties panel exposes all styling options
- **Nestable**: Components can contain other components
- **Interactive**: Supports triggers, animations, and state transitions
- **Exportable**: Outputs clean HTML with utility classes

## 1.2 Nav Rail Organization

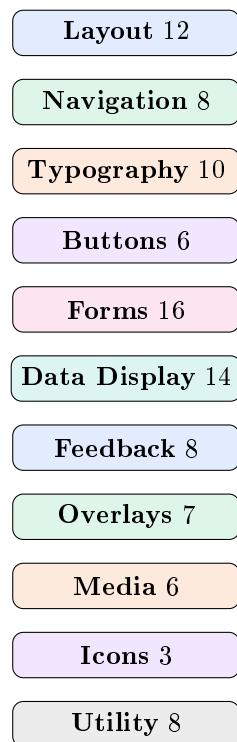


Figure 1: Nav Rail Categories (98 total components)

## 1.3 Component Specification Format

Each component is documented with:

- **Description**: What the component is and when to use it
- **Variants**: Pre-configured style variations
- **Properties**: Configurable options in the properties panel
- **States**: Visual states (default, hover, focus, disabled, etc.)
- **Slots**: Areas where child components can be nested
- **Interactions**: Supported triggers and actions
- **UnoCSS**: Base utility classes used

## 2 Interaction System

Before detailing components, we define the interaction system that applies to all interactive components.

### 2.1 Triggers

Triggers define *when* an interaction occurs.

Trigger	Description	Applies To
onClick	Mouse click or tap	All interactive
onDoubleClick	Double click	All interactive
onHover	Mouse enters element	All
onHoverEnd	Mouse leaves element	All
onMouseDown	Mouse button pressed	All interactive
onMouseUp	Mouse button released	All interactive
onFocus	Element receives focus	Form elements
onBlur	Element loses focus	Form elements
onDrag	Element being dragged	Draggable elements
onDragEnd	Drag operation ends	Draggable elements
onKeyDown	Keyboard key pressed	Focusable elements
onScroll	Scroll position changes	Scollable containers
onViewportEnter	Element enters viewport	All
onViewportLeave	Element leaves viewport	All
onChange	Value changes	Form inputs
onSubmit	Form submitted	Forms
afterDelay	After time duration	All
onLoad	Component loads	All

Table 1: Interaction Triggers

### 2.2 Actions

Actions define *what* happens when triggered.

Action	Description	Parameters
Navigate	Go to frame/page	Destination, Transition
OpenOverlay	Show overlay component	Overlay, Position
CloseOverlay	Hide current overlay	Animation
SwapState	Change component state	Target State
SetVariable	Update variable value	Variable, Value
ToggleVisibility	Show/hide element	Target
ScrollTo	Scroll to element	Target, Offset
PlayAnimation	Trigger animation	Animation Name
StopAnimation	Stop animation	Animation Name
OpenURL	Open external link	URL, New Tab
CopyToClipboard	Copy text	Content
SubmitForm	Submit form data	Endpoint
ResetForm	Clear form fields	Form Target
Custom	Execute custom code	JavaScript

Table 2: Interaction Actions

## 2.3 Animation Properties

When an action involves visual change, animations control the transition.

### 2.3.1 Animation Types

Type	Description
Instant	No animation, immediate change
Dissolve	Crossfade opacity
SmartAnimate	Interpolate all changed properties
MoveIn	Slide in from direction
MoveOut	Slide out to direction
Push	Push current content, slide in new
SlideIn	Slide over current content
SlideOut	Current content slides away
Scale	Scale from/to zero
Flip	3D flip transition

Table 3: Animation Types

### 2.3.2 Easing Functions

Easing	CSS Equivalent	Character
Linear	linear	Constant speed
EaseIn	ease-in	Start slow, end fast
EaseOut	ease-out	Start fast, end slow
EaseInOut	ease-in-out	Slow at both ends
EaseInBack	cubic-bezier(0.6,-0.28,0.74,0.05)	Overshoot start
EaseOutBack	cubic-bezier(0.18,0.89,0.32,1.28)	Overshoot end
EaseInOutBack	cubic-bezier(0.68,-0.55,0.27,1.55)	Overshoot both
Spring	Custom spring physics	Bouncy, natural
Bounce	Step-based bounce	Bouncing ball
Custom	User-defined bezier	Any curve

Table 4: Easing Functions

### 2.3.3 Timing

- **Duration:** 0ms – 10000ms (default: 300ms)
- **Delay:** 0ms – 10000ms (default: 0ms)
- **Stagger:** For lists, delay between children (0ms – 500ms)

## 2.4 Interaction Example

Listing 1: Interaction Definition (JSON)

```
{
  "trigger": "onClick",
  "action": "Navigate",
  "destination": "frame:checkout-page",
  "animation": {
    "type": "Push",
    "direction": "left",
  }
}
```

```
    "easing": "EaseInOut",
    "duration": 400
}
```

### 3 Layout Components

Layout
Structural components for organizing content and creating page layouts.

#### 3.1 Frame

The fundamental container component. All designs start with frames.

Property	Options
Width	Fixed, Hug, Fill, Min, Max
Height	Fixed, Hug, Fill, Min, Max
Padding	All, Horizontal, Vertical, Individual
Background	Color, Gradient, Image
Border	Width, Style, Color, Radius
Shadow	Preset or Custom
Overflow	Visible, Hidden, Scroll, Auto
Opacity	0% – 100%
Blend Mode	Normal, Multiply, Screen, Overlay, etc.

