



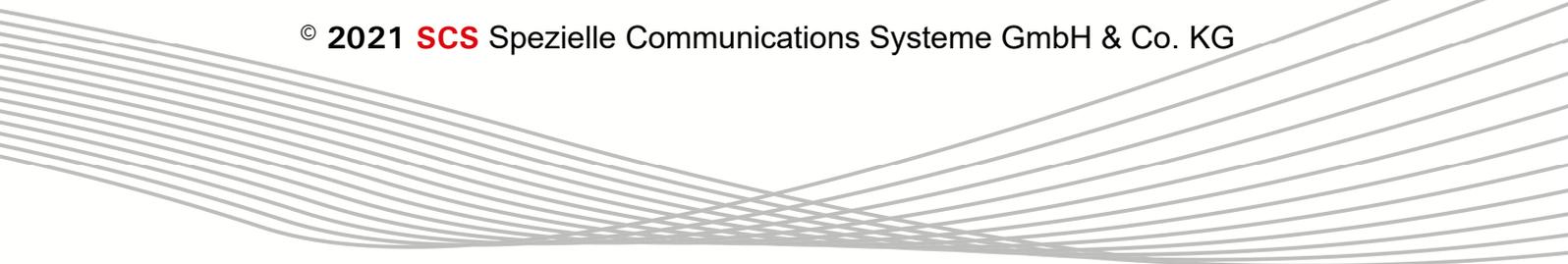
How-To License/Activate Advanced Modem Features

ALE, AES-256, SCSchat_ALE

for

P4dragon DR-7X00 HF Modems

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Introduction

The P4dragon modem supports number of different waveforms and functions. For example, the modem's default firmware supports PACTOR, Packet Radio, APRS, RTTY, and more.

The default firmware can be replaced with an upgrade that includes all default firmware features plus adds 2G Automatic Link Establishment (ALE), AES 256 encryption, and SCSchat_ALE support.

Upgrading is simple and quick; it follows the same process employed to update to a new firmware revision. However, once installed, a feature activation license must be applied to turn on the extended features. A P4dragon upgraded with the ALE firmware but without the feature activation license, continues to support all default waveforms, e.g., PACTOR, etc., and will support ALE functions for a total of 100 links.

To summarize.

- (1) Both the standard and ALE firmware support all default modem functions, such as PACTOR, Packet Radio, RTTY, etc.
- (2) Feature activation licenses need be applied to the ALE enabled firmware to turn on all or some of the following features.
 - i. 2G Automatic Link Establishment (2G ALE)
 - ii. SCSchat_ALE
 - iii. AES-256 encryption
- (3) ALE firmware function is limited to 100 ALE links without the feature activation license.

The feature activation license is linked to the modem's serial number. The license is obtained from SCS or your local SCS dealer.

For prices of the ALE and AES features please contact **SCS** or your local dealer.

The P4dragon ALE firmware is located at the following link. You can download and update your modem with the firmware package. However, note, that ALE operation will be limited to 100 links without also applying the feature activation license.

