

ALIEN TECHNOLOGY®

ALR-F800
Reader Firmware
Release Notes

October, 2019



ALR-F800

Reader Firmware

Release Notes



The following briefly describes the changes to the Alien RFID reader firmware and the supported devices.

19.10.24

ALR-F800

[Features and Enhancements]

- Added support for Alien antenna multiplexor (MUX). The antenna numbering is as follows:
0-3 for antennas attached directly to the reader RF ports ANT0-ANT3
10-17, 20-27, 30-37, 40-47 for MUX antennas attached to the reader antenna ports 0-3 respectively

Example 1: use all 8 antennas of a MUX connected to the reader RF port ANT0:

```
AntennaSequence = 10 11 12 13 14 15 16 17
```

Example 2: use antenna 0 connected to ALR-F800 port ANT0 and all 8 antennas of a MUX connected to the reader RF port ANT1:

```
AntennaSequence = 0 20 21 22 23 24 25 26 27
```

NOTE1: setting antennas with the `AntennaSequence` or `ProgAntenna` commands triggers antenna calibration. Depending on the number of antennas specified in the sequence, it may take some time.

NOTE2: `AntennaSequence` now allows up to 32 entries.

- Updated the `TagInfo` command to support the Alien Higgs-9 and Higgs-10 ICs as well as Higgs-EC and Higgs-9 ICs with XTID bit enabled.

[Changes and Bug Fixes]

- Fixed `{Tag|IO}StreamAddress` would not work when using DNS addresses (not numeric IP address).
- Fixed `AutoMode` with `AutoActio=macro` and `AutoStopTimer=-1` would execute the macro only once and never again
- Fixed reported `ChannelIndex` in LLRP mode was always 0

18.09.24

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[Changes and Bug Fixes]

- Added support for new regions.

18.02.28

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[Features and Enhancements]

- Enabled `Higgs3` option for the `ProgramAlienImage` command. `Higgs3_96` is now the default option.

[Changes and Bug Fixes]

- Fixed an issue with DHCP assigned addresses on the same subnet as the failover IP (192.168.1.x).
- Resolved an issue that could potentially lead to missing some tag reads.

17.11.13

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[Features and Enhancements]

- Updated the `TagInfo` command to support the Alien Higgs-EC ICs.
- Added an option for the `AcqG2TagData` command to use custom data names instead of the default ones (D1, D2, ...). The data name is the last optional argument in the `AcqG2TagData` command.

```
Alien> AcqG2TagData = 1 1 1
AcqG2TagData = 1 1 1
```

```
Alien>t
Tag:0000 0000 0000 0000 0000 02CC, Disc:2017/10/25 18:14:56.013, Last:2017/10/25
18:14:56.013, Count:1, Ant:0, Proto:2, D1:3000
```

```
Alien> AcqG2TagData = 1 1 1 PCWord
AcqG2TagData = 1 1 1 PCWord
```

```
Alien>t
Tag:0000 0000 0000 0000 0000 02CC, Disc:2017/10/25 18:15:10.811, Last:2017/10/25
18:15:10.811, Count:1, Ant:0, Proto:2, PCWord:3000
```

- Added an option `AcceptConnections=ALWAYS` to always drop the existing TCP client connection when a new connection request is made. The default behavior is to disconnect only if the connection request is made from the same IP address.
- All `AlienG2BlastXXX` operations are now supported in the `AcqG2Opts` command.
- The `ProgramAlienImage` command is now supported.
- Added an option to delete the Wi-Fi configuration file:
`service wifi conf del`
This option makes it easier to start "fresh" in cases when there are too many Wi-Fi parameters to reconfigure or when it's impossible to type the previously entered SSID because it contains unprintable characters.
- Improved accuracy of the reported tag RSSI in FM0 modes

[Changes and Bug Fixes]

- Fixed an issue with the `Kill` command that, in some cases, prevented reading tags after the command has been issued.
- Fixed an issue with the `CommandPort` could not be set.

