LYNX CBN cctalk Italy
Reader for IC / Magnetic stripe / NFC Cards

Operator Manual

CE

Alberici CASH SOLUTIONS

Progettazione e produzione di sistemi di pagamento e accessori per macchine Gaming, Vending e Car-Wash

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STORICO REVISIONI			
Revisione n°	**Data**	**Modifica**	**Note**
Creazione	11.12.18	Creazione	
Rev. 1.01	26.06.19	Nuovi comandi ccTalk FFA2 - FFA3xxyy - FFABxx - FFABxxssnn	Fw A1.0.6
Rev. 1.02	30.09.19	Nuovi comandi ccTalk FFAD07 , FFAD08, FFAD24 (abilitazioni supplementari lettura chip)	Fw VA1.11 (LYNX hw 1) Fw VA2.04 (LYNX hw 2)

NOTICE

This manual has been drafted with the utmost care. Nevertheless, it is not possible to guarantee at all times the absolute correspondence of the descriptions contained therein with the actual characteristics of the product. Alberici S.p.A. declines any and all responsibility towards the User with reference to damages, losses, or claims of third parties, resulting from the use of the product or caused by incorrect interpretations of this manual. Alberici S.p.A. reserves the right to modify, without prior notice and in any way, any part of this manual and the technical specifications of this product, as part of the continuous pursuit of improvement of its products.

Dear Customer,
we would like to thank you and congratulate for your choice. We trust that you will appreciate the quality and performance of the LYNX card reader. This system communicates by cctalk protocol, AES 256 encrypted by the Diffie-Hellman key-exchange protocol.

Please read carefully this handbook, to obtain the most from this product.

1. Package content

The package contains:

- the LYNX BCN reader for magnetic stripes, chip and NFC cards; art. ref. ls **LC-L1AC**
- the Operator manual (this manual)

This product has been packed with the utmost care. In the case that you receive it damaged or incomplete, please notify immediately your findings to the Carrier, and ask him to record your findings on the delivery receipt.
All packaging material must be recycled or disposed of in compliance with your local applicable laws.

2. View of the product

Lynx Card Reader with its faceplate

3. Product description

3.1 Generals

This device can read magnetic stripe cards (ISO7810, ISO7811 standard), or cards with integrated microchip (IC) (ISO7816 standard). It can also read in contactless mode using NFC technology.
The card must be introduced and withdrawn manually. The reading takes place while the card is inserted.
Communication with the machine control board takes place via ccTalk interface.
The contact pins for reading the chip are controlled by soft clamping springs, preventing from possible deterioration.

When the card is inserted into the reader, it detects the tax code contained in the magnetic stripe or in the micro-chip, and transmits the data required by the master card. For example, in the case of machines whose use is forbidden to non-age people, the data relating to the age of majority shall be pertinent. Information on the date of birth can be obtained from the magnetic stripe. Additional data can be obtained by reading the micro-chip: tax code, name, surname, gender, common birth, municipality of residence.

Note: Memory Cards or Smart cards are typically used for identification or to manage complex data sets. The former are mainly used for applications of low complexity ,such as prepaid cards, loyalty cards, etc.. The commands are sequences of bytes encapsulated in a serial protocol. Smart cards are usually reserved for applications requiring a higher level of security.

3.2 Compatible cards

The IC card (microchip) must comply with the ISO 7816 standards (providing size and positions of the 8 contacts).
The physical features of the magnetic card must comply with ISO 7810 and ISO 7811:
- dimensions: 85.60 × 53.98 mm (see ISO7810 ID-1)
- relief: see ISO7811-1, -3
- recording format: (see ISO7811-2, -4, -5, -6)

