USER MANUAL

MODEL:

K-Agent

P/N: 2900-301869 Rev 1

1. Contents

1. CONTENTS **2**

2. INTRODUCTION **3**

2.1 WHAT IS K-AGENT? 3
2.2 KEY FEATURES 3

3. GETTING STARTED **5**

3.1 SYSTEM REQUIREMENTS 5
3.2 INSTALLATION OVERVIEW 5

4. K-AGENT OVERVIEW **6**

4.1 APPLICATION INTERFACE 6
4.2 NAVIGATION AND ACCESS 7

5. INITIAL SETUP AND CONFIGURATION **8**

5.1 FIRST-TIME SETUP 8

6. USER INTERFACE CONFIGURATION **9**

6.1 FULL SCREEN MODE 9
6.2 BROWSE AND SELECT URL FEATURE 12

7. ADVANCED SETTINGS **14**

7.1 DISPLAY POLICY 14
7.2 LOCK TABLET 15
7.3 PAUSE AND RESUME FUNCTIONALITY 16

8. API REFERENCE **18**

8.1 API ENDPOINTS OVERVIEW 18
8.2 HEALTH AND STATUS APIS 18
8.3 URL MANAGEMENT APIS 18
8.4 POPUP MANAGEMENT APIS 19
8.5 DISPLAY CONTROL APIS (KT-20X TOUCH PANELS) 20
8.6 LED CONTROL APIS (KT-20X TOUCH PANELS) 20
8.7 API RESPONSE EXAMPLES 21

9. TROUBLESHOOTING **22**

9.1 COMMON CONFIGURATION ISSUES 22
9.2 DIAGNOSTIC PROCEDURES 22

10. MIGRATION FROM KRAMER CONTROL APP **24**

10.1 OVERVIEW 24
10.2 MIGRATION PROCESS 24
10.3 BENEFITS OF MIGRATION 24

11. APPENDIX **25**

11.1 DEFAULT SETTINGS REFERENCE 25
11.2 PORT REQUIREMENTS SUMMARY 25
11.3 URL FORMAT EXAMPLES 25

2. Introduction

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

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

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)

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:

