
GRYPHON™ BT

Quick Reference



USING GRYPHON™ BT SERIES READERS

Gryphon™ BT series readers, together with a Bluetooth® compatible remote device, build a Cordless Reading System for the collection, decoding and transmission of barcoded data.

The Gryphon™ BT (Gryphon™ Bluetooth®) reader is a CCD wireless barcode scanner communicating in the 2.4 GHz ISM band and using the Serial Port Profile (SPP). The Bluetooth® compatible remote device can be a PC, PDA, printer, etc with a built-in Bluetooth® device or with external Bluetooth® adapter (i.e. a Bluetooth® dongle).

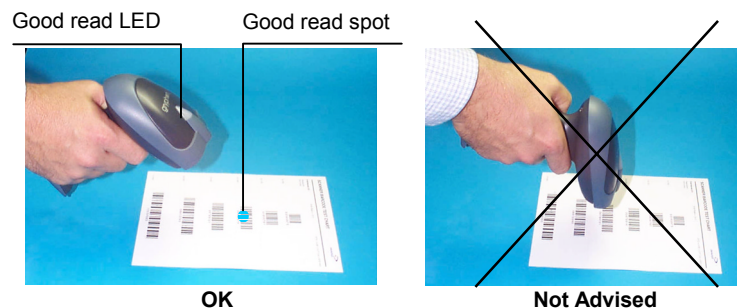
Using this Quick Reference Manual, you can initialise and start using Gryphon™ BT reader with its default values. For details about general configuration commands, refer to the Gryphon™ BT Reference Manual on the configuration CD-ROM.

Gryphon™ BT readers automatically scan barcodes **at a distance**. Simply aim the reader and pull the trigger. Code scanning is performed along the center of the light bar emitted from the reading window. This bar must cover the entire code.

READING ANGLE

Successful scanning is performed by tilting the reader with respect to the barcode to avoid direct reflections which impair the reading performance, see the figure below.

Successful reading is signalled by an audible tone plus a good-read blue spot.






To start using your Gryphon™ BT reading system you must:

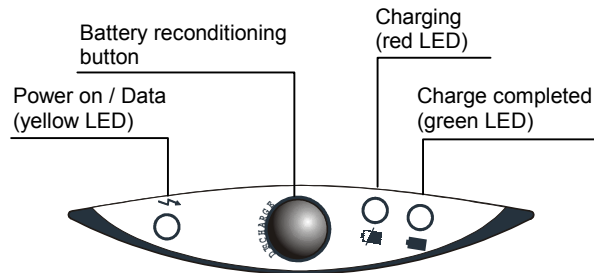
1. Have a compatible remote Bluetooth® device (with built-in Bluetooth® radio or an external Bluetooth® adapter) ready to work. See your Bluetooth® compatible device documentation.
2. Charge the Gryphon™ BT battery using C-GRYPHON charger as described in this Quick Reference manual. A full charge takes 4 hours with NiMH batteries.
3. Configure the reader as described in this Quick Reference manual under "Gryphon™ BT Configuration".

CHARGING THE BATTERIES

By placing the reader onto the C-GRYPHON battery charger it is possible to charge the Gryphon™ BT batteries. Make sure the charging LED goes on.

The LEDs positioned on the cradle signal the charge status, as described in the following table:

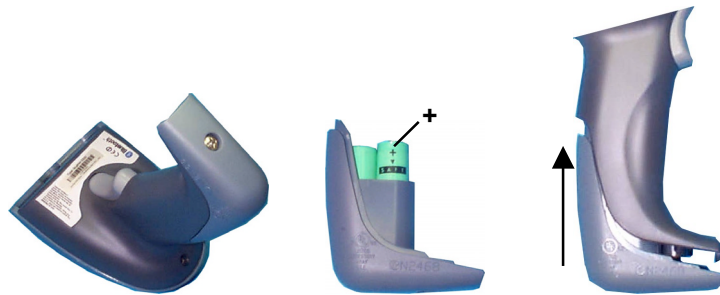
	LED	STATUS
	Yellow	On = C-GRYPHON is powered. Blinking = C-GRYPHON receives commands from the Host.
	Red	On = the battery charge is in progress.
	Green	On = the battery is completely charged.