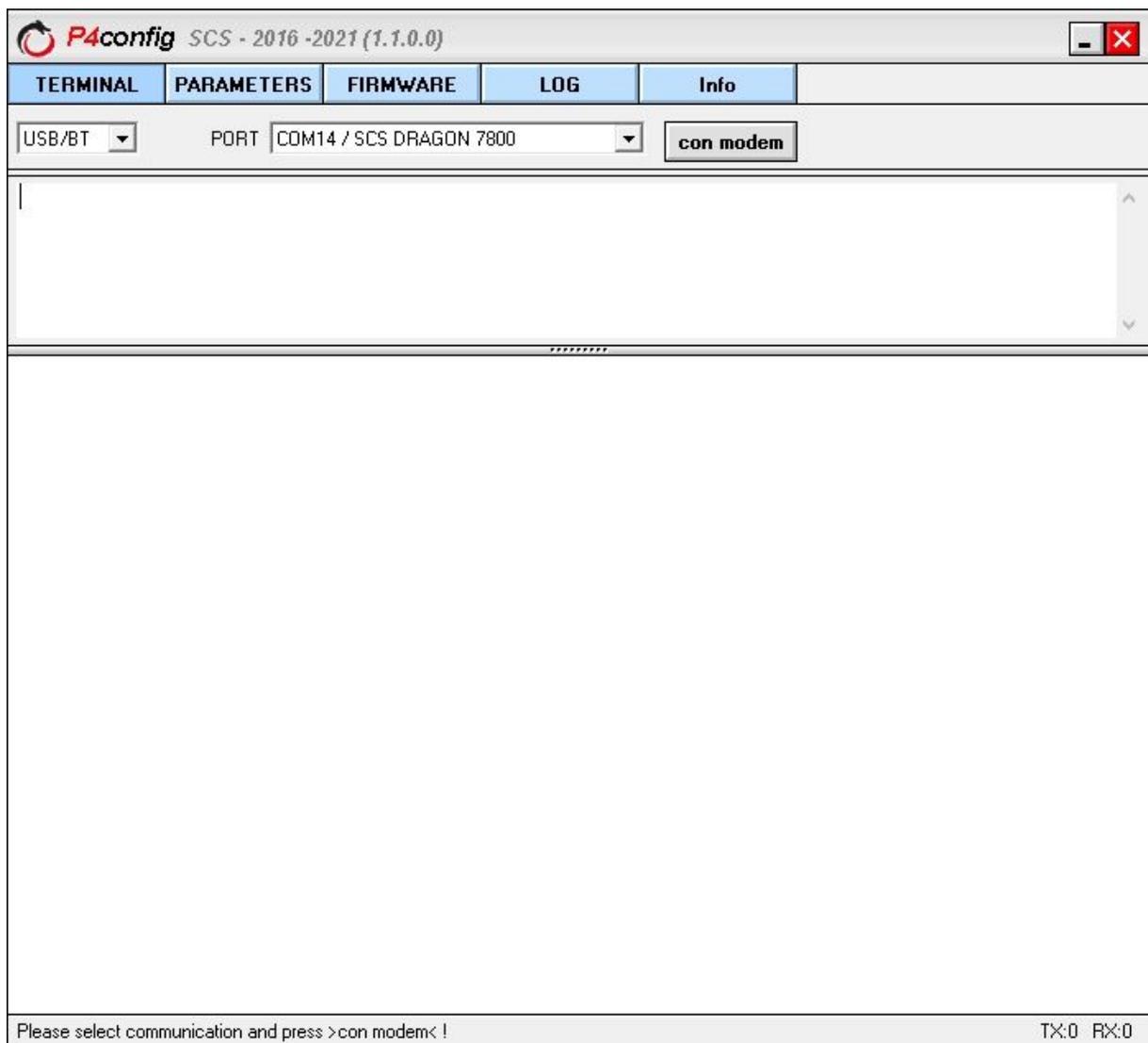
https://www.p4dragon.com/download/dragon_fw_2_40_00_ALE_dr7.zip

Retrieving the Serial Number from the Modem, Mailing it to **SCS**

The **P4config** tool is used to accomplish all the following examples. The P4config tool is obtained at the following link.