**UnoCSS:** w-\* h-\* p-\* bg-\* border-\* rounded-\* shadow-\* overflow-\*

#### 3.2 Auto Layout (Stack)

Flex-based container for automatic child arrangement.

Property	Options
Direction	Horizontal, Vertical
Gap	Spacing scale (0–96) or custom
Align Items	Start, Center, End, Stretch, Baseline
Justify Content	Start, Center, End, Between, Around, Evenly
Wrap	No Wrap, Wrap, Wrap Reverse
Padding	All, Horizontal, Vertical, Individual

**UnoCSS:** flex flex-col flex-row gap-\* items-\* justify-\* flex-wrap

#### 3.3 Grid

CSS Grid container for two-dimensional layouts.

Property	Options
Columns	1–12, Auto, Custom template
Rows	1–12, Auto, Custom template
Gap	Row gap, Column gap
Align Items	Start, Center, End, Stretch
Justify Items	Start, Center, End, Stretch
Auto Flow	Row, Column, Dense

**UnoCSS:** grid grid-cols-\* grid-rows-\* gap-\* items-\* justify-items-\*

### 3.4 Container

Responsive max-width container for page content.

**Variants:**

- `container-sm`: max-width 640px
- `container-md`: max-width 768px
- `container-lg`: max-width 1024px
- `container-xl`: max-width 1280px
- `container-2xl`: max-width 1536px
- `container-prose`: max-width 65ch

**UnoCSS:** `max-w-* mx-auto px-4`

### 3.5 Section

Full-width section with vertical padding, typically for landing pages.

**Variants:**

- `section-sm`: `py-8`
- `section-md`: `py-16`
- `section-lg`: `py-24`
- `section-xl`: `py-32`

**UnoCSS:** `w-full py-* px-4`

### 3.6 Divider

Visual separator between content sections.

**Variants:**

- `divider-horizontal`: Full-width horizontal line
- `divider-vertical`: Full-height vertical line
- `divider-with-text`: Line with centered text
- `divider-dashed`: Dashed line style
- `divider-dotted`: Dotted line style

**UnoCSS:** `border-t border-b border-l border-r border-* border-dashed`

### 3.7 Spacer

Invisible element for adding space.

**Properties:**

- `size`: Spacing scale value
- `axis`: Horizontal, Vertical, Both
- `responsive`: Different sizes per breakpoint

**UnoCSS:** `w-* h-*`

### 3.8 Aspect Ratio

Container that maintains aspect ratio.

**Variants:**

- `aspect-square`: 1:1
- `aspect-video`: 16:9
- `aspect-photo`: 4:3

- aspect-portrait: 3:4
- aspect-wide: 21:9
- aspect-custom: User-defined ratio

**UnoCSS:** aspect-square aspect-video aspect-[4/3]

### 3.9 Scroll Area

Scrollable container with custom scrollbar styling.

**Properties:**

- direction: Vertical, Horizontal, Both
- scrollbar: Auto, Always, Hidden, Styled
- snap: None, Start, Center, End

**UnoCSS:** overflow-auto overflow-x-\* overflow-y-\* scroll-snap-\*

### 3.10 Responsive Hide/Show

Container that shows/hides at breakpoints.

**Properties:**

- showOn: Array of breakpoints
- hideOn: Array of breakpoints

**UnoCSS:** hidden sm:block md:hidden lg:block

### 3.11 Center

Utility container that centers its content.

**Variants:**

- center-horizontal: Horizontal centering only
- center-vertical: Vertical centering only
- center-both: Both axes
- center-text: Text alignment center

**UnoCSS:** flex items-center justify-center mx-auto text-center

### 3.12 Absolute Position

Absolutely positioned overlay container.

**Properties:**

- position: Top-Left, Top-Center, Top-Right, Center-Left, Center, Center-Right, Bottom-Left, Bottom-Center, Bottom-Right
- inset: Custom top/right/bottom/left values
- z-index: Layer order

**UnoCSS:** absolute top-\* right-\* bottom-\* left-\* z-\*

## 4 Navigation Components

### Navigation

Components for user navigation and wayfinding.

#### 4.1 Navbar

Horizontal navigation bar, typically at page top.

**Variants:**

- **navbar-simple:** Logo + links + CTA
- **navbar-centered:** Centered links
- **navbar-split:** Logo left, links center, actions right
- **navbar-transparent:** Transparent background
- **navbar-sticky:** Sticks to top on scroll

**Slots:** Logo, Nav Links, Actions (buttons, search, user menu)

**States:** Default, Scrolled (shadow appears), Mobile Menu Open

**Interactions:**

- **onScroll:** Toggle sticky styles
- **onClick (hamburger):** Open mobile menu

**UnoCSS:** `flex items-center justify-between px-4 h-16 bg-white border-b sticky top-0`

#### 4.2 Sidebar

Vertical navigation, typically on the left.

**Variants:**

- **sidebar-full:** Always expanded
- **sidebar-collapse:** Can collapse to icons only
- **sidebar-overlay:** Slides over content (mobile)
- **sidebar-inset:** Pushed into content area

**Slots:** Header (logo), Nav Groups, Footer

**States:** Expanded, Collapsed, Hover (when collapsed)

**Properties:**

- **width:** Expanded width (default: 256px)
- **collapsedWidth:** Collapsed width (default: 64px)

**Interactions:**

- **onClick (toggle):** Collapse/expand
- **onHover (collapsed):** Show expanded temporarily

#### 4.3 Nav Link

Individual navigation link item.

