

World Of Wireless...







Document Information

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APPENDIX: DSK Board Schematic



1 MODULE DEVELOPMENT STARTER KIT

The Development Starter Kit (DSK) includes:

- A Module Development Starter Kit Board, including all the interface electronics
- A TR-800 GSM/GPRS module, which is mounted on the board
- Universal power supply: Input: 100~240VAC 50/60Hz Output: 5.0VDC @ 1.0A
- An external tri-band GSM antenna with magnetic base (SMA-ended)
- A RF cable connector for module to board RF connection
- 4-pole audio headset
- A RS-232 cable
- User Guide CD

2 FEATURES

- Antenna interface: SMA jack for GSM antenna
- RF receptacle for board to module RF connection (Hirose Part No. U.FL-R-SMT)
- 80-pin general-purpose module connector (Harwin Part No. M402M1-8005)
- Power supply interface with 2 input source possibility:
 - Hosiden's HEC3350 dc power jack, 3.5~6.5VDC @ 500mA input
 - Twin headers for connection to external power supply/battery, 3.3~5.5VDC @ 500mA input
- 2 serial interfaces using D-SUB9 female connectors
- Standard RS-232 cable, can be used for connecting to
 - Modem Port: Main AT command interface
 - Debug Port: Debugging interface or utility communication port
- SIM card holder
- Power ON/OFF push button
- RESET signal push button
- "CALL" and "1" push buttons
- LED indicators, to show:
 - Status of supply to DSK Board
 - Status of the module that is mounted on the DSK Board
- Phone Audio jack
- Auxiliary Audio jack
- Test points to the rest of the pins of the 80-pin connector. They are used for connecting to external peripherals and general troubleshooting purposes

3 INSTALLATION

Procedure:

- 1. Connect the serial cable from host PC to Port 1 (for AT commands interface) and to Port 2 (for programming or debugging purposes).
- 2. Connect the magnetic GSM antenna to the SMA antenna connector of the DSK Board
- 3. Ensure that the RF receptacle of module is connected to the RF receptacle of DSK Board using the mating cable provided.
- 4. Ensure that the module is properly mounted and the legs properly soldered.
- 5. Connect the power supply to the DSK Board.
- 6. The power supply LED should be light-on when the DSK Board supply is turned on.
- 7. Follow the instructions in the next section and do module connection setups.



4 QUICK SETUPS

4.1 Hyperterminal Configuration

- Open HyperTerminal (Start > Programs > Accessories > Communications > HyperTerminal)
- 2. Enter TR800. Click OK.



Figure 1

- 3. Select the COM1 for Connect using.
- 4. Click OK.

Connect To	? ×
🇞 тязоо	
Enter details for the phone number that you want to	dial:
Country/region: United States (1)	-
Arga code: 0	
Phone number:	
Connect using: COM1	•
OK Cance	!

Figure 2



- 5. Please make sure:
 - Bits per second: 115200
 - Data bits: 8
 - Parity: None
 - Stop bits: 1
 - Flow control: Hardware

7. Press Reset button on the DSK Board. Now you can communicate with

6. Click OK.

сом	1 Properties			?)	<u><</u>
Po	ort Settings				
	-				
	<u>B</u> its per second:	115200		•	
	<u>D</u> ata bits:	8		-	
	<u>P</u> arity:	None		•	
	<u>S</u> top bits:	1		•	
	<u>F</u> low control:	Hardware		•	
			<u>R</u> estore	Defaults	
	0	ĸ	Cancel	Apply	

Figure 3

- the modem using AT-commands.
 8. To test the communication, type AT+CGMR<ENTER>. You should get "AB_02_00_30N_DEF001" or a similar response if the setup is correct.
- 9. To check SIM card status: AT+CPIN?<ENTER>

🍓 TR-800 - HyperTermi	inal - HyperTer	minal	
File Edit View Call Tra	ansfer Help		
D 🛩 🖉 🔊 🖸	9 🖻		
OK AT+CGMR AB_02_00_30N OK AT+CPIN? +CPIN: READY OK -	_DEF001		
Connected 0:07:37	Auto detect	115200 8-N-1	SCROLL //.
	Figure 4		