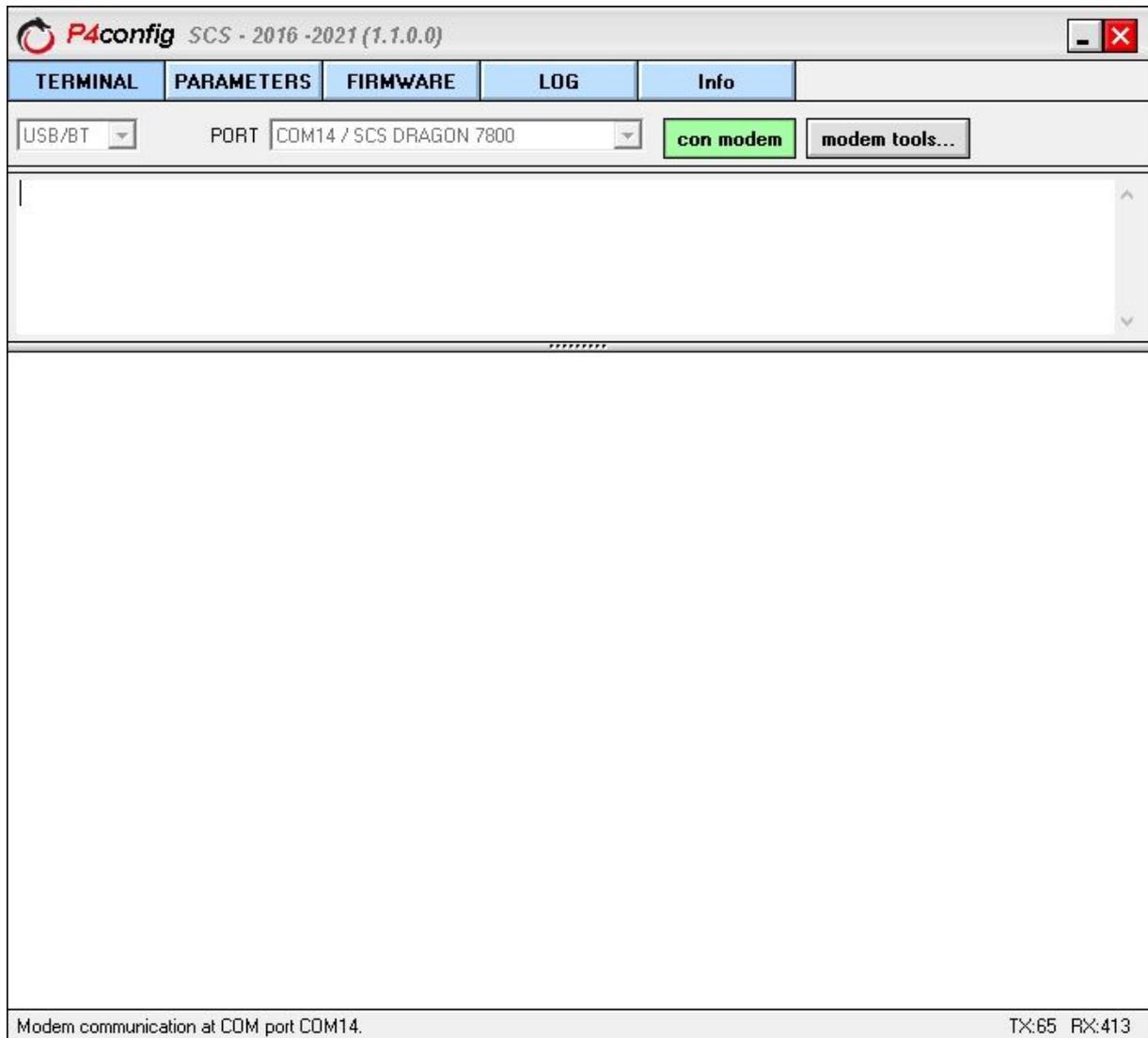
https://www.p4dragon.com/download/SCS_P4config%20V1.1.zip

Once downloaded, unzip the executable and the subfolder contained in the ZIP file. If you want, generate a shortcut to the program file on the desktop. The software consists of the single executable, P4config.exe, and the support directory. Starting the executable opens the user interface (see below graphic), P4config.exe generates an ini file in its subfolder when started the first time.



Once started, select the appropriate physical connection (USB/BT or LAN – upper left corner) and the correct PORT. The software shows “friendly names” that can easily be identified.