**Variants:**

- **nav-link-default:** Text only
- **nav-link-icon:** Icon + text
- **nav-link-icon-only:** Icon only
- **nav-link-with-badge:** Includes notification badge

**States:** Default, Hover, Active, Disabled

**UnoCSS:** `flex items-center gap-2 px-3 py-2 rounded-lg text-gray-600 hover:bg-gray-100 hover:text-gray-900`

## 4.4 Nav Group

Collapsible group of nav links with header.

**Slots:** Header (title + icon), Links

**States:** Expanded, Collapsed

**Interactions:**

- `onClick` (header): Toggle expanded/collapsed

## 4.5 Tabs

Horizontal tab navigation.

**Variants:**

- `tabs-underline`: Active tab has underline
- `tabs-pills`: Active tab has background
- `tabs-boxed`: Tabs in bordered container
- `tabs-vertical`: Vertical tab layout

**Slots:** Tab Items (each has label, optional icon, optional badge)

**States:** Default, Hover, Active, Disabled

**Interactions:**

- `onClick` (tab): Switch active tab, animate indicator
- Keyboard: Arrow keys to navigate, Enter to select

**UnoCSS:** `flex border-b (container), px-4 py-2 border-b-2 border-transparent hover:border-gray-3 (tab)`

## 4.6 Breadcrumbs

Hierarchical navigation path.

**Properties:**

- `separator`: / (default), >, →, chevron icon
- `maxItems`: Collapse middle items if exceeded

**Slots:** Breadcrumb Items (link or current)

**UnoCSS:** `flex items-center gap-2 text-sm text-gray-500`

## 4.7 Pagination

Page navigation for lists and tables.

**Variants:**

- `pagination-simple`: Previous/Next only
- `pagination-numbered`: Page numbers
- `pagination-input`: Jump to page input

**Properties:**

- `currentPage`: Current page number
- `totalPages`: Total page count
- `showFirst`: Show first page button
- `showLast`: Show last page button

**States:** Default, Hover, Active (current page), Disabled

## 4.8 Stepper

Multi-step process indicator.

**Variants:**

- **stepper-horizontal:** Horizontal layout
- **stepper-vertical:** Vertical layout
- **stepper-dots:** Minimal dot indicators

**States per Step:** Incomplete, Current, Complete, Error

**Slots:** Step (number/icon, label, optional description)

## 5 Typography Components

### Typography

Text and content components.

#### 5.1 Heading

Page and section headings.

**Variants:**

- **h1:** text-4xl md:text-5xl font-bold
- **h2:** text-3xl md:text-4xl font-bold
- **h3:** text-2xl md:text-3xl font-semibold
- **h4:** text-xl md:text-2xl font-semibold
- **h5:** text-lg font-medium
- **h6:** text-base font-medium
- **display:** text-5xl md:text-7xl font-black

**Properties:** color, align, truncate, gradient (for gradient text)

#### 5.2 Text

Body text and paragraphs.

**Variants:**

- **text-xs:** Extra small (12px)
- **text-sm:** Small (14px)
- **text-base:** Base (16px)
- **text-lg:** Large (18px)
- **text-xl:** Extra large (20px)

**Properties:** color, weight, align, lineHeight, letterSpacing, decoration

#### 5.3 Rich Text

Prose container with automatic typography styling.

**Properties:**

- **size:** sm, base, lg, xl
- **theme:** default, invert (for dark backgrounds)

**Slots:** Any HTML content (headings, paragraphs, lists, etc.)

**UnoCSS:** Uses prose utilities for consistent typography

#### 5.4 Link

Clickable text link.

**Variants:**

- **link-default:** Blue, underline on hover
- **link-muted:** Gray, subtle
- **link-nav:** No underline, for navigation
- **link-external:** Includes external link icon

**States:** Default, Hover, Focus, Visited, Active

**Interactions:**

- **onClick:** Navigate or OpenURL

## 5.5 Label

Form labels and small descriptive text.

**Variants:**

- `label-default`: Standard form label
- `label-required`: Includes asterisk
- `label-optional`: Includes "(optional)" text
- `label-with-hint`: Label + description text

## 5.6 List

Ordered and unordered lists.

**Variants:**

- `list-disc`: Bulleted list
- `list-decimal`: Numbered list
- `list-none`: No markers
- `list-check`: Checkmark markers
- `list-arrow`: Arrow markers

**Properties:** spacing (gap between items), nested (indentation)

## 5.7 Blockquote

Quoted text with attribution.

**Variants:**

- `blockquote-simple`: Left border
- `blockquote-centered`: Centered with quotes
- `blockquote-card`: Card-style with avatar

**Slots:** Quote text, Attribution (name, title)

## 5.8 Code

Inline and block code display.

**Variants:**

- `code-inline`: Inline code span
- `code-block`: Multi-line code block
- `code-with-filename`: Block with file tab
- `code-with-copy`: Includes copy button

**Properties:** language (for syntax highlighting), showLineNumbers

## 5.9 Kbd

Keyboard shortcut display.