10. To query the Network registration status and Operator Name:

AT+CREG?<ENTER> AT+COPS?<ENTER>

餋 TR800 - HyperTerminal	
<u>File Edit View Call Iransfer Help</u>	
AT+CREG? +CREG: 0,2	
OK AT+CREG? +CREG: 0,1	
ок	
%CPRI: 1,2 AT+COPS? +COPS: 0,0,"SGP M1-GSM"	
ок	
-	-
Connected 0:02:16 Auto detect 115200 8-N-1	SCROL //





4.2 Testing On Short Message

4.2.1 Send SMS

- Set the short message format as text mode: AT+CMGF=1<ENTER>
- Check if SMS service center (SMSC) number is set to SIM card: AT+CSCA?<ENTER>

TR800 - HyperTern File Edit View Call Call Sale	ninal Transfer Help		
OK AT+CMGF=1 OK AT+CSCA? +CSCA: "+65 OK	96845999	",145	•
	Dute debut	11500.0 N 1	
jConnected 0:01:15	Auto detect	J115200 8-N-1	1 ³ ///

Figure 6

File
Edit

File
Edit

File
Edit

File
Edit

File
File

File
Edit

File
Edit

File
Edit

Figure 7



Figure 8

 Set the new incoming SMS to be displayed immediately: AT+CNMI=2,2,0,0,0<ENTER>

 Send a message using this command: AT+CMGS= "Phone number" <ENTER>Message<Ctrl-Z>



4.2.2 Receive SMS

- 1. Set the message format by typing AT+CMGF=1
- Set the new incoming SMS to be displayed immediately: AT+CNMI=2,2,0,0,0<ENTER>
- 3. Upon receiving new SMS, it will be displayed immediately on TA.

🏀 TR800 - HyperTerminal	<u>- 0 ×</u>
<u>File Edit View Call Transfer H</u> elp	
%CPRI: 1,2	-
+CMT: "6594892804",,"04/12/06,09:29: Hello TR800	10+
	▼
Connected 0:01:16 Auto detect 115200 8-N-1 SCROLL	CAPS
Figure 9	

Figure 9

- To Enable new SMS indication instead of displaying it directly on TA: AT+CNMI=2,1,0,0,0<ENTER>
- Upon receiving new SMS, +CMTI: "SM", 2 indication will be given. This means the new SMS is stored at location index 7 of the SIM card.

OK AT+CNMI=2,1,0,0,0 OK OK OK OK OK OK	巻 TR-800 - H Eile <u>E</u> dit <u>Vi</u> ev □ 🗃 🎢	y perTerminal - H ≠ <u>C</u> all <u>I</u> ransfer	iyperTermi Help	inal	
ок ок ок ок	OK At+CNM Ok	[=2,1,0,0	,0		•
ОК ОК ОК	ок				
ОК ОК	ок				
ОК	ОК				
	ок				
+CMTI: "SM",2	+CMTI:	"SM",2			•
					SCROU

Figure 10

- 6. To access SIM card storage for SMS: AT+CPMS="SM"<ENTER>
- 7. To read SMS at location 2: AT+CMGR=2<ENTER>

🏀 TR-800 - HyperTerm	inal - HyperTer	minal	
File Edit View Call Tr	ansfer Help		
	8		
OK at OK AT+CPMS? +CPMS: "SM", OK AT+CMGR=2 +CMGR: "REC Hello TR800 OK -	2,30,"SM READ","6	",2,30,"S 590923194	M",2,3 ",,"07.
Connected 0:23:33	Auto detect	115200 8-N-1	SCROLL //
	Figure 11		



4.3 Set up TR-800 as a serial modem

To use the serial modem for Internet connection, either via GSM CSD or GPRS, you must first set it up as a modem on COM1 on your PC. Otherwise, it will only be recognized as a device on COM1. This section will detail how this can be done in the Win2000 environment. For other Windows OS, similar steps apply.

 Go to Control Panels > Phone And Modem Options. Select the Modems tab. Click on Add... for the next screen.



Figure 12

Please ensure that the option "Don't detect my modem. I will select it from a list" is checked.
 Click on Next for the next screen.



Figure 13



 Select Standard 33600 bps modem for Models. Click on Next for the next screen.

