

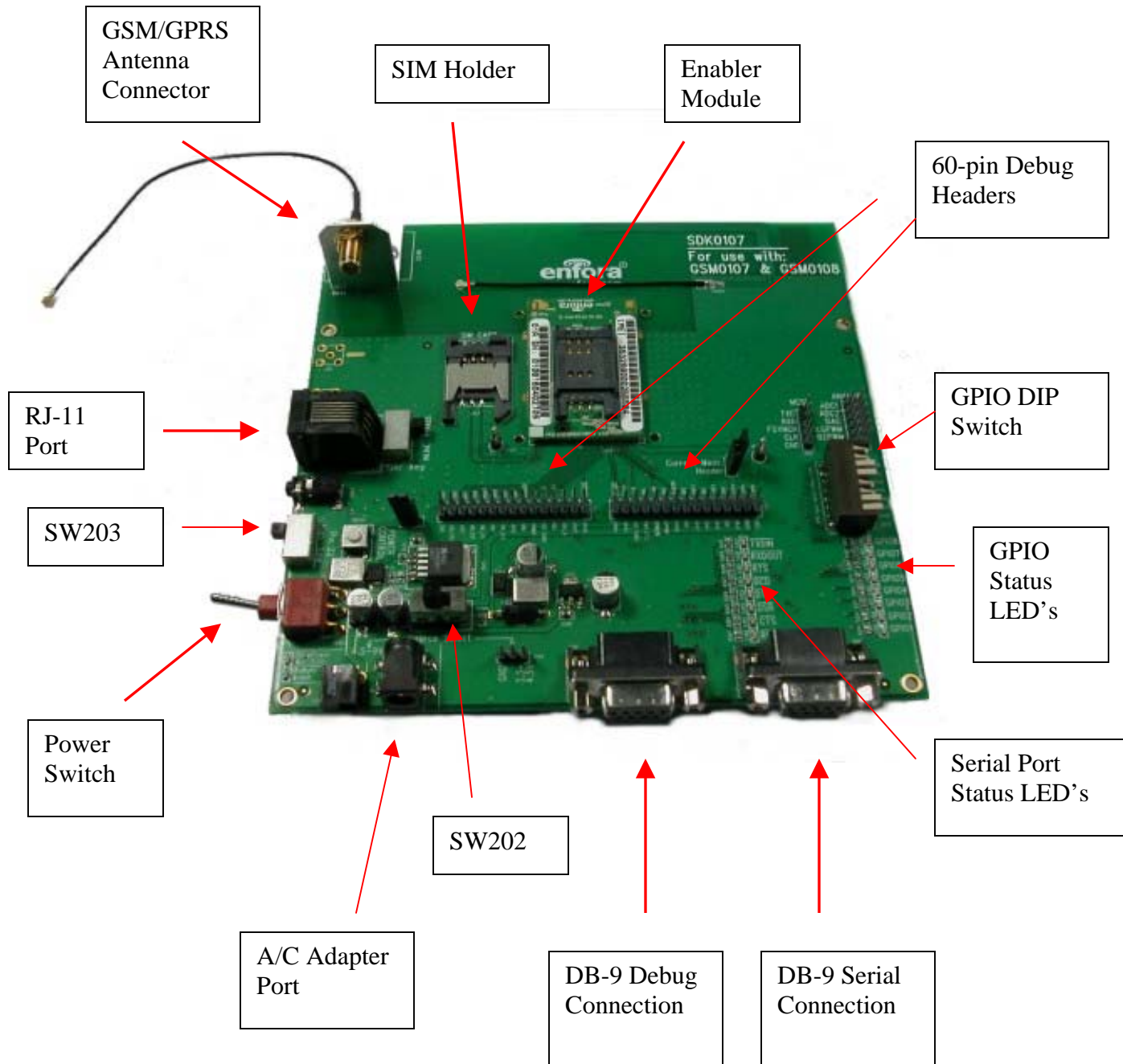
**Quick Start Guide:
GSM0107SD001**

Enabler II-G/Enabler II-E SDK Quick Start Guide

Revision 1.00

**Enfora, Inc.
www.enfora.com**

The Enfora SDK (Software Developer's Kit) is designed to allow Enfora partners to develop their own customer applications that will use the Enfora Enabler module.



The Enfora module can be removed from the SDK and added to the developer's own board.

