



# USER MANUAL

MODEL:

**K-Agent**

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|                                                     |           |
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## 2. Introduction

Welcome to K-Agent, Kramer's next-generation touch panel management software for Kramer Control & Session Manager providing enhanced remote administration capabilities for KT-20x Series Touch Panels.

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### 2.1 What is K-Agent?

K-Agent is a powerful software application that enables:

- Remote tablet management and monitoring
  - Automated URL launching in full-screen mode
  - Display policy management and power control
  - Secure device locking and access control
  - API-based remote administration
- 

### 2.2 Key Features

#### Enhanced Administration

- Ping and health monitoring
- Remote URL launching
- Device reboot capabilities
- Secure PIN-based access control

#### Advanced Display Management

- Configurable brightness and dimming controls
- Automatic display timeout settings
- Immersive full-screen mode support

#### Flexible Connectivity

- HTTP and HTTPS API support
- Integration with Kramer Control Brain systems
- Support for multiple interface configurations

### **Device-Specific Features (KT-20x Touch Panels)**

- LED sidebar control and color customization
- Enhanced brightness management
- Advanced display settings

## 3. Getting Started

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### 3.1 System Requirements

#### Network Configuration

- K-Agent must be reachable on ports 9803 (HTTP) or 9804 (HTTPS)
- K-Agent must be able to reach Brain systems on ports 8000-8049 or 9000-9049 (HTTPS)
- Supported Brain systems: KC-VirtualBrain-1, 5, 25, or 50

#### Compatible Hardware

- KT-20x Series Touch Panels with K-Agent software installed
- Network connectivity (Ethernet or Wi-Fi)

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### 3.2 Installation Overview

K-Agent comes pre-installed on compatible KT-20x Series Touch Panels. For hardware installation and network setup procedures, refer to your specific touch panel hardware manual.



K-Agent must be launched manually during the first activation to enable auto-start functionality.

# 4. K-Agent Overview

## 4.1 Application Interface

When you first access K-Agent, you'll see the main Settings interface with three primary configuration areas:

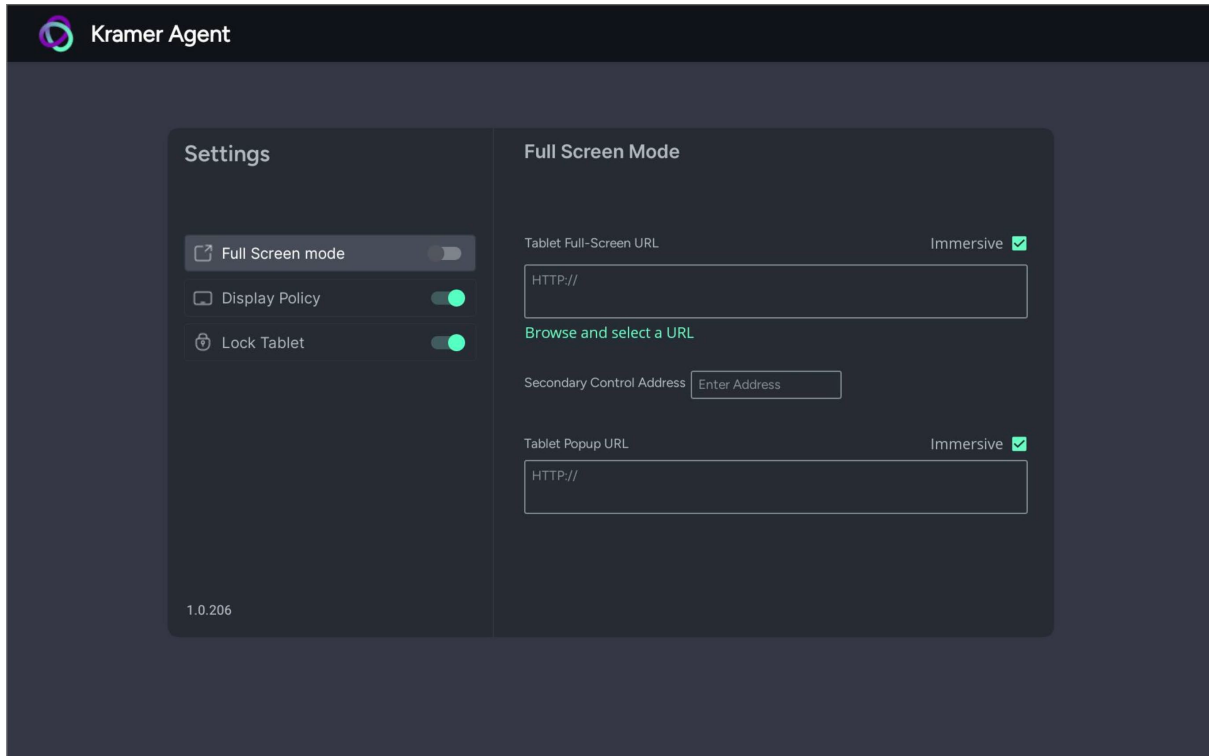


Figure 1: Main Settings panel showing Full Screen Mode, Display Policy, and Lock Tablet options

### 4.1.1 Settings Panel Structure

#### Left Panel: Configuration Options

- Full Screen Mode toggle
- Display Policy toggle
- Lock Tablet toggle
- Version information (bottom left)

#### Right Panel: Configuration Details

- Context-sensitive settings based on selected option
- URL configuration fields
- Policy and security settings

## 4.2 Navigation and Access

### Accessing K-Agent Settings

1. Swipe up from the center bottom of the screen
  - The iPad app requires a 2 finger right to left gesture and does not support a pincode
2. Enter PIN code (default: 9428)
3. Access settings panels and configuration options

