

Genie UI: Design System Documentation

Version: 3.0 (Complete Edition)

Brand Identity: "Uber Infrastructure" meets "ChatGPT Intelligence"

Core Vibe: High-Performance, Industrial, Precision, "Dark Mode Native"

Target Platforms: Web (React), iOS (SwiftUI), Android (Compose/Kotlin), Admin (Web)

1. Design Principles (The DNA)

- Precision Over Decoration:** Every pixel must serve a purpose. If it doesn't add clarity or function, delete it.
- Black Ops Aesthetics:** We embrace the void. Use deep charcoal to save battery and create depth. Light is used only to guide attention (The Signal).
- Mechanical Physics:** Interfaces don't float; they snap, slide, and lock. Motion is instant and engineered.
- Data Density:** We trust our users. Show them the data (IDs, Coordinates, Latency) but structure it beautifully.

2. Foundations

2.1 Color System (Theme Tokens)

The system uses Semantic Tokens. Developers map these variable names, and the values swap automatically based on the user's Theme setting.

A. Backgrounds (The Canvas)

Token Name	Dark Mode (Default)	Light Mode (Alt)	Usage
bg-default	<div><div></div>#050505</div>	<div><div></div>#F4F5F7</div>	Global Background. Deepest Charcoal vs. Cloud Grey.
bg-surface	<div><div></div>#121212</div>	<div><div></div>#FFFFFF</div>	Cards, Drawers, Sidebars. Layer 1 elevation.
bg-input	<div><div></div>#1A1A1A</div>	<div><div></div>#F0F2F5</div>	Form Fields. Distinct from surface.
bg-overlay	rgba(5,5,5,0.85)	rgba(0,0,0,0.4)	Modal/Drawer backdrop.
border-subtle	<div><div></div>#333333</div>	<div><div></div>#E2E4E8</div>	Hairlines. 1px stroke around all cards.
border-strong	<div><div></div>#555555</div>	<div><div></div>#C4C8D0</div>	Hover States, dividers.

B. The Brand Scale (The Signal)

Brand colors remain constant across themes to ensure recognition.

Token Name	Hex Code	Usage
primary-main	<div><div></div>#FF4D00</div>	Primary Actions, Active State.
primary-hover	<div><div></div>#FF6A2B</div>	Button Hover.
primary-pressed	<div><div></div>#CC3D00</div>	Button Active/Press.
primary-dim	<div><div></div>#4D1700</div>	Selection Backgrounds. (Opacity: 15% on Dark, 10% on Light).
primary-glow	<div><div></div>#FF4D00</div>	Effects only. Used in Drop Shadow/Blur.

C. The Text Scale (Readability)






Refined to avoid eye strain. Pure White/Black are avoided.

Token Name	Dark Mode Value	Light Mode Value	Usage
text-primary	<div><div></div>#EDEDED</div>	<div><div></div>#111111</div>	Headlines. Off-White vs. Off-Black.
text-body	<div><div></div>#A1A1A1</div>	<div><div></div>#4A5568</div>	Paragraphs. Soft Grey vs. Slate Grey.
text-muted	<div><div></div>#666666</div>	<div><div></div>#94A3B8</div>	Metadata. Timestamps, placeholders.
text-disabled	<div><div></div>#333333</div>	<div><div></div>#CBD5E1</div>	Disabled states.
text-inverse	<div><div></div>#111111</div>	<div><div></div>#FAFAFA</div>	Text on Orange. Soft Black on Dark, Off-White on Light.

D. Semantic Status

Token	Hex	Usage
status-success	<div><div></div>#00E096</div>	"In Stock", "Connected", "Completed".
status-error	<div><div></div>#FF2D55</div>	"Closed", "Failed", "Destructive Action".
status-warning	<div><div></div>#FFC043</div>	"Low Signal", "Closing Soon".
status-info	<div><div></div>#2E93fA</div>	"Processing", "System Note".

E. Accessibility & Contrast Targets (WCAG 2.1)

Pair	Ratio	Status
Orange ( #FF4D00) on Dark ( #050505)	5.4:1	PASS (AA). Safe for buttons/icons.
Text Inverse ( #111111) on Orange	5.6:1	PASS (AA). High legibility.
Primary Text ( #EDEDED) on Dark	15.8:1	PASS (AAA). Excellent readability.
Body Text ( #A1A1A1) on Dark	6.7:1	PASS (AA). Comfortable reading.

