

XI-100B Quickstart Manual

November 1, 2011

Connecting to the Device:

The XI-100B comes with two cables for connecting to the device, a data cable and a power cable.



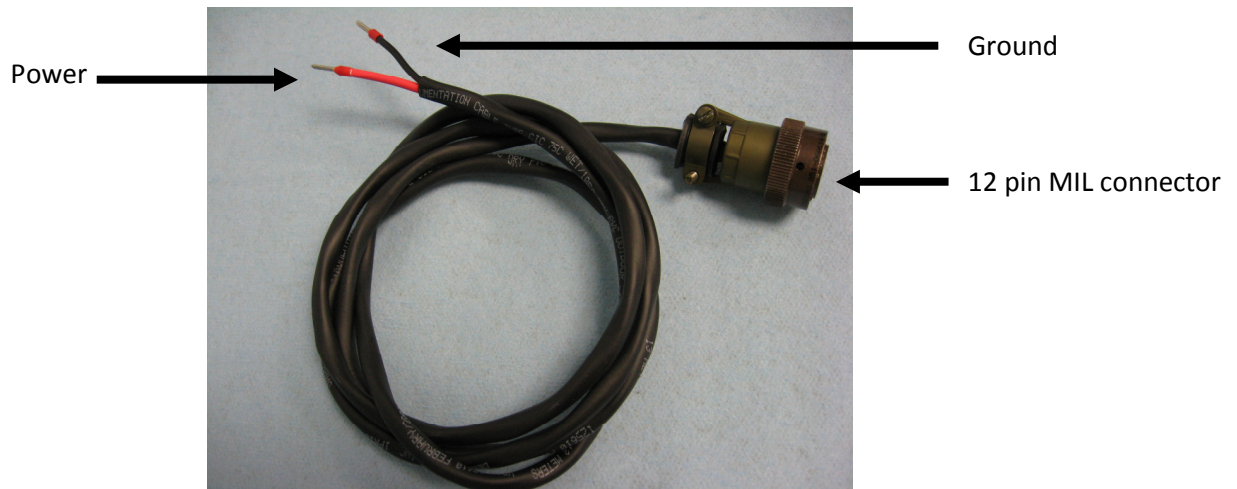
The XI-100B has three connectors on the front panel. One is a female TNC connector for connecting an external Iridium antenna. There are two military connectors, one for data and one for power. The data connector is a 19 pin female military connector. The power connector is a 12 pin female military connector.



Power Cable:

The power cable is connected to the power connector. Use a battery pack or power supply to power the

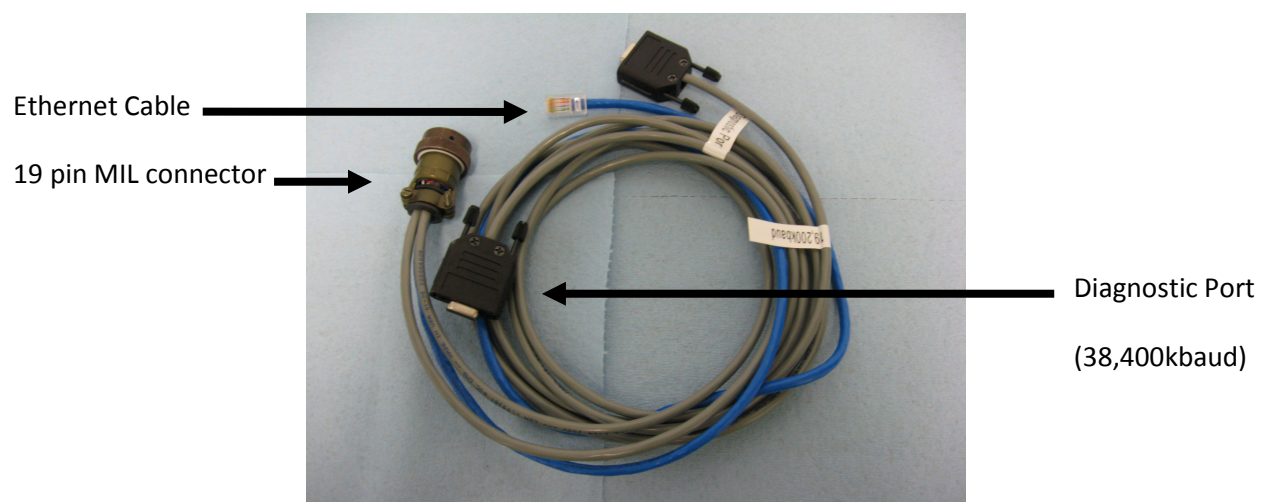
XI-100B. The power cable has a 12 pin military male connector on one end and two wires on the other end. Connect power to the red wire and ground to the black wire. Supply the unit with 9Vdc to 20Vdc. DO NOT exceed the absolute maximum voltage rating of 20Vdc.



Data Cable:

The data cable is connected to the DAS interface connector. One end of the cable has a 19 pin male military connector. The other end of the data cable has two DB-9 female connectors and one male ethernet connector. The two DB-9 connectors are labeled, one as the diagnostic port, one as the programming port. The diagnostic port is where all diagnostic information is displayed. This information can be monitored using a serial emulator like hyperterminal. The baud rate of the diagnostic port is 38,400kbud.