3.3 Technical specs

Alimentazione / *Power Supply*	12 / 24 Vcc (+/- 5%)
Assorbimento/ *Current consumption*	300 mA (picco/*peak*)
Temperatura e Umidità operative / *Working Temperature and Humidity*	0-50 °C 10-90% RH (*non condens.*)
I.F. Comunicazione / *Communication I.F.*	ccTalk + protocollo di cifratura Diffie-Hellmann AES 256
Standard ISO / *Card ISO standard*	Carta IC / IC-Card: ISO7816
	Tessera Magnetica / *Magnetic card:* ISO7810, ISO7811
Vita utile / *Expected working life*	Operazioni testina magnetica / *Magnetic Head operations*: min. 200.000
	Contatti carta IC / IC-Card pins: min. 500.000 operazioni / *operations*
Dimensioni / *Size*	Vedi quote in sezione 5.1 / *Check section 5.1*
Peso / *Weight*	104 gr.

3.4 Available functions

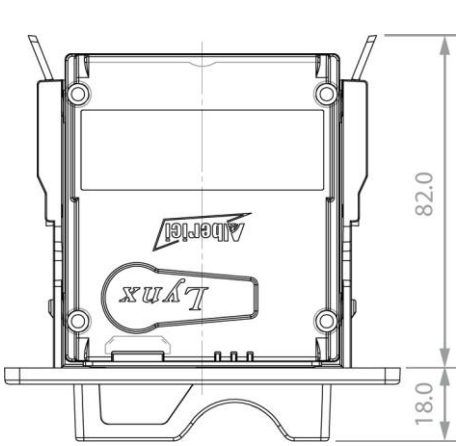
- Reads magnetic stripe cards 3-band (reads only 2nd band, containing the Tax Code)
- Reads IC cards (also known as microchip or Smart Card)
- Reads proximity cards (contactless) by NFC technology

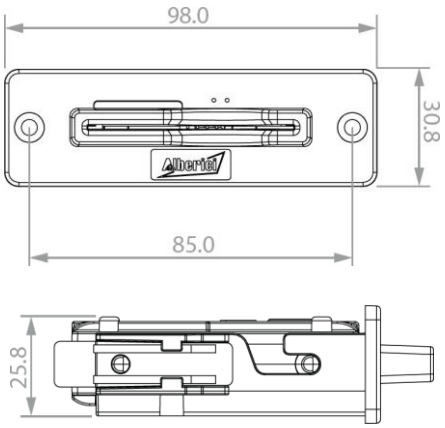
4. Warning

1 - Follow the instructions of this manual
2 - Disconnect the power supply before performing any maintenance
3 - Use your device in the range of temperature / humidity recommended
4 - While the device is in operation, do not allow any object to come into contact with the magnetic head or its connector, or errors may occur in reading
5 - Do not expose to dust, sand, chemical vapor, or spray water or other liquids
6 - Install preferably indoor
7 - Do not clean components with thinner or organic solvents
8 - Be careful to insert the card in the right direction: the IC Card must be introduced face up, the Magnetic stripe card must be slipped in face down to the right.

5. Installation

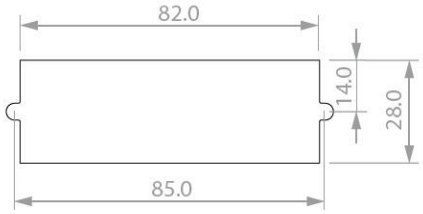
5.1 Dimensions



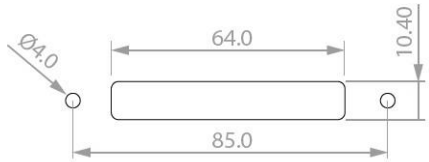


The front panel of the LYNX reader can be positioned outside or inside the cabinet.
Its snap-in/clip-out system easily delivers the reader body in hand for any quick maintenance operation.

MONTAGGIO ESTERNO OUTSIDE INSTALLATION



MONTAGGIO INTERNO INTERNAL INSTALLATION



5.2 Connections

5.2.1 ccTalk socket pin-out

6. Operation

When the card reader is in stand-by, its LEDs light up in still blue color.
While the card is being introduced into the reader slot, the LEDs light up in still yellow color.
When the card has been completely inserted to the bottom end, two cases are possible:

1. the reader recognizes the card and reads the data: the LEDs light up green. They remain lit in green for about 4 seconds. Then they turn off and stay off as long as the card stays inside the reader.
2. the reader does not recognize the card, or it fails reading the card data: the LEDs light up red, as long as the card remains inside the reader.