2.2 Typography System

Typeface Families

- 1. **Headlines:** Outfit (Geometric Sans). Character: Friendly but Engineered.
- 2. **UI/Body:** Plus Jakarta Sans (Humanist Sans). Character: Legible, Tall X-Height.
- 3. **Data/Code:** JetBrains Mono (Monospace). Character: Technical, Precise.

The Type Scale

Base Size: 16px (1rem). Scale Ratio: 1.2 (Minor Third).

Token	Font	Size	Line Height	Tracking	Weight
Display XL	Outfit	80px	110%	-3%	Bold (700)
Display L	Outfit	56px	115%	-2%	SemiBold (600)
Heading 1	Outfit	32px	120%	-1%	SemiBold (600)
Heading 2	Outfit	24px	130%	0%	Medium (500)
Heading 3	Outfit	20px	140%	0%	Medium (500)
Body Large	Jakarta	18px	160%	0%	Regular (400)
Body Base	Jakarta	16px	150%	0%	Regular (400)
Body Small	Jakarta	14px	150%	0%	Regular (400)
Caption	Jakarta	12px	140%	+1%	Medium (500)
Button	Jakarta	16px	100%	+2%	SemiBold (600)
Mono Base	JetBrains	14px	150%	0%	Regular (400)
Mono Small	JetBrains	12px	140%	0%	Medium (500)

2.3 Grid & Layout

System: 8-point Grid. All dimensions must be divisible by 4 or 8.

Spacing Tokens

- **space-0.5:** 4px (Icon gap)
- **space-1:** 8px (Related elements)
- **space-1.5:** 12px (Group gap)
- **space-2:** 16px (Card padding)
- **space-3:** 24px (Section gap)
- **space-4:** 32px (Container padding)
- **space-6:** 48px (Major section)
- **space-8:** 64px (Hero padding)

Breakpoints

- **Mobile:** 0 - 599px (4 Columns, 24px Margin, 16px Gutter)

- **Tablet:** 600 - 1023px (8 Columns, 32px Margin, 24px Gutter)
- **Desktop:** 1024 - 1439px (12 Columns, 64px Margin, 24px Gutter)
- **Wide:** 1440px+ (12 Columns, Max-width 1280px container)

Z-Index Scale

- **z-floor:** 0 (Background)
 - **z-elevated:** 100 (Cards)
 - **z-sticky:** 500 (Nav bars)
 - **z-overlay:** 800 (Drawers/Modals)
 - **z-toast:** 900 (Notifications)
 - **z-cursor:** 999 (Custom cursors/Tooltips)
-

2.4 Shape & Effects

Border Radius

- **radius-none:** 0px
- **radius-xs:** 4px (Checkboxes, Tags)
- **radius-sm:** 8px (Buttons, Inputs)
- **radius-md:** 12px (Cards)
- **radius-lg:** 24px (Modals)
- **radius-full:** 9999px (Pills, Avatars)

Shadows (The Lift)



Token	Dark Mode Effect	Light Mode Effect
shadow-sm	None (Use Border)	0px 2px 4px rgba(5,5,5, 0.05)
shadow-md	0px 4px 12px <div><div></div>#050505</div>	0px 8px 16px rgba(5,5,5, 0.08)
shadow-glow	0px 0px 12px rgba(255, 77, 0, 0.4)	Same (Orange Glow)

3. Components Specs

3.1 Buttons

Height: 48px (Desktop/Mobile Standard), 40px (Dense/Admin).

A. Primary (The Signal)

- **Bg:** primary-main ( #FF4D00)
- **Text:** text-inverse
- **Font:** Button (16px SemiBold)
- **Radius:** radius-sm (8px)
- **Interaction:** Scale 98% on press (duration-fast, Mechanical Snap easing)
- **Hover:** Bg changes to primary-hover
- **Active/Press:** Bg changes to primary-pressed
- **Disabled:** Bg ( #4D1700) (30% opacity), Text text-disabled, no interaction
- **Loading:** Show spinner (16px, primary-main) centered, text opacity 50%

B. Secondary (The Outline)

- **Bg:** Transparent
- **Border:** 1px solid border-strong
- **Text:** text-primary
- **Hover:** Bg text-primary (10% opacity)
- **Active/Press:** Border primary-main, Bg primary-dim (8% opacity)
- **Disabled:** Border border-subtle, Text text-disabled

C. Ghost (Text Only)

- **Bg:** Transparent
- **Text:** text-body
- **Hover:** Text text-primary
- **Active/Press:** Text primary-main, Scale 98%
- **Disabled:** Text text-disabled

D. Destructive (Error Actions)

- **Bg:** status-error
- **Text:** text-inverse
- **Interaction:** Same as Primary but with error color

- **Use Case:** Delete, Remove, Cancel Order
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3.2 Inputs (Forms)

Height: 48px.