17.07.17

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[Features and Enhancements]

- Added an option to report the number of tags/counts currently held in the Tag List: `tag ##?`
- Eliminated latency when setting General Purpose Outputs with the `ExternalOutput=<value>` command while `AutoMode` is running
- Added experimental support for M2 (Miller-2) mode options to the `RfModulation` command for most localities. Using M2 modes, in comparison with M4, allows for faster read rate at the expense of slightly worse sensitivity and noise rejection.
- Added support for Bluetooth USB adapters. Refer to Application Note-1045 for more details on how to configure reader Bluetooth connection.
- Added support for Wi-Fi USB adapters. Refer to Application Note-1046 for more details on how to configure reader Wi-Fi connection.
- Added `s` as an alias for the `service` command.
For example, `s all status` is equivalent to `service all status`

[Changes and Bug Fixes]

- Fixed setting `InitExternalInput` would not reply and cause a timeout
- Fixed an issue that, under certain circumstances, could result in discarding some tag reads in cases when Speed/RSSI filter was enabled
- Fixed unable to set Netmask and Gateway parameter values
- Fixed `service <name> enable|disable` command fails when executed twice in cases when the service is already enabled | disabled
- Fixed `AutoAction = macro <name>` would not run the macro as the `AutoMode` action in cases when the first execution of the macro fails (for example, if `G2Read/G2Write` command was part of the macro and it failed to read/write a tag)

[Features and Enhancements]

- Added an option to set per-antenna `AcqTime` to limit the inventory duration on a specific antenna. The countdown starts every time the reader switches to an antenna. The total inventory duration specified by `AcqTime=<time_msec>` setting still applies and, if set to a non-zero value, will stop the inventory before any per-antenna `AcqTime` settings expire.

```
AcqTime <ant>?  
AcqTime = <ant> <time_msec>
```

- Added an option to show the number of tags/counts acquired since boot time: `tag @?`
- Added `ExternalInputDebounce=<time_msec>` command to debounce spurious GPI events. The GPI event will be registered if it stays stable for the duration of at least 2x of the `<time_msec>`.
- Improved general inventory performance
- Improved antenna detection speed
- Added `AcquireMode` parameter to the `Settings->Acquire` reader web page
- Added `RfModulation` parameter to the `Settings->Antennas` reader web page
- Added Spanish and French localizations to the web interface

[Changes and Bug Fixes]

- Fixed `InvertExternalInput` setting not being applied to the `IOList` runtime value on startup
- Fixed an issue that, under certain circumstances, could cause the reader to stop reading tags
- Fixed IPv6 settings not applied on the `Settings->Network` reader web page

16.11.15

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[Features and Enhancements]

- Improved general inventory performance in all modes especially for very large populations of tags
- Improved RSSI accuracy
- Added Miller 2 modulation for China locality
- Added localized web interface for China

[Changes and Bug Fixes]

- Updated permissions to allow serial port access for Ruby apps uploaded through the web interface
- Changed the default session to be session 2
- Fixed missing IPv6 address in heartbeat messages
- Fixed LLRP not properly executing certain specs
- Fixed RSSI always reported 0 in LLRP mode
- Fixed GPIO state not being initialized to the actual pin values on startup

16.08.03

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[Features and Enhancements]

- General read and write performance improvements

[Changes and Bug Fixes]

- Corrected an issue that prevented loading firmware patches

16.05.26

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[Features and Enhancements]

- Improved general inventory performance in all modes
- Improved interference rejection for ETSI locality
- Improved programming performance
- Added LLRP support
- Added support for Alien Higgs EC tags in the `TagInfo` command

[Changes and Bug Fixes]

- General stability improvements

16.04.06

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[Features and Enhancements]

- Added support for EMA locality

16.03.30

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[Features and Enhancements]

- Improved general inventory performance in all modes
- The following RF modulations are supported in the firmware: 25M4 (DRM), 12M4, 06M4, 25FM0 (STD) , 12FM0, 06FM0 (HS)
- The 'User Apps' web page now allows registering on-reader Ruby applications using the right-click menu, as well as adds the 'Move' and 'Copy' options.
- The 'Macros' web page now allows running macros using the right-click menu.
- (experimental) Added ability to automatically add custom web pages to the reader's web navigation interface. Simply add a capitalized folder at the root level of the web server, and it will show up as a submenu item in the reader's web navigation menu.

[Changes and Bug Fixes]

- Fixed an issue related to programming tags in Block mode.
- Fixed a resource leak issue in cases when a reader was unable to connect to a network listener when streaming tags or sending notifications
- Fixed an issue when using AutoXxxOutput parameters in AutoMode with the values set to -1.
- General stability improvements

15.12.11

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[Features and Enhancements]

- Initial production release of the ALR-F800 reader firmware.