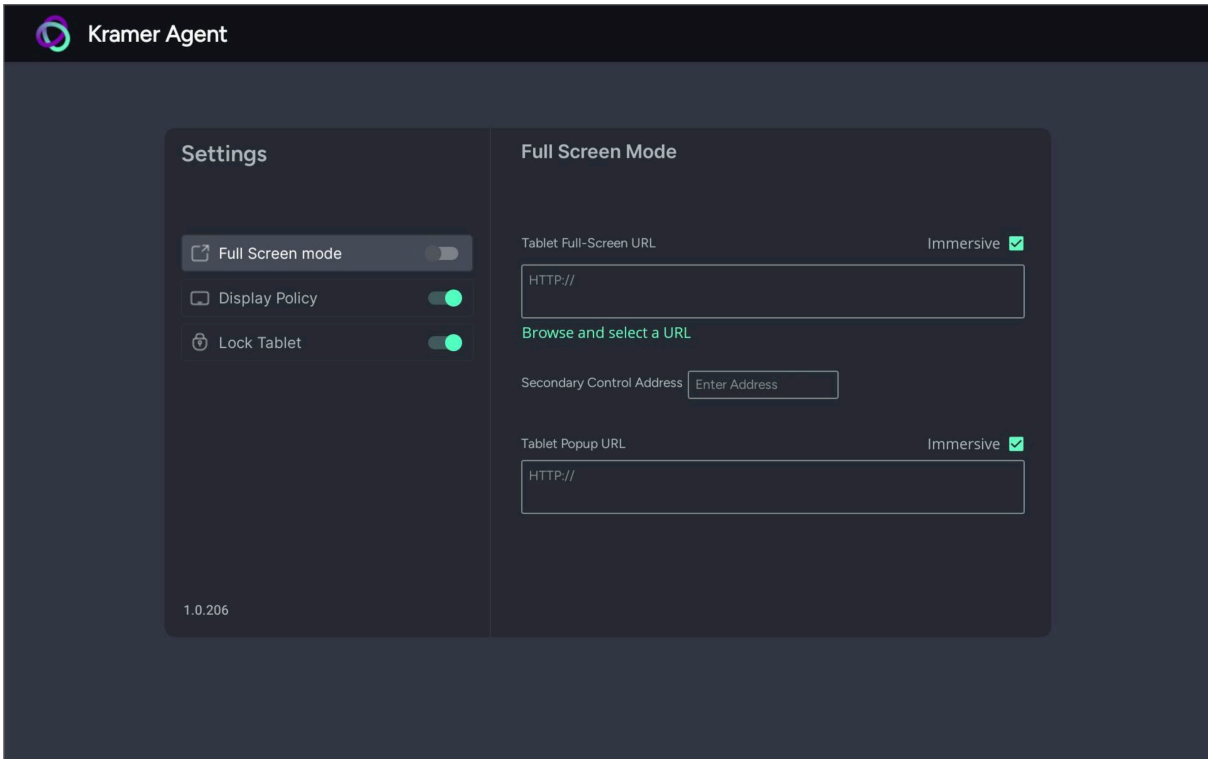


Figure 1: Main Settings panel showing Full Screen Mode, Display Policy, and Lock Tablet options

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.

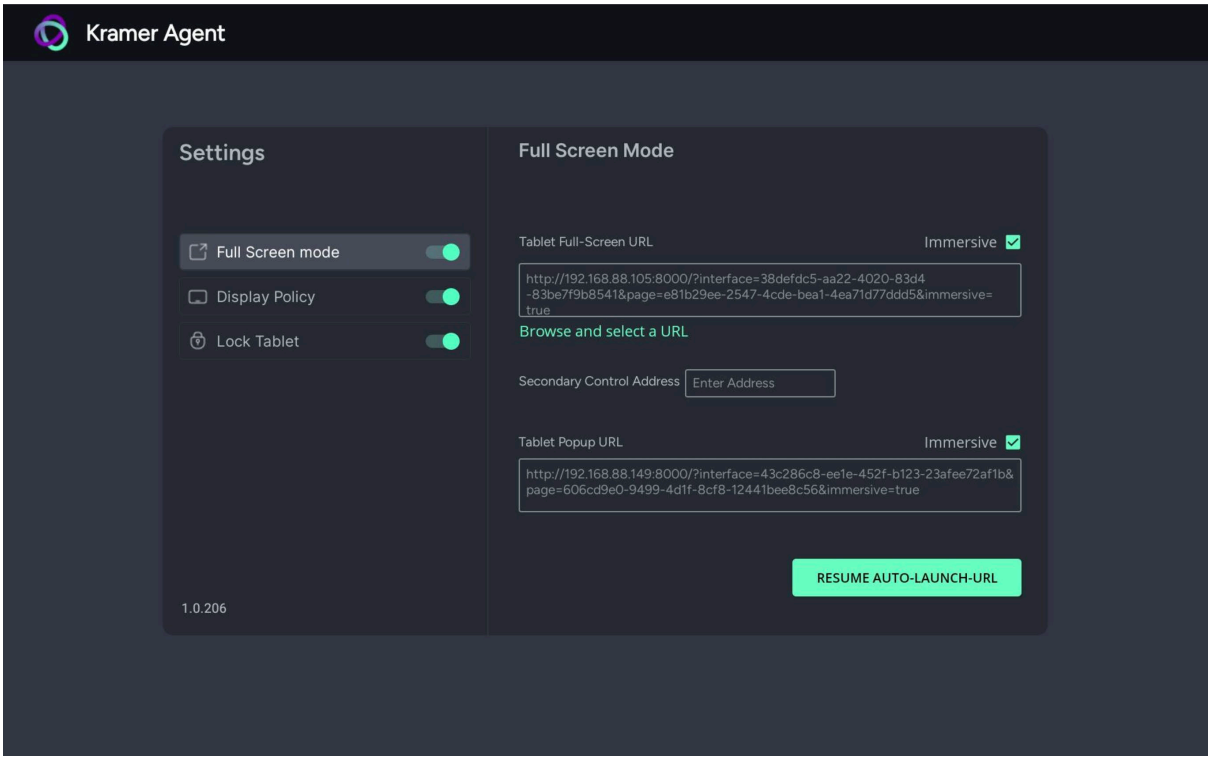


Figure 2: Full Screen Mode settings showing URL configuration fields

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:

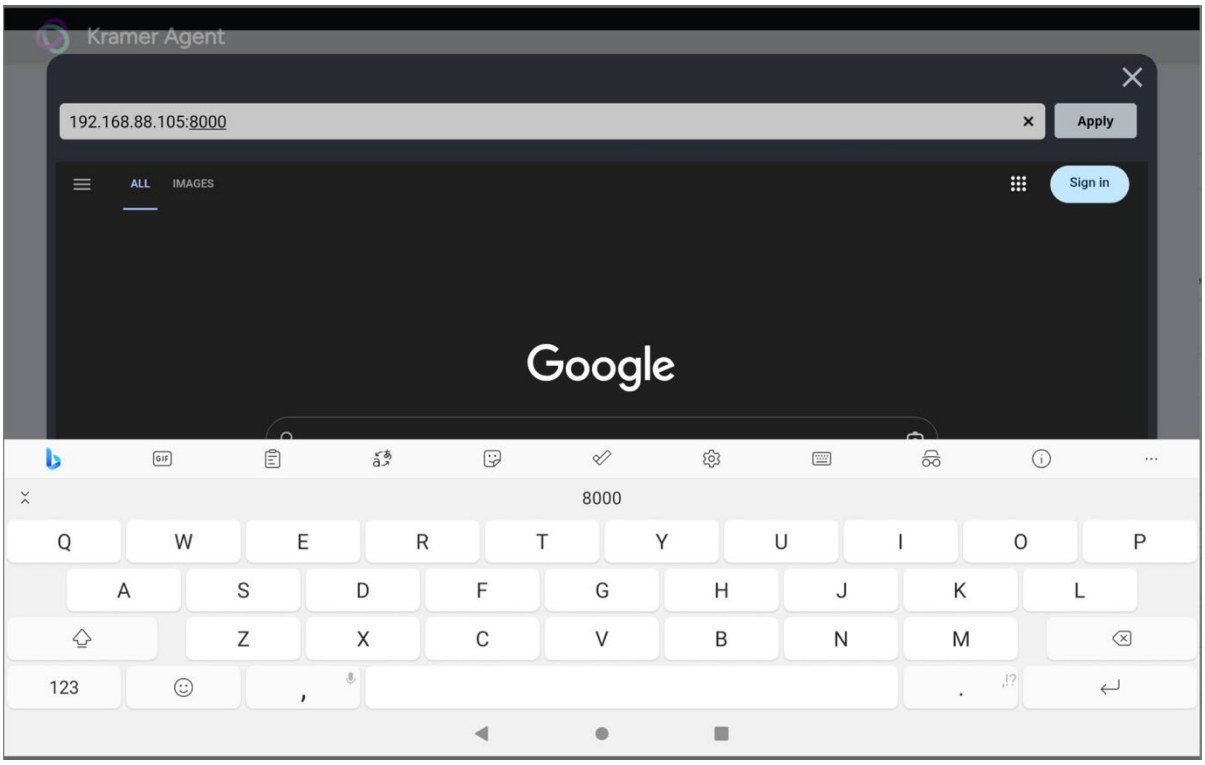


Figure 3: Embedded browser showing interface selection

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`