A. Text Input (Default)

- **Bg:** bg-input
- **Border:** 1px solid border-subtle
- **Text:** text-primary
- **Placeholder:** text-muted
- **Font:** Body Base (16px Regular)
- **Radius:** radius-sm (8px)
- **Padding:** space-1.5 (12px horizontal), space-1 (8px vertical)

B. Input States

- **Focus:** Border primary-main (2px), Outline none
- **Error:** Border status-error (2px), "Refusal Shake" animation
- **Success:** Border status-success (1px), checkmark icon (16px) right-aligned
- **Disabled:** Bg bg-surface (50% opacity), Border border-subtle, Text text-disabled

C. Input Variants

- **Search:** Magnifying glass icon (20px) left-aligned, space-1 gap
 - **Password:** Eye icon (20px) right-aligned for toggle visibility
 - **Number/Currency:** JetBrains Mono font, right-aligned text
-

3.3 Cards (Containers)

- **Bg:** bg-surface
- **Border:** 1px solid border-subtle
- **Radius:** radius-md (12px)
- **Padding:** space-2 (16px) or space-3 (24px)
- **Shadow:** shadow-sm (Light mode only)
- **Hover State:** Border border-strong, Lift 2px (translate Y -2px, duration-fast)

Card Variants

A. Data Card (Inventory Item, Vendor Profile)

- Header: space-2 padding, border-bottom border-subtle
- Body: space-3 padding
- Footer: space-2 padding, border-top border-subtle, text-muted labels

B. Stat Card (Metrics, KPIs)

- Large number: Display L (56px Outfit SemiBold)
- Label: Caption (12px Jakarta Medium, text-muted, ALL CAPS)
- Trend indicator: Arrow icon + percentage in status color

C. Interactive Card (Clickable)

- Cursor: pointer
 - Hover: Border primary-main, Bg primary-dim (5% opacity)
 - Active: Scale 99% (duration-fast)
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3.4 Navigation

Bottom Bar (Mobile)

- **Height:** 80px
- **Bg:** bg-surface + Blur 20px (Backdrop filter)
- **Border Top:** 1px solid border-subtle
- **Icons:** 24px Phosphor Icons
- **Active State:** Icon filled primary-main, label text-primary
- **Inactive State:** Icon regular weight, label text-muted
- **Safe Area:** Account for iOS notch (env(safe-area-inset-bottom))

Sidebar (Admin)

- **Width:** 260px (Expanded), 64px (Collapsed)
- **Bg:** bg-surface
- **Border Right:** 1px solid border-subtle
- **Toggle:** Hamburger icon (24px) in header
- **Transition:** Width change over duration-nav (300ms) with Mechanical Snap easing

Top Navigation Bar (Desktop)

- **Height:** 64px
 - **Bg:** bg-surface + Blur 12px (Sticky)
 - **Border Bottom:** 1px solid border-subtle
 - **Logo:** 32px height, left-aligned with space-4 margin
 - **Search:** Centered, max-width 480px
 - **Actions:** Right-aligned icons (24px), space-2 gap
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3.5 Data Tables (The Grid)

Critical for "data density" promise.

A. Table Structure

- **Header:** Bg bg-input, Text Caption (ALL CAPS), Sticky position
- **Row Height:** 56px (Comfortable), 44px (Dense mode)
- **Border:** border-subtle between rows (1px)
- **Padding:** space-1.5 horizontal, space-1 vertical

B. Column Types

- **Text:** Body Small (14px Jakarta), left-aligned
- **Number/Currency:** Mono Base (14px JetBrains), right-aligned
- **Status:** Badge component (see 3.6), centered
- **Actions:** Icon buttons (24px), right-aligned, space-0.5 gap

C. Table States

- **Row Hover:** Bg primary-dim (5% opacity)
- **Row Selected:** Bg primary-dim (12% opacity), Border-left 3px primary-main
- **Sortable Column:** Arrow icon (16px) in header, hover shows primary-main
- **Empty:** Show empty state component (see 3.7)

D. Table Features

- **Pagination:** Bottom-aligned, shows "1-25 of 247", Previous/Next buttons
- **Filters:** Top-aligned drawer, opens from right (Mobile) or inline (Desktop)
- **Export:** Icon button in header, downloads CSV/Excel

- **Density Toggle:** Switch between Comfortable/Dense modes
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3.6 Badges & Tags

Small labels for status, categories, counts.

