KINEMETRICS GRANITE AND BASALT

Antelope User's Group

March 21-23/2011

Dennis Pumphrey

Manager, Software Engineering

Kinemetrics, Inc.

New Features in v3.7
(and beyond)

New Features (Antelope Specific)

- ▣ dlmon support, via pfst.cfg:

```
#======================
# Status conversion file
#======================
#
# Used to convert system status information into data elements useable by Antelope.
#
# Each line contains one variable as follows:
#
# pfstvarname   rhvarname   flags
#
# Where:
# - pfstvarname = Variable name inserted into the pf/st packet
# - rhvarname = Variable name found in Rockhound runtime parameters
# - Flags:
#     *Scale = Multiplier scale factor
#     Fx = Formatting of digits (number of places)
#     >x = Only display if greated than x
#     >85:t >95:l = Conversion of values to strings (if greater than x)
#     Drhvar = Delta (difference) vs another Rockhound parameter
#     P = This is a persistent parameter
#     Nx = Display as 'x' if null
#     H = Hardcoded parameter
```

Status Interval	?	30
Status style	?	Antelope ▼
Store only	?	Unused ▼

New Features (Antelope Specific)

aa	dig1.LocalGPSAntCurrent	*0.001	F3	
cld	dig1.LocalTcxoDrift	*0.001		
clq	dig1.LocalClockQuality	>0:?	>85:t	>95:l
clt	dig1.LocalGPSLockChanged	*0.001	F3	
da	dig1.LocalRockCurrent	*0.001	F3	
dg	DataIntegrator.NMissingGroups			
dh	dig1.LocalHumidity			
dlt	dig1.LocalTimeSinceDataArrival	*0.001	F3	
dt	dig1.LocalTemperature			
dv	dig1.LocalRockDCVolts			
elev	dig1.LocalGPSAltitude	*0.001	F3	
esn	dig1.LocalESerialNumber			
gp1	gp1	H		
gp24	gp24	H		
lat	dig1.LocalGPSLatitude			
lcq	dig1.LocalClockQuality			
lon	dig1.LocalGPSLongitude			
m0	dig1.bd0.LocalMassPos1	*0.001	F3	
m1	dig1.bd0.LocalMassPos2	*0.001	F3	
m2	dig1.bd0.LocalMassPos3	*0.001	F3	
nc	dig1.NPhysicalChannels			
nrb	NStartups	P		
nr24	nr24	H		
rtm	rtm	H	*0.001	F3
sn	dig1.LocalSerialNumber			
trb	SMARTS.SystemStartTime	*0.001		
vco	dig1.LocalTcxoDAC			

New Features (Antelope Specific)

Packet latency and channel limiting:
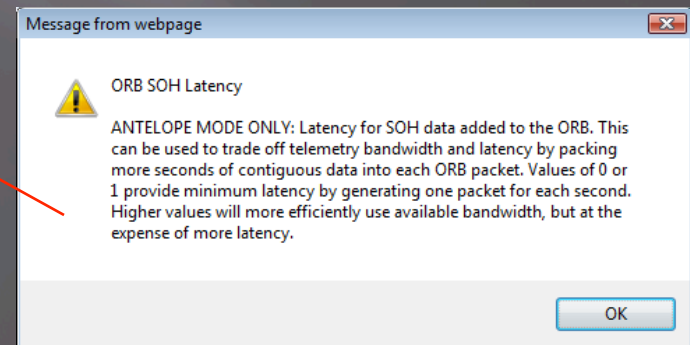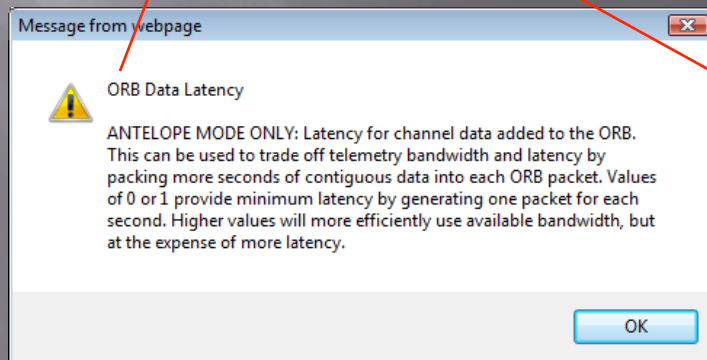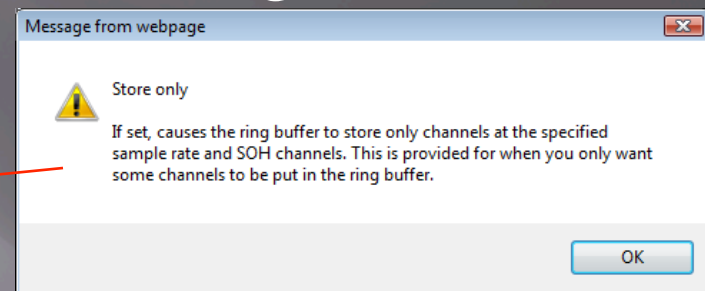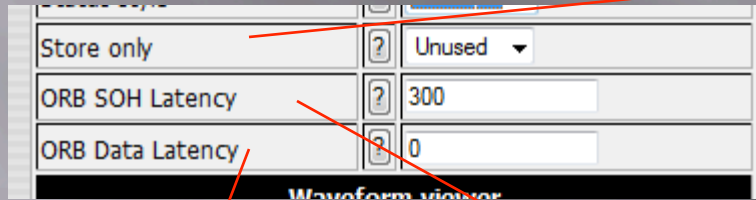
New Features (Antelope Specific)