When the card is removed, the LEDs light up again in still blue.
On reset, no card or foreign body must be inside the reader. If on reset the reader detects the presence of a card, the error status will be shown by the LEDs flashing in red colour (one flash per second). The LEDs colour will be restored to still blue, and the player returns to stand-by condition, only when the card is removed.

7. Communication protocol

ccTalk communication commands

- Baud rate (BPS): default 9600 BPS
- Default ccTalk specific address = 0x33 (can be changed by header 251 Address change)

7.1 Extracting the date of birth (full age control)

Send the "Read date of birth" command at intervals from the master to the reader (see header FFA0 in section 7.2).
The reader replies NACK until the card gets inserted.
When the card is inserted and recognized (date of birth available), the reader will respond to the master with the date of birth from the card, as long as the card remains inside the reader. If instead the reader CANNOT read the inserted card,
the device shall respond by only one byte = 255.
The reader shall reply by NACK upon removal of the card.

Please note: if the card bears only the magnetic stripe (no chip), the date of birth returned to the host shall not include information about the Century: the year will be shown as a value between 0 and 99.

Examples:
date of birth 10/1/1990: with chip reading, year format = 1990 / magnetic stripe reading only, year format = 90;
date of birth 12/12/1973: with chip reading, year format = 1973 / magnetic stripe reading only, year format = 73;
date of birth 17/7/2009: with chip reading, year format = 2009 / magnetic stripe reading only, year format = 09.

Advanced implementations:
For more sophisticated implementations, the following two "auxiliary" commands are available for the master to send:
- FFAE: reading the status of the card (absent, recognized, not recognized);
- FFAF: request for a light signal to remind the User that he must remove the card (the reader flashes yellow until the card is removed).

7.2 Specific Commands of the Lynx reader

- header FFA0 – Read birth date

replies NACK if card is absent or not detected;
replies 4 byte with birth date, if card is inside the reader and is recognized;
replies 1 byte = 255, if card is inside the reader but it is not recognized.

Transmitted data : <none>
Received data : [anno MSB] [anno LSB] [mese] [giorno]

day: value 1 … 31
month: value 1 … 12
year = [MSB]*256+[LSB]
Please note! If the year data is read from magnetic stripe, its value will be returned as 0.. 99 (no Century information).

Ex. of full reading from the chip:	*Ex. of full reading from magnetic stripe:*	*Ex. of card not recognized/not detected:*
TX > 33 01 01 FF A0 2C RX < 01 04 33 00 07 C6 01 0A F0 year = 0x07C6 = 1990 month = 0x01 = 1 (January) day = 0x0A = 10	TX > 33 01 01 FF A0 2C RX < 01 04 33 00 00 49 0C 0C 67 year = 0x0049 = 73 month = 0x0C = 12 (December) day = 0x0C = 12	TX > 33 01 01 FF A0 2C RX < 01 01 33 00 FF CC

- header FFA001 - Read birth date (ASCII)

This command is alternative to the FFA0 command; the reader will return the date in ASCII format:
replies NACK if card is absent or not recognized / not detected;
replies 8 byte birth date if card is inside the reader and is recognized.

Transmitted data: [01]
Received data: 8 ASCII characters (4 = year, 2 = month, 2 = day)

Example of full reading from chip:	*Example of full reading from magnetic stripe:*
TX > 33 02 01 FF A0 01 2A RX < 01 08 33 00 31 39 39 30 30 31 31 30 2F year = 0x31 0x39 0x39 0x30 = '1' '9' '9' '0' month = 0x30 0x31 = '0' '1' day = 0x31 0x30 = '1' '0'	TX > 33 02 01 FF A0 01 2A RX < 01 08 33 00 30 30 37 33 31 32 31 32 34 year = 0x30 0x30 0x37 0x33 = '0' '0' '7' '3' month = 0x31 0x32 = '1' '2' day = 0x31 0x32 = '1' '2'

- header FFA2 – Read Card settings *(available from v. A1.0.6 up)*

Replies 2 bytes showing the existing settings with regards to activations and to priorities of the source files (chip/magnetic stripe).