### Exiting Settings

- Press Apply to save changes and return to full-screen mode
- Settings are automatically saved

# 5. Initial Setup and Configuration

---

## 5.1 First-Time Setup

After installing your touch panel, follow these steps for initial configuration:

### 5.1.1 Step 1: Launch K-Agent

1. Locate the K-Agent icon on your touch panel home screen
2. Tap to launch the application
3. The settings interface will appear for first-time configuration

### 5.1.2 Step 2: Configure Network Access

Ensure your touch panel can communicate with your Brain system:

- Verify network connectivity
- Confirm firewall settings allow required ports
- Test connectivity to your Brain system IP address

### 5.1.3 Step 3: Set Up URL Configuration

Choose one of three methods to configure your interface URL:

#### Method 1: Browse and Select (Recommended)

1. In Full Screen Mode settings, tap "Browse and select a URL"
2. Enter your Brain IP address and port
3. Select from available interfaces
4. Apply configuration

#### Method 2: API Configuration (Recommended for System Integrators)

- Use API calls to remotely configure URLs
- See API Reference section for details

#### Method 3: Manual Entry (Not Recommended)

- Manually type the complete URL in the configuration field
- Ensure exact syntax and formatting

# 6. User Interface Configuration

## 6.1 Full Screen Mode

Full Screen Mode is the primary operational mode for K-Agent, providing immersive interface display.

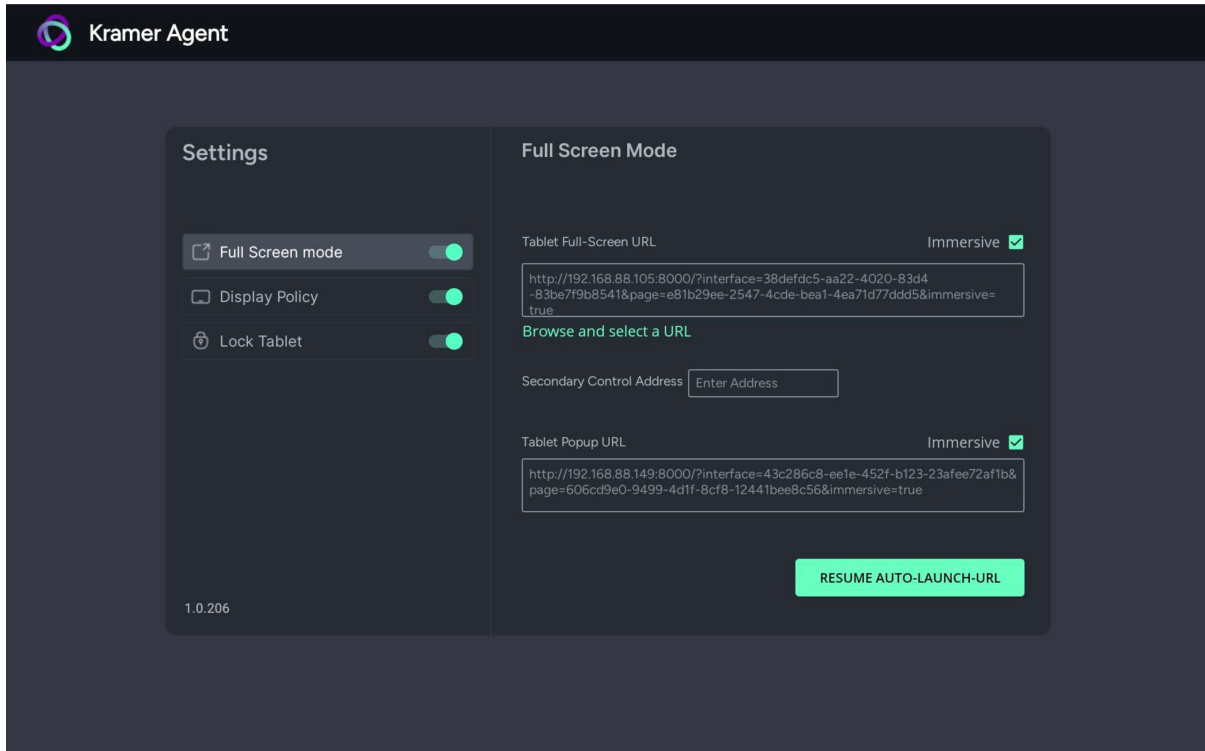


Figure 2: Full Screen Mode settings showing URL configuration fields

### 6.1.1 Configuration Options

#### Tablet Full-Screen URL

- Primary interface URL for continuous display
- Supports Kramer Control Brain interfaces & Session Manager Tablet Templates
- Immersive mode available (adds "&immersive=true" parameter)

#### URL Format Example:

```
http://192.168.88.149:8000/?interface=43c286c8-ee1e-452f-b123-23afee72af1b&page=606cd9e0-9499-4d1f-8cf8-12441bee8c56
```

#### Secondary Control Address

- Optional secondary Brain IP address
- Used for backup control systems in the event of a brain Failure

## Prerequisites

Before configuring a secondary control address, you must:

- Create a Reference Space
  - Access your Project in the manager
  - Navigate to Space Management
  - Create a new reference space based on your existing master space
  - Ensure all interface configurations are replicated
- Provision to Secondary Brain
  - Deploy the reference space to your backup Brain system
  - Verify the secondary Brain system is network accessible
  - Confirm the same interface and page IDs are maintained across both spaces
- Network Requirements
  - Both Brain systems must be accessible from the touch panel
  - Standard port requirements apply (8000-8049 or 9000-9049)
  - Network routing must support failover scenarios
- Failover Behavior
  - K-Agent automatically detects primary Brain unavailability
  - Transition to secondary Brain system
  - Interface state and functionality preserved during switchover if device states are used for UI Changes
  - Manual return to primary interface is required when available
- Configuration Examples
  - Primary Configuration (Tablet Full-Screen URL)
 

```
http://192.168.88.253:8000/?interface=43c286c8-ee1e-452f-b123-23afee72af1b&page=606cd9e0-9499-4d1f-8cf8-12441bee8c56
```
  - Secondary Configuration (Secondary Control Address)
 

```
192.168.88.254:8000
```
  - Result During Failover
  - The system automatically constructs the failover URL:
 

```
http://192.168.88.254:8000/?interface=43c286c8-ee1e-452f-b123-23afee72af1b&page=606cd9e0-9499-4d1f-8cf8-12441bee8c56
```

### **Tablet Popup URL**

- Secondary URL for overlay interfaces
- Can be triggered by API calls or interface buttons
- Supports immersive mode
- Renders the “popup” page using 80% of the touch panel canvas
- Please see the API Details Section

## **6.1.2 Immersive Mode**

Immersive mode provides a true full-screen experience by removing the interface selection frame:

- Automatically appends "&immersive=true" to URLs
- Hides browser navigation elements
- Recommended for production deployments
- Users can only exit via PIN entry

## 6.2 Browse and Select URL Feature

The Browse and Select feature simplifies URL configuration:

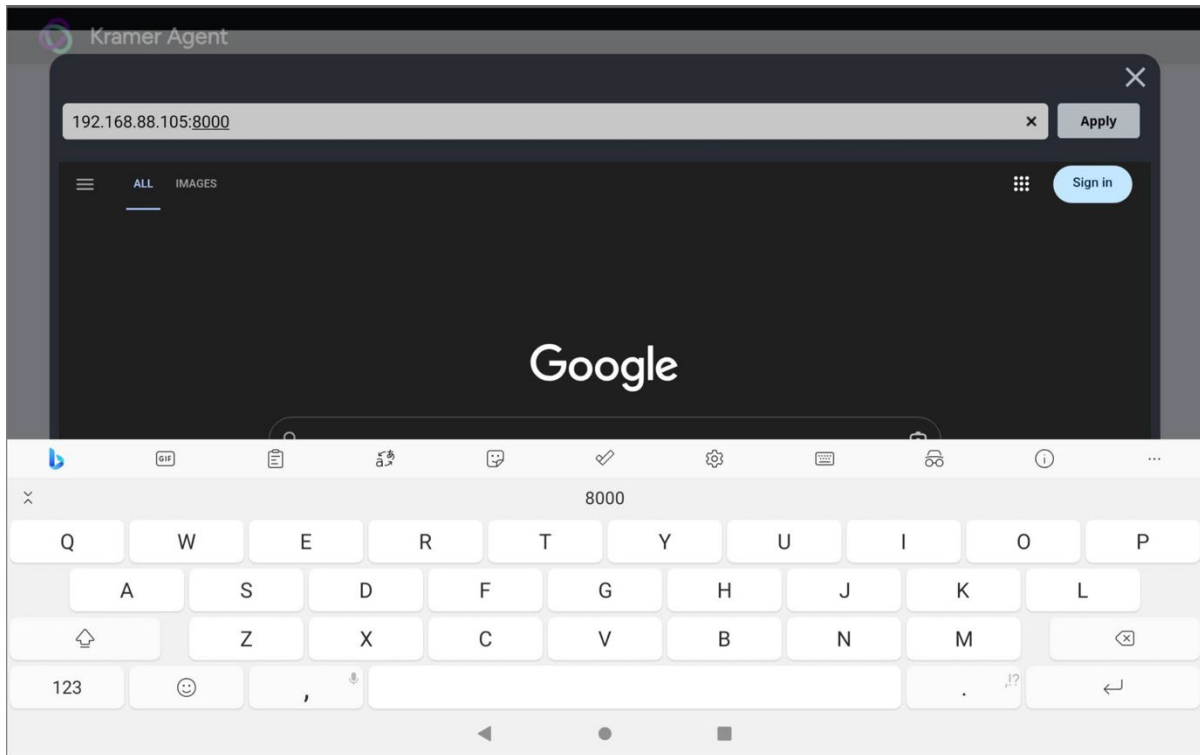


Figure 3: Embedded browser showing interface selection

### 6.2.1 Using Browse and Select

1. Access the Feature
  - In Full Screen Mode settings
  - Click "Browse and select a URL"
2. Connect to Brain
  - Enter Brain IP address and port in embedded browser
  - Example: 192.168.88.253:8000