dlcmd support:

Commands supported: userstat, kbtri, snscal, rockdspcmd, rockgpssoh, snslock, snsunlock, snsmassctr, snsstep, snsunstep, batttest, extchargertest, noisetest, defdeck.

Also supported is 'reboot', which restarts Rockhound and the alias commands massrecenter, masslock, massunlock, and calibrate.

New Features
(Antelope Specific)

SOH channel identification:

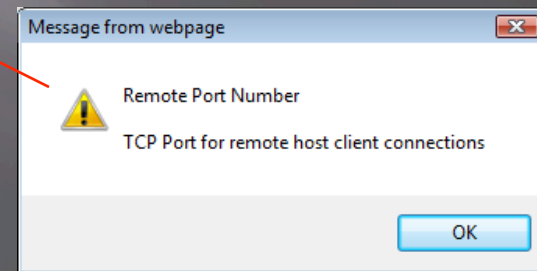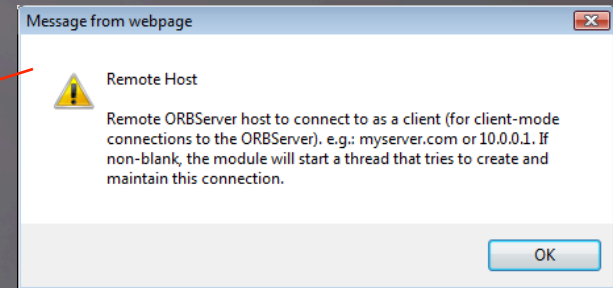Advanced parameters in hardware config allow control over SOH:

- Channel	- Location Code
- Network ID	- Network ID
- Station ID	- Calib
- Calper	- Segment Type

SOH deg NwId (Advanced)	?	
SOH hum NwId (Advanced)	?	
SOH vvb NwId (Advanced)	?	
SOH vep NwId (Advanced)	?	

New Features (Antelope Specific)

Client mode:
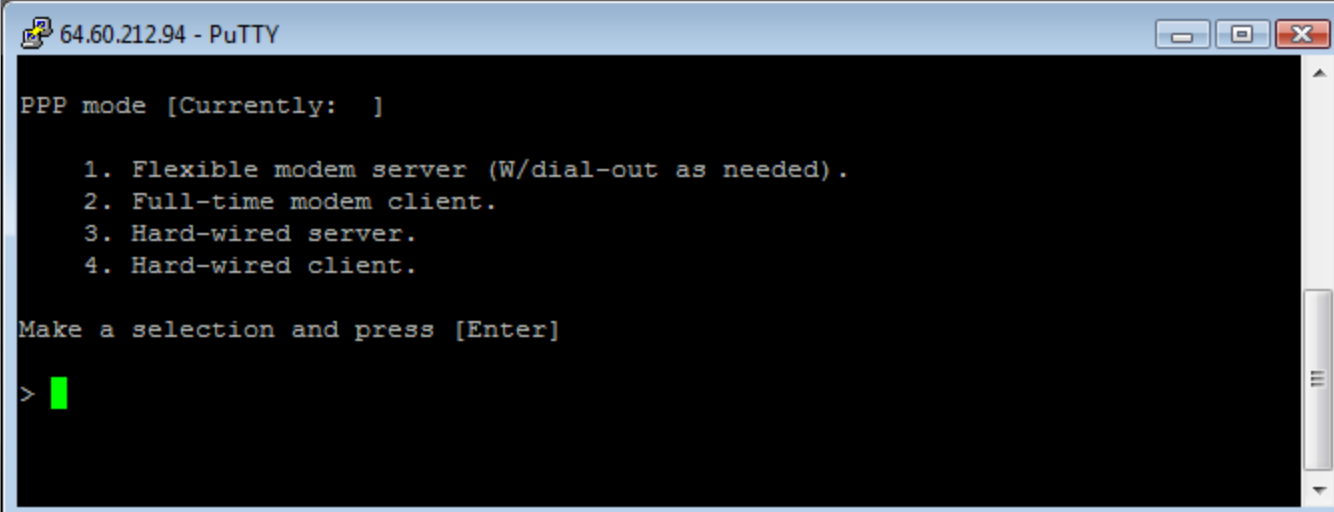
Remote Host	?	10.0.1.220
Remote Port Number	?	16001
Signer	?	invite

