

CUSTOMANDROIDAPI

USER MANUAL FOR
ANDROID LIBRARY CustomAndroidAPI

IMPORTANT NOTE

All rights reserved. Full or partial reproduction of this manual in any form, whether in hardcopy or magnetic form is strictly forbidden. CUSTOM ENGINEERING and other sources involved in the creation of this manual, while guaranteeing that the information contained in the manual has been thoroughly checked, assume no responsibility for consequences deriving from its use.

Suggestions regarding errors in the manual or ways it could be potentially improved are welcome. Products are subject to continuous checking and improvement and, as a result, CUSTOM ENGINEERING reserves the right to modify information contained in this manual without having to provide advance notice.

Copyright 2012 CUSTOM ENGINEERING – Italy

CUSTOM ENGINEERING

Str. Berettine 2 - 43010 Fontevivo (PARMA) - Italy
Tel. : +39 0521-680111 - Fax : +39 0521-610701
http: www.custom.biz - info@custom.biz

Customer Technical Support:

Email : support@custom.it

Rev.	Description :	Date	Revision
History	First Revision	11/04/2012	1.00
	Added support for new printers	15/10/2012	1.01
	Added support for new printers and for new communications ports (Ethernet and USB)	14/11/2012	1.02

World Headquarters

CUSTOM ENGINEERING SPA
Via Berettine, 2 - 43010 Fontevivo Parma ITALY
Tel. +39 0521 680111 - Fax +39 0521 610701
VAT: IT02498250345 - Cap. Soc.: 5.0 Ml/eu I.V.
Reg. Imprese Parma n. IT02498250345 - REA n. 243435
Reg. Naz. Produttori AEE: IT08100000005547
Registro PILE: IT09060P00001051
info@custom.biz www.custom.biz

Società sottoposta alla direzione e coordinamento della Custom Group SpA
Company subordinate to management of Custom Group SpA

Branch Offices

Via Tognasca, 7 - 21013 Gallarate Varese ITALY
Tel. +39 0331 706890 Fax +39 0331 706891
V.le Virgilio, 56D - 41123 Modena ITALY
Tel. +39 059 8869511 Fax +39 059 8869512
52 Railway Road, Cinderford, Gloucestershire GL14 3HL UK
Tel. +44 (0) 1594 821174 Fax +44 (0) 1594 821174
Av. Maximiliano Thous, 41 Planta 1ª 46009 Valencia SPAIN
Tel. +34 96 316 38 56
Lessing Strasse, 33 65779 Kelheim/Ts GERMANY
Tel. +49 (0) 176 668 49005

20, bldg.36, 1st Graivoronovskiy st. 109518 Moscow RUSSIA
Tel. +7 495 956 9336
300 Moravian Church rd. Woolwich, NJ 08085 USA
Tel. +1 856 906 1104
Calle Pirovano, 29 B1640FMA Martinez Pcia. Bs As ARGENTINA
Tel. +54 11 53539841 Fax +54 11 47923867
Unit 13 Meadowbrook Business Park Jacaranda Street Olivedale,
Randburg SOUTH AFRICA Tel. 011 462 0984 Fax 0866 104 182
Viking House, Waiyaki Way, Westlands, Nairobi KENYA
Tel. +254 202725546 Fax +254 722518114

INDEX

Document Overview	4
About Custom Engineering Android API.....	4
Android Platform Compatibility	4
API reference guide	4
Prerequisite	4
How to use API.....	5
Add the API to android project	5
Sample Code	7
Enable Bluetooth Permissions.....	7
Enable Ethernet/Wifi Permissions	7
Enable USB Support	7
Connect to Printer (Bluetooth).....	8
Connect to Printer (Ethernet)	8
Connect to Printer (USB).....	8
Print text	9
Print image	9