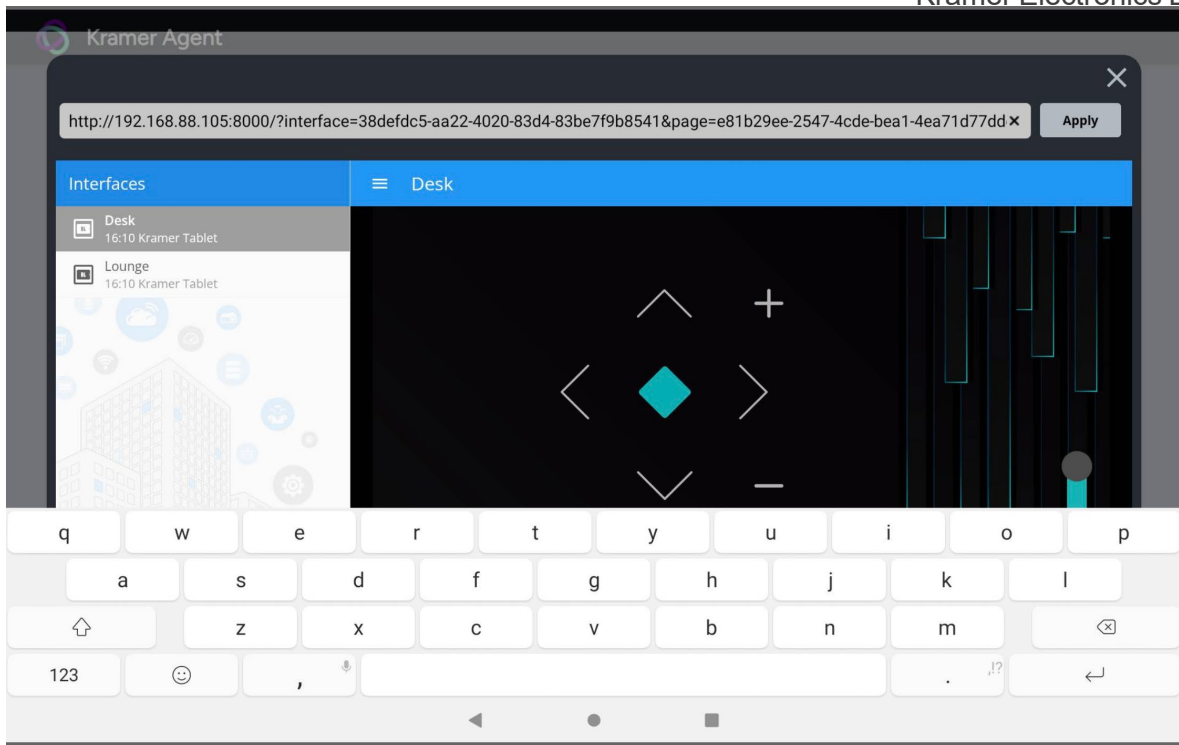
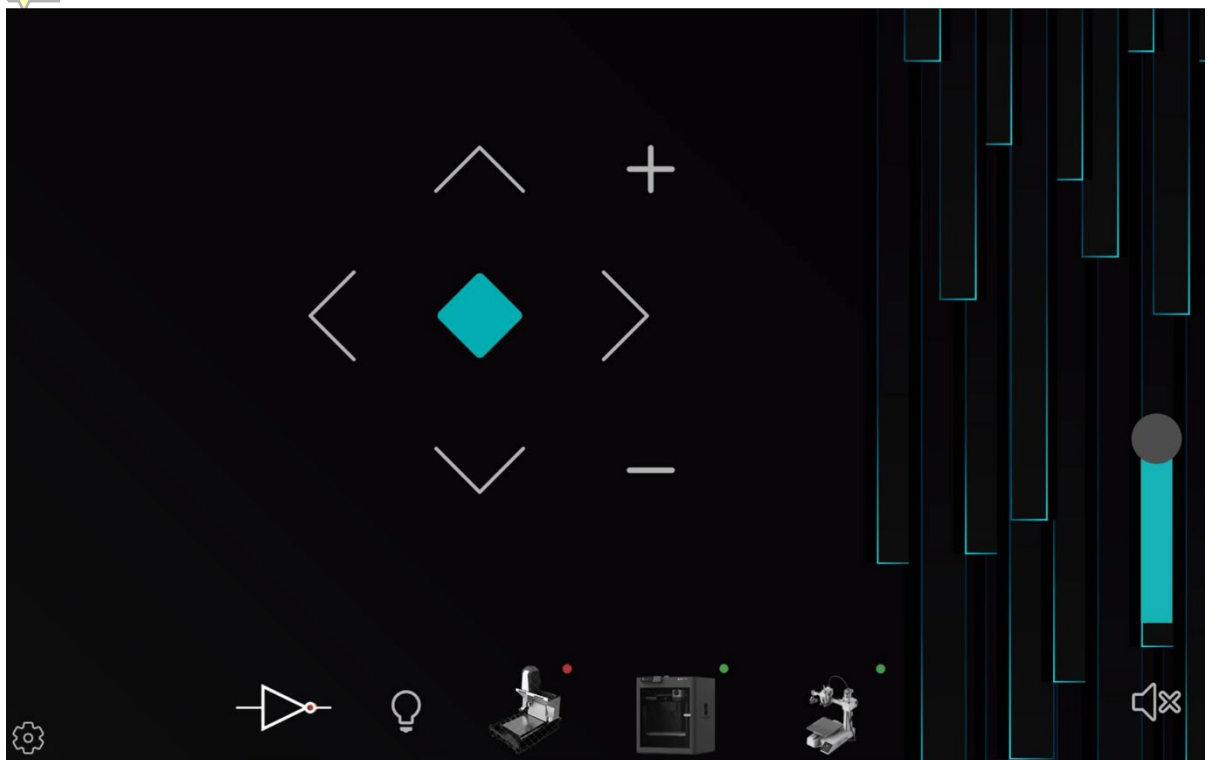


Figure 4: Embedded browser showing interface selection

### 3. Select Interface

- Browse available interfaces
- Click desired interface
- Click Apply to confirm selection



### 4. Automatic Configuration

- URL automatically populates in settings field
- Interface loads in full-screen mode

# 7. Advanced Settings

## 7.1 Display Policy

Display Policy provides comprehensive power management and display control.