After many recharging cycles NiMh and NiCd batteries may tend to lose their operating autonomy. This condition can be overcome by positioning the Gryphon™ BT onto the C-GRYPHON charger and pressing the "battery reconditioning" button. A discharge cycle may last up to 2 hours.

Changing the Batteries

When the above procedure is no longer effective, the batteries must be changed. To change the batteries of your reader, unscrew the battery cover screw, replace the old batteries with new ones, then insert the cover in the handle and screw it back into place. (See the following figures).



CAUTION

Dispose of the batteries as required by the relevant laws in force.

Powering the C-GRYPHON

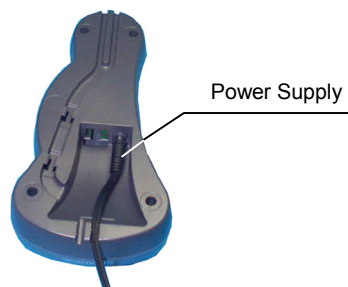


CAUTION

Connections should always be made with power off!

Apply power to C-GRYPHON by connecting a power supply unit to the connector on the base of the battery charger.

C-GRYPHON is ready to charge Gryphon™ BT Series readers with NiMh or NiCd batteries.



C-GRYPHON power supply connector

GRYPHON™ BT OPERATION

RADIO CONNECTION

Gryphon™ BT as Slave

A Gryphon™ BT is Slave when it sends barcodes to a Master remote Bluetooth® device such as a PC, Laptop, PDA, etc, which has initialized the communication.

Once set as Slave, a Gryphon™ BT reader requires no particular configuration for communication, however some radio parameters can be set to increase system performance and data transmission security, see the Gryphon™ BT Reference Manual on the configuration CD-ROM. At startup the reader can only wait for the Master to initialize the radio communication.

The following is a general procedure recommended for Gryphon™ BT Slave applications:

1. Power up the remote Bluetooth® Master device (example Laptop or PC).
2. Power up the Gryphon™ BT reader within radio range (10 meters).
Any modifications to the radio configuration should be made at this time before the radio connection takes place.
3. From the remote Bluetooth® Master device, execute the Discovery procedure, (according to the procedure given in the documentation of the Bluetooth® Master device), to recognize the Gryphon™ BT reader(s) within radio range.
4. Check that "**Gryphon BTx00** " is shown among the discovered devices.
5. Request to open an SPP connection with Gryphon™ BT, making sure to disable any required PIN and/or pairing parameters. Gryphon™ BT is always discoverable and connectable without any required PIN.

After the Gryphon™ BT reader indicates radio connection (see the [Status LED Indicator](#) table), you can start sending barcodes.

If the Master remote Bluetooth® device can support a piconet, the communication can be established with up to 7 seven Slave readers at the same time.

Gryphon™ BT as Master

A Gryphon™ BT is Master when the remote Bluetooth® device is Slave, i.e. with a Bluetooth® barcode printer. Once set as Master, a Gryphon™ BT reader must be configured to recognize the address of the Slave device to which it wants to communicate.

By default, at startup the reader initializes the communication with the Slave. If the connection is successful, the reader can send barcodes to the Slave device.

If the connection is not successful, you can attempt a connection manually by double-clicking the reader trigger. Radio connections can also be managed manually as described in the Gryphon™ BT Reference Manual on the configuration CD-ROM.

SLEEP STATE

The μ P in the reader enters a "Sleep" state after 5 minutes of no reading for minimum power consumption.

DATA TRANSMISSION

The transmission of data can be transparent (no ACK/NACK protocol), when each character is read and immediately sent to the Host (default value). Otherwise, data transmission can be with flow control (with ACK/NACK protocol), when, after each reading, Gryphon™ BT waits for an acknowledge that the remote Host received the data before reading and sending the following code.



NOTE

RTS/CTS handshaking should be set by the Bluetooth® COM driver for correct serial communication. If not used, the RTS line must be forced to the level that doesn't block such communication.