World Headquarters

CUSTOM ENGINEERING SPA
Via Berettine, 2 - 43010 Fontevivo Parma **ITALY**
Tel. +39 0521 680111 - Fax +39 0521 610701
VAT: IT02498250345 - Cap. Soc.: 5.0 Ml/eu I.V.
Reg. Imprese Parma n. IT02498250345 - REA n. 243435
Reg. Naz. Produttori AEE: IT08100000005547
Registro PILE: IT09060P00001051
info@custom.biz www.custom.biz

Società sottoposta alla direzione e coordinamento della Custom Group SpA
Company subordinate to management of Custom Group SpA

Branch Offices

Via Tognasca, 7 - 21013 Gallarate Varese **ITALY**
Tel. +39 0331 706890 Fax +39 0331 706891
V.le Virgilio, 56D - 41123 Modena **ITALY**
Tel. +39 059 8869511 Fax +39 059 8869512
52 Railway Road, Cinderford, Gloucestershire GL14 3HL **UK**
Tel. +44 (0) 1594 821174 Fax +44 (0) 1594 821174
Av. Maximiliano Thous, 41 Planta 1ª 46009 Valencia **SPAIN**
Tel. +34 96 316 38 56
Lessing Strasse, 33 65779 Kelkheim/Ts **GERMANY**
Tel. +49 (0) 176 668 49005

20, bldg.36, 1st Graivoronovskiy st. 109518 Moscow **RUSSIA**
Tel. +7 495 956 9336
300 Moravian Church rd. Woolwich, NJ 08085 **USA**
Tel. +1 856 906 1104
Calle Pirovano, 29 B1640FMA Martinez Pcia. Bs As **ARGENTINA**
Tel. +54 11 53539841 Fax +54 11 47923867
Unit 13 Meadowbrook Business Park Jacaranda Street Olivedale,
Randburg **SOUTH AFRICA** Tel. 011 462 0984 Fax 0866 104 182
Viking House, Waiyaki Way, Westlands, Nairobi **KENYA**
Tel. +254 202725546 Fax +254 722518114

Document Overview

This document details about CUSTOM android API for printers. And also explains how to use this API for android application development for CUSTOM printers.

About Custom Engineering Android API

This API provides functions to access the Custom Engineering printers via Bluetooth (using serial port profile - SPP), Ethernet and USB.

It includes below functions to access the printer

- *Get the printer class for printer*
- *Connect to printer*
- *Close connection*
- *Set timeout for read/write*
- *Write / Read bytes to/from printer*
- *Print text with various text attributes*
- *Print image with image scaling options*
- *Cut, eject / retract and present the ticket*

Android Platform Compatibility

Android 2.2 or latest (For Ethernet and Bluetooth)

Android 3.1 or latest (For USB)

API reference guide

Attached separately (HTML files format)

Prerequisite

- *You must be familiar with Android development environment using Eclipse IDE*
- *Android Platform version 3.1 or above (for USB) and 2.2 or above (for Ethernet and Bluetooth)*
- *API Jar file: customandroidapi.jar*
- *Bluetooth or Ethernet / Wifi or USB support on Android device*
- *Bluetooth or Ethernet / Wifi or USB Permission for Android project*

World Headquarters

CUSTOM ENGINEERING SPA

Via Berettine, 2 - 43010 Fontevivo Parma ITALY

Tel. +39 0521 680111 - Fax +39 0521 610701

VAT: IT02498250345 - Cap. Soc.: 5.0 Ml/eu I.V.