Add/Remove Hardware Wizard
Install New Modem
Select the manufacturer and model of your modem. If your modem is not listed, or if you have an installation disk, click Have Disk.
Manufacturers: Models:
[Standard Modern Types] Standard 9600 bps Modern 3Com Standard 14200 bps Modern 3X Standard 19200 bps Modern Accer Standard 28800 bps Modern Accer Standard 39500 bps Modern Standard 56000 bps Modern Standard 56000 bps Modern Standard 56000 bps Modern Standard 56000 bps Modern Standard 56000 bps V90 Modern Standard 56000 bps V90 Modern
<u> < ₿</u> ack <u>N</u> ext > Cancel

Figure 14

4. Select **COM1** before clicking on **Next** for the next screen. Please ensure that COM1 is the correct communication port for the serial port of your PC.

5. On the last screen, click Finish to

Modem Options screen.

on your PC.

complete setting up your serial modem

6. You should be able to see the recently created modem in your **Phone And**

Add/Remove Hardware Wi	zard
Install New Modem Select the port(s) you v	vant to install the modem on.
	You have selected the following modem: Standard 33600 bps Modem On which ports do you want to install it? All ports Selected ports COM1 COM2
	< <u>B</u> ack <u>N</u> ext > Cancel

Figure 15

Phone And Modem Options	<u>?</u> ×			
Dialing Rules Modems Advanced				
The following modems are installed:				
Modem Attached To				
li Tegno GPRS Wireless Modem 🛛 Not present				
😂 iTegno GPRS Wireless Modem #2 COM4				
iTegno GPRS Wireless Modem #3 Not present				
Standard 33600 bps Modem COM1				
Add <u>R</u> emove <u>Properties</u>				
OK Cancel	,pply			

Figure 16



- 7. To ensure that the correct communication parameter has been set-up, click on its Properties. Ensure the parameters below are correct:
 - Port Speed/Baud Rate: 115200
 - Data Bits: 8
 - Parity: None
 - Stop Bit: 1
 - Flow Control: Hardware

4.4 Establish a GSM Dial-up Connection

After TR800 is set up as a Serial Modem as shown in previous section, you can then create a GSM dial-up connection by the following steps:

 Go to Control Panel>Network Connections. Run New Connection Wizard. Click Next.



Figure 17

2. Select Connect to the Internet. Click Next.







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3. Select Set up my connection manually. Click Next.

New Connection Wizard				
Getting Ready The wizard is preparing to set up your Internet connection.				
How do you want to connect to the Internet?				
Set up my connection manually				
For a dial-up connection, you will need your account name, password, and a phone number for your ISP. For a broadband account, you won't need a phone number.				
○ Use the <u>C</u> D I got from an ISP				
< <u>B</u> ack <u>N</u> ext > Cancel				
Figure 19				

4. Select Connect using a dial-up modem. Click Next.

New Connection Wizard	
Internet Connection How do you want to connect to the Internet?	D
 Connect using a dial-up modem This type of connection uses a modem and a regular or ISDN phone line. Connect using a broadband connection that requires a user name and password This is a high-speed connection using either a DSL or cable modem. Your ISP may refer to this type of connection as PPPoE. Connect using a broadband connection that is <u>a</u>lways on This is a high-speed connection using either a cable modem, DSL or LAN connection. It is always active, and doesn't require you to sign in. 	
< <u>B</u> ack <u>N</u> ext > Cancel	

Figure 20

_		New Connection Wizard
5.	Select Modem – Standard 33600 bps Modem (COM1) for dialing device.	Select a Device This is the device that will be used to make the connection.
	Click Next.	You have more than one dial-up device on your computer.
		Select the devices to use in this connection:
		☐ 🥭 Modem - iTegno GPRS Wireless Modem (COM3) ☑ 🏈 Modem - Standard 33600 bps Modem (COM1)
		< <u>B</u> ack <u>N</u> ext > Cancel

Figure 21



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6. Enter a Connection Name. Click **Next**.

5. Enter the Phone number.

Click Next.



 Enter User name and Password if applicable. Uncheck on all three options. Click Next.