Message from webpage

⚠ Remote Host

Remote ORBServer host to connect to as a client (for client-mode connections to the ORBServer). e.g.: myserver.com or 10.0.0.1. If non-blank, the module will start a thread that tries to create and maintain this connection.

OK

Message from webpage

⚠ Remote Port Number

TCP Port for remote host client connections

OK

Message from webpage

⚠ Signer

Signer mechanism. Used to look up signing method and shared secret used for client connection authentication

OK

New Features
(Antelope Specific)

PPP dial-in, dial-out support:

- Normal is PPP server
- Switches to PPP client on dial out
- Can dial-out on for reasons such as trigger, SOH, or periodic

```
64.60.212.94 - PuTTY

PPP mode [Currently:  ]

    1. Flexible modem server (W/dial-out as needed).
    2. Full-time modem client.
    3. Hard-wired server.
    4. Hard-wired client.

Make a selection and press [Enter]

>
```
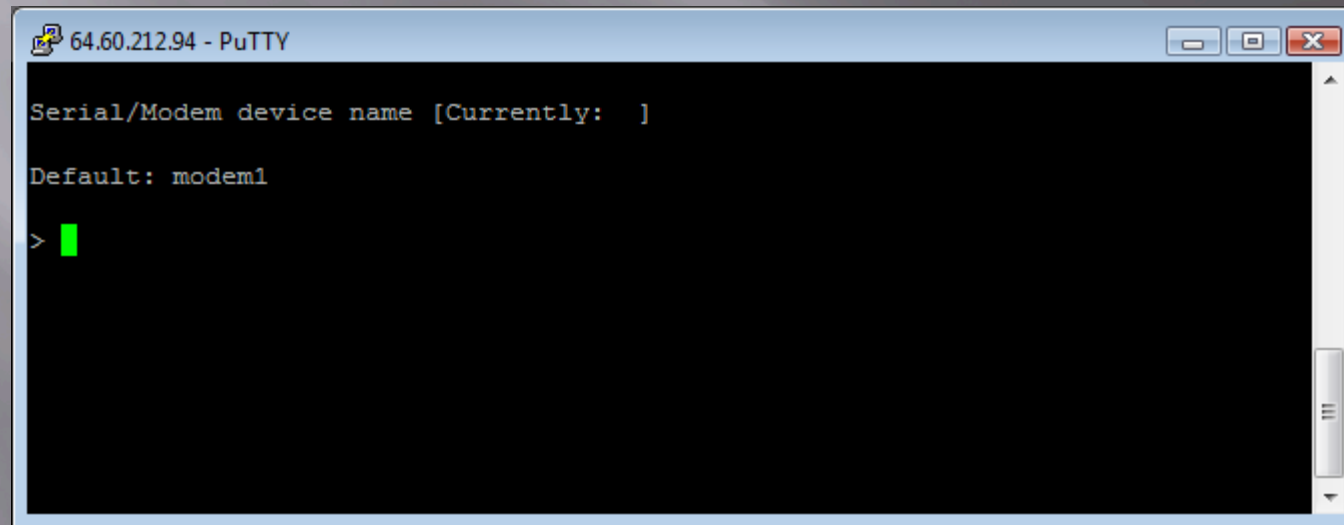
New Features (Antelope Specific)