Reg. Imprese Parma n. IT02498250345 - REA n. 243435

Reg. Naz. Produttori AEE: IT08100000005547

Registro PILE: IT09060P00001051

info@custom.biz www.custom.biz

Società sottoposta alla direzione e coordinamento della Custom Group SpA
Company subordinate to management of Custom Group SpA

Branch Offices

Via Tognasca, 7 - 21013 Gallarate Varese ITALY
Tel. +39 0331 706890 Fax +39 0331 706891

V.le Virgilio, 56D - 41123 Modena ITALY
Tel. +39 059 8869511 Fax +39 059 8869512

52 Railway Road, Cinderford, Gloucestershire GL14 3HL UK
Tel. +44 (0) 1594 821174 Fax +44 (0) 1594 821174

Av. Maximiliano Thous, 41 Planta 1ª 46009 Valencia SPAIN
Tel. +34 96 316 38 56

Lessing Strasse, 33 65779 Kelheim/Ts GERMANY
Tel. +49 (0) 176 668 49005

20, bldg.36, 1st Graivoronovskiy st. 109518 Moscow RUSSIA
Tel. +7 495 956 9336

300 Moravian Church rd. Woolwich, NJ 08085 USA
Tel. +1 856 906 1104

Calle Pirovano, 29 B1640FMA Martinez Pcia. Bs As ARGENTINA
Tel. +54 11 53539841 Fax +54 11 47923867

Unit 13 Meadowbrook Business Park Jacaranda Street Olivedale,
Randburg SOUTH AFRICA Tel. 011 462 0984 Fax 0866 104 182

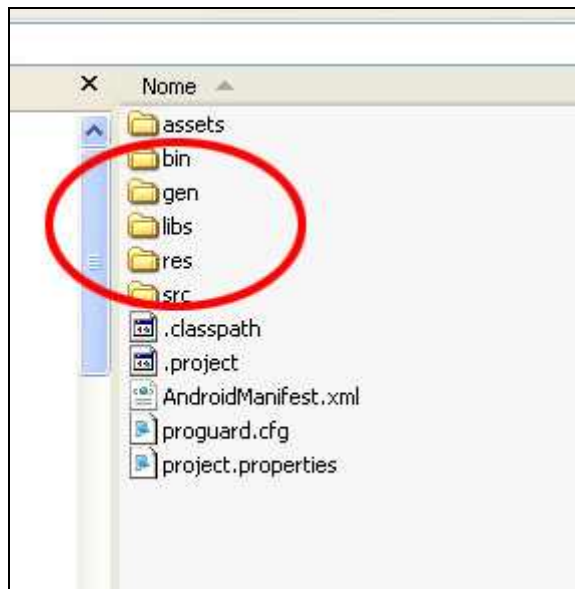
Viking House, Waiyaki Way, Westlands, Nairobi KENYA
Tel. +254 202725546 Fax +254 722518114

How to use API

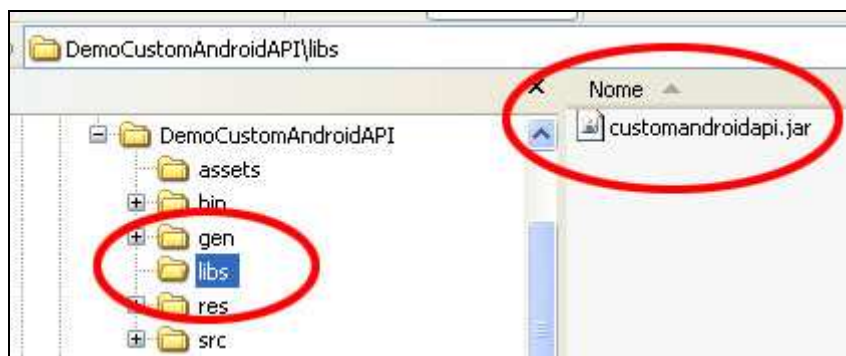
Developer needs to add the API in Android project library and then developer can access the various API functions.

