

# Component Documentation

## Button

The Button is one of the most commonly used fundamental components of AAVA Play. It is not just a click target. It's the pulse of the interface—alive, intentional, and radiant with purpose.

The component provides a highly customizable clickable element with advanced visual effects including glass morphism, multiple interaction states, and comprehensive theming options. It supports various variants, sizes, icons, and custom styling while maintaining accessibility standards.

## How to use

```
import { AavaButtonComponent } from "@aava/play-core" ;
```

## Interactive Matrix

Explore all button combinations with our interactive playground.

```

<div class="matrix-demo">
  <div class="demo-header">
    <!-- Matrix Table -->
    <div class="matrix-table-container">
      <!-- Size Headers -->
      <div id="size-tabs" class="size-tabs">
        <aava-tabs
          [tabs]="sizeTabs"
          [activeTabId]="selectedSize"
          variant="button"
          size="sm"
          [showContentPanels]="false"
          (tabChange)="onSizeTabChange($event)"
          class="size-tabs-container"
        ></aava-tabs>
      </div>

      <!-- Matrix Grid -->
      <div class="matrix-grid">
        <!-- Column Headers -->
        <div class="matrix-header">
          <div class="mode-header">Mode</div>
          <div class="fill-header" *ngFor="let fill of fills">{{ fill }}</div>
        </div>

        <!-- Matrix Rows -->
        <div class="matrix-row" *ngFor="let mode of modes">
          <div class="mode-label">{{ mode }}</div>

          <div class="button-cell" *ngFor="let fill of fills">
            <ng-container
              *ngIf="getButtonConfig(mode, fill, selectedSize) as config"
            >
              <aava-button
                *ngIf="config.available"
                [label]="config.label"
                [pill]="config.pill"
                [outlined]="config.outlined"
                [clear]="config.clear"
                [size]="getSizeMapping(selectedSize)"
                [iconName]="config.iconName"
                [iconPosition]="config.iconPosition || 'left'"
                variant="primary"
                class="matrix-button"
              ></aava-button>

              <div *ngIf="!config.available" class="unavailable">
                ■ Not Available
              </div>
            </ng-container>
          </div>
        </div>
      </div>
    </div>
  </div>
</div>

---


type ButtonMode = 'pill' | 'default' | 'action' | 'quick-action';

```

```

type ButtonFill = 'filled' | 'outline' | 'clear';
type ButtonSize = 'xs' | 'sm' | 'md' | 'lg' | 'xl';

interface ButtonConfig {
  mode: ButtonMode;
  fill: ButtonFill;
  size: ButtonSize;
  pill: boolean;
  outlined: boolean;
  clear: boolean;
  iconPosition?: 'left' | 'right' | 'only';
  iconName: string;
  label: string;
  available: boolean;
  iconColor?: string;
}

modes: ButtonMode[] = ['pill', 'default', 'action', 'quick-action'];
fills: ButtonFill[] = ['filled', 'outline', 'clear'];
sizes: ButtonSize[] = ['xsmall', 'small', 'medium', 'large', 'xlarge'];
sizeTabs: TabItem[] = [
  { id: 'xsmall', label: 'XSmall' },
  { id: 'small', label: 'Small' },
  { id: 'medium', label: 'Medium' },
  { id: 'large', label: 'Large' },
  { id: 'xlarge', label: 'XLarge' },
];
variants: ButtonVariant[] = [
  'primary',
  'secondary',
  'success',
  'warning',
  'danger',
  'info',
];
selectedSize: ButtonSize = 'md';
selectedMode: ButtonMode = 'pill';
selectedFill: ButtonFill = 'filled';

toggleTheme(): void {
  this.isDarkTheme = !this.isDarkTheme;
  document.body.setAttribute(
    'data-theme',
    this.isDarkTheme ? 'dark' : 'light'
  );
}

onSizeTabChange(tab: TabItem): void {
  this.selectedSize = tab.id as ButtonSize;
}

getSizeLabel(size: ButtonSize): string {
  switch (size) {
    case 'xs':
      return 'XSmall';
    case 'sm':
      return 'Small';
    case 'md':
      return 'Medium';
  }
}