Switches and Jumpers

Switch	Functionality	Default Position
SW201	Turn modem power on from power connectors J201 and J202	Off - Once a power supply has been applied to J201, J202 or J204 it may be placed in the on position to power on SDK and/or modem
SW202	Switches main power source between J201/J202 (to the left) and J204 (right)	To the left - If using J201 or J202
SW203	PWR_DWN Applies either AUX 3.3 V (up, or on, position) to power on; or ground (down or off position) to power off; to PWR_DWN (pin 22 of modem)	Up, or on, position -- For Enabler IIG . Down or off for Enabler IIE. Modem will not power on.
SW204	Momentary switch: temporarily applies ground to PWR CTRL pin (pin 24 of modem)	N/A J208 must be removed to manually control PWR_CTRL (pin 24)
SW301	GPIO DIP Switch Up is open, down is closed	All switches open
SW501	Inline/bypass switch for the handset speaker audio amp. Down for inline, Up for bypass	N/A
J207	Current measurement header. Remove jumper to facilitate current measurement of modem	Jumper installed
J208	PWR CTRL jumper, if installed, ground will always be applied to Pin 24 of the modem, automatically powering on. To manually control PWR_CTRL, remove jumper and control with SW204	Jumper installed

RF connectors: There are two RF cable assemblies. An SMA Connector has been provided to facilitate using an external antenna as well as a RF cable assembly connecting an internal quad band antenna.

External SIM Connector: An external SIM connector is provided on the SDK. Users may use either the external SIM or a SIM connector on the module, but not both at the same time. The SIM CLOCK, control and data lines are physically the same lines that go to the on board SIM. SIM's cannot be installed both on the external SIM connector and the on board SIM connector. It must be one or the other.

Audio Section: The audio section has a handset (J501) and a headset connector (J502). The audio path is configured with AT\$VSELECT command. AT\$VSELECT=0 selects handset and AT\$VSELECT=1 selects headset. Please see the AT command manual for the audio level commands. The inline speaker amplifier for the handset can be bypassed by moving SW501 to bypass.

GPIO Section: DIP switches and LED's have been provided to help facilitate testing of GPIO and GPIO based events. Each GPIO is tied to a DIP switch (SW301) and pulled up high through a resistor. If the GPIO is configured as an input (See AT\$IIOCFG), a high or low can be applied to each GPIO line by setting the corresponding DIP switch to open or closed. If it is open, the line will be pulled high. If it is closed the line will be pulled low.

Each GPIO line also has a corresponding LED. These LED's show the current state of the GPIO. The opposite side of the LED is tied to ground. If the LED is illuminated, then the GPIO line is high. If it is not illuminated, then the GPIO line is low

Serial Ports: The SDK has two serial ports. Each has been converted from 3V to RS232 levels. The RS232 modem port (J301) is the modem primary serial port. Prior to RS 232 conversion, each hardware line is tied to a status LED. On the opposite side of the LED, each is tied to ground. If the LED is illuminated the line is high, if it is not illuminated, the line is low.

The debug serial port (J302) is used for modem debugging and in very limited cases, GPS information. There is no control of the modem through the debug serial port.

Debug headers: J402 and J403, located in the center of the board, bring each line from the 60-pin connector to a header pin, for ease of monitoring and troubleshooting.

Configuring the Enfora module

To configure the Enfora module, connect the serial connector of the SDK to the serial port of a PC. From a Windows PC, you will use HyperTerminal to configure the module. Please follow these instructions to correctly configure HyperTerminal:

a. Start **HyperTerminal**

On **Windows XP**, click on:

Start>Programs>Accessories>Communications>HyperTerminal

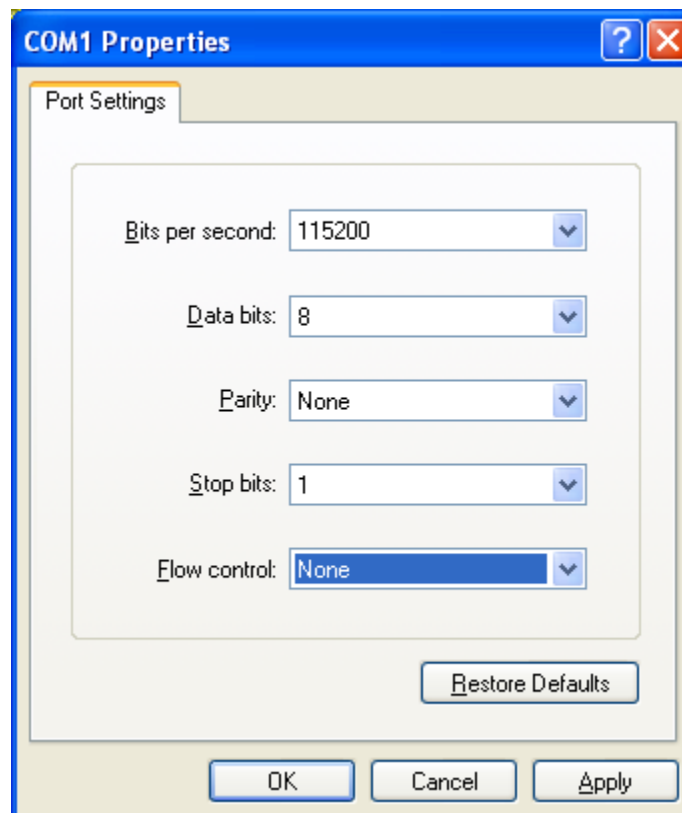
1. You should see the following screen.



3. Enter a name for the **Connection**. In this example, the **Name** is **Enfora Com1**.
4. Click **OK**.
5. The next window that will appear is the **Connect To** window.