Add the API to android project

Create, if it doesn't exist, the folder "libs", into the project



Copy into this folder, the API file "customandroidapi.jar"



World Headquarters

CUSTOM ENGINEERING SPA
Via Berettine, 2 - 43010 Fontevivo Parma ITALY
Tel. +39 0521 680111 - Fax +39 0521 610701
VAT: IT02498250345 - Cap. Soc.: 5.0 Ml/eu I.V.
Reg. Imprese Parma n. IT02498250345 - REA n. 243435
Reg. Naz. Produttori AEE: IT08100000005547
Registro PILE: IT09060P00001051
info@custom.biz www.custom.biz

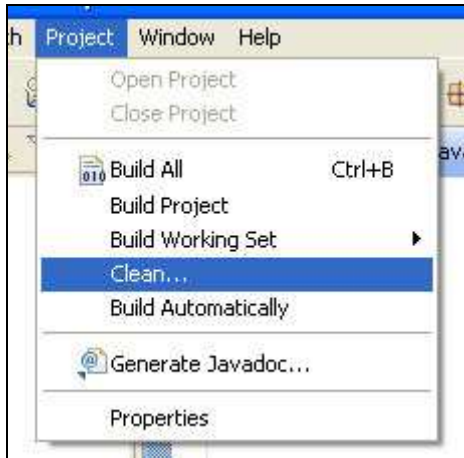
Società sottoposta alla direzione e coordinamento della Custom Group Spa
Company subordinate to management of Custom Group Spa

Branch Offices

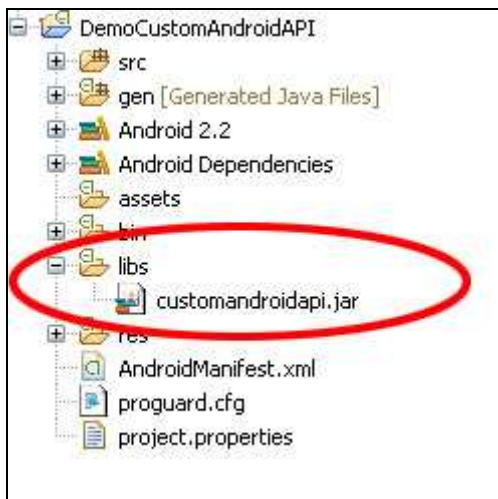
Via Tognasca, 7 - 21013 Gallarate Varese ITALY
Tel. +39 0331 706890 Fax +39 0331 706891
V.le Virgilio, 56D - 41123 Modena ITALY
Tel. +39 059 8869511 Fax +39 059 8869512
52 Railway Road, Cinderford, Gloucestershire GL14 3HL UK
Tel. +44 (0) 1594 821174 Fax +44 (0) 1594 821174
Av. Maximiliano Thous, 41 Planta 1ª 46009 Valencia SPAIN
Tel. +34 96 316 38 56
Lessing Strasse, 33 65779 Kelheim/Ts GERMANY
Tel. +49 (0) 176 668 49005

20, bldg.36, 1st Graivoronovskiy st. 109518 Moscow RUSSIA
Tel. +7 495 956 9336
300 Moravian Church rd. Woolwich, NJ 08085 USA
Tel. +1 856 906 1104
Calle Pirovano, 29 B1640FMA Martinez Pcia. Bs As ARGENTINA
Tel. +54 11 53539841 Fax +54 11 47923867
Unit 13 Meadowbrook Business Park Jacaranda Street Olivedale,
Randburg SOUTH AFRICA Tel. 011 462 0984 Fax 0866 104 182
Viking House, Waiyaki Way, Westlands, Nairobi KENYA
Tel. +254 202725546 Fax +254 722518114

Load Project into Eclipse and Click “Clean...” into “Project” menu



Now you will see the library into your Eclipse project



Android API is correctly added in project library. Now you can use this API.

