

Alien ALR-F800 readers support command line interface connections over the Bluetooth link using an optional Bluetooth USB adapter. The following application note contains detailed instructions on how to configure the reader in order to establish a Bluetooth connection.

Reader Setup

Minimum reader firmware requirements:

- reader firmware version (ReaderVersion) 17.07.17
- reader OS version 170718 or installation of two system update patches

Check the reader OS version by either issuing the Alien ri os? command or looking at the OS section of the reader's Administration->System web page menu. If the OS version is 170718 or later, then no additional updates are required. If the OS version is earlier than 170718, then two additional patches must be installed in order to add Bluetooth support to the reader OS. The patches are available at the Alien FTP or web site:

- reader kernel update patch: alien-kernel-f800 16.08.12 armel.aep or later
- reader OS Bluetooth support patch: alien-bluetooth_16.08.11_armel.aep or later

After the patches are installed, reboot the reader and plug-in the Bluetooth USB adapter.

Issue the following reader command to start the serial Bluetooth service:

Alien> service serialbt start R d 30 serialbt (the service state must show 'R' for Running)

Determine the reader hostname (the hostname will be used at a later stage to identify the reader when adding Bluetooth serial port):

```
Alien>hostname?
Hostname = alr-0107d1
```



Client PC Setup

The next step is to configure a client PC to add a new Bluetooth COM port device (using Bluetooth SPP, Serial Port Profile). The specific instructions vary depending on whether this is done using the built-in (Windows/Linux) OS Bluetooth configuration utility, as well as the OS version, or Bluetooth configuration is done using the third party setup software that came with the Bluetooth device used on the PC.

Below are screenshots and instructions showing how to add Bluetooth serial port on a Windows 7 PC. Ultimately you should see a new COM port (implementing serial connection over Bluetooth link) that could be used as just like a regular serial port to communicate with the reader using ARP commands, stream tag data, or send notifications to the 'serialbt' address.



Open the Bluetooth Settings dialog:

Bluetooth Settings					
Options COM Ports Hardware Share PIM Interface					
Discovery Allow Bluetooth devices to <u>f</u> ind this computer					
To protect your privacy, select this check box only when you want a Bluetooth device to find this computer.					
Connections					
Allow Bluetooth devices to <u>c</u> onnect to this computer					
Alert me when a new Bluetooth device <u>w</u> ants to connect					
Show the Bluetooth icon in the <u>n</u> otification area					
Turn off the <u>B</u> luetooth adapter					
Change settings for a Bluetooth enabled device.					
<u>R</u> estore Defaults					
OK Cancel Apply					



Select the 'COM Ports' tab:

8	Blueto	oth Setti	ings							x
	Options	COM Po	orts Hard	ware	e Share	PIM In	terface			
This computer is using the COM (serial) ports listed below. To determine whether you need a COM port, read the documentation that came with your Bluetooth device.										
	Port		Direction	۱	Name					
					ſ				0	
	A <u>d</u> d <u>R</u> emove									
	Choose a COM port for a Bluetooth enabled device.									
	OK Cancel Apply									



Click the 'Add' button, then select Outgoing -> Browse...

8 Add COM Port
Select the type of COM (serial) port that you want to add:
Incoming (device initiates the connection)
Outgoing (computer initiates the connection)
Device that will use the COM port:
Browse
Service:
Learn more about Bluetooth device COM ports. OK Cancel



Find the Bluetooth Device with the name matching the reader hostname determined at an earlier step (usually one of the 'alr-xxx' devices), and click OK

Select Bl	luetoot	th Device					
		alr-00e8bf-0 Bluetooth Computer		alr-0107d1-0 Bluetooth Computer			
	J	Tile Bluetooth Other		Bluetooth LE Devic Bluetooth Other	e		
If you don't see the device that you want to add, make sure that it is turned on. Follow the setup instructions that came with the device, and then click Search Again.							
Sea	arch Ag	gain			ОК	Cancel	



Click OK and Windows will install a new serial port device and a new COM port will be added to the system:

8 Add COM Port
Select the type of COM (serial) port that you want to add:
Incoming (device initiates the connection)
Outgoing (computer initiates the connection)
Device that will use the COM port:
alr-0107d1-0 Browse
<u>S</u> ervice:
Serial Port
Learn more about Bluetooth device COM ports. OK Cancel



ALR-F800 Bluetooth Setup

Bluetooth Set	tings		x				
Options COM F	orts Hardware	e Share PIM Interface					
This computer is using the COM (serial) ports listed below. To determine whether you need a COM port, read the documentation that came with your Bluetooth device.							
Port	Direction	Name					
COM38	Outgoing	alr-0107d1-0 'Serial Port'					
A <u>dd</u> Remove Choose a COM port for a Bluetooth enabled device.							
OK Cancel Apply							



Open the serial terminal software (e.g.TeraTerm) and select the Bluetooth COM port:

Tera Term: New co	nnection	
© ТСР <u>/</u> ІР	Hos <u>t</u> : <mark>10.10.82.15</mark> ✓ Hist <u>o</u> ry Service: ○ Te <u>I</u> net ◎ <u>S</u> SH ○ Other	8 TCP port#: 22 SSH yersion: SSH2 ▼ Protocol: UNSPEC ▼
⊚ S <u>e</u> rial	Po <u>r</u> t: COM38: Sta COM3: USB COM4: USB COM38: Sta	ndard Serial over Bluetoo 👻 Serial Port (COM3) Serial Port (COM4) ndard Serial over Bluetooth link (

Click OK and you should see the Alien prompt:





Supported Bluetooth Devices

Currently ALR-F800 readers support Bluetooth USB adapters that are based on the Broadcom BCM20702 chipset. The following adapters have been verified to work with the ALR-F800:

- IOGEAR GBU521
- Medialink MUA-BA3

For more information and technical support email us at support@alientechnology.com



Alien Technology LLC 845 Embedded Way San Jose, CA 95138

(408) 782-3900 www.Alientechnology.com

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