**Example:** Cmd + K

**UnoCSS:** px-2 py-0.5 bg-gray-100 border rounded text-sm font-mono

## 5.10 Highlight

Text highlighting/marking.

**Variants:**

- **highlight-yellow:** Yellow background
- **highlight-green:** Green background
- **highlight-blue:** Blue background
- **highlight-gradient:** Gradient underline

## 6 Button Components

### Buttons

Interactive button elements.

#### 6.1 Button

Primary interactive button.

**Variants:**

- **btn-primary:** Solid brand color
- **btn-secondary:** Muted/gray background
- **btn-outline:** Border only, transparent background
- **btn-ghost:** No background, minimal styling
- **btn-link:** Looks like a text link
- **btn-destructive:** Red/danger styling

**Sizes:** xs, sm, md (default), lg, xl

**States:** Default, Hover, Focus, Active (pressed), Disabled, Loading

**Slots:** Leading Icon, Label, Trailing Icon

**Properties:**

- **fullWidth:** Expand to container width
- **loading:** Show spinner, disable interaction
- **disabled:** Reduce opacity, prevent interaction

**Interactions:**

- **onClick:** Any action
- **onHover:** Preview state, show tooltip

**UnoCSS:** inline-flex items-center justify-center gap-2 px-4 py-2 rounded-lg font-medium transition-colors focus:outline-none focus:ring-2

#### 6.2 Icon Button

Square button with icon only.

**Variants:** Same as Button (primary, secondary, outline, ghost, destructive)

**Sizes:** xs (24px), sm (32px), md (40px), lg (48px)

**Properties:**

- **icon:** Iconify icon name
- **rounded:** rounded-md (default), rounded-full
- **tooltip:** Accessible label shown on hover

**UnoCSS:** inline-flex items-center justify-center p-2 rounded-lg

#### 6.3 Button Group

Group of related buttons.

**Variants:**

- **group-horizontal:** Horizontal arrangement
- **group-vertical:** Vertical stacking
- **group-attached:** No gap, connected borders
- **group-spaced:** With gap between

**Slots:** Multiple Button components

## 6.4 Split Button

Button with attached dropdown.

**Slots:** Primary Action Button, Dropdown Trigger, Dropdown Menu

**Interactions:**

- `onClick` (primary): Execute main action
- `onClick` (dropdown): Open menu overlay

## 6.5 Floating Action Button (FAB)

Prominent circular button, typically fixed position.

**Variants:**

- `fab-small`: 40px diameter
- `fab-default`: 56px diameter
- `fab-extended`: Includes label text

**Properties:**

- `position`: Bottom-right (default), bottom-left, bottom-center
- `offset`: Distance from edges

**UnoCSS:** `fixed bottom-6 right-6 w-14 h-14 rounded-full shadow-lg`

## 6.6 Toggle Button

Button that toggles between two states.

**States:** Off (unpressed), On (pressed)

**Properties:**

- `pressed`: Current toggle state
- `onIcon`: Icon when pressed
- `offIcon`: Icon when not pressed

**Interactions:**

- `onClick`: Toggle state, SetVariable

## 7 Form Components

### Forms

Input and form control components.

#### 7.1 Input

Single-line text input.

**Variants:**

- **input-default:** Standard bordered input
- **input-filled:** Filled background
- **input-underline:** Bottom border only
- **input-unstyled:** No styling

**Types:** text, email, password, number, tel, url, search, date, time, datetime-local

**States:** Default, Focus, Filled, Disabled, ReadOnly, Error, Success

**Slots:** Leading Icon, Input, Trailing Icon, Clear Button

**Properties:**

- **placeholder:** Placeholder text
- **value:** Current value
- **required:** Required indicator
- **maxLength:** Character limit
- **pattern:** Validation pattern

**Interactions:**

- **onFocus:** Expand, show suggestions
- **onBlur:** Validate, collapse
- **onChange:** Update variable, trigger validation

**UnoCSS:** w-full px-4 py-2 border border-gray-300 rounded-lg focus:ring-2 focus:ring-blue-500 focus:border-transparent outline-none transition

#### 7.2 Textarea

Multi-line text input.

**Properties:** All Input properties plus:

- **rows:** Initial visible rows
- **autoResize:** Grow with content
- **maxRows:** Maximum rows when auto-resizing

#### 7.3 Select

Dropdown selection input.

**Variants:**

- **select-native:** Browser native select
- **select-custom:** Custom styled dropdown
- **select-searchable:** With search/filter
- **select-multi:** Multiple selection

**Slots:** Trigger, Options List, Option Item

**States:** Default, Open, Focused, Disabled

**Interactions:**

- `onClick` (trigger): OpenOverlay (options)
- `onClick` (option): SetVariable, CloseOverlay
- Keyboard: Arrow keys to navigate, Enter to select, Escape to close

## 7.4 Checkbox

Boolean toggle with label.

**Variants:**

- `checkbox-default`: Standard checkbox
- `checkbox-card`: Card-style selection

**States:** Unchecked, Checked, Indeterminate, Disabled

**Slots:** Checkbox, Label, Description

**UnoCSS:** `w-5 h-5 rounded border-2 border-gray-300 checked:bg-blue-500 checked:border-blue-500`

## 7.5 Radio

Single selection from group.

**Variants:**

- `radio-default`: Standard radio button
- `radio-card`: Card-style selection
- `radio-button`: Button group style

**States:** Unselected, Selected, Disabled

## 7.6 Radio Group

Container for radio options.