A. Badge (Status Indicator)

- **Height:** 24px
- **Padding:** space-1 horizontal
- **Radius:** radius-full (pill shape)
- **Font:** Caption (12px Jakarta Medium, ALL CAPS)
- **Variants:**
 - Success: Bg status-success (15% opacity), Text status-success
 - Error: Bg status-error (15% opacity), Text status-error
 - Warning: Bg status-warning (15% opacity), Text status-warning
 - Info: Bg status-info (15% opacity), Text status-info
 - Neutral: Bg border-strong, Text text-body

B. Tag (Removable Label)

- **Height:** 28px
- **Padding:** space-1.5 horizontal
- **Radius:** radius-xs (4px)
- **Bg:** bg-input
- **Border:** 1px solid border-subtle
- **Text:** Body Small (14px)
- **Close Icon:** X icon (16px), hover shows status-error

C. Count Badge (Notification Dot)

- **Size:** 20px circle (or auto-width for 2+ digits)
 - **Bg:** primary-main
 - **Text:** text-inverse, Mono Small (12px Bold)
 - **Position:** Absolute, top-right corner of parent
-

3.7 Empty States (The Void)

When the system finds nothing, don't show a cute cartoon. Show a technical failure.

Visual Strategy

- **Icon:** 64px linear icon in text-muted
 - Search Fail: WifiSlash or MagnifyingGlass with strikethrough
 - No Inventory: Package with dotted/dashed outline stroke
 - No Connection: PlugsConnected with X overlay
 - No Data: ChartLineDown or Database with slash
- **Background:** 20% opacity "Static Map" or subtle radial gradient from bg-surface to bg-default
- **Headline:** Heading 3 (20px Outfit Medium), text-primary
- **Description:** Body Base (16px Jakarta), text-muted, max-width 400px
- **Action:** Always provide Secondary Button ("Retry Scan", "Modify Parameters", "Clear Filters")

Empty State Patterns

- **No Search Results:** "No Inventory Detected", suggest broadening filters
 - **No Network:** "Connection Failed", show retry button with countdown
 - **Permission Denied:** "Access Restricted", explain what's needed
 - **First-Time User:** "Grid Empty", guide toward first action (CTA Primary button)
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3.8 Loading States (The Process)

A. Skeleton Loaders (Preferred)

- **Appearance:** Bg bg-input, animated gradient shimmer
- **Animation:** Linear gradient moves left-to-right, duration-breath (2000ms loop)
- **Shape:** Match the component being loaded (card, table row, text line)
- **Usage:** Use for content that's loading asynchronously

B. Spinners

- **Size:** 24px (Default), 16px (Inline), 40px (Full-page)
- **Color:** primary-main
- **Animation:** Rotate 360deg, linear easing, duration-breath (2000ms loop)
- **Usage:** Use for actions/processes in progress (button loading, form submission)

C. Progress Bars

- **Height:** 4px
- **Bg:** bg-input
- **Fill:** primary-main
- **Radius:** radius-full
- **Usage:** File uploads, multi-step processes
- **Variants:**
 - Determinate: Show percentage (0-100%)
 - Indeterminate: Animated gradient pulse

D. Loading Overlays

- **Backdrop:** bg-overlay (85% opacity)
 - **Z-index:** z-overlay (800)
 - **Content:** Centered spinner (40px) + "Verifying..." text (Body Base, text-primary)
 - **Usage:** Full-screen operations (submitting orders, processing payments)
-

3.9 Modals & Drawers

A. Modal (Desktop)

- **Max Width:** 560px (Standard), 800px (Large)
- **Bg:** bg-surface
- **Border:** 1px solid border-subtle
- **Radius:** radius-lg (24px)
- **Shadow:** shadow-md
- **Backdrop:** bg-overlay, z-index z-overlay
- **Padding:** space-4 (32px)
- **Animation:** Scale from 95% to 100%, opacity 0 to 1, duration-nav, Mechanical Snap easing
- **Origin Point:** Grow from triggering button position

B. Drawer (Mobile)

- **Width:** 100% (Mobile), 400px (Tablet+)
- **Height:** Auto (max 85vh)
- **Position:** Bottom (Mobile), Right (Desktop)
- **Bg:** bg-surface
- **Border:** Top 1px border-subtle (Mobile), Left 1px (Desktop)

- **Radius:** radius-lg top corners only (Mobile)
- **Animation:** Slide from bottom (Mobile) or right (Desktop), duration-nav
- **Handle:** 48px wide, 4px tall, bg border-strong, centered at top (Mobile only)