```

```

        case 'lg':
            return 'Large';
        case 'xl':
            return 'XLarge';
        default:
            return size;
    }
}

getSizeMapping(
    size: ButtonSize
): 'xs' | 'sm' | 'md' | 'lg' | 'xl' {
    switch (size) {
        case 'xs':
            return 'xs';
        case 'sm':
            return 'sm';
        case 'md':
            return 'md';
        case 'lg':
            return 'lg';
        case 'xl':
            return 'xl';
        default:
            return 'md';
    }
}

getButtonConfig(
    mode: ButtonMode,
    fill: ButtonFill,
    size: ButtonSize
): ButtonConfig {
    // All fills are now available
    const baseConfig = {
        mode,
        fill,
        size,
        outlined: fill === 'outline',
        clear: fill === 'clear',
        available: true,
        iconColor: '#fff',
    };

    switch (mode) {
        case 'pill':
            return {
                ...baseConfig,
                pill: true,
                iconPosition: 'left' as const,
                iconName: 'star',
                label: 'Pill',
            };

        case 'default':
            return {
                ...baseConfig,
                pill: false,
                iconName: '',
                iconPosition: 'left' as const,
            };
    }
}

```

```

        label: 'Default',
    };

    case 'action':
        return {
            ...baseConfig,
            pill: false,
            iconPosition: 'left' as const,
            iconName: 'zap',
            label: 'Action',
        };

    case 'quick-action':
        return {
            ...baseConfig,
            pill: true,
            iconPosition: 'only' as const,
            iconName: 'plus',
            label: '',
        };
    }

    default:
        return {
            ...baseConfig,
            pill: false,
            iconPosition: undefined,
            iconName: '',
            label: mode,
            available: false,
        };
    }
}

```

## Basic Usage

Basic button implementation with default settings.

```

<aava-button
    label="Primary"
    variant="primary"
    (userClick)="onButtonClick($event)"
    [pill]="true"
>
</aava-button>
<aava-button
    label="Primary"
    variant="primary"
    (userClick)="onButtonClick($event)"
>
</aava-button>

---

onButtonClick(event: Event) {
    console.log('Button clicked:', event);
}

```

## Variants

The button component supports 9 semantic variants that control the visual appearance and meaning of the button.

```
<aava-button label="Primary" variant="primary"></aava-button>
<aava-button label="Secondary" variant="secondary"></aava-button>
<aava-button label="Success" variant="success"></aava-button>
<aava-button label="Warning" variant="warning"></aava-button>
<aava-button label="Danger" variant="danger"></aava-button>
<aava-button label="Info" variant="info"></aava-button>
<aava-button label="Tertiary" variant="tertiary"></aava-button>
```

## Available Variants

- primary - Main call-to-action button (pink/brand color)
- secondary - Outlined style with transparent background
- success - Positive actions (green)
- warning - Cautionary actions (orange)
- danger - Destructive actions (red)
- info - Informational actions (blue)
- tertiary - Text-only action (transparent)

## Sizes

Five size options to fit different layout requirements and visual hierarchies.

```
<aava-button label="Extra Small" variant="primary" size="xs"></aava-button>
<aava-button label="Small" variant="primary" size="sm"></aava-button>
<aava-button label="Medium" variant="primary" size="md"></aava-button>
<aava-button label="Large" variant="primary" size="lg"></aava-button>
<aava-button label="Extra Large" variant="primary" size="xl"></aava-button>
```

## Available Sizes

- xs (Extra Small) - Extra compact size for very dense interfaces
- sm (Small) - Compact size for dense interfaces
- md (Medium) - Standard size for most use cases (default)
- lg (Large) - Prominent size for primary actions
- xl (Extra Large) - Extra large size for hero sections and CTAs

## Hover Effects

Dynamic hover effects that enhance user interaction feedback.

```

<aava-button
  label="Torch (Recommended)"
  variant="primary"
  hoverEffect="torch"
  [pill]="true"
>
</aava-button>
<aava-button
  label="Glow Effect"
  variant="warning"
  hoverEffect="glow"
  [pill]="true"
>
</aava-button>
<aava-button
  label="Tint Effect"
  variant="success"
  hoverEffect="tint"
  [pill]="true"
>
</aava-button>
<aava-button
  label="Scale Effect"
  variant="danger"
  hoverEffect="scale"
  [pill]="true"
>
</aava-button>

```

## Available Hover Effects

- torch - Internal semicircular sunrise effect (default)
- glow - Outer glow with elevation
- tint - Color overlay with brightness increase
- scale - Scale transformation with elevation