STATUS LED INDICATOR

Blue LED	Meaning
1 blink / 2 sec.	Radio connection
2 blinks / 2 sec.	No radio connection
1 blink / 4 sec.	Sleep state: Radio connection
2 blinks / 4 sec.	Sleep state: No radio connection
1 Blink	Good decoding
A long sequence of short blinks	Connection / re-connection attempts

For more details and other meanings of the Gryphon™ BT indicators (LED, blue spot and beeper), refer to the Gryphon™ BT Reference Manual on the configuration CD-ROM.

GRYPHON™ BT CONFIGURATION

Configure the Gryphon™ BT by choosing one of the two procedures below and reading the codes in the given sequence.

GRYPHON™ BT AS SLAVE

1. **Restore Gryphon™ BT default**



2. **Set Gryphon™ BT as Slave**



YOUR READER IS NOW READY TO BE DISCOVERED (CONNECTED VIA RADIO) BY A BLUETOOTH® MASTER DEVICE AND READ BARCODES.

GRYPHON™ BT AS MASTER

Note: for the hexadecimal character selection of step 4, use the table at the end of this manual.

1. Restore Gryphon™ BT default**2. Set Gryphon™ BT as Master****3. Enter configuration****4. Set Remote Bluetooth® Device Address (slave)**

+

12 hexadecimal characters for the remote Bluetooth® device address

5. Exit and Save configuration**6. Request Radio Connection with Slave**

YOUR READER IS NOW CONFIGURED TO READ BARCODES USING THE DEFAULT VALUES.

GRYPHON™ BT DEFAULT CONFIGURATION

DATA FORMAT	
code identifier disabled, field adjustment disabled, code length tx not transmitted, character replacement disabled, address stamping = disabled, address delimiter = disabled.	
POWER SAVE	
scan rate 270 scans/s.	
READING PARAMETERS	
operating mode hand-held, hardware trigger, trigger active level, no timeout, Flash On = 1 sec, Flash Off = 0.6 sec, one read per cycle, safety time 0.5 sec, beeper intensity high, tone 2, beeper type monotone, beeper length short, good read spot duration medium, beeper control for radio response = ON.	
DECODING PARAMETERS	
ink spread enabled, overflow control enabled, interdigit control enabled, Puzzle Solver™ disabled, decoding safety = one read.	
CODE SELECTION	
<u>enabled codes</u>	
BT200	Code PDF417
BT100 BT200	EAN 8/EAN 13 / UPC A/UPC E without ADD ON check digit transmitted, no conversions Interleaved 2/5 check digit control and transmission, variable length code; 4-99 characters
	Standard Code 39 no check digit control, variable length code; 1-99 characters Code 128, variable length code; 1-99 characters
<u>disabled codes</u>	
BT100 BT200	<i>EAN 128, ISBT128, Code 93, Codabar, pharmaceutical codes, Codablock-A, Codablock-F Standard and EAN, MSI, Plessey, Telepen, Delta IBM, Code 11, Code 16K, Code 49 RSS family</i>

ADVANCED FORMATTING PARAMETERS

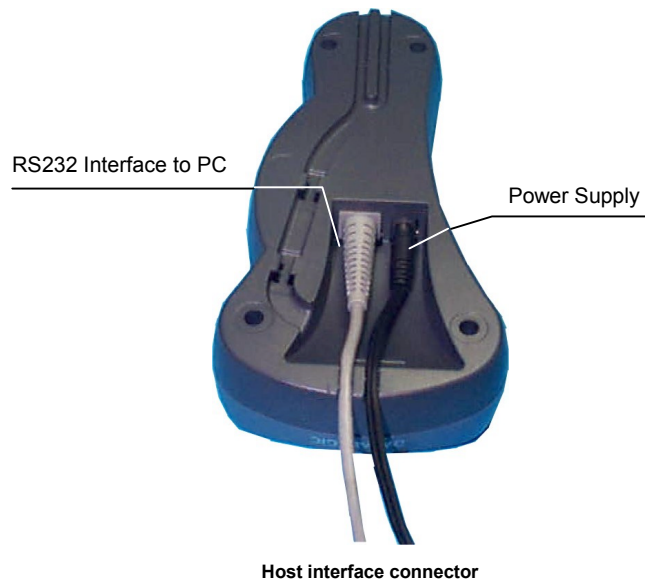
concatenation disabled, no advanced formats defined, Zebra printer formatting = disabled.