C. Modal/Drawer Components

- **Header:** space-3 padding-bottom, border-bottom border-subtle
 - Title: Heading 2 (24px Outfit Medium)
 - Close: X icon (24px) top-right, Ghost button behavior
 - **Body:** space-4 padding, scrollable if content exceeds viewport
 - **Footer:** space-3 padding-top, border-top border-subtle
 - Actions: Right-aligned, Primary + Secondary buttons, space-1.5 gap
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3.10 Toasts & Notifications

A. Toast Structure

- **Width:** 360px (Desktop), calc(100vw - 32px) (Mobile)
- **Height:** Auto (min 56px)
- **Bg:** bg-surface
- **Border:** 1px solid border-subtle
- **Radius:** radius-md (12px)
- **Shadow:** shadow-md
- **Padding:** space-2 (16px)

B. Toast Variants

- **Success:** Border-left 3px status-success, CheckCircle icon (20px)
- **Error:** Border-left 3px status-error, WarningCircle icon (20px)
- **Warning:** Border-left 3px status-warning, Warning icon (20px)
- **Info:** Border-left 3px status-info, Info icon (20px)

C. Toast Behavior

- **Placement:** Top-Center (Desktop), Bottom-Center above nav (Mobile)
- **Z-index:** z-toast (900)
- **Animation In:** Slide down (Desktop) or up (Mobile), duration-fast
- **Animation Out:** Fade out + slide, duration-fast

- **Duration:**
 - Info/Success: Auto-dismiss after 4000ms
 - Error/Critical: Never auto-dismiss, requires user click
- **Stacking:** Max 3 visible, newest pushes oldest out

D. Notification Center (Optional)

- **Trigger:** Bell icon (24px) in header with count badge
 - **Container:** Drawer (400px wide, right-aligned)
 - **Items:** List of toasts (persistent), grouped by date
 - **Actions:** Mark all read, Clear all
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3.11 Brand Presence (Logo Usage)

Rules for using the "G" mark in the interface

- **Mobile Header:**
 - Height: 24px
 - Alignment: Left-aligned or Centered
 - Color: text-primary (Off-White in Dark, Off-Black in Light)
 - **Desktop / Admin Sidebar:**
 - Height: 32px
 - Color: Full Color (Orange Accent) allowed
 - **Clear Space:** Maintain space-2 (16px) minimum clearance on all sides
 - **Favicon:** Use the "Active Signal" (Orange Dot) or the "G" Symbol
 - **Loading States:** Animated "G" pulse (scale 1x to 1.1x, duration-breath)
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3.12 Form Validation & Error Recovery

A. Input Errors (Behavior)

- **Visual:** Border turns status-error ( #FF2D55), 2px width
- **Animation:** "Refusal Shake" - Horizontal vibration (X-axis: -10px to +10px), duration 400ms, ease-in-out
- **Text:** Inline error message appears below input in status-error, Body Small font
- **Icon:** WarningCircle (16px) inside input, right-aligned

- **Recovery:** Error clears on valid input (real-time validation)

B. Form-Level Validation

- **Summary:** Error list at top of form, Bg status-error (10% opacity), radius-sm
- **Pattern:** "Fix N errors before submitting:" + bulleted list
- **Links:** Each error links to the problematic field (smooth scroll)

C. Success States

- **Visual:** Border status-success (1px), CheckCircle icon (16px) right-aligned
- **Animation:** "Recoil" easing (cubic-bezier(0.175, 0.885, 0.32, 1.275))
- **Duration:** Success indicator shows for 2000ms then fades

D. Field Requirements

- **Indicator:** Required fields show asterisk (*) in status-error next to label
 - **Helper Text:** Below input, text-muted, Body Small
 - **Character Count:** Live count for limited fields (e.g., "47 / 100"), Mono Small
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4. Iconography System

4.1 Libraries

Phosphor Icons (Primary UI Library)

- **Weight:** Regular (2px stroke) for inactive, Bold (2.5px stroke) for active states
- **Size:** 16px (Inline), 20px (Input icons), 24px (Navigation), 32px (Feature icons)
- **Color:**
 - Inactive: text-body
 - Active/Hover: text-primary
 - Selected: primary-main
 - Disabled: text-disabled




When to Use Filled vs Regular

- **Regular (Outline):** Default state, secondary actions, navigation (unselected)
- **Filled:** Active state, primary actions, navigation (selected), alerts
- **Duotone:** Reserved for feature illustrations in empty states only

Custom Map Icons

- Use for Map Pins only
 - See "Active Signal" construction below
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4.2 The "Active Signal" (Map Pin) Construction