PPP dial-in, dial-out support:

Select the modem:
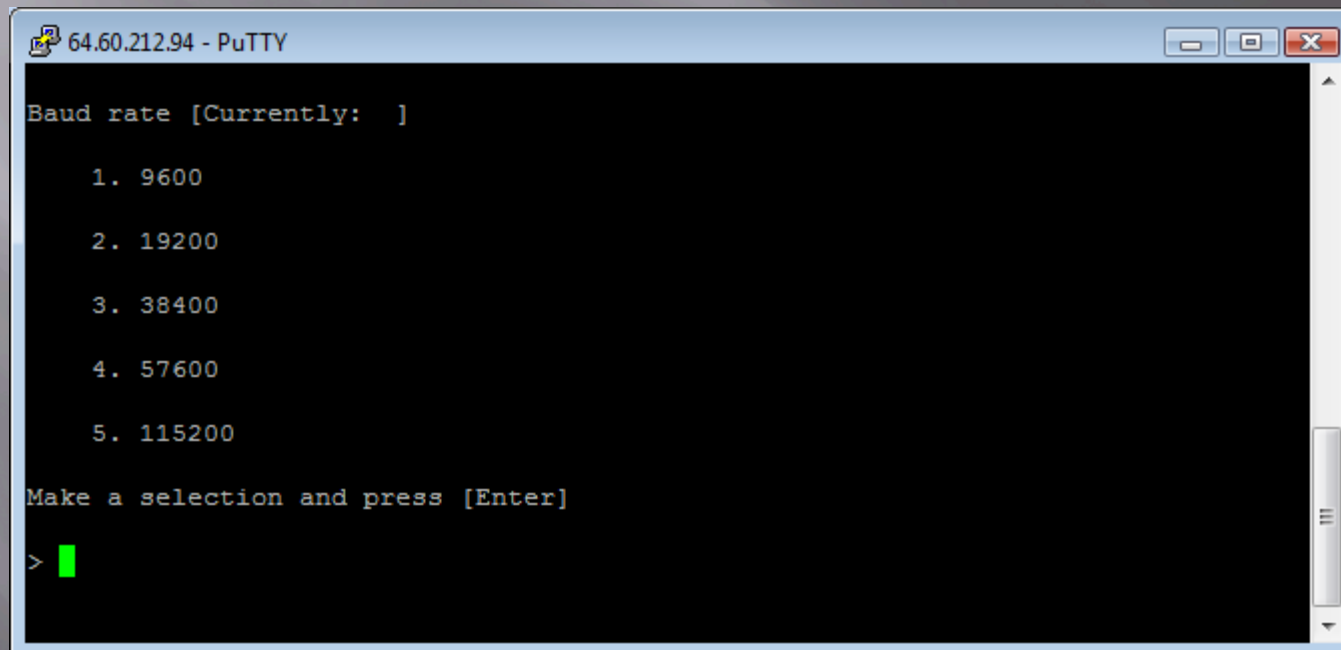
New Features (Antelope Specific)

PPP dial-in, dial-out support:

Set the baud rate:
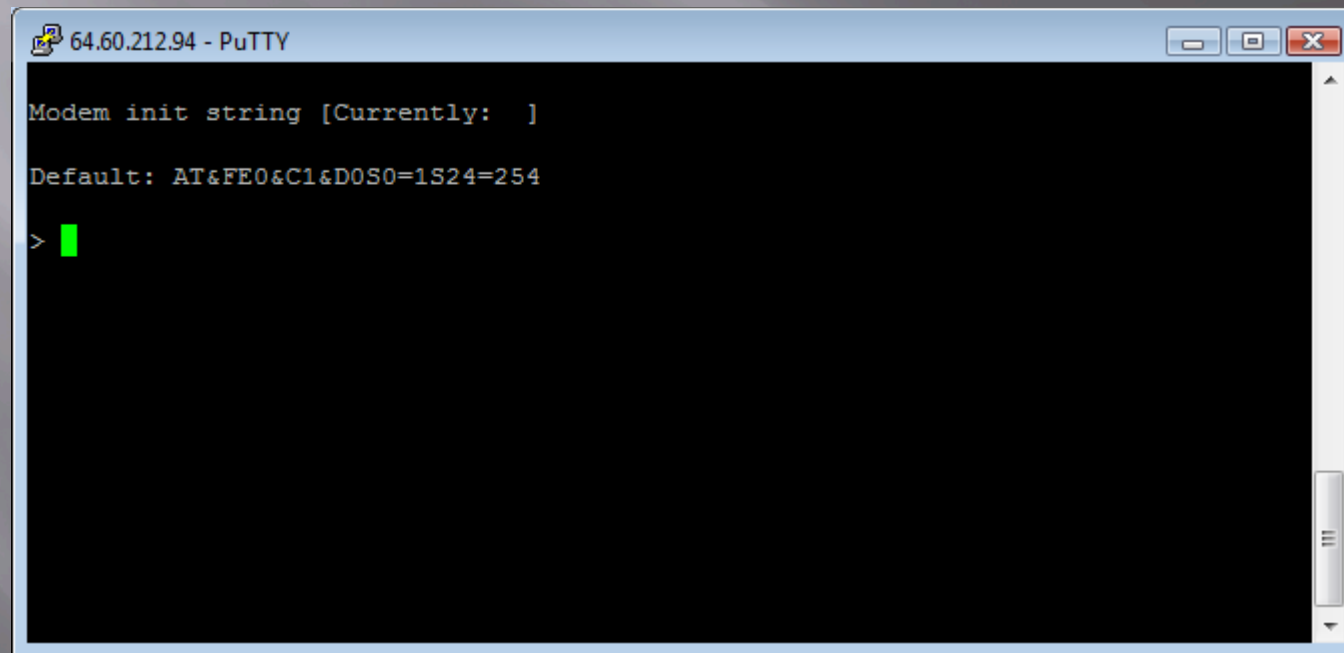
```
64.60.212.94 - PuTTY

Baud rate [Currently:  ]

    1. 9600

    2. 19200

    3. 38400

    4. 57600

    5. 115200

Make a selection and press [Enter]

>
```

New Features
(Antelope Specific)

PPP dial-in, dial-out support:

Set the modem initialization string:
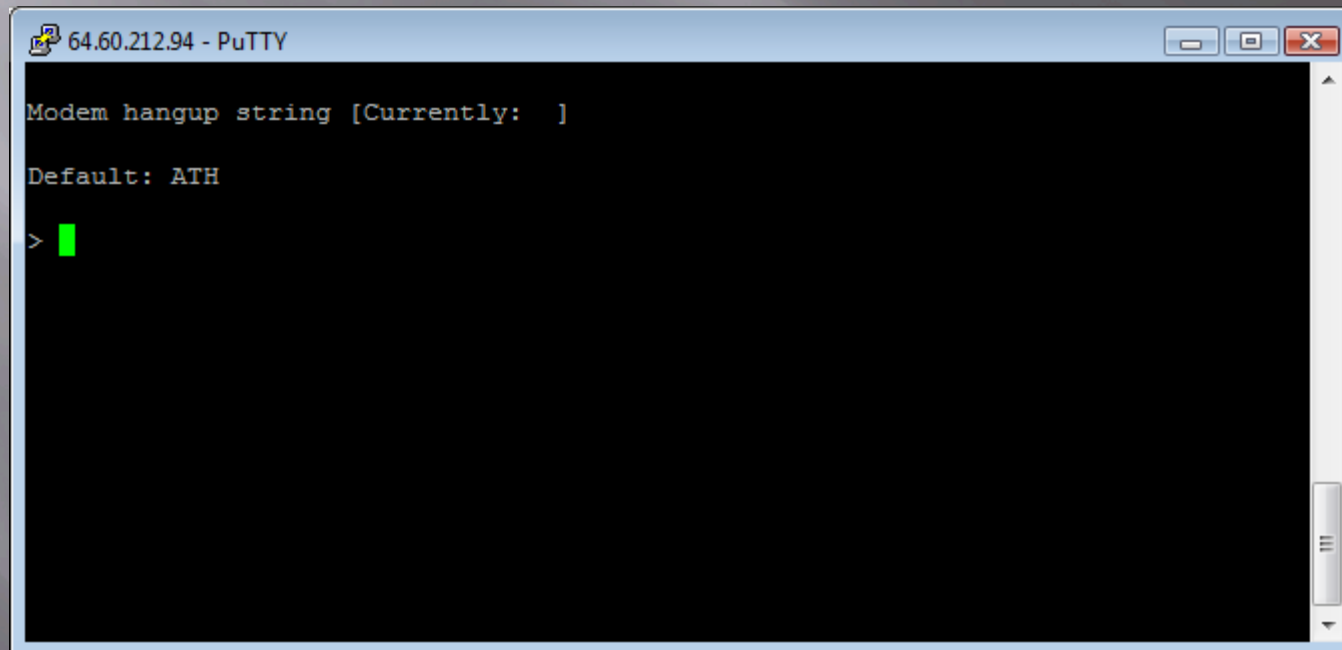

```
64.60.212.94 - PuTTY

Modem init string [Currently:  ]

Default: AT&FE0&C1&D0S0=1S24=254

>
```