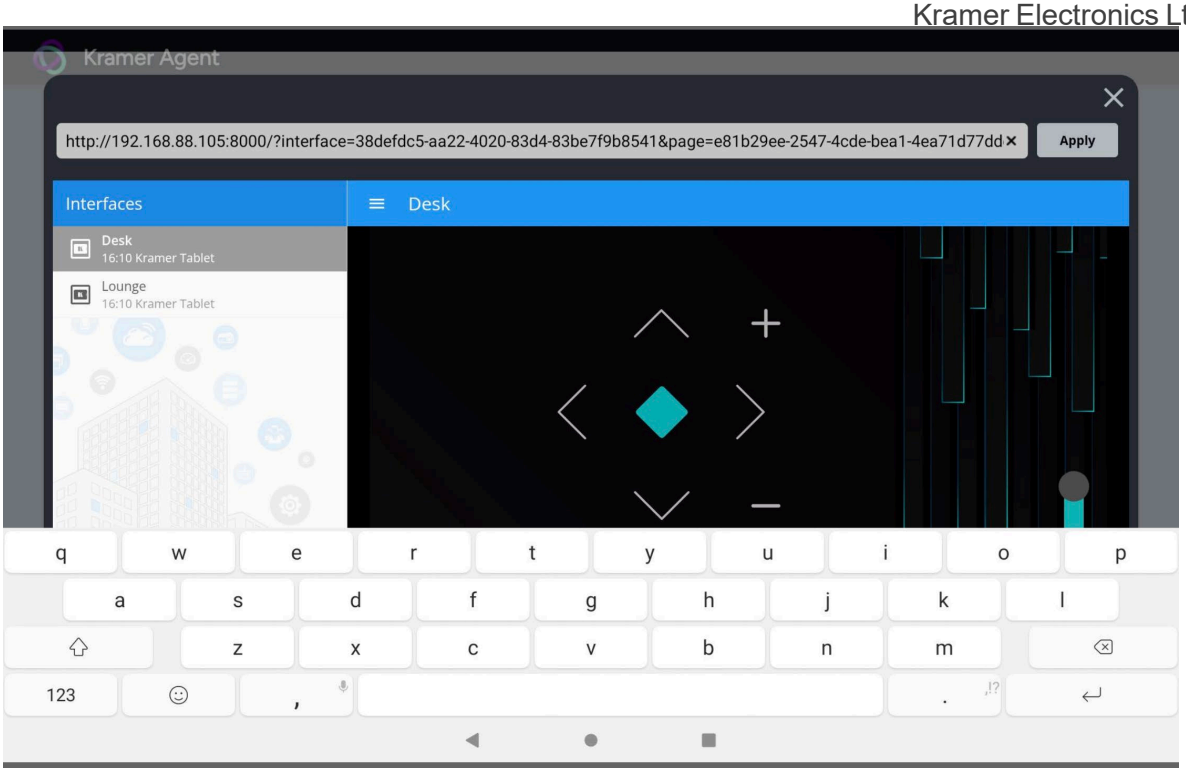
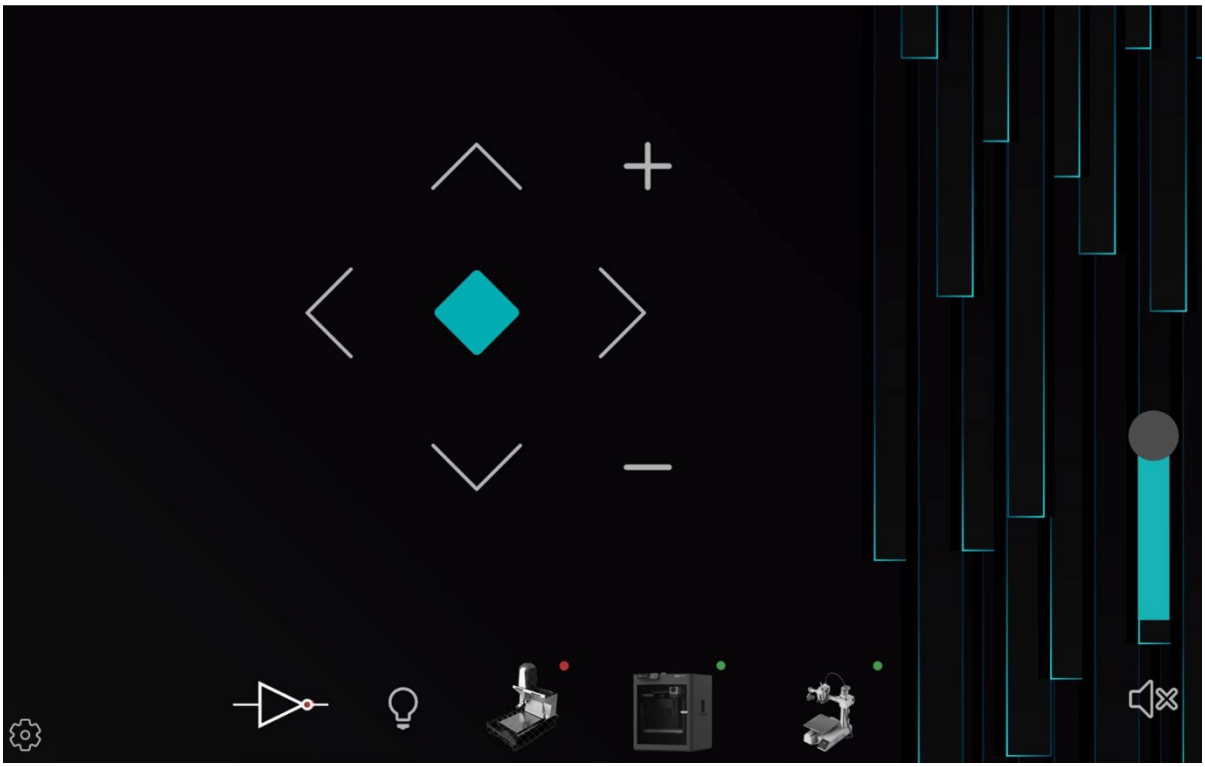


Figure 4: Embedded browser showing interface selection

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.