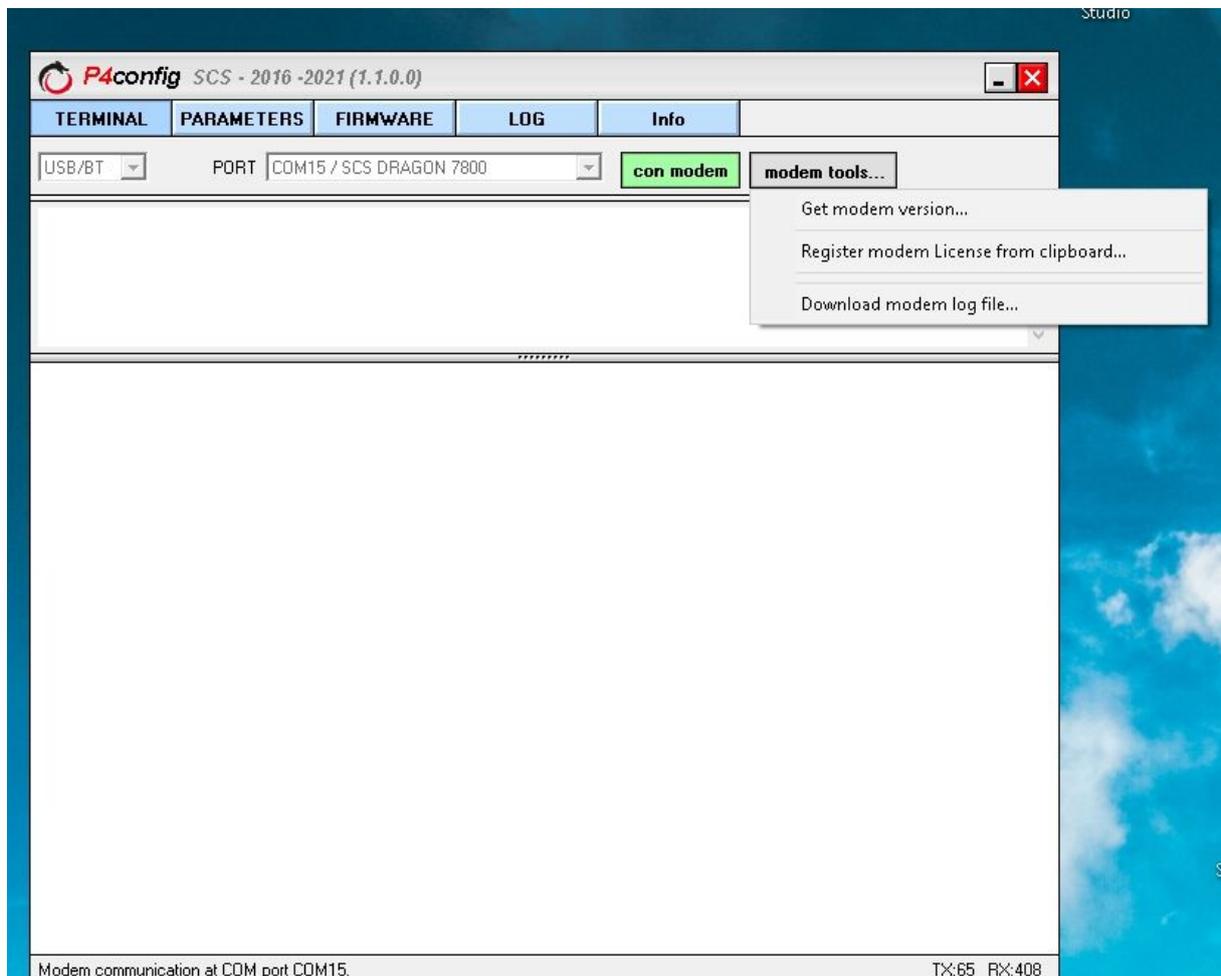
Now click “con modem”.
P4config connects to the modem.



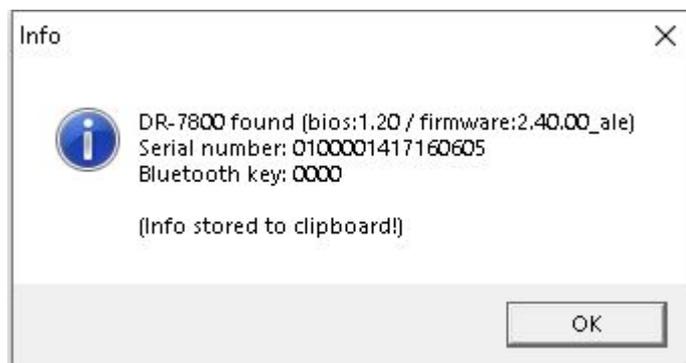
The “con modem” button turns green when the connection between P4config and modem is established,

Click “modem tools” in order to retrieve the serial number.

Now click “Get modem version...”