World Headquarters

CUSTOM ENGINEERING SPA
Via Berettine, 2 - 43010 Fontevivo Parma ITALY
Tel. +39 0521 680111 - Fax +39 0521 610701
VAT: IT02498250345 - Cap. Soc.: 5.0 Ml/eu I.V.
Reg. Imprese Parma n. IT02498250345 - REA n. 243435
Reg. Naz. Produttori AEE: IT08100000005547
Registro PILE: IT09060P00001051
info@custom.biz www.custom.biz

Società sottoposta alla direzione e coordinamento della Custom Group SpA
Company subordinate to management of Custom Group SpA

Branch Offices

Via Tognasca, 7 - 21013 Gallarate Varese ITALY
Tel. +39 0331 706890 Fax +39 0331 706891
V.le Virgilio, 56D - 41123 Modena ITALY
Tel. +39 059 8869511 Fax +39 059 8869512
52 Railway Road, Cinderford, Gloucestershire GL14 3HL UK
Tel. +44 (0) 1594 821174 Fax +44 (0) 1594 821174
Av. Maximiliano Thous, 41 Planta 1ª 46009 Valencia SPAIN
Tel. +34 96 316 38 56
Lessing Strasse, 33 65779 Kelkheim/Ts GERMANY
Tel. +49 (0) 176 668 49005

20, bldg.36, 1st Graivoronovskiy st. 109518 Moscow RUSSIA
Tel. +7 495 956 9336
300 Moravian Church rd. Woolwich, NJ 08085 USA
Tel. +1 856 906 1104
Calle Pirovano, 29 B1640FMA Martinez Pcia. Bs As ARGENTINA
Tel. +54 11 53539841 Fax +54 11 47923867
Unit 13 Meadowbrook Business Park Jacaranda Street Olivedale,
Randburg SOUTH AFRICA Tel. 011 462 0984 Fax 0866 104 182
Viking House, Waiyaki Way, Westlands, Nairobi KENYA
Tel. +254 202725546 Fax +254 722518114

Sample Code

Enable Bluetooth Permissions

Modify the “AndroidManifest.xml” and add

```
<!-- BLUETOOTH PERMISSIONS -->
<uses-permission android:name="android.permission.BLUETOOTH" />
<uses-permission android:name="android.permission.BLUETOOTH_ADMIN" />
```

to enable the permissions to use Bluetooth.

Enable Ethernet/Wifi Permissions

Modify the “AndroidManifest.xml” and add

```
<!-- WIFI / ETHERNET PERMISSIONS -->
<uses-permission android:name="android.permission.CHANGE_WIFI_MULTICAST_STATE" />
<uses-permission android:name="android.permission.INTERNET" />
<uses-permission android:name="android.permission.ACCESS_WIFI_STATE" />
<uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />
```

to enable the permissions to use Ethernet / Wifi.

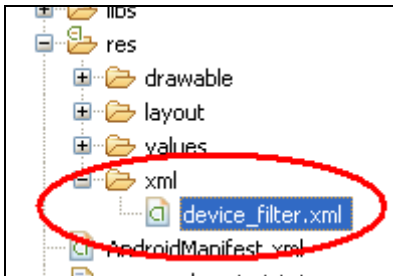
Enable USB Support

Modify the “AndroidManifest.xml” and add

```
<!-- USB -->
<intent-filter>
    <action android:name="android.hardware.usb.action.USB_DEVICE_ATTACHED" />
</intent-filter>

<meta-data android:name="android.hardware.usb.action.USB_DEVICE_ATTACHED"
    android:resource="@xml/device_filter" />
<!-- USB END -->
```

Create a Folder “xml” into “res” folder



World Headquarters

CUSTOM ENGINEERING SPA
Via Berettine, 2 - 43010 Fontevivo Parma ITALY
Tel. +39 0521 680111 - Fax +39 0521 610701
VAT: IT02498250345 - Cap. Soc.: 5.0 Ml/eu I.V.
Reg. Imprese Parma n. IT02498250345 - REA n. 243435
Reg. Naz. Produttori AEE: IT08100000005547
Registro PILE: IT09060P00001051
info@custom.biz www.custom.biz

Società sottoposta alla direzione e coordinamento della Custom Group SpA
Company subordinate to management of Custom Group SpA