RADIO PARAMETERS

radio protocol timeout = 3 seconds, transmission retry = none, no ACK/NACK protocol nor frame packing, power-off timeout = 4 hours, user-friendly name = "Gryphon BTx00", beeper control for radio response = good decode and good reception, Bluetooth® role = Slave, destination address = 000000000000, auto-connection = enabled, auto-reconnection = enabled.

SERIAL CONFIGURATION OPTIONS

In addition to the battery charge function C-GRYPHON can be connected to a PC by means of an RS232 interface to send new configuration strings from the PC to the reader (i.e. using DL Sm@rtSet™), to upgrade application software onto the Gryphon™ BT reader or optionally when performing the copy configuration procedure (see the Gryphon™ BT Reference Manual).



To proceed with these operations, connect an RS232 cable between C-GRYPHON and the PC. Connect the power supply to C-GRYPHON. Place the Gryphon™ BT reader onto the charger.

TECHNICAL FEATURES

Electrical Features	
Battery Type	2 AA NiMh* batteries 1.2 V – 1850 mAh
Time of recharge NiMh	4 hours
Operating autonomy (typ. continuous reading)	25.000 reads - NiMh
Max scan rate	270 scans/sec
Indicators	LED, Good Read Spot, Beeper
Optical Features	
Sensor	CCD solid state (3648 pixels)
Illuminator	LED array
Wavelength	630 ~ 670 nm
Max. LED Output Power	0.33 mW
LED Safety Class	Class 1 EN 60825-1
Reading field	see reading diagram (p.47)
Max. resolution	0.076 mm, 3 mils
PCS minimum	15% (Datalogic Test Chart)
Radio Features	
Bluetooth® version	Bluetooth® 1.1
Profiles supported	Serial Port Profile
Working frequency	2.4000 to 2.4835 GHz
Maximum output power	2.5 mW (class 2)
Range (in open air)	10 m.
Environmental Features	
Working Temperature	0°to + 40 °C / 32° to 104 °F
Storage Temperature (without battery)	-20°to + 70 °C / - 4° to 158 °F
Humidity	90% non condensing
Drop resistance	IEC 68-2-32 Test ED
Protection class	IP30
Mechanical Features	
Weight (with batteries)	about 280 g. / 9.87 oz
Dimensions	179 x 81 x 98 mm / 7.04 x 3.18 x 3.85 in
Material	ABS and Polycarbonate molded with rubber

* It is possible to employ also NiCd or non-chargeable Alkaline AA batteries.

C-GRYPHON	
Electrical Features	
Supply voltage	9..28 Vdc
Power consumption	max. 8 W (charging) *
Indicators	Battery charging (red) Charge completed (green) Power (yellow)
Time of recharge	NiMh / NiCd batteries: 4 hours
Environmental Features	
Working temperature	0° to +40 °C / 32° to 104 °F
Storage temperature	-20° to +70 °C / - 4° to 158 °F
Humidity	90 % non condensing
Protection class	IP30
Communications	
Interface	RS232
Baud Rate	9600
Data Bits	8
Stop Bit	1
Parity	None
Mechanical Features	
Weight	about 250 g. / 8.81 oz
Dimensions	208 x 107 x 55.5 mm / 8.1 x 4.2 x 2.18 in
Material	ABS

* Having a switching regulator inside, the C-GRYPHON draws the same power, regardless of the supply voltage, i.e. as the input voltage increases the current drawn decreases.

TROUBLESHOOTING

PROBLEM

A beep or a LED blink signals an interruption of the radio communication with the remote Bluetooth® device.

SOLUTION

- It is possible that the distance from the remote Bluetooth® device is more than 10 m or that an obstacle interrupted the communication.
- Restart the radio communication.

PROBLEM

The reader is Master and is not able to initialize radio communication with the remote Bluetooth® device server.