New Features
(Antelope Specific)

PPP dial-in, dial-out support:

Set the modem hangup string:

New Features
(Antelope Specific)

PPP dial-in, dial-out support:

Set the primary phone number:


```
64.60.212.94 - PuTTY

Primary dial-out phone number (optional) [Currently:  ]

> 555-5555
```
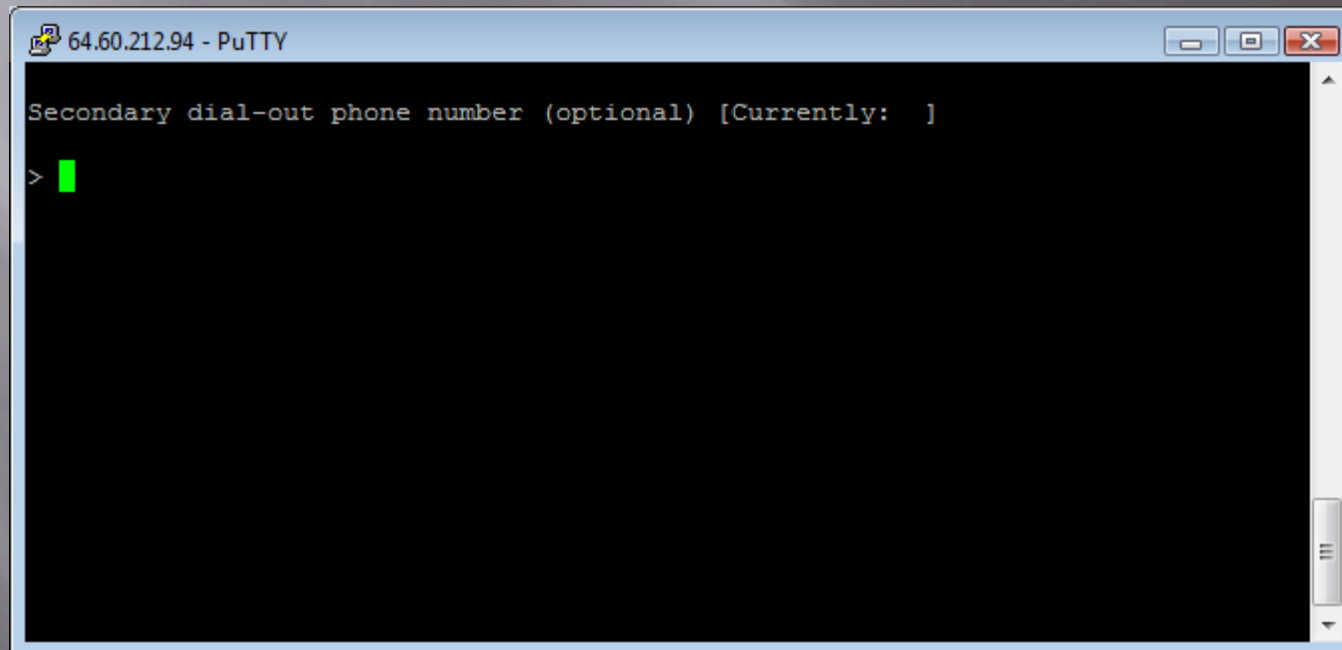
New Features
(Antelope Specific)

PPP dial-in, dial-out support:

Set the secondary phone number:

New Features
(Antelope Specific)

PPP dial-in, dial-out support:

Set the user name for PPP dial-out (host user):

New Features
(Antelope Specific)

PPP dial-in, dial-out support:

Set the password for PPP dial-out (host):
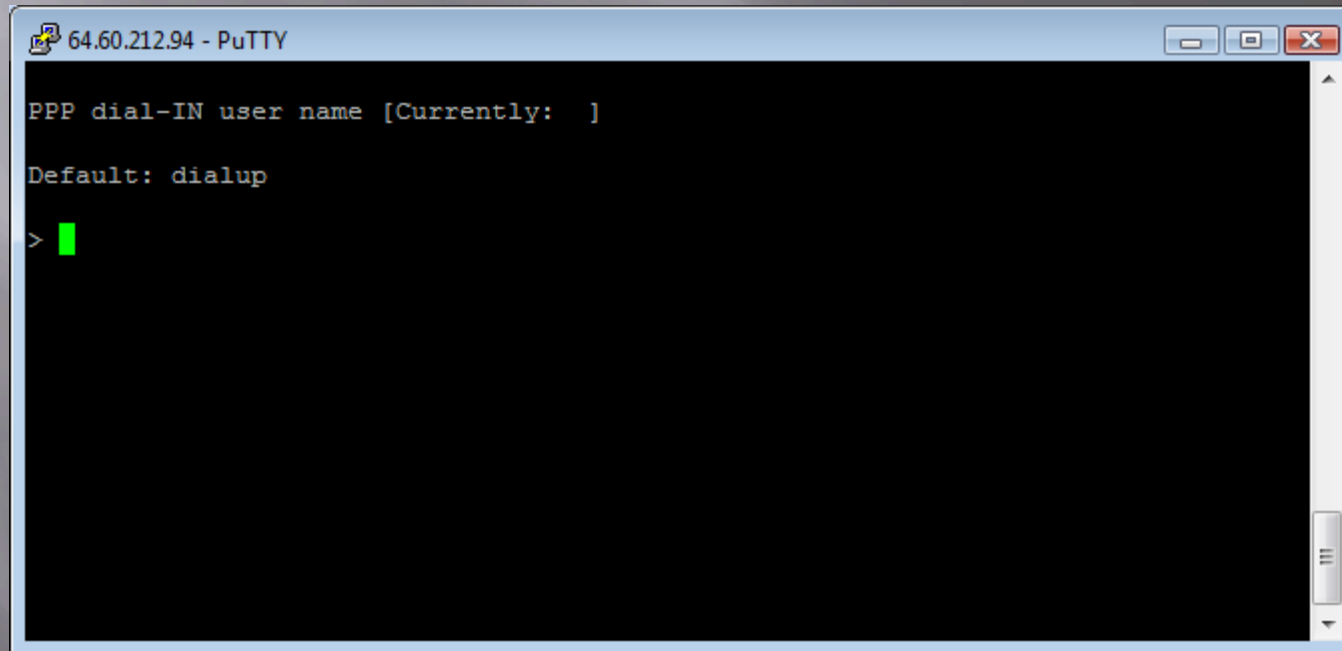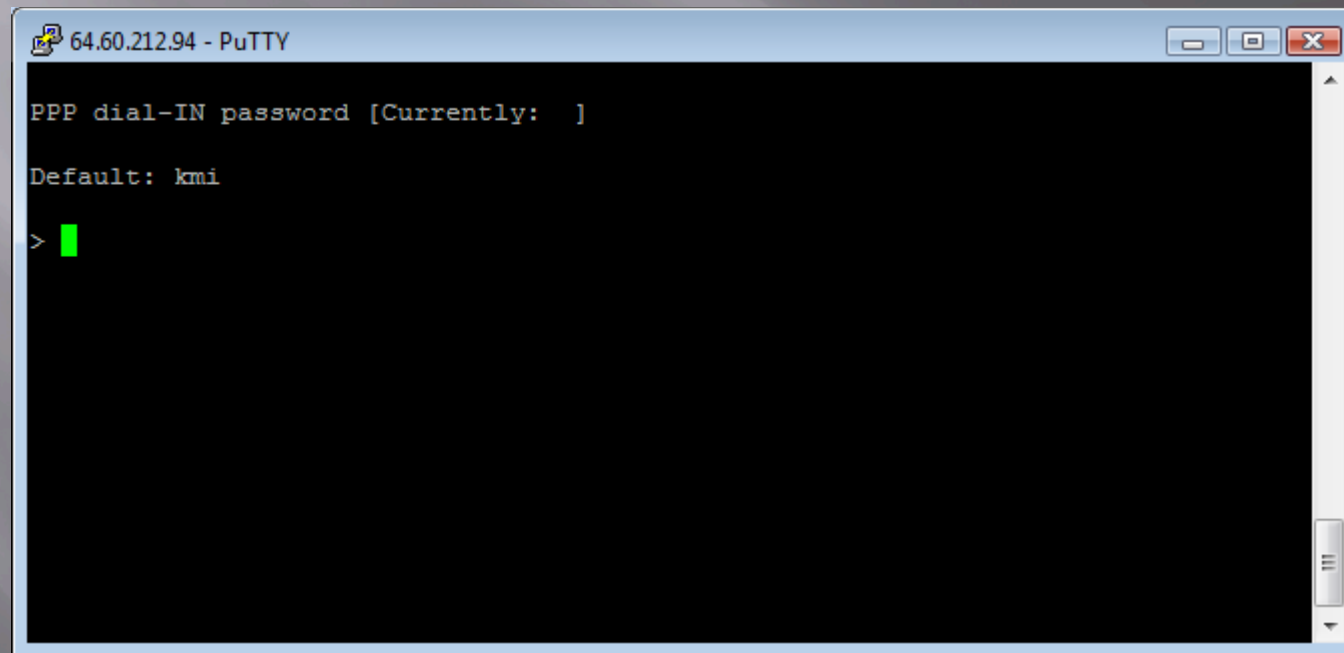
New Features (Antelope Specific)