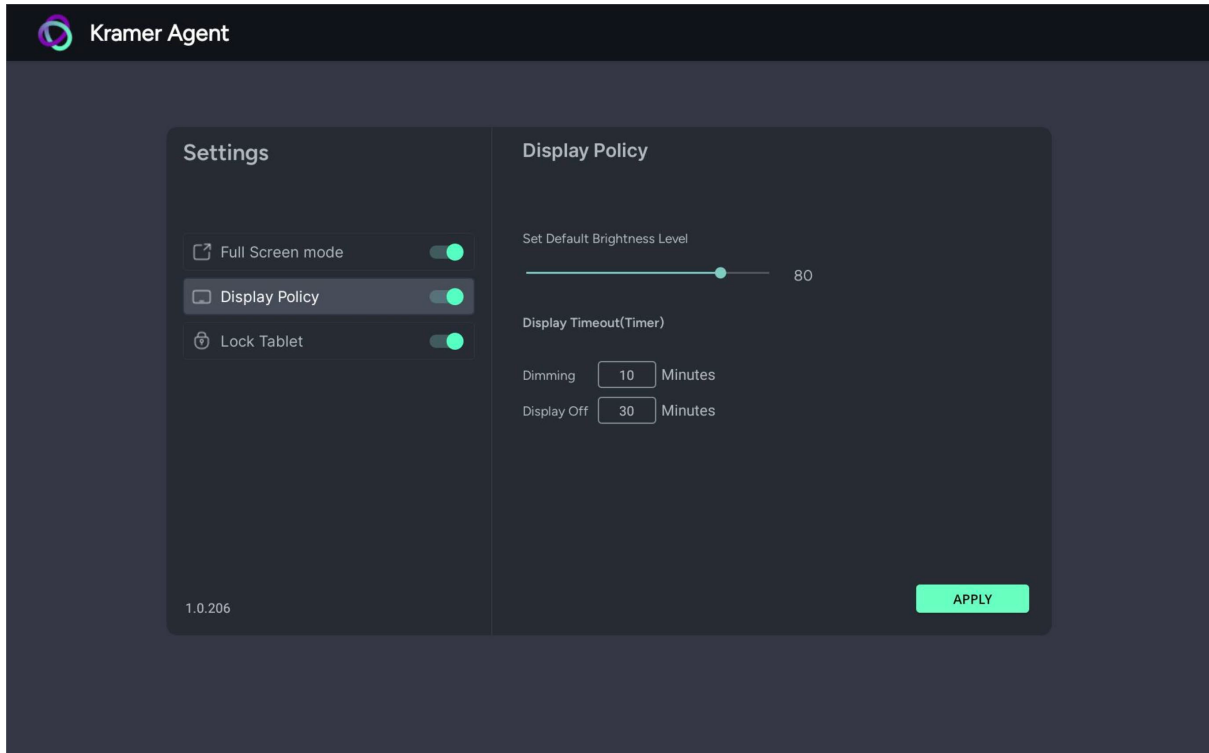


Figure 5: Display Policy configuration panel

### 7.1.1 Configuration Options

#### Set Default Brightness Level

- Percentage of maximum brightness (0-100%)
- Applied when display reactivates
- Slider control for easy adjustment

#### Display Timeout (Timer)

- **Dimming:** Minutes of inactivity before dimming to 20% brightness
- **Display Off:** Minutes of inactivity before turning off display
- Display Off must be longer than Dimming timeout

### 7.1.2 KT-20x Enhanced Features

For KT-20x Touch Panels, additional display controls are available via API:

- LED sidebar color control
- Advanced brightness management
- Extended display policies

## 7.2 Lock Tablet

Lock Tablet provides security and access control features.