SOLUTION

- Put the reader near the remote Bluetooth® device and try to initialize the radio communication again.
- Make sure that:
 - the remote Bluetooth® device is powered;
 - the protocol version is compatible with Gryphon™ BT's protocol;
 - the remote Bluetooth® device is not yet connected to another BT device with the same SPP.
- Repeat the remote Bluetooth® device address procedure.
- Display Gryphon™ BT configuration by placing the reader on the C-GRYPHON and sending the Transmit Configuration command.

PROBLEM
The remote Bluetooth® device discovers a Gryphon™ BT within its range of radio communication but is not able to communicate with it.
SOLUTION
<ul style="list-style-type: none">• Make sure that:<ul style="list-style-type: none">- the remote Bluetooth® device has not any communication protection (i.e. a password);- the protocol version is compatible with Gryphon™ BT's.

PROBLEM
It seems that the Gryphon™ BT radio communication range is less than 10 m.
SOLUTION
<ul style="list-style-type: none">• Check that there are no obstacles to radio transmission between the devices.

SERVICES AND SUPPORT

Datalogic provides several services as well as technical support through its website. Log on to www.datalogic.com/services/support and click on the [links](#) indicated for further information including:

- [Services - Warranty Extensions and Maintenance Agreements](#)
- [Support - Software Driver Downloads](#)
- [Contact Us - Listing of Datalogic Subsidiaries and Quality Partners](#)
- [Authorised Repair Centres](#)
- [Products >Hand-Held Readers >Software Tools - DL Sm@rtSet™](#)

DL Sm@rtSet™ is a Windows-based utility program which allows device configuration using a PC. It provides RS232 interface configuration as well as configuration barcode printing.

WARRANTY

Datalogic warrants this product against defects in workmanship and materials, for a period of 24 months from the date of shipment, provided that the product is operated under normal and proper conditions.

Datalogic has the faculty to repair or replace the product, these provisions do not prolong the original warranty term.

The warranty does not apply to any product that has been subject to misuse, accidental damage, unauthorized repair or tampering.

PATENTS

This product is [licensed](#) under one or more of the following U.S. patents:

4,282,425; 4,570,057; 4,766,300; 4,894,523; 5,021,642; 5,038,024; 5,081,343; 5,095,197; 5,144,119; 5,144,121; 5,182,441; 5,187,355; 5,187,356; 5,218,191; 5,233,172; 5,258,606 and /or 5,288,985

This product is [covered](#) by one or more of the following patents and patent applications:

US 5,917,176; US 5,992,740; US 6,010,073;
US pat. Appl. 99US-320.643; US pat. Appl. 99US-362.988;
US pat. Appl. 98US-126.606; EP pat. Appl. 00EP-830.127;
EP pat. Appl. 00EP-830.122; EP pat. Appl. 98EP-830.336;
EP pat. Appl. 98EP-830.611; EP pat. Appl. 97EP-200.317;
EP pat. Appl. 97EP-830.408; EP pat. Appl. 96EP-830.473;
EP pat. Appl. 96EP-830.660; EP pat. Appl. 96EP-830.439

COMPLIANCE

This device must be opened by qualified personnel only.

The batteries must be removed before opening the device.

Modifications or changes to this equipment without the expressed written approval of Datalogic could void the authority to use the equipment.

This device complies with PART 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference which may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

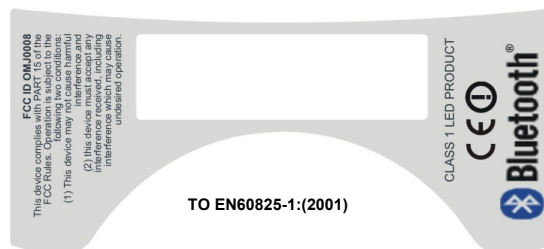
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Contact the competent authority responsible for the management of radio frequency devices of your country to verify the eventual necessity of a user license.

Refer to the web site <http://europa.eu.int/comm/enterprise/rte/spectr.htm> for further information.