Transmitted data : <none>
Received data : [activation window][reading priority]

[activation window] :
Bit 0 - magnetic stripe (0: disabled; 1: enabled)
Bit 1 - chip (0: disabled; 1: enabled)

[reading priority] = 1: magnetic stripe priority
2: chip priority

Esxample:
TX > 33 01 01 FF A2 2A
RX < 01 02 33 00 03 01 C6
(03=chip and magnetic stripe enabled; 01=priority to magnetic stripe)

- header FFA3xxyy – Modify Card settings *(available from v. A1.0.6 up)*

This command allows to modify the existing settings with regards to activations and to priorities of the source files (chip/magnetic stripe).
WARNING! Once made, modifications are permanent (the new settings get saved in non-volatile memory).

Transmitted data : [activation window][reading priority]
Received data : ACK

[activation window] :
Bit 0 - magnetic stripe (0: disabled; 1: enabled)
Bit 1 - chip (0: disabled; 1: enabled)

[reading priority] = 1: magnetic stripe priority
2: chip priority

Example:
TX > 33 03 01 FF A3 01 01 25
(01= magnetic stripe enabled, chip disabled; 01= priority to magnetic stripe)
RX > 01 00 33 00 CC

- header FFABxx – Read number of characters of the Magnetic stripe partition track *(available from v. A1.0.6 up)*
Replies the number of the characters that are detected as available in the requested partition track;
replies NACK if the card is not inserted, or if the requested data are not available.
Pay attention: the number of characters includes all the available ones (including, if present, 'start', 'end', 'LRC').

Transmitted data : [track index]
Received data : [number of characters]

[track index] = 01: track 1
02: track 2
[number of characters] = amount of available characters

Examples:
TX > 33 02 01 FF AB 01 1F (track 1)
RX < 01 01 33 00 21 AA (number of characters track 1 = 0x21)
TX > 33 02 01 FF AB 02 1E (traccia 2)
RX < 01 01 33 00 17 B4 (number of characters track 2 = 0x17)

- header FFABxxssnn - Read the characters of the Magnetic stripe partition track *(available from v. A1.0.6 up)*

Replies the ASCII characters read in the requested partition track;
replies NACK if the card is not inserted, or if the requested data are not available..
Pay attention: the number of characters includes all the available ones (including, if present, 'start', 'end', 'LRC').

Transmitted data : [track index][index of first character][number of characters]
Received data : ASCII

[track index] = 01: track 1
02: track 2
[index of first character] = index (base 0=zero) of start reading position
[number of requested characters] = 0: ALL the available characters;
> 0: number of requested characters
Notice: if the number of the requested characters is higher than the number of the available characters, only the available characters will be returned – therefore the number of returned characters will be less than the requested number.

Examples:
TX > 33 04 01 FF AB 01 01 10 0C
reading of track 1; starting from index 1; 16 characters)
RX < 01 10 33 00 50 47 4E 4E 44 52 37 ** ** ** ** ** ** ** ** A5
(PGNNDR7*********)

TX > 33 04 01 FF AB 02 00 00 1C
reading of track 2; starting from first character, index 0; ALL characters)
RX < 01 17 33 00 3B 38 30 33 38 30 30 30 30 38 30 30 ** ** ** ** ** ** ** ** 33 3F 35 0B
(;80380000800********3?5)

- header FFAE – Read Card status

Transmitted data : <none>
Received data : [status of the card]

[status of the card] = 0 : card is absent;
1 : card is inside the reader and it is recognized (= birth date available);
255: card is inside the reader, but it is not recognized.