1. **Base:** Circle, 16px diameter,  #FF4D00
2. **Core:** Circle, 6px diameter,  #FAFAFA, Centered
3. **Pulse:** Circle, 32px diameter,  #FF4D00, Opacity 30% → 0%, Scale 1x → 2x
4. **Animation:** Loop duration-breath (2000ms), linear easing

Map Pin States

- **Default:** Static (no pulse)
 - **Active/Selected:** Pulse animation active, Base increases to 20px
 - **Clustered:** Base shows count (Mono Small, text-inverse), no pulse
 - **Hover:** Scale 1.1x (duration-fast, Mechanical Snap)
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4.3 Icon Usage Guidelines

- **Touch Targets:** Wrap icons in 44x44px button on mobile (even if icon is 24px)
 - **Spacing:** Maintain space-1 (8px) gap between icon and adjacent text
 - **Alignment:** Vertically center icons with text (use flexbox align-items: center)
 - **Loading States:** Replace icon with spinner of same size during async actions
 - **Color Inheritance:** Icons should inherit text color when inside text elements
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5. Motion Physics

5.1 Timing Tokens

- **duration-instant:** 100ms (Feedback - hover state changes)
- **duration-fast:** 200ms (Micro-interactions - button press, checkbox toggle)
- **duration-nav:** 300ms (Page transitions, drawer open/close)
- **duration-breath:** 2000ms (Loops - radar scans, pulse animations)

5.2 Easing Curves (Bezier)

- **Mechanical Snap:** cubic-bezier(0.2, 0, 0.38, 0.9) - Modals, Drawers, Page transitions
- **Linear:** linear - Loaders, Radar scans, Progress bars
- **Recoil:** cubic-bezier(0.175, 0.885, 0.32, 1.275) - Success states, confirmations
- **Ease Out:** cubic-bezier(0, 0, 0.2, 1) - Element entrance (fade in, slide in)
- **Ease In:** cubic-bezier(0.4, 0, 1, 1) - Element exit (fade out, slide out)

5.3 Choreography Rules

1. **Staggering:** When loading lists, stagger items by 50ms (max 6 items, then instant)
2. **Origin:** Elements should originate from where the action happened
 - Modal: Grow from triggering button
 - Drawer: Slide from edge
 - Dropdown: Expand from trigger
3. **Lateral Entry:**
 - Mobile: Screens slide in from right (next page) or left (back)
 - Desktop: Screens fade up (opacity + translateY)
4. **Exit:** Reverse the entrance animation (same duration, opposite direction)

5.4 Animation Patterns by Component

Component	Enter	Exit	Duration	Easing
Modal	Scale 95%→100%, Opacity 0→1	Reverse	duration-nav	Mechanical Snap
Drawer	Slide from edge	Slide to edge	duration-nav	Mechanical Snap
Toast	Slide + Fade in	Fade out	duration-fast	Ease Out / Ease In
Dropdown	Scale Y 0→1 from top	Scale Y 1→0 to top	duration-fast	Ease Out / Ease In
Tooltip	Fade in, Y -4px	Fade out	duration-instant	Ease Out / Ease In
Page	Fade up (Y 16px→0)	Fade down	duration-nav	Ease Out / Ease In

5.5 Reduced Motion

- **Respect prefers-reduced-motion:**
 - Disable scale, slide, and opacity animations
 - Keep instant state changes (e.g., show/hide without transition)



- Maintain functional feedback (e.g., color changes on interaction)
 - **Implementation:** `@media (prefers-reduced-motion: reduce) { * { animation-duration: 0.01ms !important; transition-duration: 0.01ms !important; } }`
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6. UX Writing (The Voice)

6.1 Personality: The System

- **Tone:** Efficient, Verified, Urgent
- **Perspective:** We are the OS
- **Principles:**
 - No pleasantries. Get to the point.
 - Use active voice. "Scanning..." not "Being scanned..."
 - Speak in system language. "Grid" not "map", "Lead" not "customer"
 - Show, don't explain. "3 Errors" not "There are 3 errors in your form"

6.2 Dictionary

Context	 Don't Say	 Do Say
Search	"Searching..."	"Scanning Grid..."
Input	"Type here"	"Enter Query..."
Vendor	"You have an order"	"Lead Detected"
Empty	"No results found"	"No Inventory Detected"
Error	"Something went wrong"	"Connection Failed"
Waiting	"Hang tight"	"Verifying..."
Success	"Done!"	"Confirmed"
Delete	"Are you sure?"	"Confirm Deletion"
Loading	"Just a moment"	"Processing..."
Save	"Saved successfully"	"Data Synced"

