GAPOSA®

434MHz range

EN

linkIT-RS232

Home automation interface for control of Gaposa radio motors.

TECHNICAL CHARACTERISTICS

- Individual or group control
- 16 or 24 individual channels
- Tilting mode
- Intermediate position
- LED for feedback
- Reset and programming buttons
- Cables available for easy connection

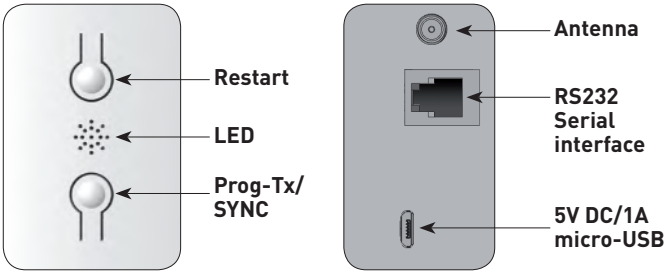
Hub Input Voltage	5V
Hub Input Power	0.3 A Max.
Frequency	434.15 MHz
Connection	Wi-Fi
Wi-Fi network	2.4 GHz only
Range	30 mt / 98 feet
Protection Rate	IP20
Operation Temperature	0°C to 60°C / 32°F to 140°F

Flip these instructions for **Control4** version

Hardware

Reference	Channels	Country
linkIT-434-16	16	USA
linkIT-434-24	24	USA

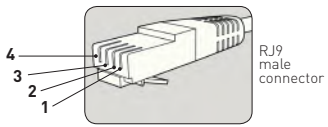
Comes with 2A, 5V micro-USB power supply and DB9 adapter cable.
It is possible to install more than one LinkIT provided your Controller has the requisite number of RS232 ports or a Remote RS232 - TCP/IP Convertor is used. No daisy chain possible.

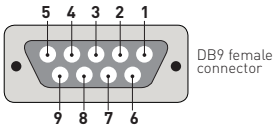


LED status

Green	On first power up
Red	When radio transmission is in progress
Blue	When the optional wireless/cloud service is connected

RJ9 – DB9 connection





USAGE	RJ9 PIN	DB9 PIN
5 Volt Power	1	NA
TXD	2	2
RXD	3	3
GND	4	5

Note: RS232 is transmitted via RJ9 Socket.
Warning: check for crossover of pins 2 & 3 depending on the equipment used.
5V Pin is optional and is provided to allow LinkIT to be powered via the RJ9 socket.
This is for advanced installation only and should not be used alongside the 5V micro USB input.

Cabling distance

15 meters or more if special cables are used.
Cable options:

Reference	Description
	Serial connector with RJ9

RS232 protocol

RS232 Setup: (9K6 8N1)

Baud Rate	9600
Data	8
Check Bit	None
Stop Bit	1

Control Commands:

Command	Byte	Tilt Up	0xba
Add Motor (PROG TX)	0xaa	Tilt Down	0xbb
Delete Motor (TX DELETE)	0xab	Stop	0xcc
Go to Interim Position	0xad	Up	0xdd
		Down	0xee

Transmission Structure:

Header	Bank	Channel	Command	Verify XOR B0-B3
B0	**B1**	**B2**	**B3**	**B4**
0x67	0x00	0x01	0xdd	0xbb

Example – Channel 1 – UP (Channel value Min 1 Max 8)

Bank:

Bank ID	Bank Function	Byte
A	**Address 1-8**	**0x00**
B	Address 9-16	0x01
C	Address 17-24	0x02

Banks B-C are optional depending on LinkIT SKU – I.E if you have an 8-channel version only bank A will function. A 24-channel version will have banks A-C.

Reply Structure:

Header	Command	Confirmation
B0	B1	B2
0x6 6	0xdd	0xff

Example – Confirmation Command UP – received

Usage:

The host device must send a 5-byte payload to LinkIT.

B0	Fixed Header Byte – 0x67
B1	Bank Selection from Bank A-C dependent on the target address
B2	Channel – This is always in the range 1-8.
B3	Control Command – see table above
B4	Verify – XOR of Bytes B0-B3 – See Example Table

For example, to close (down) a motor with bank 0 address 1 the command would be:
0x67,0x00,0x01,0xee,0x88 = 0x67^0x00^0x01^0xee - bitwise XOR

Examples of verify Commands:

HEAD	BANK	CHANNEL	COMMAND	VERIFY
0x67	0x00	0x01	0xee	0x88
0x67	0x00	0x02	0xee	0x8B
0x67	0x00	0x03	0xee	0x8A
0x67	0x00	0x04	0xee	0x8D
0x67	0x00	0x05	0xee	0x8C
0x67	0x00	0x06	0xee	0x8F
0x67	0x00	0x07	0xee	0x8E
0x67	0x00	0x08	0xee	0x81

On the table all codes are listed for motors 1 - 8 for command -0xee (Down)

For Up and Stop

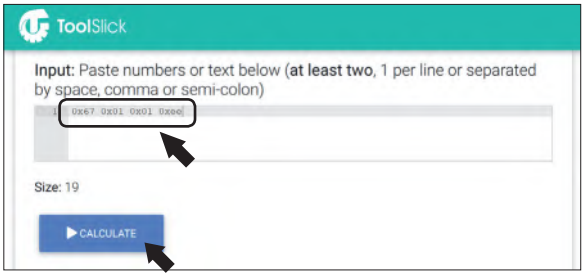
Change the Command to **0xdd - UP** and for **0xcc - STOP**

Note: now the bytes must be xored together to get the verification byte

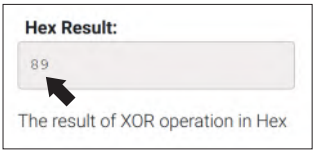
For easy calculation, use XOR Calculator link:

https://toolslick.com/math/bitwise/xor-calculator

Enter the bytes for example **0x67 0x01 0x01 0xee** :



Take the HEX result see example:



Using the above you can calculate the XOR for every code that you need:

To ensure this is correct the command and XOR for Bank 1, Channel 1, UP would be:

0x67, 0x01,0x01,0xdd - (XOR = ba)

Command to send: **0x67,0x01,0x01,0xdd,0xba**

SCAN ME

More information:
To access the support files for LinkIT, go to this website, or scan the QR Code.

http://www.gaposa.it/eng/linkit/