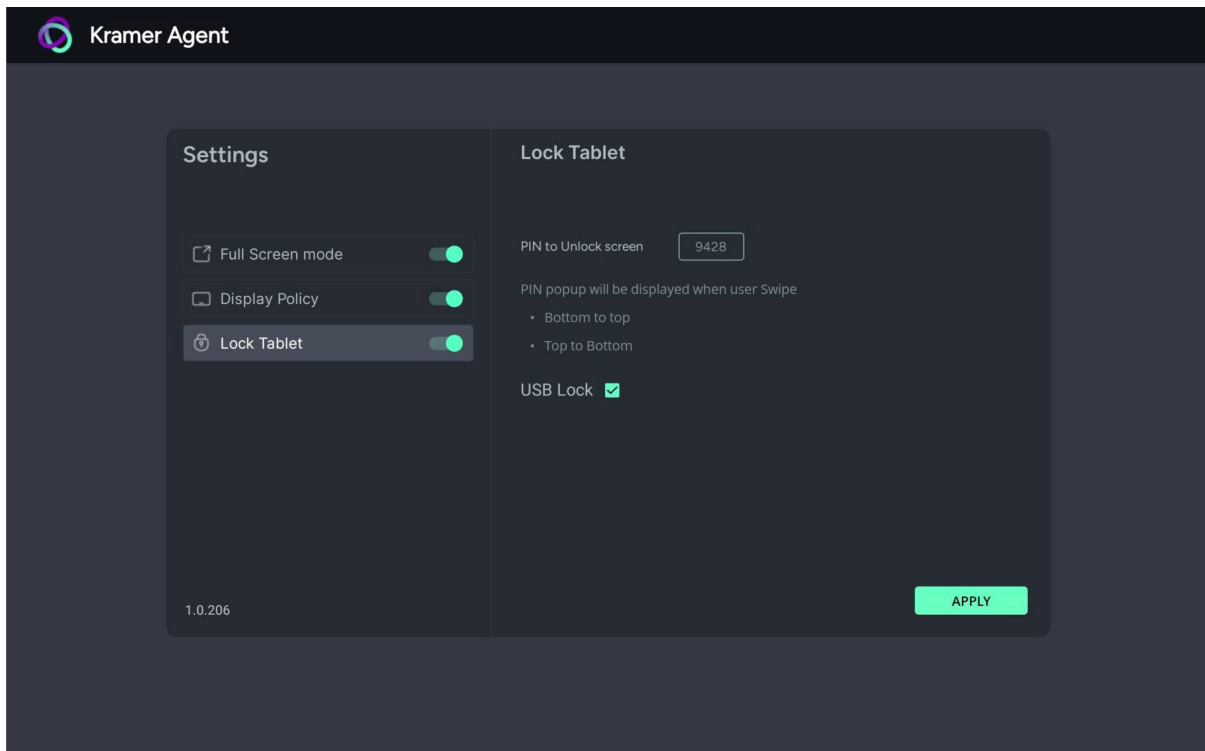


Figure 6: Lock Tablet configuration showing PIN and USB options

### 7.2.1 Security Configuration

#### PIN to Unlock Screen

- Default PIN: 9428
- Configurable to any numeric value
- Required to access settings or exit full-screen mode

#### PIN Popup Behavior

- Triggered when user swipes up from center bottom
- Available swipe directions:
  - Bottom to top
  - Top to bottom

#### USB Lock

- Optional USB port disable feature
- Prevents unauthorized USB device access

## 7.2.2 PIN Entry Process

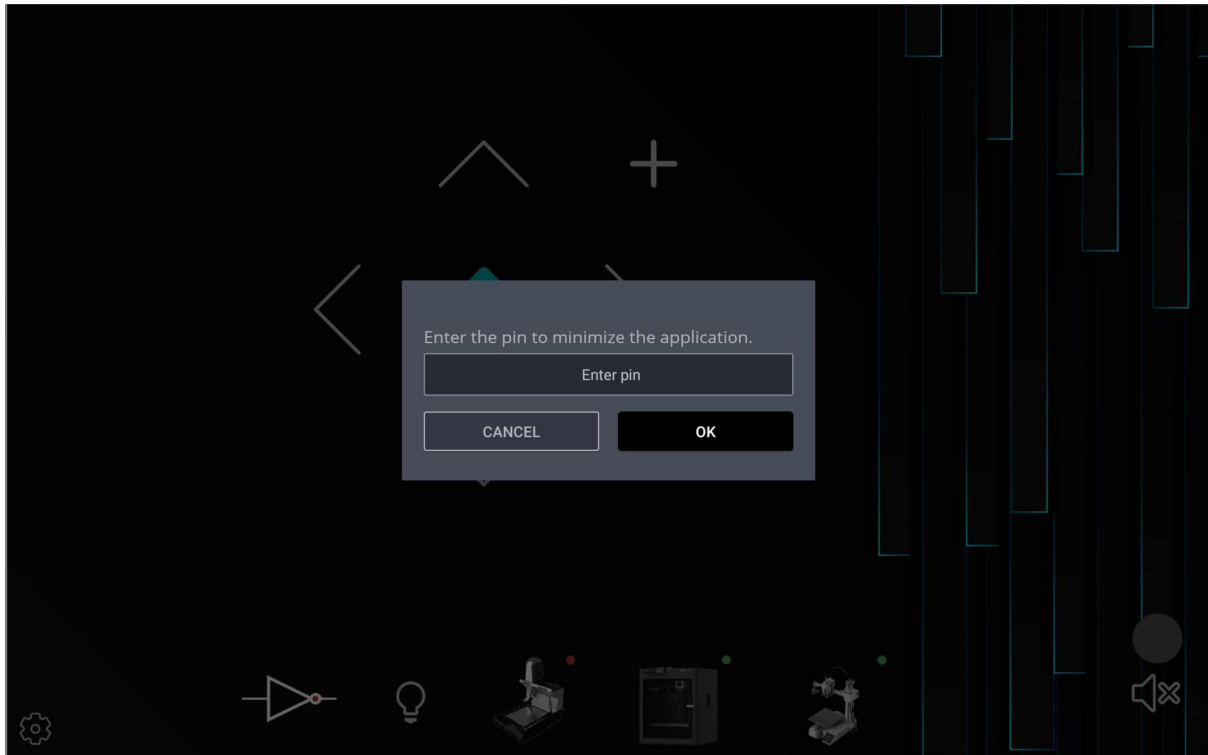


Figure 7: PIN entry keypad overlay

### When accessing settings:

1. User swipes up from center bottom (IPad 2 Finger right to left gesture – No Pin code Support)
2. PIN entry dialog appears
3. Enter correct PIN using on-screen keypad
4. Access granted to settings interface

---

## 7.3 Pause and Resume Functionality

K-Agent provides operational pause and resume capabilities:

### 7.3.1 Pause Operation

- Activated when PIN is entered and settings accessed
- Current UI is suspended
- Display returns to settings interface
- Session state preserved

## 7.3.2 Resume Operation

- UI automatically reloads when exiting settings
- All interface states restored
- Continues until next PIN entry