## Pressed Effects

Visual feedback for button press interactions with various animation styles.

```

<aava-button
  label="Ripple (Recommended)"
  variant="primary"
  pressedEffect="ripple"
  [pill]="true"
>
</aava-button>
<aava-button
  label="Inset Effect"
  variant="warning"
  pressedEffect="inset"
  [pill]="true"
>
</aava-button>

```

## Available Pressed Effects

- ripple - Multi-layered ripple animation (default)
- inset - Inset shadow effect

## Icons

Comprehensive icon support with flexible positioning and customization options.

```
<aava-button
  label="Left Icon"
  iconName="star"
  iconPosition="left"
  variant="primary"
  iconColor="#fff">
</aava-button>
<aava-button
  label="Right Icon"
  iconName="star"
  iconPosition="right"
  variant="primary"
  iconColor="#fff">
</aava-button>
<aava-button
  iconName="star"
  iconPosition="icon-only"
  variant="primary"
  iconColor="#fff">
</aava-button>
```

## Icon Properties

- iconName - Lucide icon name
- iconPosition - Position relative to text: left , right , icon-only
- iconColor - Custom icon color (defaults to currentColor)
- iconSize - Icon size in pixels (default: 20)

## States

Interactive states for different user scenarios and feedback.

```

<aava-button label="Default State" variant="primary" size="md" [pill]="true">
</aava-button>
<aava-button
  label="Processing State"
  variant="primary"
  [processing]="true"
  size="md"
  [pill]="true"
  iconName="loader"
  iconColor="white"
  iconPosition="left"
>
</aava-button>
<aava-button
  label="Disabled State"
  variant="primary"
  [disabled]="true"
  size="md"
  [pill]="true"
>
</aava-button>

```

## Available States

- default - Programmatically active state
- processing - Loading/async operation state with pulse animation
- disabled - Non-interactive state

## Shapes & Styles

Shape modifiers and style variants for different design requirements.

```

<aava-button
  label="Primary"
  variant="primary"
  [pill]="true"
  [customStyles]="{ 'max-width': '100px' }"
></aava-button>
<aava-button
  label="Secondary"
  variant="secondary"
  [pill]="true"
  [customStyles]="{ 'max-width': '100px' }"
></aava-button>

<aava-button
  label="Primary"
  variant="primary"
  [customStyles]="{ 'max-width': '100px' }"
></aava-button>
<aava-button
  label="Secondary"
  variant="secondary"
  [customStyles]="{ 'max-width': '100px' }"
></aava-button>

```

## Available Shapes

- default - Standard rectangular with border radius
- pill - Fully rounded corners (50px border radius)

## Style Variants

- outlined - Transparent background with colored border
- clear - Transparent background with no border, uses variant text colors
- customStyles - Allows to apply inline CSS styles directly to the component.

This property accepts a key-value pair object where the key is the CSS property name and the value is the corresponding CSS value.

## Events

The button component emits events for user interactions.

```
<aava-button
  label="Click Handler"
  variant="primary"
  (userClick)="onButtonClick()"
  [customStyles]="{ 'max-width': '200px' }"
  [pill]="true"
>
</aava-button>

---

onButtonClick() {
  setTimeout(() => {
    alert('Hi There!');
  }, 200);
}
```

## Available Events

- userClick - Emitted on button click or keyboard activation (Enter/Space)

## Accessibility

The button component follows WAI-ARIA accessibility guidelines:

- Proper keyboard navigation (Enter and Space key support)
- ARIA attributes for screen readers ( aria-disabled , aria-pressed )
- Focus management with visible focus indicators
- Semantic button element usage

## API Reference

## Inputs

Property	Type	Default	Description
label	string	"	Button text content
variant	ButtonVariant	'default'	Visual variant: 'default' , 'primary' , 'secondary' , 'success' , 'warning' , 'danger' , 'info'
size	ButtonSize	'md'	Button size: 'xs' , 'sm' , 'md' , 'lg' , 'xl'
state	ButtonState	'default'	Interaction state: 'default' , 'hover' , 'active' , 'disabled' , 'processing' , 'focus'
hoverEffect	ButtonHoverEffect	'torch'	Hover effect: 'torch' , 'glow' , 'tint' , 'scale' , 'none'
pressedEffect	ButtonPressedEffect	'ripple'	Pressed effect: 'ripple' , 'inset' , 'solid' , 'none'
processingEffect	ButtonProcessingEffect	'pulse'	Processing effect: 'pulse' , 'none'
focusEffect	ButtonFocusEffect	'border'	Focus effect: 'border' , 'none'
disabledEffect	ButtonDisabledEffect	'dim'	Disabled effect: 'dim' , 'none'
disabled	boolean	false	Whether button is disabled
processing	boolean	false	Whether button is in processing state
pill	boolean	false	Whether to use pill shape
outlined	boolean	false	Whether to use outlined style variant
clear	boolean	false	Whether to use clear style variant (transparent, no border)
width	string	"	Custom width value
height	string	"	Custom height value
gradient	string	undefined	Legacy – use customStyles instead

