

CAT-M Module USER GUIDE



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Cat-M Module Board User Guide

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Software Acknowledgements

Document Revision History

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|----------|-------------|-------------|
| 1 | 09 30, 2016 | Creation |

Referenced Documents

| Revision | Date | Document Name | Document Title |
|----------|-------------|-------------------------|-------------------------|
| 1 | 09 25, 2016 | Cat-M_Board_user_manual | Cat-M Board user manual |

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1.Introduction

This document describes how to use the Cat-M "Module" board, from boot to data traffic.

This document targets engineers who will need to use the Cat-M Module board for test activities and demos.

2.Board overview

The main interfaces and buttons are described in the picture below.



NOTE : A USB to Serial Adapter will be required to communicate with the Module

3.Board boot up

3.1. MFW

MFW is based on default.ELF file.

Note : That currently the FW is to be pushed from the Laptop and hence requires a dedicated Laptop per UE to be used at all times. Bootup procedure below needs to be performed everytime the UE is USB Powered down or Reset is performed.

3.2. BAT file for FW flashing

Please contact your Sequans POC for Batch file to Flash the UE & Latest FW

Firmware file (*.elf) should be renamed to default.elf & be placed under SQN_CATM_DM_STP_V0.3\SQN_FW_Load\Firmwares (Please unzip the Batchfile to get this location. Note this folder can be placed & run from anywhere on your PC, however it is important that *.elf file be placed inside the Firmwares folder)

Note : Firmware file & Bootloader both are both in *.elf but can be differentiated by size. Firmware file is approximately 3+ megabytes while the Bootrom will be approximately 1.5 megabytes

3.3. Bootup

- 1. Connect USB cable on the laptop to power up. Serial Ports will appear as you connect them to different UART ports.
- 2. Use putty or teraterm to open UE console through UART2 with the baud rate 115200
- 3. On UE press on the Reset button to have UE loading the bootrom and to be able to load the firmware
- 4. Copy your *.elf into the folder "SQN_FW_Load/Firmwares" with the name "default.elf"
- 5. Modify the "load_SQN_CatM_Fw.bat" script so as to use your correct COM port Number instead of the preconfigured "COM45" & set the Baud rate to 921600
- 6. Run the "load_SQN_CatM_Fw.bat" script
- 7. When the FW finish to load with 100%.
- 8. Now you can start your DM
- 9. Let's configure the DM if it was not done
- 10. DM->File->Preferences-> the window "Configuration" will open
- 11. Tick "enable UART"; then type correct COMM port corresponding to UART0 in the port name, use baud rate 921600 instead of 115200 on the baudrate section
- 12. Click on OK. Using the UART0 serial port UE can now be seen connected on the DM.

3.4. Bootloader Update

To check the current Bootrom Version Log into UE through console Port & The first line displays the current version of Bootrom.

| COM17 - Tera Term VT | Current Bootrom | | |
|--|--|--------------|------------|
| File Edit Setup Control Windo | Version | | |
| [0000000000] RBGerbil 11.40259 [0000000004] Reset cause 'EXT' | 990 '5.0.0.0 [25990]' '(real 'EXT' / ChoucendG : '0') [| rawRst '0x00 | 000001 ' 🔶 |
|] [00000000011] regConfig 0xEC7E3 [0000000014] Pupping costor 0x | 34AF01 | | III |
| [000000018] boot: Current fla [0000000023] [SFFF] Error: Wro | ash, timeout 10000, proto thp ong magic | | |
| [0000000027] boot: Switched to [0000000032] uart: using_uart1 |) uart1, timeout 60000, proto at L with baudrate 921600 | 1 7 97 | |
| LUUUUUUUU37] LAIJ Info: Forcin | ng baudrate to 115200 for AI neg | ociation | |
| | ANT Court to beat the Torne | | - |

Steps to update the Bootrom:

