



**Newland AIDC**

SCANNING MADE SIMPLE



# NEWLAND WEB KIOSK

Software

Version: V2.9

User Guide

# Disclaimer

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# Newland Web Kiosk

## Introduction

The Newland Web Kiosk is an application that can be used in conjunction with an Ndevor Desktop Profile and provides a full screen protected view of a web application or website. The application supports running multiple web applications at the same time by creating multiple URL shortcuts within the Desktop Profile. Target devices for the Newland Web Kiosk include Newland Android based Mobile Computers, Newland Nquire devices and Nwear mobile computer devices.

As of release 2.0 of the Newland Web Kiosk, web applications can take advantage of the integrated scanning API. Through the API, the web application can control the scanner that is integrated in the Newland device. In addition, the data received from the scanner can be captured using the API as well, leading to a controlled way of receiving the scanned data.

The scanning API also includes functions to support scanners connected via Bluetooth to the mobile device via Newland's NHUB application.

As of version 2.08 of the Newland Web Kiosk, in addition to the Scanning API, an API to be able to read NFC tags has been added.

In this document you will find all the necessary information to setup Newland's web-kiosk and the full description of the scanning API.

## Installation & Configuration

Add the Newland Web Kiosk APK to your Ndevor instance by using the Application/Application Management screen.

Enable the application in an App Profile that is applicable to your device(s).

Create or modify your Desktop Profile. In the URL, prefix http or https with "newland" so that in total, the URL will look like:


ICON PATH	/Download/newland logo - sq.png
URL	newlandhttps://www.newland-id.com:ALLOWZOOM
NAME	Newland

The "newland" prefix will make the Newland Web Kiosk launch instead of the standard browser (usually Chrome).

Do NOT add the Newland Web Kiosk to the Application section of the Desktop Profile! Only add URL Shortcuts!

<b>Options (Case sensitive!)</b>	<b>Function:</b>
----------------------------------	------------------

# Newland Web Kiosk

<b>:ALLOWZOOM</b>	Will allow the user to use zoom gestures and buttons on the web session. Tapping the HOME button will reset the zoom to its initial state.
<b>:NOBUTTONS</b>	The use of the on-screen buttons is disabled.
<b>:IGNSSLERR</b>	Ignore SSL errors (invalid certificate on the website) Use this option with caution especially when visiting 3rd party websites.
<b>:ALLOWDWN</b>	Will allow the user to download and open files from a web page, i.e. pdf files. The file will be opened with whichever application is associated with the filetype downloaded.
<b>:ALLOWCPP</b>	<p>Will allow the user to use copy/paste logic within input fields. Selection can be made by double-tapping in the text to be selected, or by single tapping on the cursor “tear” as in the example below.</p> <p style="text-align: center;">Newland </p> <p>Important note: When the user would type in a website url in a text field, and then uses the copy-paste logic, he will be offered the option to open that URL, and the standard browser Chrome will be opened with that URL. The Web-Kiosk is not capable of preventing that from happening, as this is standard Android behavior.</p>

## Example URL:

newlandhttps://www.newland-id.com:ALLOWZOOM:NOBUTTONS

# Newland Web Kiosk

## Use

When the Newland Web Kiosk is running, it will show the website in full screen.

A button bar can be launched by swiping from the left edge of the screen to the right, unless it is disabled with the :NOBUTTONS option.

The button bar will appear in the top of the screen for two seconds during which the buttons can be tapped.



Returns the user to the initial URL and resets zoom



Refreshes the currently displayed URL



Clears cookies and browser cache, then execute home function(s)



Information. Shows application version information and Newland disclaimer.

## Scanning & NFC API

Release 2.0 of the Newland Web Kiosk integrates an API that allows web applications to control the scanner and to receive the scanned data in a controlled manner. The integration consists of script functions to control the scanner, that can be called directly from the web application and a script function to receive the scanned data. This function must be implemented in the web-host application and will be called from the Web Kiosk when a barcode is scanned. The scanner needs to be configured to output its data via the API output method and all the corresponding Broadcast Output settings must be configured correctly to allow the scanning API in the Web Kiosk to work. A function is available that will set up the scanner settings correctly.