**Properties:**

- `orientation`: Horizontal, Vertical
- `value`: Currently selected value
- `name`: Form field name

## 7.7 Switch / Toggle

On/off toggle switch.

**Variants:**

- `switch-default`: Standard toggle
- `switch-with-icons`: On/off icons inside
- `switch-with-labels`: On/Off text labels

**Sizes:** sm, md, lg

**States:** Off, On, Disabled

**UnoCSS:** `relative w-11 h-6 bg-gray-200 rounded-full peer-checked:bg-blue-500 transition-colors`

## 7.8 Slider

Range selection input.

**Variants:**

- `slider-single`: Single value
- `slider-range`: Two handles for range

**Properties:**

- `min`: Minimum value
- `max`: Maximum value
- `step`: Step increment
- `showValue`: Display current value
- `showMarks`: Show tick marks

**Interactions:**

- `onDrag`: Update value
- Keyboard: Arrow keys to adjust

## 7.9 Color Picker

Color selection input.

**Variants:**

- `color-swatch`: Simple swatch trigger
- `color-input`: With hex/rgb input
- `color-full`: Complete picker with gradients

**Properties:**

- `value`: Current color (hex, rgb, hsl)
- `showAlpha`: Include alpha channel
- `presets`: Preset color swatches

## 7.10 Date Picker

Date selection with calendar.

**Variants:**

- `date-single`: Single date
- `date-range`: Date range
- `date-time`: Date and time

**Properties:**

- `minDate`: Earliest selectable date
- `maxDate`: Latest selectable date
- `disabledDates`: Array of disabled dates
- `format`: Display format

## 7.11 File Upload

File selection and upload.

**Variants:**

- `upload-button`: Button trigger
- `upload-dropzone`: Drag-and-drop area

- **upload-avatar**: Circular image upload

**Properties:**

- **accept**: Accepted file types
- **multiple**: Allow multiple files
- **maxSize**: Maximum file size
- **showPreview**: Preview uploaded files

**States:** Empty, Dragging Over, Uploading (with progress), Complete, Error

## 7.12 OTP Input

One-time password / verification code input.

**Properties:**

- **length**: Number of digits (4, 6)
- **type**: Number only, alphanumeric
- **masked**: Show dots instead of characters

**Interactions:**

- Auto-advance focus on input
- Paste handling for full code

## 7.13 Form Field

Wrapper component with label, input, and error message.

**Slots:** Label, Input (any form component), Helper Text, Error Message

**Properties:**

- **required**: Show required indicator
- **error**: Error message to display
- **hint**: Helper text

## 7.14 Form

Form container with validation and submission.

**Slots:** Form Fields, Submit Button

**Properties:**

- **action**: Submission endpoint
- **method**: GET, POST
- **validation**: Validation schema

**Interactions:**

- **onSubmit**: SubmitForm action
- Validation on blur or submit

## 8 Data Display Components

### Data Display

Components for presenting information and data.

#### 8.1 Card

Contained content surface.

**Variants:**

- `card-elevated`: Shadow elevation
- `card-outlined`: Border, no shadow
- `card-filled`: Subtle background fill
- `card-interactive`: Hover effects for clickable cards

**Slots:** Header (title, subtitle, actions), Media, Body, Footer

**States:** Default, Hover (interactive), Selected

**UnoCSS:** `bg-white rounded-xl shadow-md border border-gray-100 overflow-hidden`

#### 8.2 Avatar

User or entity image representation.

**Variants:**

- `avatar-image`: Photo
- `avatar-initials`: Letter initials
- `avatar-icon`: Icon placeholder

**Sizes:** xs (24px), sm (32px), md (40px), lg (48px), xl (64px), 2xl (96px)

**Properties:**

- `src`: Image URL
- `alt`: Alt text
- `fallback`: Initials or icon when image fails
- `status`: Online, offline, busy, away (shows indicator dot)

**UnoCSS:** `w-10 h-10 rounded-full bg-gray-200 flex items-center justify-center overflow-hidden`

#### 8.3 Avatar Group

Stacked avatars with overflow indicator.

**Properties:**

- `max`: Maximum visible avatars
- `spacing`: Overlap amount

#### 8.4 Badge

Small status indicator or count.

**Variants:**

- `badge-default`: Neutral gray
- `badge-primary`: Brand color
- `badge-success`: Green
- `badge-warning`: Yellow/orange

- badge-error: Red
- badge-info: Blue

**Sizes:** sm, md, lg

**Properties:**

- dot: Show as dot only (no text)
- pill: Fully rounded
- outline: Border only

**UnoCSS:** inline-flex items-center px-2 py-0.5 rounded text-xs font-medium

## 8.5 Tag

Removable label/category indicator.

**Variants:** Same colors as Badge

**Properties:**

- removable: Show X button
- icon: Leading icon

**Interactions:**

- onClick (X): Remove tag, trigger callback

## 8.6 Stat

Key metric display.

**Variants:**

- stat-simple: Value + label
- stat-with-icon: Includes icon
- stat-with-change: Shows delta/trend
- stat-card: Card container style

**Slots:** Icon, Value, Label, Change Indicator

## 8.7 Table

Data table with sorting, selection, and pagination.