New Connection Wizard				
Internet Account Information You will need an account name and password to sign in to your Internet account.				
Type an ISP account name and password, then write down this information and store it in a safe place. [If you have forgotten an existing account name or password, contact your ISP.]				
User name:				
Password:				
Confirm password:				
Use this account name and password when anyone connects to the Internet from this computer				
☐ <u>M</u> ake this the default Internet connection				
Iurn on Internet Connection Firewall for this connection				
< <u>₿</u> ack <u>N</u> ext > Cancel				

Figure 24



7. Click Finish to complete the New Connection Wizard.

4.5 Establish a GPRS Dial-up Connection

After TR800 is set up as a Serial Modem as shown in Section **6.1.3**, you can then create a GPRS dial-up connection by the following steps:

 Go to Control Panel>Network Connections. Run New Connection Wizard. Click Next.



- 3. Select Set up my connection manually. Click Next.



Figure 25

New Connectio	n Wizard				
Network Co What do	onnection Type 9 you want to do?				
• Con	nect to the Internet nect to the Internet so you can browse the Web and read email.				
C Con Conr a fiel	nect to the network at my workplace nect to a business network (using dial-up or VPN) so you can work from home, Id office, or another location.				
⊂ <u>S</u> et Conr	up a home or small office network nect to an existing home or small office network or set up a new one.				
C S <u>e</u> t Conr set u	up an advanced connection nect directly to another computer using your serial, parallel, or infrared port, or p this computer so that other computers can connect to it.				
	< Back Next > Cancel				
	Figure 26				
New Connectio	ew Connection Wizard				
Getting Re The wiza	ady ard is preparing to set up your Internet connection.				
How do	you want to connect to the Internet?				
0.0	Choose from a list of Internet service providers (ISPs)				
۰	Set up my connection manually				
F F r	For a dial-up connection, you will need your account name, password, and a phone number for your ISP. For a broadband account, you won't need a phone number.				
о н	Jse the <u>C</u> D I got from an ISP				
	< <u>B</u> ack <u>N</u> ext > Cancel				

Figure 27



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- 4. Select **Connect using a dial-up** modem. Click Next.
- New Connection Wizard

 Internet Connection

 How do you want to connect to the Internet?

 Image: Connect using a dial-up modem

 This type of connection uses a modem and a regular or ISDN phone line.

 Connect using a broadband connection that requires a user name and password

 This is a high-speed connection using either a DSL or cable modem. Your ISP may refer to this type of connection using either a cable modem. DSL or LAN connection. It is always active, and doesn't require you to sign in.

 < Back</td>
 Next >

 < Back</td>
 Next >

Figure 28

5. Enter a Connection Name. Click **Next**.

 Enter "*99***1#" for the Phone number. This is a fixed GPRS connection dialing number for

> the module. Click **Next**.

ew Connection Wizard	
Connection Name What is the name of the service that provides your Internet connection?	Ð
Type the name of your ISP in the following box. ISP N <u>a</u> me	
GPRS Connection	
The name you type here will be the name of the connection you are creating.	
< Back Next > Cancel	

Figure 29

Type the phone number below. Phone number: "99"""1# You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.	Type the phone number below. Phone number: "99"""1# You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.	Phon W	Number to Dial nat is your ISP's phone number?
Ehone number: "99"***1# You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.	Phone number: "99 ^{con} 1# You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.	τ	pe the phone number below.
"99"**1# You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.	*99***1# You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.		Phone number:
You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.	, You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.		*99***1#
			You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.

Figure 30



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7. Enter User name and Password if applicable. Uncheck on all three options. Click **Next**.

New Connection Wizard					
Internet Account Information You will need an account name and password to sign in to your Internet account.					
Type an ISP account name and password, then write down this information and store it in a safe place. (If you have forgotten an existing account name or password, contact your ISP.)					
User name:					
Password:					
Confirm password:					
Use this account name and password when anyone connects to the Internet from this computer					
Make this the default Internet connection					
☐ <u>I</u> urn on Internet Connection Firewall for this connection					
< <u>B</u> ack <u>N</u> ext> Cancel					

Figure 31

8. Click Finish to complete the New Connection Wizard.



Figure 32

- From HyperTerminal, enter the network's APN (Access Point Name) into the TR800 module: AT+CGDCONT=1,"IP","APN" and ENTER. The APN can be obtained from your network operator.
- 10. After this, use the following AT-command to attach to the GPRS network: **AT+CGATT=1**.
- 11. You can now connect to the GPRS network using Windows Dial-up connection created.