Example:
TX > 33 01 01 FF AE 1E
RX < 01 01 33 00 00 CB (card is absent)

Example:
TX > 33 01 01 FF AE 1E
RX < 01 01 33 00 01 CA (card is inside the reader and it is recognized)

Example:
TX > 33 01 01 FF AE 1E
RX < 01 01 33 00 FF CC (card is inside the reader, but it is not recognized)

- header FFAF – Request Card Removal (light signal alert)

Transmitted data : <none>
Received data : [statuis of the card] (see command FFAE)

This command is active when the card is inserted into the reader; the purpose of this command is to attract the User's attention and warn her/him not to forget to remove the card from the reader: upon receipt of this command, the LEDs will flash yellow until the card has completely been removed.
If the card has already been removed, the command will have no effect.

Example:
TX > 33 01 01 FF AF 1D
RX < 01 01 33 00 01 CA (the card is inside the reader: the LEDs flash yellow)

Example:
TX > 33 01 01 FF AF 1D
RX < 01 01 33 00 00 (the card has been removed: the LEDs light up still blue)

7.3 ccTalk commands for reading the source file

- header FFAD00 - Reading of the "source"
Returns NACK if the card is absent (or not recognized);
returns 1 byte, if the card is inserted and recognized, with the following possible values:
1: magnetic stripe has been read; 2: chip has been read; 3: both chip and magnetic stripe have been read.
returns 1 byte = 255, if the card is inserted but HAS NOT BEEN recognized.
This command can be useful when other information than the date of birth is looked for. In fact, the information relating to the Family name (Surname), Name, Sex, Place of Birth, and Place of residence, are available only if the chip has been successfully read. If the card has only the magnetic stripe only, only the tax code can be read apart from the date of birth.

- header FFAD01 – Read Family Name / Surname (*)
returns the Family name in ASCII format (maximum 40 characters); or,
returns NACK if the requested information is not available.

- header FFAD02 - Read Name (*)
returns the name in ASCII format (maximum 40 characters); or,
returns NACK if the requested information is not available.

- header FFAD03 - Read Sex (*)
returns "F" or "M" character (1 byte in ASCII format); or,
returns NACK if the requested information is not available.

- header FFAD04 - Read Tax Code
returns the tax code (16 bytes in ASCII format); or,
returns NACK if the requested information is not available.

- header FFAD05 - Read Code of Birth Place (*)
returns the code of the town of birth (4 bytes in ASCII format); or,
returns NACK if the requested information is not available.

- header FFAD06 - Read Code of the Place of living (*)
returns the code of the town of residence (4 bytes in ASCII format); or,
returns NACK if the requested information is not available.

The following commands have been implemented starting from the FALCH versions endowed with fw v. A1.11 (hw 1 model) and v. A2.04 (hw 2 model):

FFAD07 - Read CHIP: Card Identifying Number
FFAD08 - Read CHIP: Card Identifying Number, Luhn-verified
FFAD24 - Read CHIP: Fiscal Code (Tax Id. Number)

- ***header*** FFAD07 – *Read CHIP: Card Identifying Number* (*)

Returns the Card Identifying Number that has been detected from the sector “MF/DF0/EF.ID_Carta” of the Chip.
The reader will answer by 16 ASCII format bytes; or, it will return NACK if no data is available or detected.
For instance, it will return NACK if the Card has not been inserted, or if the chip has NOT been read.
Notice: the check digit of the Identifing No. is the 16th byte. The master should verify that the information is correct.
Ex.:
TX > 33 02 01 FF AD 07 17
RX < 01 10 33 00 36 30 33 30 36 30 38 ** ** ** ** ** ** ** ** 35 8E
(6030608********5)

- ***header*** FFAD08 – *Card Identifying Number, Luhn-verified* (*)

This command is same as FFAD07, except that the device will formally verify the data by using the Luhn formula (known also as Module 10). If the formula shows that the detected data shows that they are not correct, NACK will be returned.