Branch Offices

Via Tognasca, 7 - 21013 Gallarate Varese ITALY
Tel. +39 0331 706890 Fax +39 0331 706891
V.le Virgilio, 56D - 41123 Modena ITALY
Tel. +39 059 8869511 Fax +39 059 8869512
52 Railway Road, Cinderford, Gloucestershire GL14 3HL UK
Tel. +44 (0) 1594 821174 Fax +44 (0) 1594 821174
Av. Maximiliano Thous, 41 Planta 1ª 46009 Valencia SPAIN
Tel. +34 96 316 38 56
Lessing Strasse, 33 65779 Kelheim/Ts GERMANY
Tel. +49 (0) 176 668 49005

20, bldg.36, 1st Graivoronovskiy st. 109518 Moscow RUSSIA
Tel. +7 495 956 9336
300 Moravian Church rd. Woolwich, NJ 08085 USA
Tel. +1 856 906 1104
Calle Pirovano, 29 B1640FMA Martinez Pcia. Bs As ARGENTINA
Tel. +54 11 53539841 Fax +54 11 47923867
Unit 13 Meadowbrook Business Park Jacaranda Street Olivedale,
Randburg SOUTH AFRICA Tel. 011 462 0984 Fax 0866 104 182
Viking House, Waiyaki Way, Westlands, Nairobi KENYA
Tel. +254 202725546 Fax +254 722518114

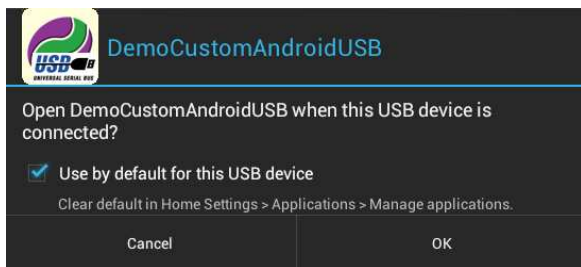


and create a file “device_filter.xml” with the code

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
  <usb-device vendor-id="3540" />
</resources>
```

to enable the support of Custom Engineering printer with USB port. If you don't create this file, the O.S. asks to you the permission to use this device every time.

The first time you plug the USB printer, and the application is already installed, you will see this message:



Is important to set the checkbox and press “OK” button to enable the application to use this USB device; Otherwise the USB communication fails.

Connect to Printer (Bluetooth)

```
//Open it
prnDevice = new CustomAndroidAPI().getPrinterDriver(btDevice);
//Connect it
prnDevice.connectPrinter();
```

Connect to Printer (Ethernet)

```
//Open it
prnDevice = new CustomAndroidAPI().getPrinterDriver(ethDeviceIP, 9100);
//Connect it
prnDevice.connectPrinter();
```

Connect to Printer (USB)

```
//Open it
prnDevice = new CustomAndroidAPI().getPrinterDriver(usbDevice, this);
//Connect it
prnDevice.connectPrinter();
```



M.U.R.S.T.
Ministry University
Research Scientific
Technology
Authorized laboratory
no. 5094272



World Headquarters

CUSTOM ENGINEERING SPA
Via Berettine, 2 - 43010 Fontevivo Parma ITALY
Tel. +39 0521 680111 - Fax +39 0521 610701
VAT: IT02498250345 - Cap. Soc.: 5.0 Ml/eu I.V.
Reg. Imprese Parma n. IT02498250345 - REA n. 243435
Reg. Naz. Produttori AEE: IT08100000005547
Registro PILE: IT09060P00001051
info@custom.biz www.custom.biz

Società sottoposta alla direzione e coordinamento della Custom Group SpA
Company subordinate to management of Custom Group SpA

Branch Offices

Via Tognasca, 7 - 21013 Gallarate Varese ITALY
Tel. +39 0331 706890 Fax +39 0331 706891
V.le Virgilio, 56D - 41123 Modena ITALY
Tel. +39 059 8869511 Fax +39 059 8869512
52 Railway Road, Cinderford, Gloucestershire GL14 3HL UK
Tel. +44 (0) 1594 821174 Fax +44 (0) 1594 821174
Av. Maximiliano Thous, 41 Planta 1ª 46009 Valencia SPAIN
Tel. +34 96 316 38 56
Lessing Strasse, 33 65779 Kelkheim/Ts GERMANY
Tel. +49 (0) 176 668 49005

20, bldg.36, 1st Graivoronovskiy st. 109518 Moscow RUSSIA
Tel. +7 495 956 9336
300 Moravian Church rd. Woolwich, NJ 08085 USA
Tel. +1 856 906 1104
Calle Pirovano, 29 B1640FMA Martinez Pcia. Bs As ARGENTINA
Tel. +54 11 53539841 Fax +54 11 47923867
Unit 13 Meadowbrook Business Park Jacaranda Street Olivedale,
Randburg SOUTH AFRICA Tel. 011 462 0984 Fax 0866 104 182
Viking House, Waiyaki Way, Westlands, Nairobi KENYA
Tel. +254 202725546 Fax +254 722518114



Print text