The ethernet cable is used as an interface between the XI-100B and the unit being used to gather data (example- NetRx).



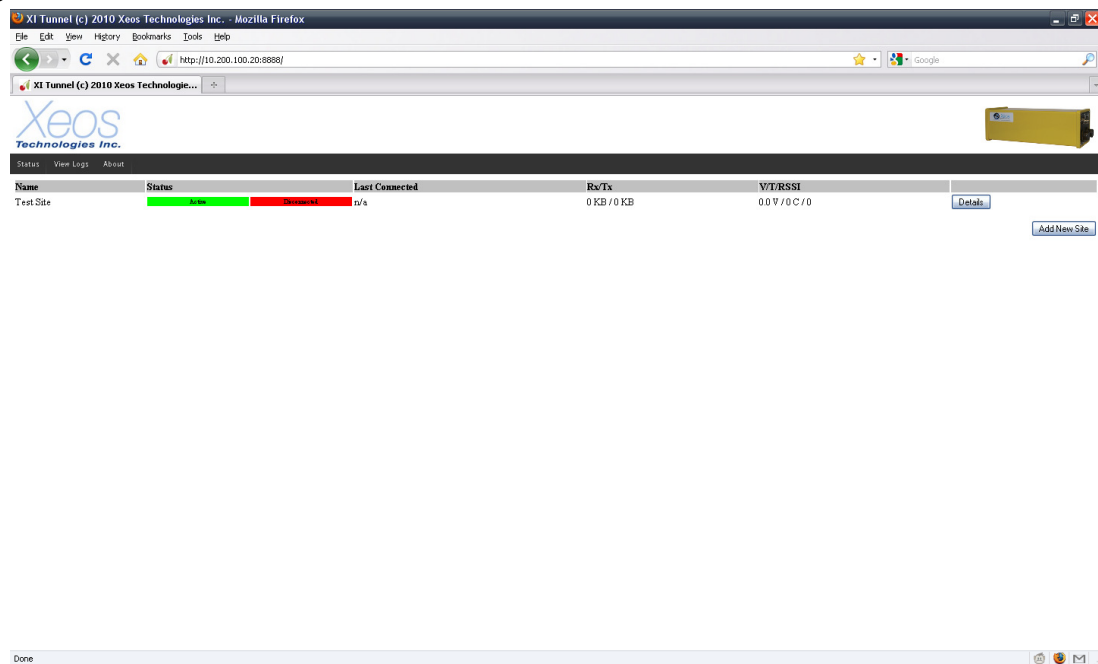
Programming Cable:



The programming port is where new firmware can be uploaded using the previously installed bootloader and the flashloader software. The baud rate of the programming port is 19,200kbaud. This plugs into the Data connector on the front of the XI-100 just like the Data Cable.

Using the XI-Tunnel

Open a browser window and navigate to the tunnel at <http://X.X.X.X:8888>. New devices will need to be configured to use the XI-Tunnel.



Status:

This is the first page that appears when you type in the tunnel website address. This page gives a summary of all devices configured to the tunnel. The name of the device is displayed as well as if the unit is active or not, and if the unit is connected via RUDICS. This page also displays the last time the device was connected via RUDICS, as well as the amount of bytes transmitted and received. Battery voltage, temperature and RSSI can also be viewed from this page. Click on 'Details' for more information on any device in the list.

View Logs:

This is where the tunnel stores all logs. Anything that goes through the tunnel will be stored in a log file. This is the default log file path.

Details:

Click on the 'Details' button next to a device to view more information on the device. This page shows all the information that is displayed on the status page. You can edit and/or delete the device on the tunnel. Click on 'Reset Status' to reset the send and receive counters. Under 'Status of Health' the firmware version, battery voltage, temperature and modem RSSI can be viewed. The Mode of the XI-100B as well as timing intervals can be set under the 'Configuration' heading.

There are 3 modes of operation, SBD mode, Single RUDICS Mode and Full Time RUDICS mode.

SBD Mode:

- The unit only checks for commands and sends status messages based on the SBD Check Interval.
- The SBD Check Interval is user configurable. It can be set by typing a value in minutes in the box next to the 'Set SBD Check Interval' button. Then click on 'Set SBD Check Interval'. The XI-100B will receive and execute the timing change command on the next scheduled SBD Check Interval.

Single RUDICS Mode:

- Prompts the XI-100B to establish a single RUDICS session through the iridium network.
- Can be set on a timed interval using Auto RUDICS. Type a value in minutes in the box next to the 'Set Auto RUDICS Interval' button. Then click on the 'Set Auto RUDICS Interval'.
- When the device connects, it will execute the script in the tunnel directory named connect.sh (unix) or connect.bat (windows) and passes in two parameters; the unique site ID (an integer), and the site name (see script file for more details).

Full Time RUDICS Mode:

- Configures the XI-100B to continually maintain a RUDICS connection.
- While in this mode, any commands will be sent immediately through the RUDICS connection.