🏀 USB - HyperTerminal	
<u> E</u> ile <u>E</u> dit <u>V</u> iew <u>C</u> all <u>T</u> ransfer <u>H</u> elp	
AT+CGDCONT=1, "IP", "APN" OK	×
Connected 0:00:19 ANSIW 115200 8-N	-1 SC //

Figure 33



4.6 Set up TR-800 for Fax

- 1. Install TR-800 as a Standard 19200 bps modem; refer to Section 4.3
- Go to Control Panel > System > Device Manager > Modem > Open Standard 19200bps Modem > Modem tab > Set the Maximum Port Speed to 19200

ndard	19200 bps Modem Properties
ieneral	Modem Diagnostics Advanced Driver
Port:	COM1
⊂ ^{Spea}	sker volume
	Low. High
- Махі	mum Port Speed
	15200
	Control
	Wat for dial tone before dialing
24.1.1.1.1	
	UK Cance
	Figure 34

3. On Hyper Terminal > Set AT+IPR=19200 (NOTE: Do this step every time before running Symantec WinFax)

🍓 TR-800 - HyperTerm	inal		- 🗆 🗵	
File Edit View Call Tr	ransfer Help			
	<u>-</u>			
				
AT-Command I AT OK AT+IPR=19200	nterpret	er ready		
OK				
-				
Connected 0:00:42	Auto detect]115200 8-N-1]	SURULL	
Figure 35				



4.6.1 Settings for WinFax Pro

1. Launch WinFax PRO Message Manager



- 2. Go to Tools > Program Setup > Modems and Communications Devices
- 3. Select "Active" devices for location at Cellular (PCS/GSM-Digital)
- 4. Select Active modem Standard 19200 bps Modem

Select and se you want to u: fine "Active" device	t up the modems an se. s for location:	d other comm Cellular (PC	unicatio	ons devic Digital)
ssible devices:		1-		
Connection Device		Port		Active
Standard 19200 br	aessewooem #5	<pre><not <="" config="" pre=""></not></pre>		
Standard 15200 Dp SISDN Device (CAP	9 2 0)	<not config<="" td=""><td>ureds</td><td></td></not>	ureds	
WinFax PBO Fax 9	haring	<not config<="" td=""><td>ured></td><td>E</td></not>	ured>	E
Concord Internet F	ax	<not config<="" td=""><td>ured></td><td></td></not>	ured>	
Add	Remove		Proper	ties
		T	est Corr	n Ports
Receive and dialing :	settings			
To configure how a click Receive Setup	device answers the	phone, R	eceive	Setup
To configure how a favor click Dialing 9	device dials when s	ending [Dialing Setup	

Figure 37



5. Click yes

6. Click Next

you want to use.			ons device
efine "Active" devices for location:	Cellular (PCS/GSM	-Digital) 💌
ossible devices:			
Connection Device	Port		Active
iTeano GPBS Wireless Modem #9	<not co<="" td=""><td>nfigured></td><td>Г</td></not>	nfigured>	Г
and Communications Devices dard 19200 bps Modem has not been o bu want to run the WinFax PRO moder Yes	Propertie configured m configura No	:s to work wil ation wizari	th WinFax d now?
ns and Communications Devices Idard 19200 bps Modem has not been o ou want to run the WinFax PRO moder Yes	Propertie configured m configure No	to work wil ation wizari	th WinFax d now?
ms and Communications Devices Indard 19200 bps Modern has not been o you want to run the WinFax PRO moder Yes Receive and dialing settings	Propertic configured m configure No	to work wil ation wizard	th WinFax d now? n Ports
ns and Communications Devices Inderd 19200 bps Modern has not been of rou want to run the WinFax PRO moder Yes Receive and dialing settings To configure how a device answers the click Receive Setup	Propertic configured m configura No	to work wil ation wizard Test Cor Receive	th WinFax d now?