### Receiving Scanned or NFC Data

When the scanner has been used to scan a barcode, the Web Kiosk will callback the `nlBarcode` function which needs to be present in the script section of the host's web page. Each page on the web application needs to contain this function which executes the appropriate actions for that page to process the scanned data. When working with NHub and Bluetooth scanners, `nlNHubResult` is called to pass results from NHub commands.

#### nlBarcode

<b>nlBarcode (barcode, type, typename, status)</b>		
<i>Parameter</i>	<i>Type</i>	<i>Description</i>
Source	String	INTERNAL: From internal scanner XX:XX:XX:XX:XX:XX: Mac address of Bluetooth scanner connected via NHub
Barcode	String	Scanned barcode in ASCII format.
Type	String	Symbology ID number. Possible values are listed in the appendix in the Newland Android Mobile Computer API Handbook.
Typename	String	Symbology name, i.e. CODE128. Possible values are listed in the appendix mentioned above.
Status	String	"ok" after a successful scan, or "fail" after a scanning timeout or otherwise failed scan operation. "Fail" will only happen when the scanner was initialized with the option "Send output on failed scan attempt". Not used when receiving from NHub connected scanners.

#### nlNHubResult

<b>nlNHubResult (result, status, device)</b>		
<i>Parameter</i>	<i>Type</i>	<i>Description</i>
result	String	Result of NHub command
status	Integer	Status of NHub command result
device	String	BT Mac address of the scanner

## nlNFC

<b>nlNFC (source, data)</b>		
<i>Parameter</i>	<i>Type</i>	<i>Description</i>
source	String	Always "NFC"
Data	String	NFC tag UID, in hexadecimal format

## Controlling and configuring the scanner

Functions are provided to control the scanning process.

### Scanner Power

<b>nlScan.Power(scannerPower)</b>		
Controls scanner power. This function can be used to control whether the user can use the scanner or not.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
scannerPower	Integer	0=Off 1=On

### Scanner Initialization

<b>nlScan.Initialize(sendFailBroadcast)</b>		
Sets the scanner up to work with the scanning API. Puts output mode to API and configures the scanner's broadcast output parameters. It is highly recommended to call this function one time from the web application's landing page.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
senFailBroadcast	Integer	0=Do not send output on fail 1=Send output on failed scan attempt

### Scan Mode

<b>nlScan.Scanmode(mode)</b>		
Sets the scanner's output mode. For the API to work correctly, this mode must be set to 3. The scanner Initialization function sets the mode to 3 already. This function can be used to set the scanner back to regular wedge mode upon ending the web application, or in case the web application needs to use pages that do not support Newland's Webkiosk scanning API.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
Mode	Integer	1=Fill in EditText directly 2=Simulate keystroke 3=Output via API

# Newland Web Kiosk

## Trigger

<b>nlScan.Trigger(timeout)</b>		
Triggers the scanner to start scanning.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
Timeout	Integer	Sets the scanner's timeout in seconds.

## Triggermode

<b>nlScan.Triggermode(mode)</b>		
Sets the mode of triggering the scanner.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
mode	Integer	0=Level mode 1=Continuous mode 2=Pulse mode 4=Delay mode

## Timeout

<b>nlScan.Timeout(timeout)</b>		
Sets the timeout of the scanner, after which a scan will fail.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
Timeout	long	Timeout in milliseconds. Default: 3000.

## Interval

<b>nlScan.Interval(interval)</b>		
Sets the timeout between decode sessions.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
Timeout	long	Interval in milliseconds. Default: 50.

## Repeatinterval (aka re-read delay)

<b>nlScan.Repeatinterval(interval)</b>		
For continuous scanning, sets the interval in which the same barcode can be scanned again.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
Timeout	long	Interval in milliseconds.