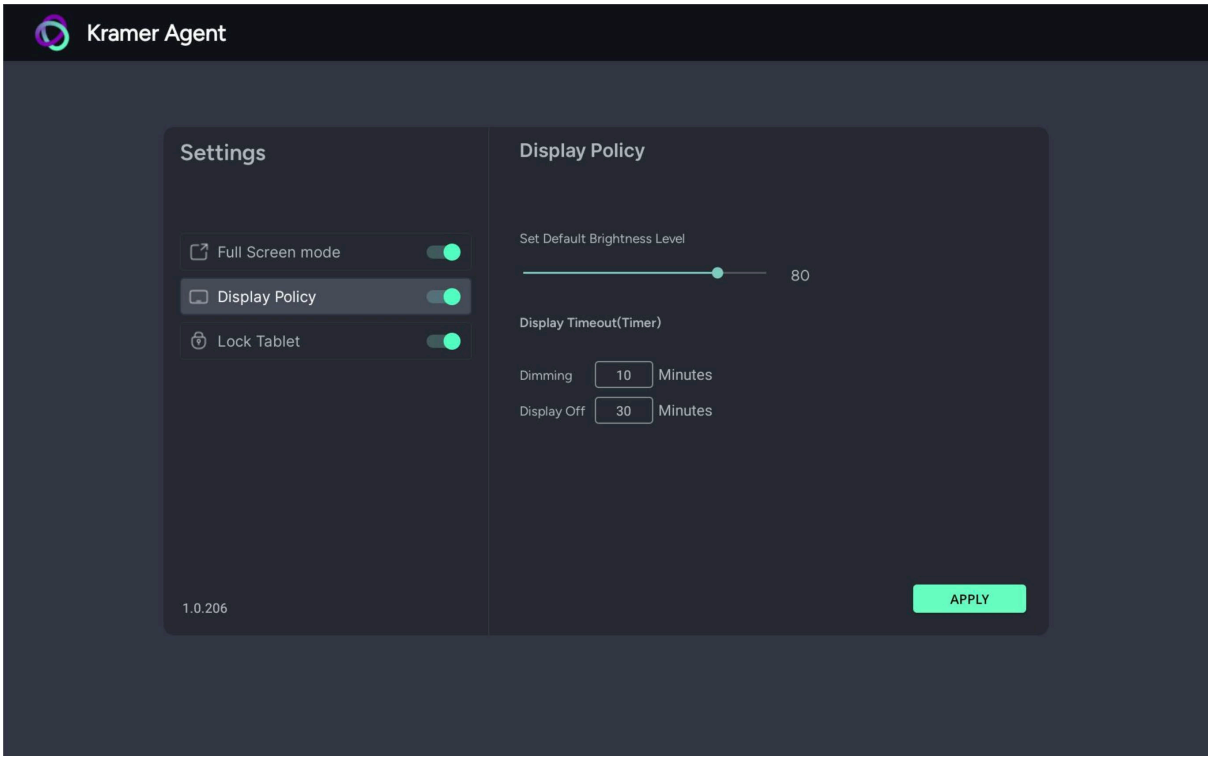


Figure 5: Display Policy configuration panel

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.

