JBM Electronics
Gateway Model C251

Thank you for purchasing The Gateway C251. The C251 connects an asynchronous, dial-only, or Ethernet device to a GSM cell network.

UNPACKING INSTRUCTIONS

1. Unpack the C251

2. Verify the following components are enclosed *(Figure A)*

Figure A Package Contents

Power Supply (United States)

or

Power Supply (International)

Console Cable (6' DE9)

(Front)

(Back)

Note: Non-US power supplies require customer-supplied power cord to connect power supply to AC power outlet.

3. If any items are missing, please contact **JBM** at **1-800-489-7781**.

CABLING

9-Pin Female DCE Console (LMI) Port *(Table A)*

Table A lists the required RS-232C pin descriptions used in cable connection from the 9-Pin Female Console Port (ttyS0) located on the back of the C251. A standard straight-wired 9 to 9 Pin male to female cable is used for console connection.

25-Pin Female DCE Async RS-232 Port *(Table B)*

Table B lists the required async RS-232 pin descriptions used in cable connection from the 25-Pin Female DCE Port *(Port 1)* located on the front of the C251. (DTE with G50 Adapter)

TABLE A 9-Pin Female DCE Console (LMI) Port			
PIN	**INBOUND**	**OUTBOUND**	**DESCRIPTION**
1		*	Data Carrier Detect
2		*	Receive Data
3	*		Transmit Data
4	*		Data Terminal Ready
5			Signal Ground
6		*	Data Set Ready
7	*		Request To Send
8		*	Clear To Send
9		*	Ring Indicator
Console connection to PC *(Back)*			

TABLE B 25-PIN RS-232 DCE PORT			
PIN	**INBOUND**	**OUTBOUND**	**DESCRIPTION**
1			Chassis Ground
2	*		Transmit Data
3		*	Receive Data
4	*		Request to Send
5		*	Clear to Send
6		*	Data Set Ready
7			Signal Ground
8		*	Data Carrier Detect
20	*		Data Terminal Ready
22		*	Ring Indicator
Connects to an asynchronous device such as a modem (Front)			

G50 Adapter *(Table C)*

Table C lists the required RS-232 pin assignment used in the G50 Adapter to convert the C252's RS-232 port to DTE.

Ethernet Cables *(Tables D&E)*

Tables D&E list the required pins used in the Straight *(Table D)* and Crossed-wired *(Table E)* 10/100BaseT cable.

TABLE C GW50 ADAPTER DTE		
MALE PIN	DIRECTION	FEMALE PIN
1	Ground	1
2	←	3
3	→	2
4	←	8
5	→	20
7	Ground	7
8	→	4
9	Not applicable	9
10	Not applicable	10
12	Not applicable	12
13	Not applicable	13
18	Not applicable	6
19	Not applicable	19
20	←	5
21	Not applicable	21
* 22	Not applicable	15
23	Not applicable	17
24	Not applicable	24
25	Not applicable	25
For async DTE		

TABLE D STRAIGHT 10/100BASET	
PIN	**DESCRIPTION**
1	TD+
2	TD-
3	RD+
4	-
5	-
6	RD-
7	-
8	-
Used for HUB or Switch	

TABLE E CROSSED 10/00BASET	
CONNECTOR A	**CONNECTOR B**
1	3
2	6
3	1
-	-
-	-
6	2
-	-
-	-
Used for direct PC connection	

* Driven Low

CONFIGURATION

1. Collect information about the configuration setup.
2. Complete Configuration Setup Worksheets. Worksheets located at: http://www.jbmelectronics.com/tech/workdir.htm
3. Attach the power supply connector to C251 and connect power supply plug to an AC power outlet.
4. Verify the PWR (yellow) LED is lit to indicate that the unit is receiving power.

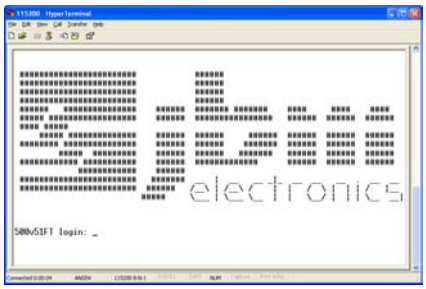
5. Attach the female end of console cable to PC and male end of console cable to console port on the back of C251.

6. Locate Hyper Terminal instructions at: http://www.jbmelectronics.com/tech/hyperterm.pdf

   Note: Communications with the console is through an async terminal emulation program. The following instructions are for Hyper Terminal, a standard Windows component. Other emulation programs can also be used.