The time and date of the last Configuration Update is displayed under the Configuration heading. All routes configured to operate with the XI-100B are listed at the bottom of the page.

NOTE: You may need to periodically refresh the page to get the latest updates. The status page will auto refresh.

XI Tunnel (c) 2010 Xeos Technologies Inc. - Mozilla Firefox
 File Edit View History Bookmarks Tools Help
 http://10.200.100.20:8888/sites/details?siteId=1
 XI Tunnel (c) 2010 Xeos Technologie...

Xeos Technologies Inc.
 Status View Logs About

Name	Iridium Address	Status	Last Connected	
Test Site	*:5330	Active Disconnected	n/a	Edit Delete Reset Stats

Log Path:
Connection Script:

Status of Health
Firmware Version: 0.0.0 **Battery Voltage:** 0.0 V **Last Temperature:** 0 C **RSSI:** 0

Configuration
Mode: SBD Mode **Set:**
SBD Check Interval: 0 minutes
Auto RUDICS Interval: Disabled
Configuration Last Updated: 31-12-1969 08:00:00 PM

Name	Local <-> Remote	Protocol	Status	Rx/Tx
netRS http	*:8110 <-> 192.168.0.1:80	TCP	Disconnected	Rx: 0 Tx: 0

Add New Site (Setting Up a New Device):

- 1) To add a new device, click on 'Add New Site'.

XI Tunnel (c) 2010 Xeos Technologies Inc. - Mozilla Firefox
 File Edit View History Bookmarks Tools Help
 http://10.200.100.20:8888/
 XI Tunnel (c) 2010 Xeos Technologie...

Xeos Technologies Inc.
 Status View Logs About

Name	Status	Last Connected	Rx/Tx	V/T/RSSI
No sites configured				

Done

- 2) Fill in the boxes to configure a new device:

Sites -> Add New Site

Enabled: ☒

Site Name:

Iridium Listen IP:port:

Log Path:

IMEI:

Incoming Mail Settings

POP3 Server:

POP3 Server Port:

POP3 SSL Support: ☒

POP3 Login:

POP3 Password:

Outgoing Mail Settings

SMTP Server:

SMTP Server Port:

SMTP SSL Support: ☒

SMTP Login:

SMTP Password:

☒ Name	Local ip:port	Remote ip:port	Protocol
netRS http	*:8110	192.168.0.1:80	TCP
☐ Name	Local ip:port	Remote ip:port	Protocol
☐ Name	Local ip:port	Remote ip:port	Protocol
☐ Name	Local ip:port	Remote ip:port	Protocol
☐ Name	Local ip:port	Remote ip:port	Protocol
☐ Name	Local ip:port	Remote ip:port	Protocol
☐ Name	Local ip:port	Remote ip:port	Protocol
☐ Name	Local ip:port	Remote ip:port	Protocol
☐ Name	Local ip:port	Remote ip:port	Protocol
☐ Name	Local ip:port	Remote ip:port	Protocol

Site/Add New Site:

- Enabled** Check this box to enable the device.
- Site Name** The name of the device you are setting up. This is the name that will appear on the Summary page.
- Iridium Listen IP:Port** The IP address and Port that the tunnel will listen to for incoming connections from the Iridium gateway. Use the IP address '*' for all addresses (example- *:5330). This must be in the format of 'IP:Port' otherwise it will not work.
- Log Path** The log path is where the tunnel logs all messages to and from the device. Leave this box blank to use the default log path.
- IMEI** The 15-digit unique IMEI number assigned to the device.

Incoming Mail Settings:

These are the mail settings for the incoming SBD messages. Contact your mail administrator for proper mail settings.

- POP3 Server** The server address of the email account for incoming messages .
- POP3 Server Port** The server port of the email account for incoming messages. See your mail administrator for proper settings.
- POP3 SSL Support** See you mail administrator for proper settings.
- POP3 Login** The email address of the incoming email account. NOTE: Gmail users require a prefix of recent: (example- recent:xeos@gmail.com).
- POP3 Password** The password for the incoming email account.

Outgoing Mail Settings:

These are the mail settings for the outgoing SBD messages. Contact your mail administrator for proper mail settings.

SMTP Server	The server address of the email account for outgoing messages (messages from the user to the Iridium network). See your mail administrator for proper settings.
SMTP Server Port	The server port of the email account for outgoing messages. See your mail administrator for proper settings.
SMTP SSL Support	See you mail administrator for proper settings.
SMTP Login	The email address of the outgoing email account (example- xeos@gmail.com)
SMTP Password	The password for the outgoing email account.

Tunnel Setup:

This is where you set up the routes for the XI-100B to the unit you want to gather data from.

Enable Box	This box must be checked to enable a particular connection.
Name	Name of the connection.
Local ip:port	The ip and port that listens for communication from user. Must be in the form of ip:port.
Remote ip:port	The ip and port that the connection is mapped to. This always has to be on the 192.168.0.X subnet. Must always be in the form of ip:port.

3) Click on 'Save'.

4) Your new device should now appear on the Status page.