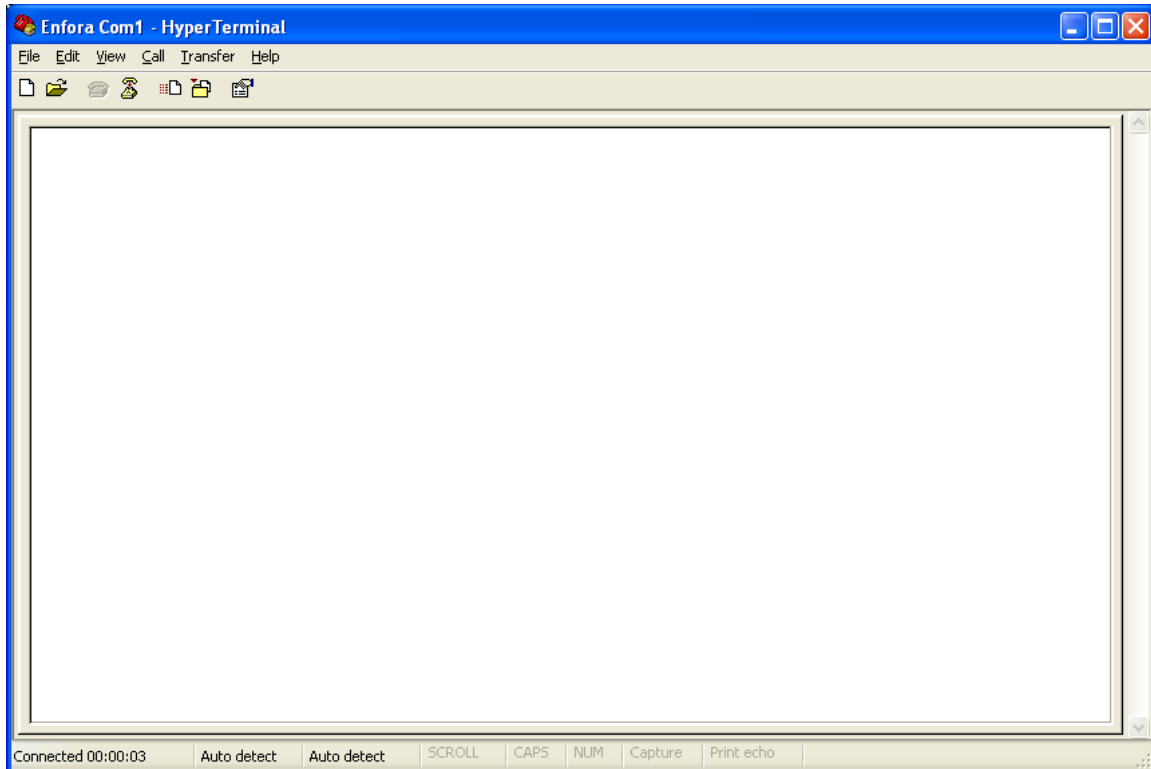
6. Change the **Connect Using** setting to the Com port that was determined in **Step B**.
7. Click **OK**.
8. The next window is the **Port Settings** window.



9. Make sure the settings match the example.

10. Click **OK**.

11. Now the **Main Program Window** should appear.



12. Terminal Setup Testing.

- a. Make sure the cursor is in the main window.
- b. Type “AT” and press “Enter”
- c. You should see the modem respond back with “OK” in the Main Window
- d. If this happens, the COM port is configured correctly.
- e. At this point you are ready to start configuring your SDK with AT commands.

Modem Settings that Allow for Automated GSM and GPRS Network Connectivity

1. Open the HyperTerminal connection that you configured in the previous section.
2. Type **AT** and press <ENTER> the modem should respond with **OK**. This will verify that you are communicating with the modem. If you cannot see characters entered on the screen, enter **ATE1V1**.
3. To perform a PDP context activation on a network, the following commands need to be used.

AT&F	(Default configuration)
AT+CREG=2	(status GSM registration)
AT%CGREG=2	(Status GPRS attach)
AT+CGDCONT=1,"IP","APN","",0,0	(.APN value will be provided by carrier.)
AT%CGPCO=1,"username,password",1	(Set Type of Authentication, Username and Password if is need it)
AT+CPIN="xxxx"	(xxx is a PIN number for SIM card if needed)
AT&W	(save the configuration)

SDK Tips

Before using the SDK for the first time, please make sure you remove all packing material from the SDK (tape, etc.).

Enfora Parts

The SDK includes: The SDK Board and AC/DC “Wall-Pack” Power Supply.

There optional accessories that you may need in addition to the Enfora module. Some examples of these accessories are listed below. Please contact your Enfora sales representative for specific part information, and ordering information.

- Molex Connector
- MCB Connector (RF antenna cable)

Integration guide

GSM0108IG001 - Enabler II-G Quad-Band GSM/GPRS Radio Modem Integration Guide

Schematic diagram

SDK0107MG001 - Enabler II-G SDK0107MG001 REV C Schematic Diagram