- 1. Connect UE USB cable on the laptop. Serial Ports will appear as you connect them to different UART ports.
- 2. Use putty or teraterm to open UE console through UART2 with the baud rate 115200 and keep it open all the while.
- 3. On UE press on the Reset button to have UE load the bootrom and to see the current version.
- 4. Copy your *.elf into the folder "SQN_FW_Load/Firmwares" with the name "default.elf". Modify the "load_SQN_CatM_Fw.bat" script so as to use your correct COMM port Number instead of the preconfigured "COM45" & set the Baud rate to 921600
- 5. Run the "load_SQN_CatM_Fw.bat" script
- 6. When the FW finish to load with 100%.
- 7. Go back to already open console port and press Enter. Mtools dedicated application text will appear on screen.
- To upgrade the Bootrom use the following commands. AT (Press Enter) AT+SMBB=0,"DROP" (Press Enter)
- 9. Bootrom is updated when console port returns "OK". Reset the UE Manually or use AT^Reset & from next boot up updated bootrom will be used.

See below image highlighting the above steps.

| | and the second s |
|--|--|
| 😃 COM17 - Tera Term VT | |
| File Edit Setup Control Window Help | |
| נו, נו געער או אין | |
| 5.0.0.0 [26014] by robot-soft at 2016-09-21 20:24:25LPU Wait for LPU to boot SLO started version 1 LPU ready mTools dedicated application. | DLP start |
| -> AT value = 1 = 0x1 \$ AT+SMBB=0,"DROP" | |
| ERROR \$ \$ AT+SMBB=0,"DROP" | |
| OK \$ at^RESET [000000000] RBGerbil 11.4026014 '5.0.0.0 [26014]' [0000000004] Reset cause 'SW'(real 'SW') (bootWDG : '0' [000000011] regConfig 0xEC7E34AF01 [0000000011] Running sector 0x1C080000 [000000014] Running sector 0x1C080000 [0000000018] boot: Current flash, timeout 10000, proto t [0000000023] [SFFF] Error: Wrong magic |) [rawRst '0x00000004'] hp |
| [0000000026] boot: Switched to uart1, timeout 60000, pro [0000000032] uart: using uart1 with baudrate 921600 [0000000032] [01] lpfo: Faxcing baudrate to 115200 for 0 | to at T perociation |
| Coordination in the second sec | |
| | Tojanoobit |

Please Note : Currently Reverting back to Older Bootrom is not compatible.

4.DM connection

Please contact Sequans POC for latest Version of DM tool.

4.1. Start DM

1. Click on "4G Debug & Monitoring tool"; Sequans DM window shall be displayed as below:

| A Sequans DM | | |
|--|-----------------------------------|-------------------------|
| <u>File R</u> eset <u>V</u> iews <u>D</u> ashboa | ards <u>E</u> xport <u>T</u> ools | <u>H</u> elp |
| Mode: Live events | | |
| Liser record central | | |
| Oser record control | | |
| Load cfg Start Basenar | me: | |
| | | |
| Connection status | - Background record | ing status |
| Main Connected | Impact on UE | Transparent |
| Sequansd Searching | Enabled event qty | 45 (+13 when recording) |
| Serial port status | Buffer fill level | 0% |
| ACM Disabled | Covered period | last 1 minutes |
| GPS Disabled | | |
| [UE events] Bitrate: 0 kb/s | Evt freq: 0 Hz Notif | freq: 0 Hz |

2. If not, make sure "File->Offline Mode" is untick.

4.2. Activate light events

1. Click on "Views->Record config"

| X Record co | onfiguration [LIVE] | and the set | - | |
|--------------------------------------|---|--|---|---|
| - User recon | d advanced configuration | | Event selection | User recording config import/export |
| Do noth | ing special under reduced when user re | cord size above 100.0 MB | Add base events Clear all Expand all Collapse all | Load .dmrec Save .dmrec |
| - Enabled ev Impact on | vents (10) UE Transparent | | Covered groups: Base, LTE-PHY-DL, LTE-RRC, cli, fsm, lte, ul-link Covered events: l1p-cinr0, l1p-cinr1, l1p-dl-ack, | Cripts and log configuration UE script called just after start of recording <custom> Apply Now Now</custom> |
| Quantity | Event name | Activation lo | 🗄 🗹 cli | |
| | catMsg cli=external-in cli=external-out cli-ims-in cli-ims-out cli-omadm-in cli-omadm-out cli-sequansd-in cli-sequansd-in | Added when res CLI External CLI External CLI Ims CLI Ims CLI Omadm CLI Omadm CLI Sequansd CLI Sequansd | G mink Fism gps Jog UTE-MAC VITE-PHY-DL UTE-PHY-UL VITE-RRC VITE-RRC VITE-RRC VIte | UE script called just before end of recording Custom> |
| 0 4 0 0 0 0 0 0 | cli-ue-in cli-ue-in cli-ue-out emm-auth-fsm emm-conn-fsm emm-tau-fsm emm-tst-fsm esm-bearer-fsm | CLI Ue CLI Ue Added when res Added when res Added when res Added when res Added when res | □ | UE log configuration called just after start of recording: Nov Sequansd log configuration called just after start of recording: Nov Nov Nov Nov Nov Nov Nov Nov |
| 0 0 0 0 0 0 0 | hp-cat-fsm hp-main-fsm hp-sms-mo-fsm hp-sms-nt-fsm hp-usin-fsm llp-cinr0 llp-cinr1 llp-dbr1 | Added when rec Added when rec Added when rec Added when rec Added when rec Added when rec Added when rec | | OMADM log configuration called just after start of recording: |