**Variants:**

- table-simple: Basic table
- table-striped: Alternating row colors
- table-bordered: Cell borders
- table-compact: Reduced padding

**Properties:**

- columns: Column definitions (key, label, sortable, width)
- data: Row data array
- selectable: Row selection
- sortable: Column sorting
- stickyHeader: Fixed header on scroll

**Slots:** Header Row, Body Rows, Footer, Empty State

**Interactions:**

- onClick (header): Sort by column
- onClick (row): Select row, Navigate
- onClick (checkbox): Toggle selection

## 8.8 Data List

Key-value pair list display.

**Variants:**

- **datalist-horizontal**: Label and value on same line
- **datalist-stacked**: Label above value
- **datalist-grid**: Two-column grid

## 8.9 Timeline

Chronological event display.

**Variants:**

- **timeline-left**: Markers on left
- **timeline-alternating**: Alternating sides
- **timeline-centered**: Centered line

**Slots:** Timeline Item (marker, time, content)

## 8.10 Accordion

Collapsible content sections.

**Variants:**

- **accordion-single**: Only one open at a time
- **accordion-multiple**: Multiple can be open
- **accordion-bordered**: With borders
- **accordion-separated**: Gap between items

**Slots:** Accordion Item (trigger, content)

**States per Item:** Collapsed, Expanded

**Interactions:**

- **onClick** (trigger): Toggle expand/collapse with animation

## 8.11 Tree

Hierarchical data display.

**Properties:**

- **data**: Nested tree structure
- **selectable**: Allow node selection
- **checkable**: Show checkboxes
- **expandedKeys**: Currently expanded nodes

**Slots:** Tree Node (icon, label, children)

## 8.12 Calendar

Month calendar grid display.

**Properties:**

- **month**: Displayed month
- **events**: Array of events with dates
- **selectable**: Allow date selection

## 8.13 Empty State

Placeholder for empty content areas.

**Slots:** Illustration, Title, Description, Action Button

**UnoCSS:** `flex flex-col items-center justify-center py-12 text-center`

## 8.14 Skeleton

Loading placeholder that mimics content shape.

**Variants:**

- `skeleton-text`: Single line
- `skeleton-paragraph`: Multiple lines
- `skeleton-avatar`: Circle
- `skeleton-image`: Rectangle
- `skeleton-card`: Card layout

**Properties:**

- `animated`: Shimmer animation
- `width`: Element width
- `height`: Element height

**UnoCSS:** `bg-gray-200 rounded animate-pulse`

## 9 Feedback Components

### Feedback

Components for user feedback and status communication.

#### 9.1 Alert

Inline status message.

**Variants:**

- `alert-info`: Blue, informational
- `alert-success`: Green, positive
- `alert-warning`: Yellow/orange, caution
- `alert-error`: Red, negative

**Slots:** Icon, Title, Description, Actions, Close Button

**Properties:**

- `dismissible`: Show close button
- `icon`: Custom icon override

**Interactions:**

- `onClick (close)`: Animate out, remove

**UnoCSS:** `flex gap-3 p-4 rounded-lg border bg-blue-50 border-blue-200`

#### 9.2 Toast / Notification

Temporary popup message.

**Variants:** Same as Alert (info, success, warning, error)

**Properties:**

- `position`: Top-right, top-center, bottom-right, etc.
- `duration`: Auto-dismiss time (0 for persistent)
- `dismissible`: Show close button

**Interactions:**

- `afterDelay`: Auto-dismiss with slide-out animation
- `onClick (close)`: Immediate dismiss
- `onHover`: Pause auto-dismiss timer

#### 9.3 Progress Bar

Linear progress indicator.

**Variants:**

- `progress-determinate`: Known percentage
- `progress-indeterminate`: Unknown, animated
- `progress-striped`: Striped pattern

**Properties:**

- `value`: Current value (0-100)
- `max`: Maximum value
- `showLabel`: Display percentage
- `color`: Bar color

**UnoCSS:** `w-full h-2 bg-gray-200 rounded-full overflow-hidden`

## 9.4 Progress Circle

Circular progress indicator.

**Variants:**

- `circle-determinate`: Known percentage
- `circle-indeterminate`: Spinning

**Sizes:** sm (32px), md (48px), lg (64px), xl (96px)

**Properties:** Same as Progress Bar

## 9.5 Spinner

Loading spinner animation.

**Variants:**

- `spinner-default`: Circular spinner
- `spinner-dots`: Bouncing dots
- `spinner-bars`: Pulsing bars
- `spinner-ring`: Ring with gap

**Sizes:** xs, sm, md, lg

**UnoCSS:** `animate-spin w-6 h-6 border-2 border-blue-500 border-t-transparent rounded-full`

## 9.6 Banner

Full-width announcement bar.

**Variants:**

- `banner-info`: Informational
- `banner-warning`: Warning
- `banner-error`: Critical
- `banner-promo`: Promotional

**Slots:** Icon, Message, Action Link, Close Button

**Properties:**

- `sticky`: Stick to top of viewport
- `dismissible`: Can be closed

## 9.7 Callout

Highlighted information block.

**Variants:**

- `callout-note`: Blue, general info
- `callout-tip`: Green, helpful tip
- `callout-warning`: Yellow, caution
- `callout-danger`: Red, important warning

**Slots:** Icon, Title, Content

## 9.8 Meter

Value within known range display.

