



Scan2ip user guide

Wireless scanning through WLAN for Android devices



Scan2IP for Android

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Welcome to Scan2IP

Scan2IP works as a wireless connection between the handheld scanning device and the computer. In the standard configuration the scanned barcode captured as a keyboard input. Scan2IP extent the range of the scanning device and the computer by transferring the scanning through the wireless network. The handheld device and the computer just have to be connected to the same network.

Installation

The procedure of installing Scan2IP is divided into 2 parts, first the installation of the handheld device and then installation of the computer host.

Installation device

To install the application on the handheld device please look at the option on the web site. NPT's Host solution can also be downloaded from scan2IP.com

After installing the Scan2IP application, please start the application and accept the agreements.

Licensing the application

To get the functionality of Scan2Ip after the 30 days trial, please license Scan2IP.

On Scan2IP.com you can purchase licenses for Scan2IP. This license is valid for both Android and Win-CE version of Scan2IP. To license Android installations of Scan2IP please login to Scan2Ip. Goto the Devices fan and generate a license. Now press the barcode symbol in the Activation Code column. A PDF with the activation code can be printed.

On the device go to the License menu, in the top left corner. Scan or type in the activation code, press OK if the license is free or the device have been licenses before you get and accept of licenses.

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Configuration

Scan2IP can be configured in 3 different data delivery modes. Depending on the application where Scan2IP is used.

General settings

The following settings are general for all data options.

The screenshot shows the 'Settings' screen of the Scan2ip application. It is divided into three sections: 'Data', 'Scanner', and 'Auto send data on scan'. Callouts provide the following information:

- Device Identifier:** A text field for entering a device ID. Callout: "Text identifying the device."
- Append quantity:** A checkbox to add quantity to scanning. Callout: "Append quantity to the scann. Default set to 1"
- Scanner:** A section containing the 'Use camera scanner' checkbox, which is checked. Callout: "User the camera as barcode scanner. Option to use mobile phone as"
- Auto send data on scan:** A checkbox to automatically send data after scanning a barcode. Callout: "Automatically sends the data after scanning barcode."

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Keyboard wedge

In this mode Scan2IP works as a keyboard on the host side. All scanning's are received on the host as keyboard inputs.

Application setup

The screenshot shows the 'Settings' screen of the Scan2ip application. It is divided into several sections: 'Connection', 'Connection settings', 'Data', and 'Scanner'. The 'Keyboard wedge' option is checked, and the 'Host' field is highlighted with a callout box labeled '2.Host IP and communication port'. The 'Port' field is also highlighted with a callout box labeled '1.Keyboard Wedge'.

1.Keyboard Wedge

2.Host IP and communication port

Port can free be selected, please note that the firewall has to be open on the network and computer for the port selected. If there is a virus shield also make sure port is open.

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Host setup

The Keyboard Wedge host can be downloaded from the web page in the section download. Keyboard Wedge is designed to use Windows 7+ or Windows 2010+. Run the installation file after download and configure the host.

Monitor: Is a status screen when data from the scanner can be seen. This is specially use full for monitoring the system.

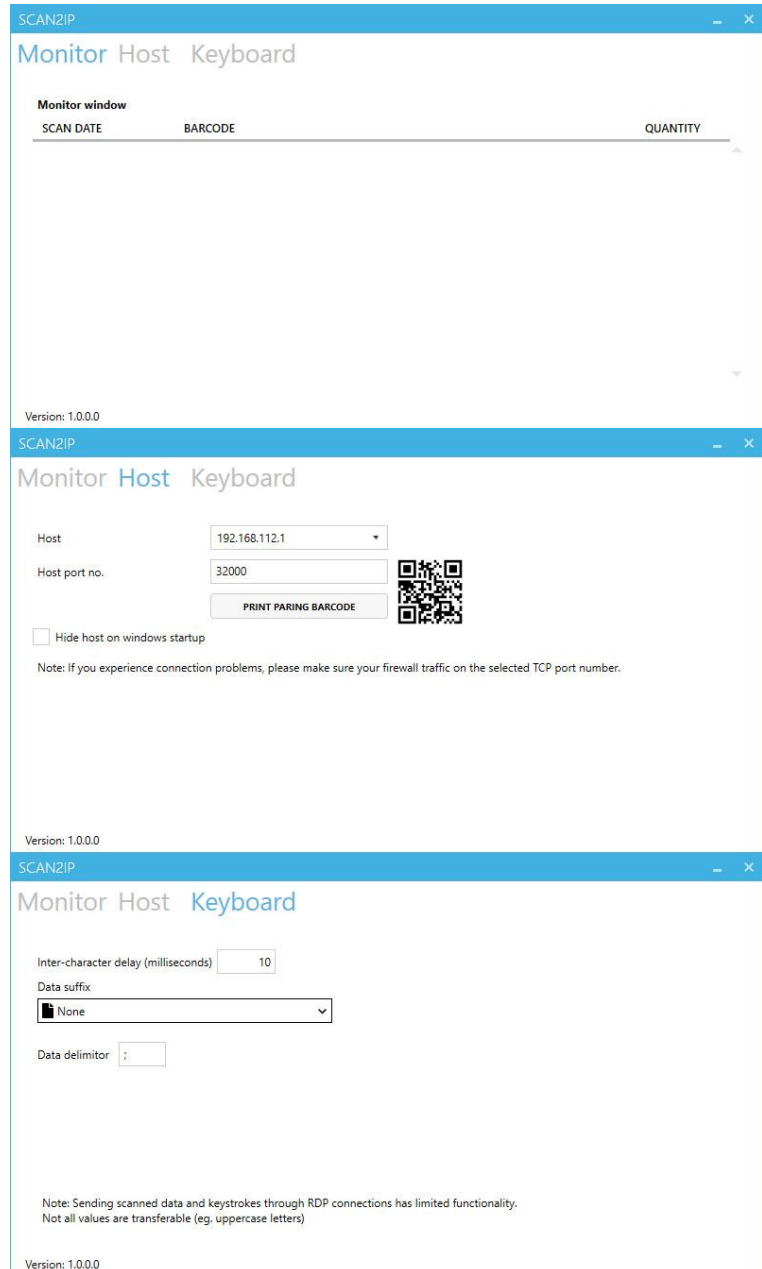
Host: is the where the setup of the Keyboard Wedge host program is done. Select the IP address of the computer/server and scan the barcode on the setting menu on the device.