2. Click on "Add base events" this will enable basic LTE events, Add specific events if required.

4.3. Activate and stop DM logs

1. Before performing the test, activate DM logs by clicking on "Start" on "Sequans DM" window.



2. At the end of your test, stop DM logs by clicking on same button, then click on "Cancel". DM logs are located at "Basename" path

4.4. Power up & Power Down the UE

- 1. To power up the UE, type "poweron" then press Enter on "CLI for UE" window.
- 2. To power off the UE, type "poweroff" then press Enter on "CLI for UE" window.

Please run the command "addscanfreq 13 5230" before running any test in "CLI for UE" window

5. Establish Data Connection to PC

5.1. Setup the Modem & Baud Rate

Open the device manager, click on <u>Action Add legacy hardware</u>

| 🚔 Device M | anager | | - • • |
|--------------|---|---------|-------|
| File Actio | n View Help | | |
| de e la | Scan for hardware changes | | |
| 4.4 | Add legacy hardware | | |
| D . | Help | | |
| | isk drives isk drives isk drives VD/CD-ROM drives luman Interface Devices JE ATA/ATAPI controllers eyboards lice and other pointing devices fonitors letwork adapters orts (COM & LPT) rocessors ound, video and game controllers ystem devices niversal Serial Bus controllers | | |
| Add a legacy | (non Plug and Play) device to the con | nputer. | |

Click on Next



Select Install the hardware manually

| d Hardware | | |
|---|---|-----------------|
| The wizard can help you | install other hardware | |
| The wizard can search know exactly which h | for other hardware and automatically install it for you. Or, ardware model you want to install, you can select it from a | if you list. |
| What do you want th | wizard to do? | |
| Search for and | nstall the hardware automatically (Recommended) | |
| Install the hard | vare that I manually select from a list (Advanced) | |
| | | |
| | | |
| | | |

In the list, select Modem

SEQUANS Communications Confidential and Proprietary

| huda DC | | |
|--|------------------------|--|
| dilladare. | | |
| ad manuware | | |
| From the list below, select the type of hardware you a | are installing | |
| | | |
| | | |
| If you do not see the hardware category you want, c | lick Show All Devices. | |
| | | |
| Common hardware types: | | |
| maging devices | * | |
| Infrared devices | | |
| Media Center Extender | | |
| Memory technology driver | 10 | |
| Moderns | | |
| T Multi-port serial adapters | | |
| TPCMCIA adapters | | |
| Portable Devices | - | |
| | | |
| | | |
| | | |
| | < Back Next > Cancel | |

Check Don't detect my modem

| vevice manager | | |
|------------------|--|---|
| Action View | Help | |
| 🦻 🔟 🖬 🖬 | 12 | |
| huda-PC | 20 | |
| Add Hardware Wiz | ard | |
| Install New Mo | dem | |
| Do you want | Windows to detect your modem? | |
| - | | - |
| | Windows will now try to detect your modem. Before continuing, you should: | |
| | If the modern is attached to your computer, make sure it is turned on. | |
| | Quit any programs that may be using the modem. | |
| | Click Next when you are ready to continue. | |
| | Don't detect my modern; I will select it from a list. | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | < Back Next > Cancel | |
| | | |