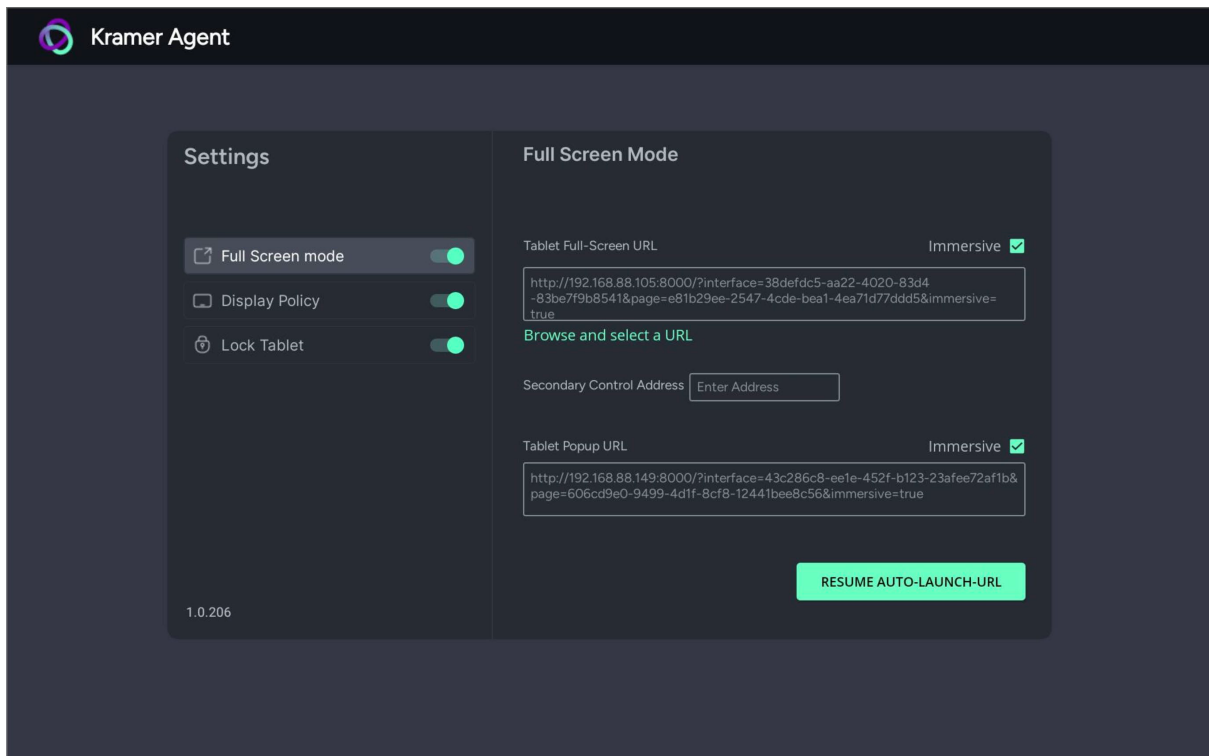


Figure 8: Resume Auto-Launch-URL button in settings

## 8. API Reference

K-Agent provides comprehensive API access for remote management and integration.

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### 8.1 API Endpoints Overview

All API calls use the following format:

- HTTP: `http://<device_ip>:9803/<endpoint>`
- HTTPS: `https://<device_ip>:9804/<endpoint>`

---

### 8.2 Health and Status APIs

#### Health Check

**Endpoint:** `/health/` **Method:** GET **Response:** `{"status": "Up"}` **Description:** Verify K-Agent is running and responsive

**Example:**

`https://192.168.88.73:9804/health/`

---

### 8.3 URL Management APIs

#### Launch URL (Non-Immersive)

**Endpoint:** `/launchurl?<URL>` **Method:** GET **Description:** Launch URL in standard browser mode

**Example:**

`https://192.168.88.73:9804/launchurl?http://192.168.88.253:8000/?interface=e84f5fb8-c5a3-4675-9006-d79d3e6cfe59&page=5913c07a-9a41-4fac-9870-e87b1ef719df`

#### Launch Kramer URL (Immersive Mode)

**Endpoint:** `/launchkramerurl?<URL>` **Method:** GET **Description:** Launch URL in full-screen immersive mode

**Example:**

`https://192.168.88.73:9804/launchkramerurl?http://192.168.88.253:8000/?interface=e84f5fb8-c5a3-4675-9006-d79d3e6cfe59&page=5913c07a-9a41-4fac-9870-e87b1ef719df&immersive=true`

## Pause/Resume Auto-URL

**Pause Endpoint:** /pauselaunchautourl/ **Resume Endpoint:** /resumelaunchautourl/ **Method:** GET **Description:** Temporarily pause or resume URL auto-launch

### Examples:

`https://192.168.88.73:9804/pauselaunchautourl/`  
`https://192.168.88.73:9804/resumelaunchautourl/`

## Reset URL

**Endpoint:** /reseturl **Method:** GET **Description:** Clear auto-URL settings and reset password to default

### Example:

`https://192.168.88.73:9804/reseturl`

---

## 8.4 Popup Management APIs

### Open Popup URL

**Endpoint:** /popupurl **Method:** GET **Description:** Open popup with saved URL

### Example:

`https://192.168.88.73:9804/popupurl`

### Open Popup with Timer

**Endpoint:** /popupurl?time=<seconds> **Method:** GET **Description:** Open popup for specified duration

You Can also Close the Popup by setting the time to 0

### Example:

`https://192.168.88.73:9804/popupurl?time=5`

### Open Popup with URL

**Endpoint:** /popupurl?url=<URL> **Method:** GET **Description:** Open popup with specific URL (when no URL saved)

### Example:

`https://192.168.88.73:9804/popupurl?url=http://google.com`

## Open Popup with URL & Timer

**Endpoint:** /popupurl?url=<URL>&time=<seconds> **Method:** GET **Description:** Open popup with specific URL (when no URL saved) for specified duration

**Example:**

`https://192.168.88.73:9804/popupurl?url=http://google.com&time=20`

---

## 8.5 Display Control APIs (KT-20x Touch Panels)

### Enable/Disable Display Control

**Enable:** /displaysettingon/ **Disable:** /displaysettingoff/ **Method:** GET  
**Description:** Enable or disable display policy controls

**Examples:**

`https://192.168.88.73:9804/displaysettingon/`  
`https://192.168.88.73:9804/displaysettingoff/`

### Display Configuration

**Set Display Off Time:** /setdisplayofftimevalue=<integer> **Set Display Brightness:** /setdisplaybrightnessvalue=<integer> **Set Display Dimming Time:** /setdisplaydimtime=<integer>