Figure 38



Figure 39



- 7. Query Modem Results
- 8. Click Next
- 9. Click Finish



- 10. Check only Cellular (PCS/GSM-Digital)
- 11. Click OK

elect Locations for Standard 19200 bps 🗵
Select the locations where you want this device to be used.
Cellular (Analog/AMPS)
Cellular (PCS/GSM-Digital)
Default
Dial as entered
Locations are disabled if this device cannot be used in combination with the devices already configured for the location.
OK Cancel

Figure 41

- 12. Click Properties
- 13. Select General Tab
- 14. Select COM 1 initialize at 19200bps
- 15. Select Modem type to be Class 2.0

erties for: Standard 19200 bps Modem	2
eral Fax	
Set general options for your modem.	
	<u> </u>
CUM1 Initialize at: 19200	► bps
/olume	
i i i i i	
On until connected	
Aodem type	
	1
OK Cancel	Apply
Figure 42	

- 16. Select Fax Tab
- 17. Transmission speed to be 9600bps
- 18. Add AT&F&D0&C1&K3S7=90S10=200 to the Initialization string sequence
- 19. Flow control to be AT+FCLASS=2.0
- 20. Check Use Hardware flow control

eneral rax		
Set faxing options for your moder	1.	
My modem is connected to a Regula	ar or Cellular (PCS/GSM-Digital)	💌 telephone,
so use these settings when faxing:	— — Initialization string sequen	
Maximum: 9600 bps	1 AT&F&D	%C1&K3S7=90S10=
	2.	
Minimum: Send at any rate	3.	
	4.	
ECM for sending	Flow control: AT+FCL4	SS=2.0
ECM for receiving	Use hardware flo	w control
Low for recoving	Reset: ATZ	
 nignispeed complession (zb) 		Default

Figure 43



- 21. Click Receiving Setup
- 22. Select Automatically answer incoming calls after 2 rings
- 23. Click OK

	nswering calls.
When answering on: Standard 19200 bps M	odem 🗾
Automatic receive	
Automatically answer incoming calls	
Answer arter 2 ring(s)	-
Automatic receive always on.	Schedule
This line has Call Waiting Disable it when re	ceiving calls
	conving calls.

Figure 44

- 24. Click Dialing Setup
- 25. Make sure Standard 19200bps Modem is selected
- 26. Click OK and Exit

estion:	
ication: <u> Leiluian PC5765M-Dig</u> <u>·</u> Country	New Remove
Long distance access:	Change
International access:	
For this device Standard 19200	bps Modem 📃 💌
The area code is:	🔲 Always dial area code
The phone number is:	
Dial prefix (call waiting etc.):	-
🗖 Dial suffix:	
🗖 Use calling card:	



Figure 45

4.6.1.1 Sending via Mobile Fax

- 1. Open the document to be faxed.
- 2. Print the document with WinFax Printer
- 3. Click Print

💣 Print ? X General Layout Paper/Quality Select Printer -04 MightyFAX WinFax (Photo hp LaserJet hp LaserJet 'inFax -3030 PCL 6 3380-3030-... Printer Driver Quality) • Status: Print to file Ready Location: Find Printer. Comment: Print to this device to send a fax. Page Range ● AII Number of copies: 1 + C Selection C Current Page C Pages 1-65535 Collate J. 2 2 3 3 Enter either a single page number or a single page range. For example, 5-12 Print Cancel Apply Figure 46

- 4. WinFax PRO Send will initialize. Kindly follow the guided steps
- 5. Click **Send** button to send the fax



Figure 47



6. Sending Fax in progress



Figure 48

7. Fax Sent.



Figure 49



4.6.1.2 Receive via Mobile Fax

1. Receiving Fax in progress



Figure 50

2. Fax Received



Figure 51

Important! At the end of the mobile fax session, close Message Manager. Right click Symantec WinFax PRO icon on the system task tray located at the bottom right corner of the computer screen (near to system Time/Date display). Select Exit to end the fax session.





4.6.2 Settings for Mighty Fax

- 1. Launch Mighty FAX > Preferences
- 2. Click **Modem** on the left. Select the communication port the modem is attached to.



Figure 52

- 3. Click **Sending** on the left
- 4. Select **class 2.0** as the fax class for sending faxes
- 5. Select **9600** as the transfer rate (bps) for sending faxes

😂 Preference	es (Program Settings) 📃 🗌 🔀								
į	Sending Faxes								
Intro	Items 4- <u>6</u> Items <u>7</u> -9 Items 10-1 <u>4</u>								
🧼 <u>M</u> odem	4. What fax class should we use when SENDING faxes? We recommend Class 1, which we have found to be the most reliable for most modems. Fax class for SENDING Faxes								
Sending	○ auto detect ○ class 2 ○ class 1 (recommended) ⊙ class 2.0								
	5. Transfer Rate (@PS) for SENDING faxes 9600								
Advanced	AT&F & DO&C1&KX3S7=90S10=90 Help with Init Strings								
Help	Quick Recommendations								

Figure 53

6. Enter AT&F&D0&C1&K3S7=90S10=90 as the modem initialization string



- 7. Click Receiving on the left.
- 8. Select **class 2.0** as the fax class for receiving faxes
- 9. Select **9600** as the transfer rate (bps) for receiving faxes.