- ***header*** FFAD24 – *Fiscal Code (Tax Id. Number)* (*)

The reader will answer by 16 ASCII format bytes; or, it will return NACK if no data is available or detected.
For instance, it will return NACK if the Card has not been inserted, or if the chip has NOT been read..
Esempio:
TX > 33 02 01 FF AD 24 FA
RX < 01 10 33 00 50 47 4E 4E 44 52 37 ** ** ** ** ** ** ** ** A5
(PGNNDR7*********)

(*) PLEASE NOTE: this information is available only if reading the chip.

7.4 ccTalk standard commands

The following ccTalk standard commands are available and active in the Lynx reader:

254 Simple poll

the reader replies by Ack :
TX > 33 00 01 FE CE
RX < 01 00 33 00 CC

253 Address poll

the reader replies by one single byte that is equal to the value of its address. This command is used in broadcast mode, by which the Master addresses all the Slaves, by querying them with address 0:
TX > 00 00 01 FD 02
RX < 33

252 Address clash

the reader replies by one single byte = value of its address. This command is used in broadcast mode, where the Master addresses all the Slaves, by querying them with address 0. Response time is pseudo-random from 1ms to 255 ms.
TX > 00 00 01 FC 03
RX < 33

251 Address change

the reader replies by Ack, and will take up the new address; from then on, it will answer to prompts if sent to such new address. The new addres is equal to the byte value sent as command data:
TX > 33 01 01 FB 32 9E (will take up new address 32)
RX < 01 00 33 00 CC

250 Address random

the reader replies by Ack, and will take up a new random address; from then on, it will only answer to prompts sent to such new address.
TX > 33 00 01 FA D2
RX < 01 00 33 00 CC

246 Request manufacturer id

the reader replies by the name of the Manufacturer:
TX > 33 00 01 F6 D6
RX < 01 08 33 00 41 6C 62 65 72 69 63 69 A9 (Alberici)

245 Request equipment category id

the reader replies by indicating what type of device it is:
TX > 33 00 01 F5 D7
RX < 01 0B 33 00 43 61 72 64 20 72 65 61 64 65 72 B4 (Card Reader)

244 Request product code

the reader replies by providing its peculiar product code:
TX > 33 00 01 F4 D8
RX < 01 09 33 00 4C 54 20 4C 4E 58 20 30 31 90 (LT LNX 01)

242 Request serial number

the reader replies by providing its distinctive serial number:
TX > 33 00 01 F2 DA
RX < 01 03 33 00 0C 00 00 BD

241 Request software revision

the reader replies by providing the release number of its internal software:
TX > 33 00 01 F1 DB
RX < 01 0B 33 00 75 31 2E 30 20 41 31 2E 30 2E 31 6E (u1.0 A1.0.1)

192 Request build code

TX > 33 00 01 C0 0C
RX < 01 07 33 00 4C 54 20 56 31 2E 30 20 (LT V1.0)

170 Request base year

TX > 33 00 01 AA 22
RX > 01 04 33 00 32 30 30 30 06 (2000)

8. Maintenance

Dust on the sensors, or on the magnetic head, could affect the performance of the reader. It is therefore recommended to clean the reader regularly, at least every 10.000 reading events.
- Make use of a simulation card moistened with alcohol to clean the magnetic head: insert it into the reader and withdraw it several times.
- Make use of a simulation card moistened with alcohol to clean the spring contacts for the chip: insert it into the reader and withdraw it several times.

9. Maintenance

The manufacturer will fix malfunctions arising from production faults in this machine or parts of it within 12 months from the date of sale.

All communications referring to guarantee repairs or replacements must be accompanied by the product serial number and the copy of the sale invoice.
To obtain your guarantee repair, please send the part to the Dealer where you purchased the machine, together with the following documents:
- copy of the sale invoice
- delivery note stating “returned for guarantee repair”
- detailed report of the problem found and the circumstances in which it occurs.

Before sending the product, please get in touch with your Dealer or with Alberici S.p.a. (+39 051 944300); very malfunctions can be fixed via a simple phone call, saving you costs and time.