In the list, select Communications cable between two computers

| huda-PC | | | |
|--|--|----------------------|--|
| Id Hardware Wizard | | | |
| Install New Modem | | | |
| | | | |
| Select the manufacturer | and model of your modern. If your modern is not it | sted, or if you have | |
| an installation disk, click | k Have Disk. | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Manufacturer | Models | | |
| Manufacturer (Standard Modern Types) | Models | puters | |
| Manufacturer (Standard Modern Types) | Models | puters. | |
| Manufacturer (Standard Modern Types) | Models | puters | |
| Manufacturer (Standard Modern Types) | Models | putens E | |
| Manufacturer (Standard Modern Types) | Models Communications cable between two com Parallel cable between two computers Standard 300 bps Modem Standard 1200 bps Modem | putens | |
| Manufacturer (Standard Modern Types) | Models Communications cable between two com Parallel cable between two computers Standard 300 bps Modem Standard 1200 bps Modem | puten | |
| Manufacturer (Standard Modern Types) This driver is digitally signed. Tell me why driver signing is | Models Communications cable between two com Parallel cable between two computers Standard 300 bps Modern Standard 1200 bps Modern Provided 1200 bps Modern Important | Puten | |

Select the COM port associated with the UART1 of the board (in this case, we use COM5)

| huda-PC | | |
|-----------------------------------|---|--|
| Install New Moo Select the por | o (e) you want to install the modem on. | |
| | You have selected the following modern: | |
| | On which ports do you want to install #? C All ports P Selected ports | |
| | COM3 COM4 COM5 COM5 | |
| | | |
| | | |

Click on <u>Finish</u>



Now in the device manager, under the <u>Modem</u> section, you can see the <u>Communications cable between</u> <u>two computers</u>

| Device Manager | |
|--|--|
| File Action View Help | |
| ** 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | |
| huda-PC Batteries Computer Disk drives Display adapters DVD/CD-ROM drives DVD/CD-ROM drives DE ATA/ATAPI controllers Keyboards Mice and other pointing devices Monitors Monitors Network adapters Porcessors Sound, video and game controllers System devices Universal Serial Bus controllers | |
| | |

Click right on it, and select Properties

| 🚔 Device Manager | | - 0 💌 |
|---|--|-------|
| File Action View Help | | |
| ♦ ♦ m 1 1 2 m 1 4 | 🔐 🕀 ඟ | |
| huda-PC Batteries Disk drives Disk drives Display adapters DVD/CD-ROM drives Qui Human Interface Device IDE ATA/ATAPI controlle Keyboards Mice and other pointing Modems Communications Network adapters Ports (COM & LPT) Processors System devices Universal Serial Bus | Is the second se | |
| Opens property sheet for the current | selection. | |

In the tab <u>Modem</u> list the baudrates for <u>Maximum Port Speed</u>, you will see that the maximum value is 115200.

| d hude DC | Commun | ications | cable betwee | n two comp | uters Pr | operties | X | - | |
|--|------------|--|--|------------|----------|----------|--------|---|--|
| > @ Batteries | General | Modem | Diagnostics | Advanced | Driver | Details | _ | | |
| Compact Disk drives Display adapters DVD/CD-ROM drives Human Interface Devis GE ATA/ATAPI control | Port: | COM5 ker volut | 0 () | н | sh | | | | |
| Keyboards Mice and other pointir Modems Monitors Monitors Monitors Monitors Ports (COM & LPT) Processors Sound, video and gam System devices Universal Serial Bus co | Max Dial (| 115 300 2400 2400 2400 2400 1920 1920 3840 5760 | Speed 200 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | | | | |
| | | | | | 0 | × | Cancel | | |

We want to make 921600 baudrate available. To do so we have to modify the base register.