Preference	s (Program Settings) 📃 🗌 🔀									
į	Receiving Faxes									
Intro	Items 1 <u>5</u> -17 Items 1 <u>8</u> -20 Ite <u>m</u> s 21-22									
🧼 <u>M</u> odem	15. What fax class should we use when RECEIVING faxes? We recommend Class 1, which we have found to be the most reliable with most modems.									
 S <u>e</u> nding	Fax glass for RECEIVING Faxes ○ auto detect ○ class 2 ○ class 1 ⓒ class 2.0									
Receiving	16. Transfer Rate (BPS) for RECEIVING faxes 9600 🛛 💽 🙎									
1	17. Modem Initialization String for receiving (optional) AT&D0&C1&K3S7=90S10=90									
<u>A</u> dvanced	Help With Init Strings									
Help	Quick Recommendations									

Figure 54

- 10. Enter AT&F&D0&C1&K3S7=90S10=200 as the modem initialization string.
- 11. Click Advanced on the left
- 12. Select Use larger send buffer and Use larger receive buffer
- 13. Click Save



Figure 55



4.6.2.1 Sending via Mobile Fax

- 1. Open the document to be faxed.
- 2. Print the document with MightyFax Printer Driver.
- 3. Click OK

rint		?		Type a question for help 📼
Printer Name: Idle Status: Idle Type: MightyFAX Where: PRINTFAX: Comment:	YFAX Printer Driver APF Printer Driver	Properties Find Printer Print to file Manual duplex	目 读 读 □ • <u>⊿</u> • <u>Δ</u> • <u>↓</u>	1 • • • 7 •
Page range	C Selection Cr page ranges or example, 1,3,5-12 Copies Trange Tra	et: 1 collete	odem; refer to Set up TR800 as a Serial 100 Wanager > Modem > Open Standard Je Maximum Port Speed to 19200	
	General Modern Dia Port COM1 Speaker volume Low	gnottics Advanced Driver		
3 1 3 4				

Figure 56

4 Mighty Fax Print to Fax will initialize. Kindly follow the guided steps to enter phone number, recipient and fax subject.

Mighty	FAX Search Hep									8	
end .	Beceive	D Bew		X	B Barr		Preferences	Egt			
Outgoing	Faxes	Incoming Faces	1			Tria	period has 4 d	lays left			
View: All C	Outgoing Faxes	Sort by:	Date Sent	~					$\mathcal{D}(\operatorname{ind}(\operatorname{Ch}(*))$	Dinit Read	
Date Sent	Time Sent	Fax#	Re	cipient		Subject		Last Allempt	Fax	ile .	^
						67462668 Recipient MAOW Subject Test		Cancel			
c.I.m.											~

Figure 57



5 A screen will prompt you to start sending when ready.



6 Status for sending fax

screen will show the page progress and status of the sending process.

MightyFAX Ne Edit Search Help						
📩 📩 Send Beceive	D New 1	🛛 🗙 Ecili Delete	Brink View Prefer	enges Egt		
Outgoing Faces	Incoming Faxes		Trial period I	has 4 days left		
View: All Outgoing Faxe	s Sort by: Dat	te Sent 👻			💭 Fin	d (Ctri+F) 🖉 Find Next (F3)
Date Sent Time Sent	Fast Sen	d Fax	r	E.		Fax File A
		Phone number: Total pages: Dial attempt Current page: Page length Page length Status Sending pa	67462668 1 1 1 62543 1ge data	Rende D: Connect BPS Resolution: Bytes transferred: Elapsed time:	6567482668 9680 high 6728 0:14	. 3
K .]						×
			Preparing S	Send Fax form		- Alar