Alberici S.p.a. will verify that warranty is applicable, i.e. that problem is not caused by:
- transport damages
- damages from incorrect installation or wrong configuration
- installation in premises or areas not complying with the prescribed safety requirements
- intentional or unwilled tampering
- wrong or careless use or maintenance
- non-compliance with precautions prescribed (see Chapter 4. Caution)
- natural disasters, vandalisms, intentional or unintentional damage

Guarantee is considered automatically expired if outer and inner labels are missing.

Transport costs of repaired products are at the Customer’s charge.

10. Customer service

Alberici S.p.a. will be pleased to offer all the necessary information on use, ordinary maintenance and technical service. Please call (+39) 051 944300 and specify if your request concerns information on use or technical support.

DICHIARAZIONE DI CONFORMITÀ

CE

DIRETTIVA 2014/35/UE - DIRETTIVA 2014/30/UE

La ditta **Alberici S.p.A.**, avente sede in via **Ca' Bianca 421, 40024 Castel San Pietro Terme (BO) – Italia,**

D I C H I A R A

che il dispositivo classificato nella famiglia di prodotto **dispositivo elettronico – Lettore di Tessere Lynx**, identificato univocamente da:

Modello	Configurazione			N° di Serie e/o matricola
Lettore di tessere LYNX	☐ **ccTalk**	☐ **Crypto**	☐ **USB**	
Lettore di tessere FALCH	☐ **Pulse**	☐ **MDB**	☐ **RS232**	– – – – – – – – – – – –

essendo realizzato conformemente al modello campione denominato CH-AC01 avente matricola n° CH0-1000044, finito di testare positivamente il 18/11/2013 ai fini EMC e LVD , rapporto (7835/757): 7835CE-Lynx CBN ccTalk.doc, dalla NEW STP S.r.l., con sede legale in via P.F. Andrelini, 42, 47121 Forlì (FC), Italia e sede operativa in via San Donnino, 4, 40127 Bologna (BO), Italia, risulta essere conforme a quanto previsto dalle seguenti direttive comunitarie:

a) le norme armonizzate (per i punti applicabili):
- CEI EN 55014-1 (CEI 110-1);
- CEI EN 55014-2 (CEI 210-47);
- CEI EN 55022 (CEI 110-5);
- CEI EN 55024 (CEI 210-49);
- CEI EN 60065 (CEI 92-1);
- CEI EN 60335-1: 2013-05 (CEI 61-150);
- CEI EN 60335-2-82 : 2005-08 (CEI 61-226);
- CEI EN 60950-1 (CEI 74-2);
- CEI EN 61000-3-2 (CEI 110-31);
- CEI EN 61000-3-3 (CEI 110-28);
- CEI EN 61000-4-2 (CEI 210-34);
- CEI EN 61000-4-3 (CEI 210-39);
- CEI EN 61000-4-4 (CEI 210-35);
- CEI EN 61000-4-5 (CEI 110-30);
- CEI EN 61000-4-11 (CEI 110-29);
- CEI EN 61000-6-1 (CEI 210-64);
- CEI EN 62233 (CEI 61-251).

b) In conformità ai requisiti essenziali di sicurezza della Direttiva Bassa Tensione:
- 2014/35/UE del 26 Febbraio 2014;
- L. 791 del 18 Ottobre 1977 e s.m.

c) in conformità ai requisiti essenziali di sicurezza della Direttiva Compatibilità Elettromagnetica:
- 2014/30/UE del 26 Febbraio 2014;
- D.Lgs. 194 del 06 Novembre 2007

che conferiscono la presunzione di conformità alla Direttiva 2004/108/CE

Castel San Pietro Terme (BO), Italia, lì, ___/___/_____

Fabrizio Alberici

Il Presidente

Alberici S.P.A.
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NOTICE

Alberici S.p.A. reserves the right to make changes to the equipment described and to its technical specifications at any time and without notice, in pursuit of continual improvement of this product.

Alberici®

Progettazione e produzione di sistemi di pagamento, accessori per videogames e macchine vending
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