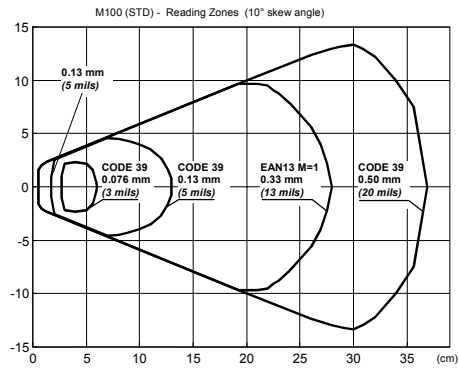


LED CLASS

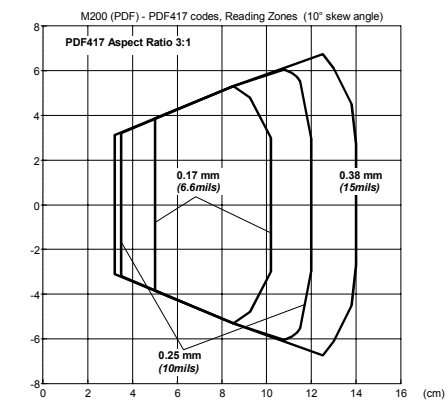
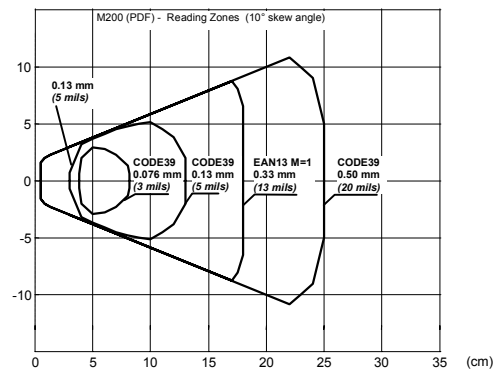


GRYPHON™ BT SERIES

GRYPHON™ BT100 (STANDARD)



GRYPHON™ BT200 (PDF)



HEX NUMERIC TABLE

**0****1****2****3****4****5****6****7****8****9****A****B****C****D****E****F**

DATALOG S.p.A.,
Via Candini, 2
40012 - Lippo di Calderara
Bologna - Italy



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declare que el

GRYPHON BT100, Cordless bar code reader
GRYPHON BT200, Cordless bar code reader

e tutti i suoi modelli
and all its models
et tous ses modèles
und seine modelle
y todos sus modelos

sono conformi alla Direttiva del Consiglio Europeo sottoelencata:
are in conformity with the requirements of the European Council Directive listed below:
sont conformes aux spécifications de la Directive de l'Union Européenne ci-dessous:
der nachstehenden angeführten Direktive des Europäischen Rats entsprechen:
cumple con los requisitos de la Directiva del Consejo Europeo, según la lista siguiente:

1999/5/EEC R&TTE

Questa dichiarazione è basata sulla conformità dei prodotti alle norme seguenti:
This declaration is based upon compliance of the products to the following standards:
Cette déclaration repose sur la conformité des produits aux normes suivantes:
Diese Erklärung basiert darauf, daß das Produkt den folgenden Normen entspricht:
Esta declaración se basa en el cumplimiento de los productos con las siguientes normas:

EN 60950-1, December 2001:	INFORMATION TECHNOLOGY EQUIPMENT – SAFETY – PART 1: GENERAL REQUIREMENTS
ETSI EN 300 328-2, December 2001:	ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM); WIDEBAND TRANSMISSION SYSTEMS; DATA TRANSMISSION EQUIPMENT OPERATING IN THE 2.4 GHZ ISM BAND AND USING SPREAD SPECTRUM MODULATION TECHNIQUES; PART 2: HARMONIZED EN COVERING ESSENTIAL REQUIREMENTS UNDER ARTICLE 3.2 OF THE R & TTE DIRECTIVE
ETSI EN 301 489-17, September 2000:	ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM); ELECTROMAGNETIC COMPATIBILITY (EMC) STANDARD FOR RADIO EQUIPMENT AND SERVICES; PART 17: SPECIFIC CONDITIONS FOR WIDEBAND DATA AND HIPERLAN EQUIPMENT

Ruggero Cacioppo

Lippo di Calderaia, 14.01.04

Ruggero Cacioppo
Quality Assurance Manager