6.3 Formatting

- **Data Labels:** ALL CAPS (e.g., STATUS, TIME, ID, COORDINATES)

- **Sentence Case:** For body text and headlines
- **No Punctuation:** In headlines or button text (unless it's a question)
- **Numbers:** Use Mono font, include units (e.g., "12.4 km", "3.2s", "\$47.50")
- **Timestamps:** Relative when recent ("2m ago"), absolute when old ("Jan 15, 2:34 PM")

6.4 Button Labels

- **Primary Actions:** Verb only. "Submit", "Confirm", "Deploy", "Scan", "Connect"
- **Secondary Actions:** "Cancel", "Go Back", "Skip"
- **Destructive Actions:** "Delete", "Remove", "Disconnect" (never "Yes" or "OK")
- **Loading State:** Replace label with "Verifying...", "Processing...", "Connecting..."

6.5 Error Messages

- **Network:** "Connection Failed. Retry?"
- **Validation:** "[Field] Required" or "[Field] Invalid Format"
- **Permission:** "Access Restricted. Contact Admin"
- **Server:** "System Error. Code: [XXX]"
- **Timeout:** "Request Timeout. Retry Scan"

6.6 Empty State Microcopy

- **No Results:** "No Inventory Detected" + "Adjust Filters or Scan Again"
- **No Connection:** "Signal Lost" + "Reconnect to Grid"
- **No Permission:** "Access Denied" + "Request Elevation"
- **First Use:** "Grid Initialized" + "Begin Scanning"

7. Implementation Notes (Dev Handoff)

7.1 Setup & Configuration

1. CSS Reset:

CSS

```
* { box-sizing: border-box; margin: 0; padding: 0; }
```

2. Font Loading:

- Preload fonts to prevent FOUT (Flash of Unstyled Text)

- Use variable fonts: Outfit (Var), Plus Jakarta Sans (Var), JetBrains Mono
- Fallback stack: `-apple-system, BlinkMacSystemFont, 'Segoe UI', sans-serif`

3. Touch Targets:

- Minimum tappable area on mobile is 44x44px
- Even if icon is 24px, wrap in 44px button with padding

4. Theme Handling:

- Store theme preference in LocalStorage key: `genie-theme`
- Default to System Preference: `window.matchMedia('(prefers-color-scheme: dark)')`
- Listen for system changes and update accordingly

7.2 Responsive Strategy

- **Mobile First:** Write base styles for mobile (0-599px)
- **Progressive Enhancement:** Add complexity at larger breakpoints
- **Fluid Typography:** Use `clamp()` for headings between breakpoints
 - Example: `font-size: clamp(24px, 5vw, 32px)`

7.3 Performance Targets

- **First Contentful Paint:** < 1.5s
- **Time to Interactive:** < 3.5s
- **Bundle Size:** < 200kb (gzipped)
- **Animation:** Maintain 60fps (use `transform` and `opacity` only)

7.4 Accessibility Checklist

- ☐ All interactive elements keyboard navigable (Tab, Enter, Space)
- ☐ Focus indicators visible (2px primary-main outline)
- ☐ ARIA labels on icon-only buttons
- ☐ Skip navigation link for screen readers
- ☐ `prefers-reduced-motion` support
- ☐ Color contrast ratios meet WCAG AA (documented in 2.1E)
- ☐ Form inputs have associated `<label>` elements
- ☐ Error messages announced to screen readers (`aria-live="polite"`)

7.5 Code Conventions

- **CSS Variables:** Use semantic tokens, not raw hex values

CSS

/  Correct */*

background: var(--bg-surface);

/  Wrong */*

background: #121212;

- **Component Naming:** Use BEM methodology

CSS

.card { }

.card__header { }

.card__header--highlighted { }

- **File Structure:**

/styles

/tokens (colors, spacing, typography)

/components (button, card, input)

/layouts (grid, sidebar, page)

/utilities (helpers, animations)

7.6 Testing Requirements

- **Visual Regression:** Percy, Chromatic, or similar
- **Accessibility:** axe-core automated testing
- **Cross-Browser:** Chrome, Safari, Firefox, Edge (last 2 versions)
- **Device Testing:** iPhone 12+, Samsung Galaxy S21+, iPad Pro

8. Platform-Specific Adaptations

8.1 iOS (SwiftUI)

- **Native Feel:** Use SF Symbols where appropriate alongside Phosphor icons
- **Navigation:** SwiftUI NavigationStack for page transitions
- **Haptics:** UIImpactFeedbackGenerator on button press (Light)
- **Safe Areas:** Account for Dynamic Island, notch, home indicator
- **Dark Mode:** Respect system preference by default