Note: Make sure the firewall and virus shield are open on the communication port.

Delay between character input in the keyboard buffer can be changed. After receiving data from the device a suffix can be added to the data.

- None
- Enter
- Tab
- Custom, enter the suffix characters.

Data delimiter can be change, default ;



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HTTP

Scan2IP can send data to the host as REST api call, this is done with the GET protocol. Service can be used with basic credentials or as an anonymous application.

Application setup

The screenshot shows the 'Settings' screen of the Scan2ip application. The settings are organized into sections: Connection, Keyboard wedge, Http, Tcp/Ip, Connection settings, Authentication Method, Authentication Credentials, Data, and Scanner. Callouts point to specific settings: '1. Select: HTTP' points to the 'Http' option; '2. IP adr or URL of the REST service' points to the 'Host' field; '3. Authentication' points to the 'Use Basic authentication' option; and '(4) Credentials' points to the 'User name' and 'Password' fields.

1. Select: HTTP

2. IP adr or URL of the REST service

3. Authentication

(4) Credentials

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Host setup

Data are sent in JSON format to and from the REST service as described in the table below:

Call from Scan2IP to Host (JSON)	Response from Host to Scan2IP (JSON)
<pre>{ "DeviceIdentifier" : "Entered device id", "Barcode" : "Scanned barcode data", "Quantity" : "1" }</pre>	<pre>{ "statusCode" : "Ok", "message" : "Data sent to keyboardbuffer" }</pre>
<p>DeviceIdentifier is the device name added in the setting. To keep multiple device input separated. Barcode is the information from the barcode scanned by the device. Quantity is the amount registered in quantity, default value is 1, if quantity is not activated</p>	<p>StatusCode values:</p> <ul style="list-style-type: none"> • OK, text show in green • Warning, text show in orange • Error, text show in red <p>Message is text show on device.</p>

REST service example in PHP:

```
URL setup on the terminal: www.mydomain.xxx/service_name.php
<?php
$json = file_get_contents('php://input');

// Your code goes here
// Input parameters from Scan2IP:
//                               $json->Barcode
//                               $json->DeviceIdentifier
//                               $json->Quantity

// Return signal to Scan2IP
//                               deliver_response($statusCode, $message)
//                               $statusCode is color on device screen ('Ok', 'Warning', 'Error')
//                               $message message on device screen

function deliver_response($statusCode, $message)
{
    header("HTTP/1.1");
    $response['statusCode'] = $statusCode;
    $response['message'] = $message;
    echo json_encode($response);
}
?>
```

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REST service example in ASP:

URL setup on the terminal: `www.mydomain.xxx/service_name.aspx?date=`

```
<OperationContract(>  
  <WebInvoke(Method:="POST",  
    UriTemplate:="MyDataReceiver/?data={data}",  
    BodyStyle:=WebMessageBodyStyle.Bare,  
    ResponseFormat:=WebMessageFormat.Json)>  
  Function MyDataReceiverFunction(ByVal data As String) As DataReceiverResponse
```

Underlying function:

```
Public Structure DataReceiverResponse  
  Public StatusCode As String  
  Public message As String  
End Structure
```

```
Public Function MyDataReceiverFunction(ByVal data As String) As DataReceiverResponse Implements  
IScan2IpService.MyDataReceiverFunction
```

```
  Dim received_json_string As String  
  received_json_string = data
```

'Your logic here

'Do whatever you want with the received JSON data

'Send response to the device

'The device expects a JSON object with two parameters: StatusCode and message

```
Dim response As New DataReceiverResponse
```

```
response.StatusCode = "OK"
```

```
response.message = "Successfully received data"
```

```
Return response
```

```
End Function
```

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TCP/IP

To send data to the “TCP/IP” host, enable “Tcp/Ip” and enter the host and port no. to match tcp/ip server.