7. View Figure B to see the Gateway Login Screen.

FIGURE B - GATEWAY LOGIN SCREEN



GATEWAY LOGIN

Log into the Gateway through the 9-Pin Console Port *(back)*, using **root** for the user name and the **six-digit serial number of the unit** for the password. Both entries are case sensitive and must be entered in lower case.

*Note: The JBM Gateway comes with two predefined Linux accounts with same default passwords. The first is **root**, which has full Administration rights, and the second is **jbmgatew**, which is a user account. Telnet by default uses the jbmgatew account. After login type "su -" then root password for Admin. Rights.*

For best security practices we recommend the following procedure:

- Change the default **root** user password.
  a. Type **passwd** and press **Enter**.
  b. Select a new password by following the onscreen instructions.

- Change the default **jbmgatew** user password.
  a. Type **passwd jbmgatew** and press **Enter.**
  b. Select a new password by following the onscreen instructions.

For further information, please refer to the following:

- Ethernet Setup: http://www.jbmelectronics.com/tech/niccfg.pdf
- Lightbar Information: http://www.jbmelectronics.com/tech/lightbar.htm
- FCC Information: http://jbmelectronics.com/general/fcc.htm
- Warranty Information: http://jbmelectronics.com/general/warren.htm

HARDWARE STATUS LEDS		
Power:	**Yellow – Power Connection Status** *(PWR)*	
	ON	Power is being received by the C251
	OFF	Power is not being received by the C251
Ethernet:	**Green – LAN Connection Status** *(LINK)*	
	ON	C251 is connected to LAN
	OFF	C251 is not connected or is being rebooted
	RED – Data Transmit Activity Status *(T)*	
	ON-OFF-ON (Flickering)	C251 is transmitting packets
	Green – Data Receive Activity Status *(R)*	
	ON-OFF-ON (Flickering)	C251 is receiving packets
RS-232: *(Async)*	**Green – Data Receive Activity Status** *(RD)*	
	ON-OFF-ON (Flickering)	C251 is receiving packets
	Red – Data Transmit Activity Status *(TD)*	
	ON-OFF-ON (Flickering)	C251 is transmitting packets
Dial Tone:	**Green – Line Current Sensor** *(LCS)*	
	ON	Off hook
	Yellow – CO Modem *(CO)*	
	ON	CO mode on
	Green – Data Receive Activity Status *(RD)*	
	ON-OFF-ON (Flickering)	C251 is receiving packets
	Red – Data Transmit Activity Status *(TD)*	
	ON-OFF-ON (Flickering)	C251 is transmitting packets
GSM Modem: *(Wireless)*	**Green – Data Carrier Detect Signal** *(DCD)*	
	ON	C251 is on call
	RED – Data Transmit Activity Status *(TD)*	
	ON-OFF-ON (Flickering)	C251 is transmitting packets
	Green – Data Receive Activity Status *(RD)*	
	ON-OFF-ON (Flickering)	C251 is receiving packets
	Green LED Bar – Signal Strength The purpose of the light bar is to assist in antenna placement. If the signal is low reposition the antenna.	
	1 To 4 LEDs lit	1= fair 2 = good 3 = very good 4 = excellent 1&4 blinking = very low

SPECIFCATIONS		
Console Port:	Baud Rate:	110-115,200 bps
	Interface:	One Female DE-9, RS-232C DCE
Ethernet Port:	Mbps:	10/100BaseT
	Interface:	Female RJ-45 connector
RS-232 Port: *(Async)*	Baud Rate:	110-115,200 bps
	Interface:	One Female DB-25 connector, async, DCE (DTE with G50 Adapter)
Dial-Tone Port:	Baud Rate:	110-2400 bps
	Interface:	One female RJ-11 Connector for modem, One RJ-11 Connector for pass-through
GSM Modem: *(Wireless)*	Interface:	SMA-Connector, EGSM, GSM
	Band:	EGSM 850: Rx 869 ~ 894 MHz / Tx 824 849 MHz GSM 1900: Rx 1930 ~ 1990 MHz / Tx 1850 ~ 1910
Operating System	Linux 2.4 Kernel	
Management:	Console Port:	CLI Access through async connection
	IP Protocol	SNMP, HTTP/S, Telnet, SSH
Power:	12V DC (External) 120 VAC 60Hz or 120-240 VAC 50/60Hz	
Physical:	Size:	7" W x 2.5" H x 8" L
	Weight:	2 pounds
Processor:	486DX-100	
Memory:	32 MB RAM, 16MB Flash	
Warranty:	1 Year Parts and Labor	