**Properties:**

- **value**: Current value
- **min**: Minimum
- **max**: Maximum
- **low**: Low threshold
- **high**: High threshold
- **optimum**: Optimal value

## 9.9 Rating

Star rating display/input.

**Properties:**

- **value**: Current rating
- **max**: Maximum stars (default 5)
- **precision**: 1 (full), 0.5 (half)
- **readonly**: Display only
- **icon**: Custom icon (default: star)

**Interactions:**

- **onHover**: Preview rating
- **onClick**: Set rating

## 10 Overlay Components

### Overlays

Components that appear above page content.

#### 10.1 Modal / Dialog

Centered overlay for focused content.

##### Variants:

- `modal-sm`: max-width 400px
- `modal-md`: max-width 600px
- `modal-lg`: max-width 800px
- `modal-xl`: max-width 1200px
- `modal-full`: Full screen
- `modal-sheet`: Bottom sheet (mobile)

**Slots:** Header (title, close button), Body, Footer (actions)

##### Properties:

- `closeOnOverlay`: Close when clicking backdrop
- `closeOnEscape`: Close on Escape key
- `preventScroll`: Lock body scroll

##### Interactions:

- `onClick` (backdrop): CloseOverlay
- `onKeyDown` (Escape): CloseOverlay
- Entry animation: Fade + Scale or Slide
- Exit animation: Fade + Scale or Slide

#### 10.2 Drawer / Slide-over

Panel that slides from edge.

##### Variants:

- `drawer-left`: Slides from left
- `drawer-right`: Slides from right (default)
- `drawer-top`: Slides from top
- `drawer-bottom`: Slides from bottom

**Sizes:** sm (320px), md (400px), lg (600px), xl (800px)

**Slots:** Header, Body, Footer

##### Interactions:

- Entry: MoveIn from edge
- Exit: MoveOut to edge

#### 10.3 Popover

Contextual overlay anchored to element.

##### Properties:

- `placement`: top, bottom, left, right (+ start/end variants)
- `trigger`: click, hover, focus

- **offset**: Distance from anchor
- **arrow**: Show arrow pointer

**Slots:** Trigger (anchor element), Content

**Interactions:**

- **onClick/onHover**: OpenOverlay with positioning
- Auto-flip when near viewport edge

## 10.4 Tooltip

Small text label on hover.

**Properties:**

- **content**: Tooltip text
- **placement**: top (default), bottom, left, right
- **delay**: Show delay in ms

**Interactions:**

- **onHover**: Show after delay with fade
- **onHoverEnd**: Hide with fade

**UnoCSS:** px-2 py-1 bg-gray-900 text-white text-sm rounded shadow-lg

## 10.5 Dropdown Menu

Action menu anchored to trigger.

**Slots:** Trigger, Menu (Menu Items)

**Menu Item Types:**

- **item**: Standard action item
- **item-checkbox**: Toggleable item
- **item-radio**: Radio selection (grouped)
- **separator**: Visual divider
- **label**: Non-interactive label
- **submenu**: Nested menu

**States per Item:** Default, Hover, Focus, Disabled

**Interactions:**

- **onClick (trigger)**: Toggle menu
- **onClick (item)**: Execute action, close menu
- Keyboard: Arrow navigation, Enter to select

## 10.6 Context Menu

Right-click menu.

**Properties:**

- **trigger**: Right-click target element
- Menu structure same as Dropdown Menu

**Interactions:**

- **onContextMenu**: Open at cursor position

## 10.7 Command Palette

Keyboard-driven command interface.

**Properties:**

- **commands**: Array of available commands
- **placeholder**: Search placeholder
- **hotkey**: Keyboard shortcut to open (default: Cmd+K)

**Slots:** Search Input, Command List, Command Item (icon, label, shortcut)

**Interactions:**

- **onKeyDown** (Cmd+K): Open palette
- **onChange** (search): Filter commands
- **onClick/Enter**: Execute command

## 11 Media Components

### Media

Components for images, video, and media content.

#### 11.1 Image

Responsive image with loading states.

**Properties:**

- **src**: Image source URL
- **alt**: Alt text (required)
- **aspectRatio**: Constrain aspect ratio
- **objectFit**: cover, contain, fill, none
- **objectPosition**: Position within container
- **lazy**: Lazy loading
- **placeholder**: Blur-up, skeleton, or color

**States:** Loading (placeholder), Loaded, Error (fallback)

**UnoCSS:** `w-full h-auto object-cover`

#### 11.2 Video

Video player with controls.

**Properties:**

- **src**: Video source URL
- **poster**: Poster image
- **autoplay**: Auto-play on load
- **loop**: Loop playback
- **muted**: Muted by default
- **controls**: Show native controls

**Custom Controls:** Play/Pause, Progress, Volume, Fullscreen

#### 11.3 Audio

Audio player with visualization.

**Properties:**

- **src**: Audio source URL
- **showWaveform**: Display waveform
- **showProgress**: Progress bar

#### 11.4 Carousel / Slider

Horizontally scrolling content.

**Variants:**

- **carousel-single**: One item visible
- **carousel-multi**: Multiple items visible
- **carousel-fade**: Fade transition
- **carousel-slide**: Slide transition

**Properties:**

- **autoplay**: Auto-advance
- **interval**: Time between slides
- **loop**: Infinite loop
- **showArrows**: Navigation arrows
- **showDots**: Indicator dots
- **draggable**: Swipe/drag navigation

**Slots:** Slides (any content)

**Interactions:**

- **onClick** (arrows): Navigate
- **onDrag**: Swipe navigation
- **afterDelay**: Auto-advance

## 11.5 Lightbox

Full-screen image/gallery viewer.