Close the Properties window and start <u>regedit</u> as administrator SEQUANS Communications Confidential and Proprietary Go into <u>HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E96D-E325-11CE-BFC1-08002BE10318}\0000</u> Check the AttachedTo field value matches the UART1 COM port. Here we have highlighted an example of COM24.

| > 📙 BackupRestore | ▲ Name | Туре | Data |
|---|--|------------|--|
| Class | ab (Default) | REG SZ | (value not set) |
| - 40475BB51-5A02-4EE0-B36C-29040FAD2650} | AttachedTo | REG_SZ | COM24 |
| - [091BC97E-2352-4362-A539-10A6D8FF7596] | ConfigDialog | REG_SZ | modemui.dll |
| 1204/00F-AJC0-40FE-0514-030A/044A502} | B DCB | REG_BINARY | 1c 00 00 00 00 10 0e 00 15 20 00 00 00 00 0a 00 0a . |
| {252525251-0001-4772-07001-05402-05402-0557 | 🐹 Default | REG_BINARY | 00 00 00 00 00 00 00 00 00 00 00 00 00 |
| {34446E8E-37B4-4B16-9DA6-BEA2DB33465A} | E DeviceType | REG_BINARY | 00 |
| {36FC9E60-C465-11CF-8056-444553540000} | DriverDate | REG_SZ | 3-9-2000 |
| {3F966BD9-FA04-4EC5-991C-D326973B5128} | Contraction and Contraction an | REG_BINARY | 00 40 84 69 5a 89 bf 01 |
| 16F60B-25B3-4662-B732-99A6111EDC0B} | ab DriverDesc | REG_SZ | Communications cable between two computers |
| , {43675D81-502A-4A82-9F84-B75F418C5DEA} | DriverVersion . | REG_SZ | 6.1.7600.16385 |
| {4532C9EB-FEF9-43AC-83DA-D5DE1F9A2BFF} | 💐 EnumPropPages | REG_SZ | modemui.dll,ModemPropPagesProvider |
| 658EE7E-F050-11D1-B6BD-00C04FA372A7} | A FriendlyName | REG_SZ | Communications cable between two computers #2 |
| 21B56-6795-11D2-B1A8-0080C72E74A2} | 10 ID | REG_BINARY | c4 c3 d0 07 |
| H9CE6AC8-6F86-11D2-B1E5-0080C72E74A2} | and InfPath | REG_SZ | mdmhayes.inf |
| DE900-E320-IICE-BFCI-08002BE10318} | and InfSection | REG_SZ | M2700 |
| E967-E325-11CE-BFC1-08002BE10318} | ath LoggingPath | REG_SZ | C:\Windows\ModemLogs\ModemLog_Communica |
|)36E968-E325-11CE-BEC1-08002BE10318} | Manufacturer | REG_SZ | (Standard Modem Types) |
| 4D36E969-E325-11CE-BFC1-08002BE10318} | MatchingDeviceId | REG_SZ | pnpc031 |
| D36E96A-E325-11CE-BFC1-08002BE10318} | MaximumPortSp | REG_DWORD | 0x000e1000 (921600) |
| {4D36E96B-E325-11CE-BFC1-08002BE10318} | Model | REG_SZ | Communications cable between two computers |
|)36E96C-E325-11CE-BFC1-08002BE10318} | 100 PermanentGuid | REG_BINARY | a1 84 5e 59 91 14 dd 43 a9 24 82 13 92 27 42 a7 |
| 4D36E96D-E325-11CE-BFC1-08002BE10318} | 10 PortSubClass | REG_BINARY | 02 |
| 0000 | W Properties | REG_BINARY | 00 00 00 00 00 00 00 00 00 00 00 00 00 |
| 0001 | A ProviderName | REG_SZ | Microsoft |
| 1002 | ResponsesKeyNa | REG_SZ | Communications cable between two computers::(St |
| 1003 | 10 UINumber | REG_DWORD | 0x0000002 (2) |
| 004 | | | |
| 0005 | | | |
| 0007 | | | |
| 0008 | | | |
| 0009 | | | |