Property	Type	Default	Description
background	string	undefined	Legacy – use customStyles instead
color	string	undefined	Legacy – use customStyles instead
dropdown	boolean	false	Legacy – use separate dropdown component
glassVariant	ButtonGlassVariant	'glass-10'	Default recommended glass intensity
customStyles	Record	{}	CSS custom properties override
iconName	string	"	Lucide icon name
iconColor	string	"	Custom icon color
iconSize	number	20	Icon size in pixels
iconPosition	'left'   'right'   'only'	'left'	Icon position relative to text

## Outputs

Event	Type	Description
userClick	EventEmitter	Emitted when button is clicked or activated via keyboard

## Design Tokens & Theming

AAVA Play buttons use semantic design tokens for all surfaces, spacing, radius, and motion. While global tokens define the visual language of the system, buttons expose a set of scoped override tokens that allow you to fine-tune appearance without breaking consistency.

Use these only when necessary —for instance, to adjust a button's vertical padding inside a dense UI or to sharpen the radius for compact layouts.

## Available Design Tokens for Button

### Size & Layout Tokens

Token	Purpose	Default Value
--button-size-xsm-padding	Padding for extra small size buttons	Theme-based

Token	Purpose	Default Value
--button-size-sm-padding	Padding for small size buttons	Theme-based
--button-size-md-padding	Padding for medium size buttons	Theme-based
--button-size-lg-padding	Padding for large size buttons	Theme-based
--button-size-xlg-padding	Padding for extra large size buttons	Theme-based
--button-size-xsm-height	Height for extra small size buttons	Theme-based
--button-size-sm-height	Height for small size buttons	Theme-based
--button-size-md-height	Height for medium size buttons	Theme-based
--button-size-lg-height	Height for large size buttons	Theme-based
--button-size-xlg-height	Height for extra large size buttons	Theme-based
--button-border-radius	Border radius for default shape	Theme-based

## Typography & Motion Tokens

Token	Purpose	Default Value
--button-font-weight	Font weight for button text	Theme-based
--button-transition	Default transition animation	Theme-based

## Icon Tokens

Token	Purpose	Default Value
--button-icon-margin	Margin around icons	Theme-based

## Token Override Example

You can define overrides in your theme configuration or component styles:

```
/* Custom button theming */ .my-compact-buttons { --button-size-md-padding : 8 px 16 px ;  
--button-border-radius : 4 px ; --button-transition : 100 ms ease ; }
```

This would make buttons more compact, sharper, and snappier—ideal for dense interfaces or admin tools.

These tokens are opt-in overrides. If not set, the button will inherit global styles via the design system tokens.

## Best Practices

### Design Guidelines

- Use semantic variants - Choose variants that match the action's intent (primary for main actions, danger for destructive actions)
- Default variant - Use default variant for standard buttons; primary for main CTAs
- Size selection - Use medium as the default size; extra small / extra large for extreme cases only
- Effects system - Default effects work well together; customize only when needed
- Icon usage - Use icon-only for compact interfaces, left / right for labeled actions
- Consistent sizing - Match button sizes to surrounding elements and visual hierarchy

### Accessibility

- Always provide meaningful labels - Even for icon-only buttons, use proper ARIA labels
- Keyboard navigation - Ensure all interactive elements are keyboard accessible
- Focus indicators - Maintain clear focus states for navigation
- Screen reader support - Use semantic HTML and proper ARIA attributes
- Color contrast - Ensure sufficient contrast for all variants and states

### Performance

- Avoid excessive custom styling - Use built-in variants when possible
- Debounce rapid clicks - Prevent accidental multiple submissions
- Optimize icon loading - Use icon systems efficiently
- Consider bundle size - Import only needed effects and variants