Figure 59



7 Status for sending fax screen will prompt you upon completion of the transmission.

MightyFAX	ip :					
📩 📩 Send Becely	e New	Edit Delete	A D G	enges Egt		
Oulgoing Faxes	Incoming Faces	T)	Trial period I	sas & days leit		1
View: All Outgoing Fa	xes 💉 Sort by:	Date Sent			Pr	nd (Ctri+F) 🖉 Find (ext. (F3)
Date Sent Time 5	67482661	end Fax				Fax File A
		Proce number: Total pages: Die alternet: Current page: Page Brogress: Status: Status: Status:	E742568 1 1 1 1 page of 1 we	Renote D: Connect BPS: Resolution: s sent. Transmission time: 0 OK	6587402688 9600 high 50549 00:00	1
4 11						>
			Fim			

Figure 60

4.6.2.2 Receiving via Mobile Fax

- 1. When receiving fax, click Incoming Faxes
- 2. At the bottom of the screen, it should show Waiting for incoming call

ile Edit Search Help)						and female fem
📩 💼 Send STOP	D New	Edit	X ⊵elete	B Print	⊘ ⊻jew	 Preferen <u>c</u> es	Exit
Outgoing Faxes	Incoming Fax	es					
View All Received Few				3	Find (ChaluE)	(a) marchine	4.(E3)
view. Autreceived Law		Sort by: Date	e Received 💙	4	rina (Cari+r)	A FRAGINES	
New? Date Rec'd Time	Rec'd From Fax	sort by: Date	Pages	Notes	rina (Carier)	Fax File	
New? Date Rec'd Time	rso Ƴ	x ∰	Pages	Notes	rind (carer)	Fax File	
Vew / An Recided 1 ax	so Rec'd From Fax	Sont by: Dat	Pages	Notes	rind (carer)	Fax File	

3. When there is incoming fax, bottom of screen will show Receiving Fax



4. COMPONENT PLACEMENT INFORMATION

a. Top Component Placement Diagram





b. Component List

Reference	Description
J1	80-pin connector – GSM/GPRS module
J2	DC supply jack
J3	External supply/battery input test points
J4	Backup battery connector
J5	SIM card holder
J6	Phone audio jack
J7	Auxiliary audio jack
J8	Modem Serial UART port
J9	Debug Serial UART port
J10	RF receptacle – for connection to module's RF receptacle
J11	SMA jack – for RF connection to an external antenna or test equipment
SW1	RESET pushbutton
SW2	Power ON/OFF pushbutton
SW3	"CALL" function pushbutton
SW4	"1" function pushbutton
D1	LED indicator – Development Starter Kit Board power supply
D2	LED indicator – Module status indicator

c. Test Point List

The test-points provided on the Development Starter Kit Board allows access to module pins or features that are not implemented or used on the DSK Board itself, e.g. parallel bus, rest of keypad pins, battery charging interface etc.

Test Point	Function	Test Point	Function
TP86	D15	TP85	D14
TP84	D13	TP83	D12
TP82	D11	TP81	D10
TP80	D9	TP79	D8
TP78	D7	TP77	D6
TP76	D5	TP75	D4
TP74	D3	TP73	D2
TP72	D1	TP71	D0
TP70	CS3	TP69	CS2
TP68	/WR	TP67	/RD
TP66	A4	TP65	A3
TP64	A2	TP63	A1
TP62	GND	TP61	GND
TP60	CLK13M	TP59	SCS0_SCL
TP58	SDI_SDA	TP57	RST_OUT
TP56	KBR3	TP55	KBR4
TP54	KBR1	TP53	KBR2
TP52	KBC4	TP51	KBR0



Test Point	Function	Test Point	Function
TP50	KBC2	TP49	KBC3
TP48	KBC0	TP47	KBC1
TP46	M_TXD	TP45	M_FSYNCH
TP44	M_RXD	TP43	GPIO-3
TP42	GPIO-2	TP41	GPIO-1
TP40	M_CLK	TP39	V_IO
TP38	ICTL	TP37	VCCS
TP36	PCHG	TP35	VCHG
TP34	ADIN2	TP33	ADIN1
TP32	GND	TP31	GND
TP30	RXD2	TP29	TXD2
TP28	RXD	TP27	TXD
TP26	GND	TP25	GND





Mechanical Drawing of TR-800 d.