## Stop Scan

<b>nlScan.Stop()</b>		
Stops a current scanning action.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
n/a		

## Beeper

<b>nlScan.Beeper(beep)</b>		
Sets the good-read beeper.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
Beep	Integer	0=Beeper off 1=Beeper on

## LED

<b>nlScan.LED(led)</b>		
Sets the good-read LED indicator.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
Beep	Integer	0=LED off 1=LED on

## Symbology Configuration

<b>nlScan.BarcodeConfig(CodeID, Property, Value)</b>		
Configures the scanner's symbology settings. For all possible settings please refer to the manual "Newland Android PDA Symbologies Configuration Handbook".		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
CodeID	String	Symbology ID in text, i.e. CODE128
Property	String	The parameter to be configured
Value	String	The value to be assigned to the parameter

## NHub Send Command

<b>nlScan.NHubSend(Property, Value)</b>		
Sends a command to the NHub Bluetooth Scanner interface. This function allows us to send configuration and other commands to the Bluetooth scanner connected to the device via NHub. Refer to "Programming_Guide_Based_on_Newland_Unified_Commands_Set" for a full overview of scanner command parameters.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
Property	String	The parameter to be configured 'CMD' for sending commands to the BT connected scanner
Value	String	The value of the command to be sent to the BT connected scanner. i.e. "SCNTRG1" to trigger the BT scanner

## Device API

The device API provides functions for web applications to obtain device information.

### Device Model

<b>model = nlScan.NGetModel()</b>		
Returns the model name of the device on which the application is running.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
model	String	The device model name

### Serial Number

<b>serial = nlScan.NGetSerial()</b>		
Returns the serial number of the device on which the application is running.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
serial	String	Device serial number

### Device Build Number

<b>build = nlScan.NGetBuild()</b>		
Returns the firmware build number of the device on which the application is running.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
build	String	The device firmware build number

### Device Name

<b>devicename = nlScan.NGetDeviceName()</b>		
Returns the device name of the device on which the application is running.		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
devicename	String	Device name

## NQuire GPIO API

The NQuire GPIO API provides a function to control the output signal from the GPIO ports. This API will only have effect when running the Web Kiosk on NQuire devices.

### nlScan.nqGPIO

<b>nlScan.nqGPIO(port, status)</b>		
Controls the output signal from the GPIO ports on NQuire devices		
<i>Parameter</i>	<i>Type</i>	<i>Values</i>
port	String	Select the port to be switched "A" or "B"
Status	Boolean	True=On, False=off

## Sample HTML code

```
<!DOCTYPE html>
<html>
<head>
<title>Newland Barcode API Demo</title>
</head>
<body>
<h2>Newland Barcode API demo</h2>
<button onclick="nlScan.Power(0)">Disable Scanner</button>
<button onclick="nlScan.Power(1)">Enable Scanner</button>
<button onclick="nlScan.Trigger(2)">Trigger Internal Scanner</button>
<button onclick="nlScan.NHubSend('CMD', 'SCNTRG1')">Trigger BT Scanner</button>
<button onclick="nlScan.Stop()">Stop</button><br>
<br>
<label>Barcode<br><input type="text" id="barcode" /></label> <br><br>
<label>Symbologytype<br><input type="text" id="type" /></label> <br><br>
<label>Symbologyname<br><input type="text" id="typename" /></label> <br><br>
<label>Scanstate<br><input type="text" id="status" /></label> <br><br>
<script>
// This function prevents buttons from gaining focus causing them to repeat itself
document.querySelectorAll('button').forEach(function(button) {
  button.addEventListener('mousedown', function(e) {
    e.preventDefault();
  });
});
// This function will be called from the Web Kiosk when barcode input is received
// For demo we'll fill in the data in the appropriate input fields
function nlBarcode(barcode, barcodetype, barcodetypername, scanstate) {
  document.getElementById('barcode').value = barcode;
  document.getElementById('type').value = barcodetype;
  document.getElementById('typename').value = barcodetypername;
  document.getElementById('status').value = scanstate;
};
// Initialize the scanner settings the way we need
function initScanner() {
  nlScan.Power(1); // Enable scanner
  nlScan.Initialize(1); // Initialize the scanner
  nlScan.Beep(1); // Enable good-read beep
  nlScan.LED(1); // Enable good-read LED
  nlScan.TriggerMode(0); // Set trigger mode to "level"
  nlScan.BarcodeConfig('CODE128', 'Minlen', '5');// Set Code128 min length 5
  nlScan.BarcodeConfig('CODE128', 'Maxlen', '25');// Set Code128 max length 25
  nlScan.BarcodeConfig('QRCODE', 'Enable', '1');// Enable QR code reading
};
// Run automatically when the HTML page finishes loading
window.onload = function() {
  initScanner();
};
</script>
</body>
</html>
```

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