**Properties:**

- **images**: Array of image sources
- **startIndex**: Initial image
- **showThumbnails**: Thumbnail strip
- **zoom**: Enable zoom

**Interactions:**

- Arrow keys / swipe: Navigate
- Escape: Close
- Pinch/scroll: Zoom

## 11.6 Gallery

Grid of images with lightbox integration.

**Variants:**

- **gallery-grid**: Uniform grid
- **gallery-masonry**: Pinterest-style
- **gallery-justified**: Row-based justified

**Properties:**

- **columns**: Number of columns
- **gap**: Spacing between items
- **enableLightbox**: Open lightbox on click

## 12 Icon Components

### Icons

Iconography components powered by Iconify.

#### 12.1 Icon

Single icon display.

**Properties:**

- **name:** Iconify icon name (e.g., `lucide:home`)
- **size:** xs (16px), sm (20px), md (24px), lg (32px), xl (48px)
- **color:** Icon color (inherits text color by default)
- **rotate:** 0, 90, 180, 270 degrees
- **flip:** horizontal, vertical, both

**UnoCSS:** `i-lucide-home w-6 h-6`

**Icon Sets Available:**

- |             |                   |                         |
|-------------|-------------------|-------------------------|
| • Lucide    | • Tabler          | • Simple Icons (brands) |
| • Heroicons | • Material Design | • Fluent                |
| • Phosphor  | • Feather         | • Carbon                |

#### 12.2 Animated Icon

Icon with animation states.

**Properties:**

- **animation:** spin, pulse, bounce, ping
- **triggerOn:** Always, hover, click
- **fromIcon:** Starting icon (for morphing)
- **toIcon:** Ending icon (for morphing)

**Interactions:**

- **onClick/onHover:** Trigger animation or morph

#### 12.3 Icon Stack

Layered/composite icons.

**Properties:**

- **icons:** Array of icon configs with positions
- **size:** Overall size

**Example:** Folder icon with badge overlay

## 13 Utility Components

### Utility

Helper components for common patterns.

#### 13.1 Visually Hidden

Content for screen readers only.

**UnoCSS:** `sr-only`

#### 13.2 Focus Trap

Constrains focus within container (for modals).

#### 13.3 Click Outside

Detects clicks outside element (for closing dropdowns).

#### 13.4 Portal

Renders children outside DOM hierarchy (for overlays).

#### 13.5 Transition

Animation wrapper for enter/leave transitions.

**Properties:**

- `show`: Boolean to trigger transition
- `enter`: Enter animation
- `leave`: Leave animation
- `duration`: Transition duration

#### 13.6 Scroll Lock

Prevents body scroll (for modals).

#### 13.7 Copy Button

Button that copies content to clipboard.

**Properties:**

- `content`: Text to copy
- `feedback`: "Copied!" duration

**States:** Default, Copied (shows checkmark)

#### 13.8 QR Code

Generated QR code display.

**Properties:**

- `value`: Encoded content
- `size`: Pixel size
- `errorCorrection`: L, M, Q, H
- `foreground`: Foreground color
- `background`: Background color

## 14 Component Composition Patterns

### 14.1 Nesting Rules

Components can be nested following these guidelines:

- **Layout components** can contain any components
- **Card slots** accept any content components
- **Form fields** contain exactly one form input
- **Buttons** can contain icons and text only
- **Nav links** can contain icon, text, and badge
- **Overlays** can contain any components in their body slot

### 14.2 Common Compositions

Pattern	Composition
Hero Section	Section > Container > Stack > Heading + Text + Button
Feature Grid	Section > Container > Grid > Card ( $\times N$ )
Pricing Table	Section > Container > Grid > Card with Stats
Login Form	Card > Form > Form Field ( $\times N$ ) + Button
Dashboard	Sidebar + Container > Grid > Stat Cards + Table
Settings Page	Tabs > Tab Panel > Form Fields
Product Card	Card > Image + Stack > Heading + Text + Badge + Button
Comment	Stack > Avatar + Stack > Text + Text + Button Group

Table 5: Common Component Composition Patterns

### 14.3 Interaction Chaining

Multiple interactions can be chained:

Listing 2: Chained Interactions Example

```
{
  "trigger": "onClick",
  "actions": [
    {
      "type": "SetVariable",
      "variable": "isSubmitting",
      "value": true
    },
    {
      "type": "PlayAnimation",
      "target": "self",
      "animation": "pulse"
    },
    {
      "type": "SubmitForm",
      "form": "contactForm",
      "onSuccess": [
        {
          "type": "SetVariable",
          "variable": "isSubmitting",
          "value": false
        },
        {
          "type": "Navigate",
          "destination": "frame:thank-you"
        }
      ]
    }
  ]
}
```



## 15 Appendix: Component Count Summary

Category	Count
Layout	12
Navigation	8
Typography	10
Buttons	6
Forms	16
Data Display	14
Feedback	8
Overlays	7
Media	6
Icons	3
Utility	8
<b>Total</b>	<b>98</b>

Table 6: Component Library Summary

*“A component library is a vocabulary for building interfaces.”*