P4config will request the required information from the modem placing the results on the clipboard.



The information on the clipboard will look similar to the following.

DR-7800 found (bios:1.20 / firmware:2.40.00_ale)

Serial number: 0100001417160605

Bluetooth key: 0000

Please paste this information to the ordering E-Mail you send to **SCS.**

mailto: info@scs-ptc.com

Don't forget to mention the features you need:

- **ALE**
- **AES**
- **SCSchat_ALE**

SCS will send you the appropriate 20-character license code required for permanent use of the advanced features.

You may order a key to enable a single feature adding additional features at a later date. Currently enabled feature licenses will always remain valid.

Storing the Features License Code to the Modem

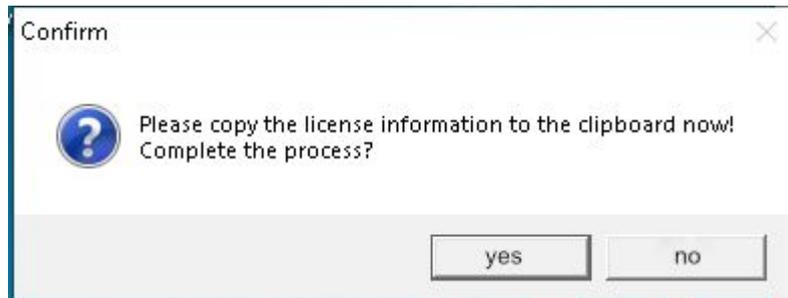
After receiving the 20-character license code from **SCS** by email, P4config is used to update the modem with the feature license; in addition, you can use P4config to interrogate the modem and see what features are currently licensed.

The feature license string you receive from **SCS** always starts with the FLICENSE command, followed by the serial number of the modem and the actual license code; here's an example:

```
FLICENSE 010000141747B76D AEINFARMUAZACBFACCD5
```

Copy the license string from your email to the clipboard. For example, highlight it in the email then right click, then select Copy. Note, make sure you highlight the entire license string from FLICENSE to the end.

Now open the P4config "modem tools" menu, then click "Register modem License from Clipboard". P4config confirms you want to register the license; you click "yes."



The software confirms the licensing process.

The advanced features you ordered are now permanently licensed!

Direct use of a TERMINAL Software for Licensing

While P4config simplifies accessing modem serial number and license status as well as entering the license string, a simple terminal can be used to accomplish the same functions.

The modem always powers up in terminal mode. Once started use your terminal to establish a connection with the modem. How to establish the connection depends on the terminal you are using and won't be covered in this note.

There are only two commands you actually need for feature licensing. Enter these commands as described below in the input window of the terminal software.

cmd: FLICENSE

The FLICENSE command is used to send info to the modem and query the modem for license status.

Sending feature license info to the modem.

The FLICENSE command supports sending the modem a feature license string used to activate additional modem functions. that activates customized modem firmware features.

Example:

```
FLICENSE 010000141747B76D AEINFARMUAZACBFACCD5 <Enter>
```

```
OK
```

```
THANK YOU FOR LICENSING THE P4dragon FIRMWARE!
```

```
FLICENSE: 010000141747B76D AEINFARMUAZACBFACCD5
```

Query the modem for license status.

Enter the FLICENSE command without any parameters.

Example:

```
cmd: flicense
```

```
FLICENSE: 010000141747B76D AEINFARMUAZACBFACCD5
```

```
LICENSED FEATURES:
```

```
-----
```

- 2G ALE option
- SCSchat_ALE support
- AES-256 option

The modem will reply with any registered licenses and identify the features they support.

cmd: SYS SERNum

The “SYS SERNum” command queries the modem for its electronic serial number and then displays the results. This number is always required for generating an FLICENSE code at **SCS**.

Example for retrieving the serial number:

```
cmd: sys sern
```

```
Serial number: 0100001417160605
```

SCS

Spezielle Communications Systeme GmbH & Co. KG
Röntgenstraße 36
63454 Hanau
GERMANY
Internet: www.p4dragon.com
E-Mail: info@p4dragon.com

Tel.: +49(0)618185 00 00
Fax.: +49(0)618199 02 38