Double click on *Properties*

| ew Favorites Help | | | | |
|---|------------------------|---|-----------------------|---|
| b L BackupRestore | | Name | Туре | Data |
| 🖌 📙 Class | | (Default) | REG SZ | (value not set) |
| Image: Participation of the second state of | 650} | ab AttachedTo | REG SZ | COM24 |
| > 📙 {091BC97E-2352-4362-A539-10A6D8FF7 | 596} | | REG SZ | modemui dll |
| ▷ 📙 {1264760F-A5C8-4BFE-B314-D56A7B44A | 362} | | REG DINIARY | |
| > 📙 {25DBCE51-6C8F-4A72-8A6D-B54C2 | C0251 | | REG_DINARI | |
| ▷ ↓ {2BE28EB0-BC4A-11E1-9A96-E7C761 Ed | it Binary Valu | 8 | | |
| 34446E8E-37B4-4B16-9DA6-BEA2D | /alue name: | | | 0 0 000 |
| ▷-L {36FC9E60-C465-11CF-8056-4445535 | Properties | | | |
| > | i iopenies | | | 00 40 84 69 5a 89 6f 01 |
| ► 4116F60B-25B3-4662-B/32-99A611 | /alue data: | | | Communications cable between two computers |
| 436/5D81-502A-4A82-9F84-B/5F41 | 0000 00 0 0008 00 0 | 0 00 00 00 00 00 00 0 00 00 00 00 00 | 00 | 5.1.7600.16385 |
| | 0010 00 0 | <u>0 00</u> 00 30 00 00 | 000 | modemui.dll, Modem Prop Pages Provider |
| 4038EF/E-F030-11D1-808D-00C04F | 0018 00 C | 2 01 00 00 C2 01 | 00 <mark>.A.</mark> Å | Communications cable between two computers #2 |
| (40/21030-0/93-1102-0140-0000C/ | 0020 | | | c4 c3 d0 07 |
| (49CE0AC6-0F80-11D2-B1E3-0080C7 | | | | mdmhayes.inf |
| 4D36E966-E325-11CE-BEC1-08002B | | | | M2700 |
| 4D36E967-E325-11CE-BEC1-08002B | | | | C:\Windows\ModemLogs\ModemLog_Communica |
| 4D36E968-E325-11CE-BFC1-08002B | | | | (Standard Modem Types) |
| 4D36E969-E325-11CE-BFC1-08002B | | | | pnpc031 |
| ▶ | | | | 0x000e1000 (921600) |
| ▶ 📙 {4D36E96B-E325-11CE-BFC1-08002B | | OK | Cancel | Communications cable between two computers |
| ▶ | ***) | Party ennonencoura | | a1 84 5e 59 91 14 dd 43 a9 24 82 13 92 27 42 a7 |
| 4D36E96D-E325-11CE-BFC1-08002BE10 (4D36E96D-E325-11CE-BFC1-08002BE10 | 318} | 8 PortSubClass | REG_BINARY | 02 |
| Þ - 📙 0000 | | Roperties | REG_BINARY | 00 00 00 00 00 00 00 00 00 00 00 00 00 |
| Þ - 📙 0001 | | ProviderName | REG_SZ | Microsoft |
| 0002 | | ab ResponsesKevNa | REG SZ | Communications cable between two computers::(St |
| ▷ - L 0003 | | 11 UINumber | REG DWORD | 0x0000002 (2) |
| ▶ - 📙 0004 | | 20 | | |
| ▶ - 📙 0005 | | | | |
| ▶ | | | | |
| 0007 | | | | |
| 0008 | | | | |
| A 10009 | | | | |

Find the first occurence of <u>00 C2 01 00</u> and change it into <u>00 10 0E 00</u>