The screenshot shows the 'Settings' screen of the Scan2ip application. The 'Connection' section is active, showing options for 'Keyboard wedge', 'Http', and 'Tcp/Ip'. The 'Tcp/Ip' option is selected with a checkmark. Below it, the 'Connection settings' section includes 'Host' (marked as 'Required') and 'Port'. The 'Data' section includes 'Device Identifier', 'Append quantity', 'Send quantity to host', and 'Expect server response'. The 'Scanner' section includes 'Use camera scanner' and 'Auto send data on scan'. Three callout boxes on the left provide instructions: 1. 'Communications of TCP/IP' points to the 'Host' field. 2. 'IP or DNS of the TCP/IP server host.' points to the 'Host' field. 3. 'Select TCP/IP' points to the 'Tcp/Ip' option.

TCP/IP test server:

Testing of TCP/IP function, can be done, by using the free tool “TCP test tool” from Apponic. They also have a description of how to setup the TCP/IP server and client on a Windows PC.

Scan2IP works as a TCP Client and TCP server where information send to Scan2IP is displayed on the device after sending data.

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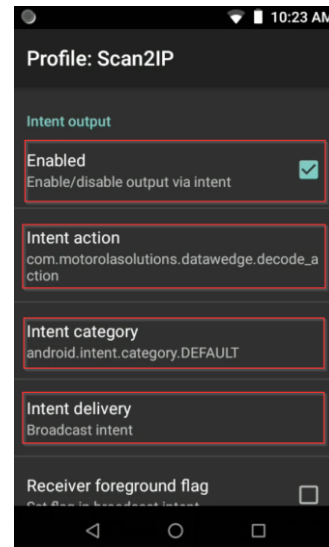
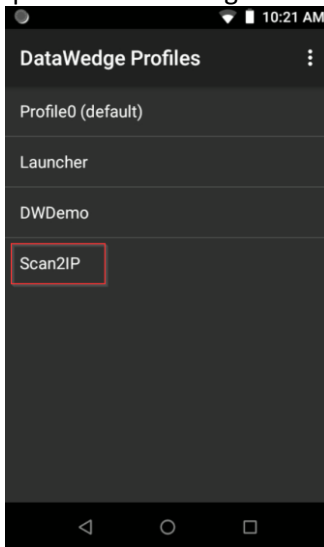
Barcode scanner configuration

For brand specific devices the following can be used for setting the use of barcode scanner.

Zebra

When starting the Scan2IP application on a Zebra device a DataWedge profile is being created. It contains all information for using Scan2IP on a Zebra device.

For manual setup of the DataWedge:



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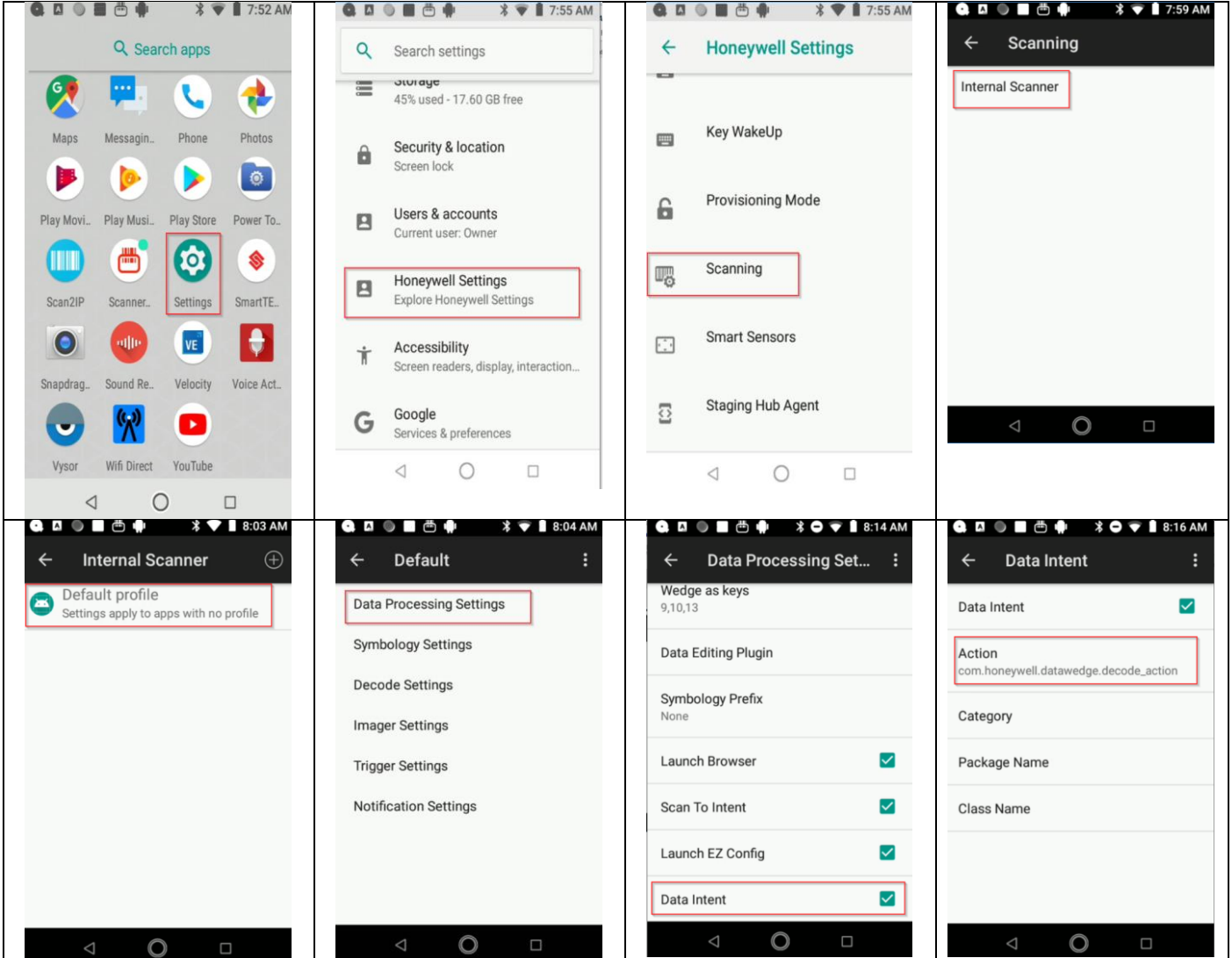


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Honeywell

The internal scanner is not used by default. Configure the setup as following:



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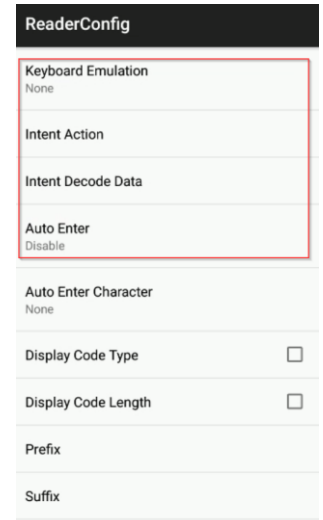
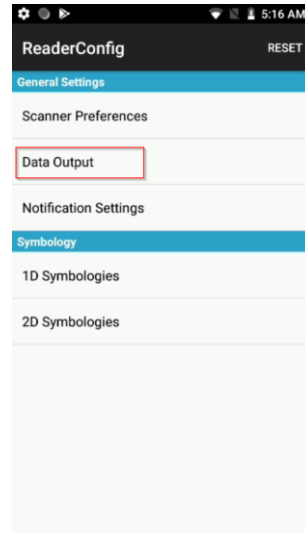
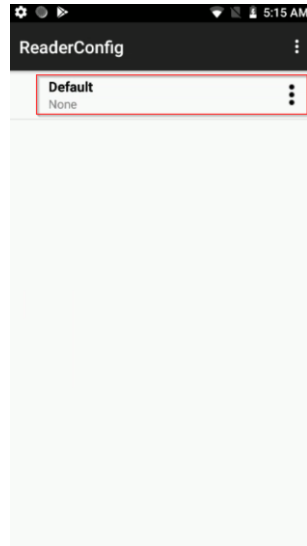
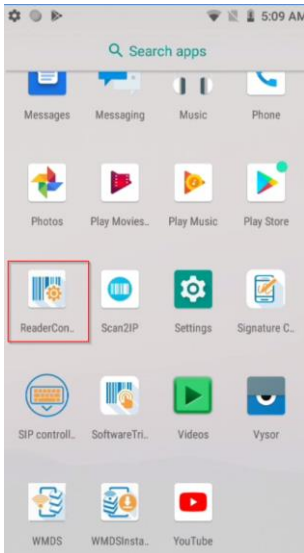


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Cipherlab

The use of internal scanner is not installed by default. Configure the ReaderConfig application as following:



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