8.2 Android (Compose/Kotlin)

- **Material Integration:** Use Material3 APIs but override with Genie tokens
- **Navigation:** Jetpack Compose Navigation with slide transitions
- **Haptics:** `HapticFeedback.performHapticFeedback()` on interactions
- **Edge-to-Edge:** Handle gesture navigation bar, status bar transparency
- **Dark Mode:** Use `isSystemInDarkTheme()` by default

8.3 Web (React)

- **State Management:** Use Context API for theme, avoid prop drilling
 - **Routing:** React Router with smooth page transitions
 - **Forms:** React Hook Form for validation, performance
 - **Animations:** Framer Motion for complex choreography
 - **PWA:** Service worker for offline capability, 512x512 icon
-

9. Design Tokens Export

9.1 JSON Structure (For Developers)

```
json
{
  "color": {
    "bg": {
      "default": { "dark": "#050505", "light": "#F4F5F7" },
      "surface": { "dark": "#121212", "light": "#FFFFFF" }
    },
    "primary": {
      "main": "#FF4D00",
      "hover": "#FF6A2B",
      "pressed": "#CC3D00"
    }
  },
  "spacing": {
    "1": "8px",
    "2": "16px",
    "3": "24px"
  }
}
```

9.2 Figma Variables Setup

- **Collections:** Create "Light" and "Dark" mode collections
- **Naming:** Use slash notation (`color/bg/default`), (`space/2`)
- **Scopes:** Set appropriate scopes (Background, Text, Border)
- **Export:** Use Figma Tokens plugin for automated sync

9.3 CSS Custom Properties

```
css

:root {
  /* Light Mode (Default for system without preference) */
  --bg-default: #F4F5F7;
  --bg-surface: #FFFFFF;
  --primary-main: #FF4D00;
}

[data-theme="dark"] {
  --bg-default: #050505;
  --bg-surface: #121212;
  /* primary-main stays the same */
}

@media (prefers-color-scheme: dark) {
  :root {
    --bg-default: #050505;
    --bg-surface: #121212;
  }
}
```

10. Version History & Changelog

Version 3.0 (Complete Edition) - Current

Added:

- Complete data table specifications
- Loading state patterns (skeleton, spinner, progress, overlay)
- Badge and tag components
- Modal and drawer complete specs
- Toast notification system

- Enhanced form validation patterns
- Icon usage guidelines (filled vs regular)
- Reduced motion support
- Platform-specific adaptations (iOS, Android, Web)
- Design tokens export formats

Version 2.6 (Accessibility & Recovery Edition)

Added:

- WCAG 2.1 contrast ratio documentation
- Error recovery patterns
- Refusal shake animation
- Toast duration logic

Version 2.0 (Foundation)

Established:

- Core color system
 - Typography scale
 - Grid and spacing
 - Motion physics
 - Base components
-

11. Resources & Links

Design Files

- **Figma Library:** [Insert Link]
- **Icon Library:** <https://phosphoricons.com>
- **Font Downloads:** Google Fonts (Outfit, Plus Jakarta Sans), JetBrains Mono

Documentation

- **Component Storybook:** [Insert Link]
- **Design Tokens Repo:** [Insert Link]
- **Accessibility Guidelines:** WCAG 2.1 Level AA

Support

- **Design System Team:** design-system@genie.com
 - **Slack Channel:** #genie-design-system
 - **Office Hours:** Tuesdays 2-3 PM EST
-

12. Quick Reference (Cheat Sheet)

Most Used Tokens

Colors:

- Primary Action: `primary-main` ( #FF4D00)
- Background: `bg-surface` ( #121212) dark / ( #FFFFFF) light
- Body Text: `text-body` ( #A1A1A1) dark / ( #4A5568) light

Spacing:

- Card Padding: `space-2` (16px) or `space-3` (24px)
- Element Gap: `space-1.5` (12px)
- Section Gap: `space-4` (32px)

Typography:

- Headline: `Heading 2` (24px Outfit Medium)
- Body: `Body Base` (16px Jakarta Regular)
- Data: `Mono Base` (14px JetBrains Regular)

Components:

- Button Height: 48px
- Input Height: 48px
- Card Radius: `radius-md` (12px)
- Button Radius: `radius-sm` (8px)

Motion:

- Quick Interaction: `duration-fast` (200ms)
 - Page Transition: `duration-nav` (300ms)
 - Default Easing: `Mechanical Snap`
-

End of Design System Documentation v3.0

Last Updated: January 2026 Maintained by: Genie Design System Team