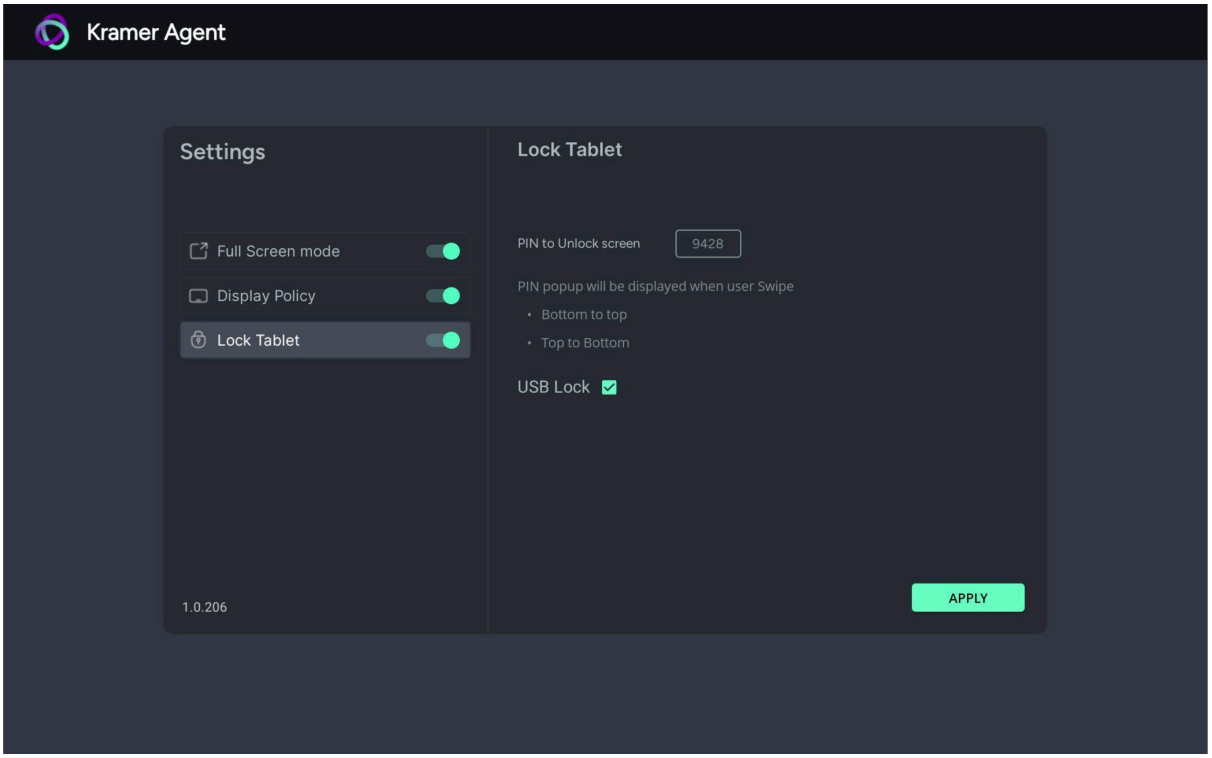


Figure 6: Lock Tablet configuration showing PIN and USB options

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

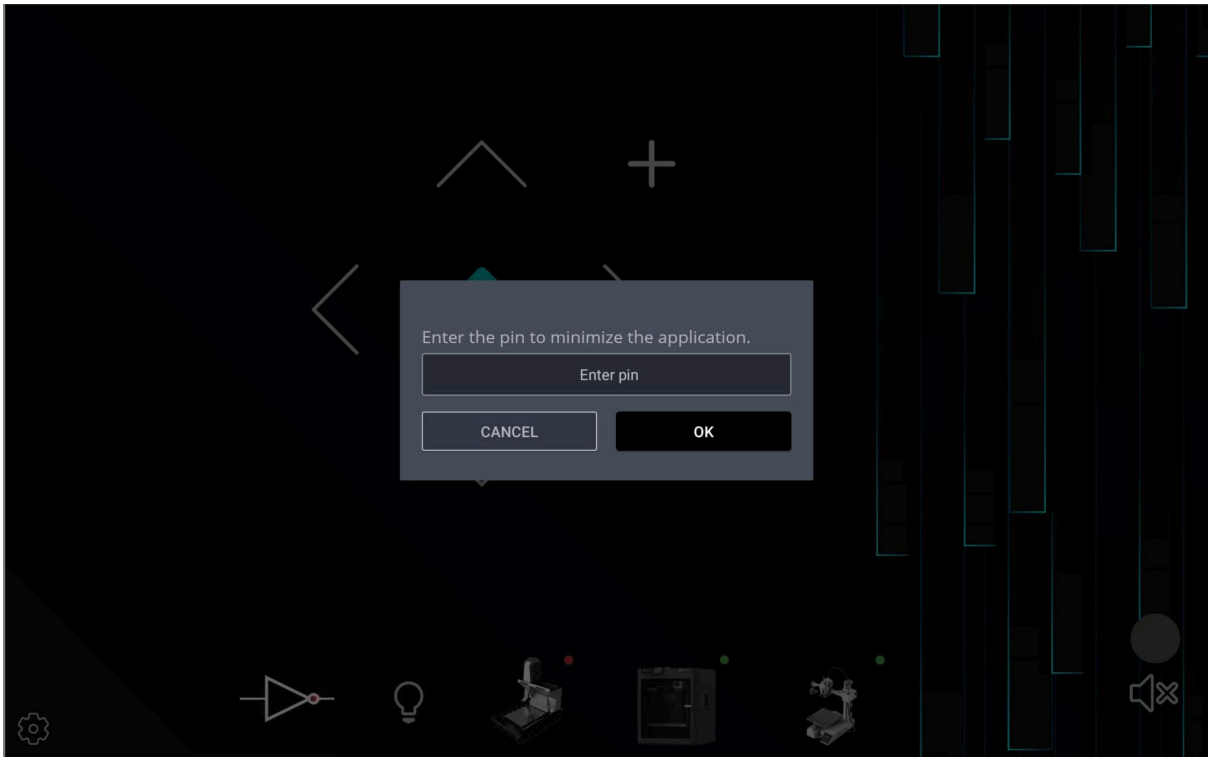


Figure 7: PIN entry keypad overlay

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

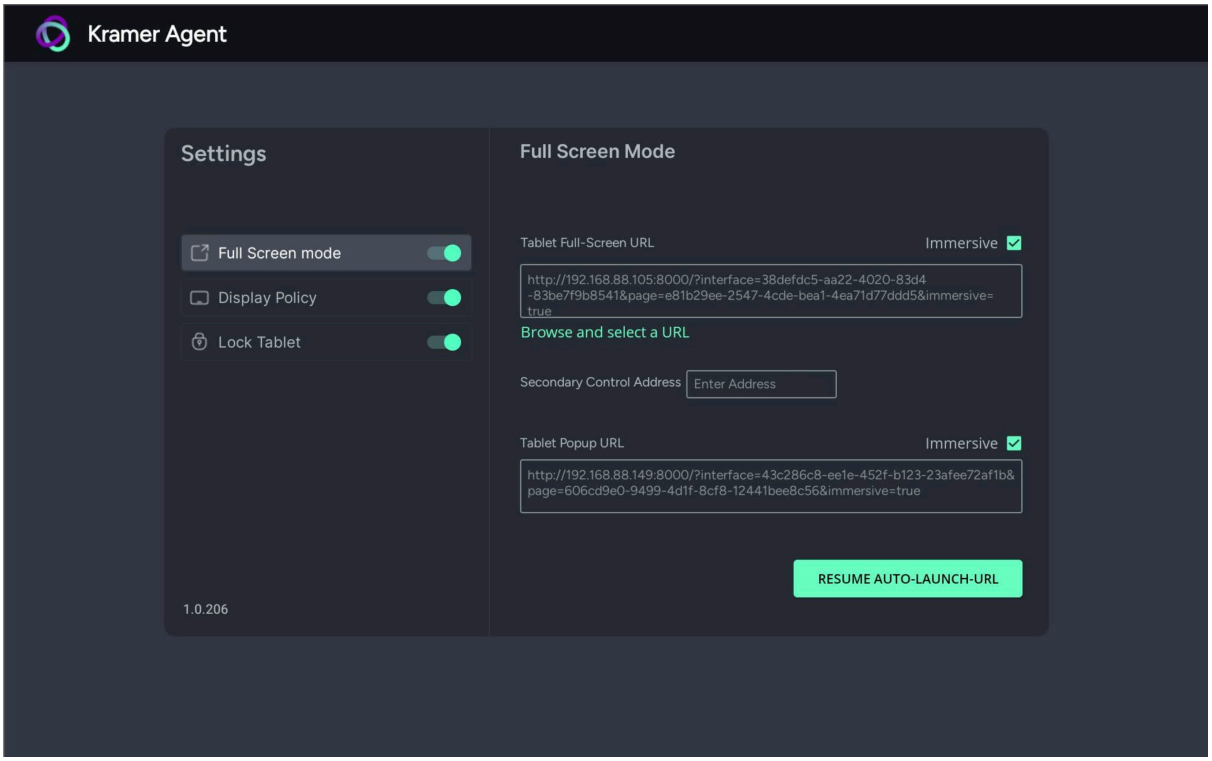


Figure 8: Resume Auto-Launch-URL button in settings

8. API Reference

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

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

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

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.

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
```

P/N: 2900-301869 Rev: 1

For the latest information on our products and a list of Kramer distributors, visit our website where updates to this user manual may be found.

We welcome your questions, comments, and feedback.

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