```
PrinterFont font = new PrinterFont();    //create font object and required
font.setEmphasized(true);               //Set required attributes
font.setJustification(PrinterFont.FONT_JUSTIFICATION_CENTER);
String text = "Hello World !!!";
printer.printText(text, 104,510, font);  //104 is left margin in pixel and 510 is text width in pixel
```

Print image

```
Bitmap image = BitmapFactory.decodeResource(getResources(), R.drawable.sample3);
//Bitmap can be also created from image file as mentioned below
//Bitmap image = BitmapFactory.decodeFile(String pathName);

api.printImage(image, 100, CustomPrinter.IMAGE_SCALE_TO_WIDTH, 376);
//100 is left margin in pixel and 376 is image width in pixel to print
//Above method will scale the image to 376 pixel width and then prints the image with left margin of 100
//pixel
```



World Headquarters

CUSTOM ENGINEERING SPA
Via Berettine, 2 - 43010 Fontevivo Parma ITALY
Tel. +39 0521 680111 - Fax +39 0521 610701
VAT: IT02498250345 - Cap. Soc.: 5.0 Ml/eu I.V.
Reg. Imprese Parma n. IT02498250345 - REA n. 243435
Reg. Naz. Produttori AEE: IT08100000005547
Registro PILE: IT09060P00001051
info@custom.biz www.custom.biz

Società sottoposta alla direzione e coordinamento della Custom Group SpA
Company subordinate to management of Custom Group SpA

Branch Offices

Via Tognasca, 7 - 21013 Gallarate Varese ITALY
Tel. +39 0331 706890 Fax +39 0331 706891
V.le Virgilio, 56D - 41123 Modena ITALY
Tel. +39 059 8869511 Fax +39 059 8869512
52 Railway Road, Cinderford, Gloucestershire GL14 3HL UK
Tel. +44 (0) 1594 821174 Fax +44 (0) 1594 821174
Av.Maximiliano Thous, 41 Planta 1ª 46009 Valencia SPAIN
Tel. +34 96 316 38 56
Lessing Strasse, 33 65779 Kelheim/Ts GERMANY
Tel. +49 (0) 176 668 49005

20, bldg.36, 1st Graivoronovskiy st. 109518 Moscow RUSSIA
Tel. +7 495 956 9336
300 Moravian Church rd. Woolwich, NJ 08085 USA
Tel. +1 856 906 1104
Calle Pirovano, 29 B1640FMA Martinez Pcia. Bs As ARGENTINA
Tel. +54 11 53539841 Fax +54 11 47923867
Unit 13 Meadowbrook Business Park Jacaranda Street Olivedale,
Randburg SOUTH AFRICA Tel. 011 462 0984 Fax 0866 104 182
Viking House, Waiyaki Way, Westlands, Nairobi KENYA
Tel. +254 202725546 Fax +254 722518114