**Examples:**

`https://192.168.88.73:9804/setdisplayofftimevalue=30`  
`https://192.168.88.73:9804/setdisplaybrightnessvalue=75`  
`https://192.168.88.73:9804/setdisplaydimtime=15`

---

## 8.6 LED Control APIs (KT-20x Touch Panels)

### Change LED Light Color

**Endpoint:** /ledlightcolor=value (rgb1, rgb2, rgb3) **Method:** GET **Description:** Set LED sidebar color using RGB values (0-255)

**Example:**

`https://192.168.88.73:9804/ledlightcolor=value(105,23,65)`

**Note:** RGB values must be between 0-255

## 8.7 API Response Examples

### 8.7.1 Successful API Response

```
{  
  "status": "success",  
  "message": "Browser will be launched with given URL"  
}
```

### 8.7.2 Health Check Response

```
{  
  "status": "Up"  
}
```

# 9. Troubleshooting

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## 9.1 Common Configuration Issues

### 9.1.1 Incorrect URL Syntax

**Problem:** Interface fails to load or displays error **Solution:**

1. Verify URL format matches example syntax
2. Ensure Brain IP address and port are correct
3. Confirm interface and page IDs are valid
4. Refer to this user manual before contacting customer support

**Correct URL Format:**

`http://[IP]:[PORT]/?interface=[INTERFACE_ID]&page=[PAGE_ID]`

### 9.1.2 Network Connectivity Issues

**Problem:** API calls fail or timeout **Solution:**

1. Verify firewall settings allow required ports:
  - K-Agent: 9803 (HTTP) or 9804 (HTTPS)
  - Brain: 8000-8049 or 9000-9049 (HTTPS)
2. Confirm Brain system is online and provisioned
3. Test network connectivity between devices
4. Check for network routing issues

### 9.1.3 Authentication and Access Issues

**Problem:** Cannot access settings or API responses fail **Solution:**

1. Verify correct PIN entry (default: 9428)
2. Ensure proper swipe gesture from center bottom
3. Check if USB lock is preventing access
4. Restart K-Agent application if needed

---

## 9.2 Diagnostic Procedures

### 9.2.1 API Connectivity Test

1. Open web browser on network-connected computer
2. Navigate to: `https://[TOUCH_PANEL_IP]:9804/health/`
3. Verify response: `{"status":"Up"}`
4. If no response, check network and firewall settings

### 9.2.2 URL Configuration Verification

1. Access K-Agent settings via PIN entry

2. Check Full Screen Mode URL configuration
3. Use "Browse and select a URL" to verify Brain connectivity
4. Test manual URL entry if automatic detection fails

### **9.2.3 Display Policy Troubleshooting**

1. Verify Display Policy is enabled
2. Check timeout values are properly configured
3. Test brightness controls via API
4. Confirm display responds to manual wake gestures

# 10. Migration from Kramer Control App

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## 10.1 Overview

The Kramer Control App has been deprecated and replaced by K-Agent. All users should migrate to K-Agent for continued support and enhanced functionality.

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## 10.2 Migration Process

### 10.2.1 Configuration Transfer

1. **Identify Current URLs:** Note existing Kramer Control App interface URLs
2. **Update K-Agent:** Input URLs using K-Agent configuration methods
3. **Test Functionality:** Verify all interfaces load correctly
4. **Remove Old App:** Uninstall deprecated Kramer Control App

### 10.2.2 Key Differences

| Feature           | Kramer Control App | K-Agent                      |
|-------------------|--------------------|------------------------------|
| URL Loading       | Basic              | Enhanced with immersive mode |
| API Access        | Limited            | Comprehensive API suite      |
| Display Control   | Basic              | Advanced policy management   |
| Security          | Standard           | Enhanced PIN and USB locking |
| Remote Management | Limited            | Full API-based control       |

---

## 10.3 Benefits of Migration

### Enhanced Functionality

- Comprehensive API for remote management
- Advanced display and power policies
- Improved security and access control

### Better Integration

- Seamless Brain system connectivity
- Enhanced interface selection tools
- Improved error handling and diagnostics

### Future Support

- Active development and updates
  - Enhanced feature roadmap
  - Continued compatibility with new Brain versions
-

# 11. Appendix

## 11.1 Default Settings Reference

| Setting        | Default Value | Description              |
|----------------|---------------|--------------------------|
| PIN Code       | 9428          | Access control PIN       |
| HTTP Port      | 9803          | Non-secure API access    |
| HTTPS Port     | 9804          | Secure API access        |
| Immersive Mode | Disabled      | Full-screen mode setting |
| USB Lock       | Disabled      | USB port access control  |

## 11.2 Port Requirements Summary

| Component     | Ports      | Protocol   | Direction |
|---------------|------------|------------|-----------|
| K-Agent API   | 9803, 9804 | HTTP/HTTPS | Inbound   |
| Brain Systems | 8000-8049  | HTTP       | Outbound  |
| Brain Systems | 9000-9049  | HTTPS      | Outbound  |

## 11.3 URL Format Examples

### Single Interface:

`http://192.168.1.100:8000/`

### Multi-Interface with IDs:

`http://192.168.1.100:8000/?interface=43c286c8-ee1e-452f-b123-23afee72af1b&page=606cd9e0-9499-4d1f-8cf8-12441bee8c56`

### Immersive Mode:

`http://192.168.1.100:8000/?interface=43c286c8-ee1e-452f-b123-23afee72af1b&page=606cd9e0-9499-4d1f-8cf8-12441bee8c56&immersive=true`



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Rev: 1

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