| ravonites neip | | | 1111 | - Amount |
|---|------------------|------------------|------------|--|
| DackupRestore | ^ | Name | Туре | Data |
| A Loss | | (Default) | REG_SZ | (value not set) |
| Image: Participation of the second | 40FAD2650} | ab AttachedTo | REG_SZ | COM24 |
| ▷ ↓ {091BC97E-2352-4362-A539-10/ | 6D8FF7596} | ab ConfigDialog | REG SZ | modemui.dll |
| ▷ | A7B44A362} | W DCB | REG BINARY | 1c 00 00 00 00 10 0e 00 15 20 00 00 00 00 0a 00 0a |
| ▷ | 4C2B4FC835} | 100 Default | REG BINARY | 00 00 00 00 00 00 00 00 00 00 00 00 00 |
| ▷ ↓ {2BE28EB0-BC4A-11E1-9A96-E7 | Edit Pipan/Value | 1 See D Clouit | X | 00 |
| > | | | 6.00 | 3.0.2000 |
| > 1 (36FC9E60-C465-11CF-8056-444 | Value name: | | | 00.40.84.60 52.80 bf 01 |
| 3F966BD9-FA04-4EC5-991C-D3 | Properties | | | |
| 4116F60B-25B3-4662-B732-99A (42575FD01 F02A 4A02 0504 PZ) | 61 Velue deter | | | Communications cable between two computers |
| | pre value data: | 00 00 00 00 00 | 10 | 0.1./600.16385 |
| >- [4532C9EB-FEF9-43AC-83DA-D | | | JU | modemui.dll,ModemPropPagesProvider |
| (4038EE/E-F030-11D1-B0BD-00 | 0010 00 00 | 00 00 30 00 00 0 | | Communications cable between two computers #2 |
| (40CF64C9 6F96 11D2 D1FE 00 | | 0E 00 00 C2 01 0 | | c4 c3 d0 07 |
| 49CE0AC6-0F80-11D2-BIE3-00 | 0020 | | | mdmhayes.inf |
| V-1. (4D30E903-E323-11CE-DFC1-00 | 02 | | | M2700 |
| MD36E067_E325_11CE_BEC1_08 | 02 | | | C:\Windows\ModemLogs\ModemLog_Communica |
| 4D36E968-E325-11CE-BFC1-080 | 02 | | | (Standard Modem Types) |
| 4D36E969-E325-11CE-BEC1-08 | 02 | | | pnpc031 |
| 4D36E96A-E325-11CE-BEC1-08 | 02 | | | 0x000e1000 (921600) |
| 4D36E96B-E325-11CE-BEC1-08 | 102 | | _ | Communications cable between two computers |
| ↓ {4D36E96C-E325-11CE-BEC1-08 | 02 | ОК | Cancel | a1 84 5e 59 91 14 dd 43 a9 24 82 13 92 27 42 a7 |
| 4D36E96D-E325-11CE-BFC1-08 | 00 | MULTINI VILLANSS | | |
| Þ | | Proportion | | |
| Þ-1. 0001 | | ab DroviderNome | DEC SZ | Microsoft |
| Þ-10002 | | | | Communications cable between two communications |
| Þ - 📜 0003 | | Responseskeyiva. | KEG_SZ | Communications cable between two computers::(St. |
| Þ 📙 0004 | | | REG_DWORD | 0x0000002 (2) |
| »- 📜 0005 | | | | |
| Þ 📙 0006 | | | | |
| Þ - 📙 0007 | | | | |
| »-) . 0008 | | | | |
| a 📙 0009 | | | | |
| AllUcorCottings | _ | | | |

Close regedit, return in the device manager and re-open the Properties window of <u>Communications cable</u> <u>between two computers</u> Select 921600 as maximum baudrate

| • | Commun | ications | cable betwee | n two comp | uters Pro | operties | | 1 | |
|---|---------------------------------|--|--------------|------------|------------------|-------------------------|--------|---|--|
| Huda-PC Satteries Disk drives More and other pointir Modems Communications of Monitors Metwork adapters Processors System devices Universal Serial Bus co | General Port Spez Mass | COM5 aker volur Low mum Port 9211 300 1200 2400 Cort 9500 23845 1921 3845 1922 | Speed | Advanced | Driver Driver | Details Details K | Cancel | | |

Open the *Network and sharing center*

| Y Wetwor F N | etwork and sharing center • • • | Search Control Panel |
|-------------------------|---|--|
| Control Panel Home | View your basic network infor | mation and set up connections |
| Change adapter settings | 😹 —— 🎲 | See full ma |
| settings | HUDA-PC Network (This computer) | Internet |
| | View your active networks | Connect or disconne |
| | | Access type: Internet |
| | Network | HomeGroup: Joined |
| | Home network | Connections: U Local Area Connection |
| | Change your networking settings | |
| | Set up a new connection or n | etwork |
| | Set up a wireless, broadband, up a router or access point. | dial-up, ad hoc, or VPN connection; or s |
| | Connect to a network | |
| | Connect or reconnect to a wi connection. | reless, wired, dial-up, or VPN network |
| | Choose homegroup and shar | ing options |
| | Access files and printers locat change sharing settings. | ted on other network computers, or |
| | Troubleshoot problems | |
| | Diagnose and repair network information. | problems, or get troubleshooting |
| See also | | |
| HomeGroup | | |
| Internet Options | | |
| Windows Firewall | | |

Click on Set up a new connection or network



| Set Up a Connection or | Network | |
|--|--|---------------------------------|
| Choose a connection | option | |
| Connect to the Int Set up a wireless, h | ternet broadband, or dial-up connection to the Internet | t. |
| Set up a new netw Configure a new re | ork outer or access point. | |
| Connect to a work Set up a dial-up or | place VPN connection to your workplace. | |
| Set up a dial-up co Connect to the Int | onnection terret using a dial-up connection. | |
| | | |
| | | |
| | | Next Ca |
| | | |
| ype the information | from your Internet service provider | (ISP) |
| ype the information | from your Internet service provider 1234 | (ISP) Dialing Rules |
| ype the information ial-up phone number: ser name: | from your Internet service provider 1234 [Name your ISP gave you] | (ISP) |
| ype the information ial-up phone number: lser name: assword: | from your Internet service provider 1234 [Name your ISP gave you] [Password your ISP gave you] | (ISP) Dialing Rules |
| ype the information ial-up phone number: iser name: assword: | from your Internet service provider 1234 [Name your ISP gave you] [Password your ISP gave you] Show characters Remember this password | (ISP) Dialing Rules |
| ype the information ial-up phone number: iser name: assword: onnection name: | from your Internet service provider 1234 [Name your ISP gave you] [Password your ISP gave you] Show characters Remember this password Dial-up Connection | (ISP) Dialing.Rules |
| ype the information ial-up phone number: lser name: assword: onnection name: Connection name: Connection name: Connection name: | from your Internet service provider 1234 [Name your ISP gave you] [Password your ISP gave you] Show characters Remember this password Dial-up Connection to use this connection nyone with access to this computer to use this of the provider of | (ISP) Dialing Rules connection. |

When the dialing window appear, click on $\underline{\mathit{Skip}}$

| Create a Dial-up Connection | |
|---------------------------------------|-------------|
| Connecting to Dial-up Connection | |
| i i i i i i i i i i i i i i i i i i i | |
| Dialing 1234 | |
| | |
| | |
| | Skip Cancel |

Click on *Close* on the next window

| 🕒 🔚 Create a Dial-up Connection | |
|--|-------|
| The connection is ready for use | |
| in the second se | |
| | |
| | |
| Connect now | |
| | |
| | Close |

Return in the <u>Network and sharing center</u> and click on <u>Change adapter settings</u> on the top left SEQUANS Communications Confidential and Proprietary



Click right on the *Dial-up Connection* and click on *Properties*

| | Start | this connection | Rename this conne | ction >> | 5 N | | 12 |
|------|---------|--|-------------------|----------------------|--------|--|----|
| Dial | -up Con | nection | Loca | Area Connection | | | |
| Cor | | Connect Status Cancel as Default Create Copy Create Shortcut Delete Rename Properties | Connection | (R) PRO/1000 MT Desk | top Ad | | |
| | | | | | | | |
| | | | | | | | |

In the <u>Options</u> tab, uncheck <u>Prompt for name and password, certificate, etc.</u> and <u>Prompt for a phone</u> <u>number</u>

| rganize + start this con | nection rename this connection Delete this connection # | (9)T | |
|---|--|------|--|
| Disconnected Disconnected Communications of | Dial-up Connection Properties General Options Daing options Dialrog options Prompt for name and password, certificate, etc. Include Windows logon domain Prompt for phone number Prompt for phone number Redial attempts: 3 Three between redial attempts: 1 minute Ide threshold: > PPP Settings OK | | |

Once the UE is ATTCHED to the Network, Type below commands to establish PPP connection to the Laptop Connect to the UART1 port(Used to load the FW) with baud rate of 921600 & then AT (Press Enter) AT+CGDATA="PPP",1,1

Once you see Connect message close the window and proceed to Next Step.

Note : It is important to close the window as otherwise the port remains occupied and PPP connections is not established.

Click right on the *Dial-up Connection* and select *Connect*



A dialog window opens, passes quickly the connection steps until it shows <u>Connected</u> for a few seconds, then it closes itself.

The console of the board shows that PPP connection is established and shows the local and remote IP adresses.