PPP dial-in, dial-out support:

Set the user name for PPP dial-in (digitizer):

New Features
(Antelope Specific)

PPP dial-in, dial-out support:

Set the password for PPP dial-in (digitizer):

New Features
(Antelope Specific)

PPP dial-in, dial-out support:

Set the local IP address assigned to the PPP connection:
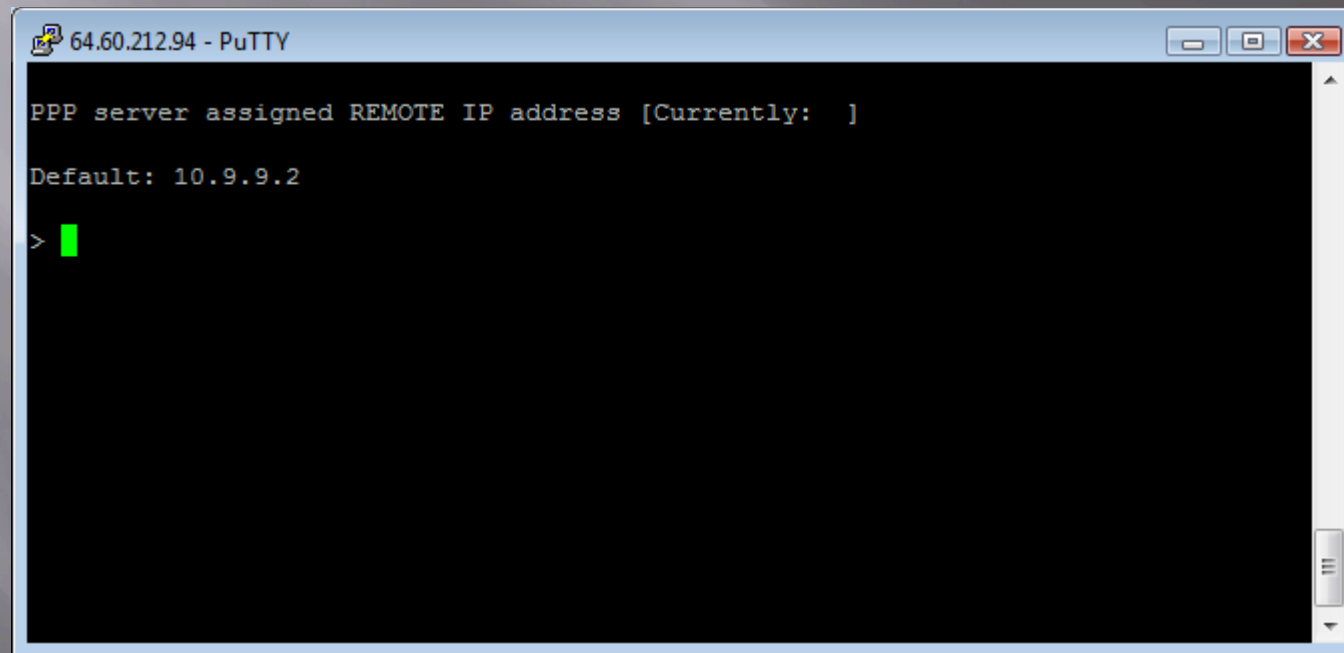
New Features
(Antelope Specific)

PPP dial-in, dial-out support:

Set the remote IP address assigned to the PPP connection:
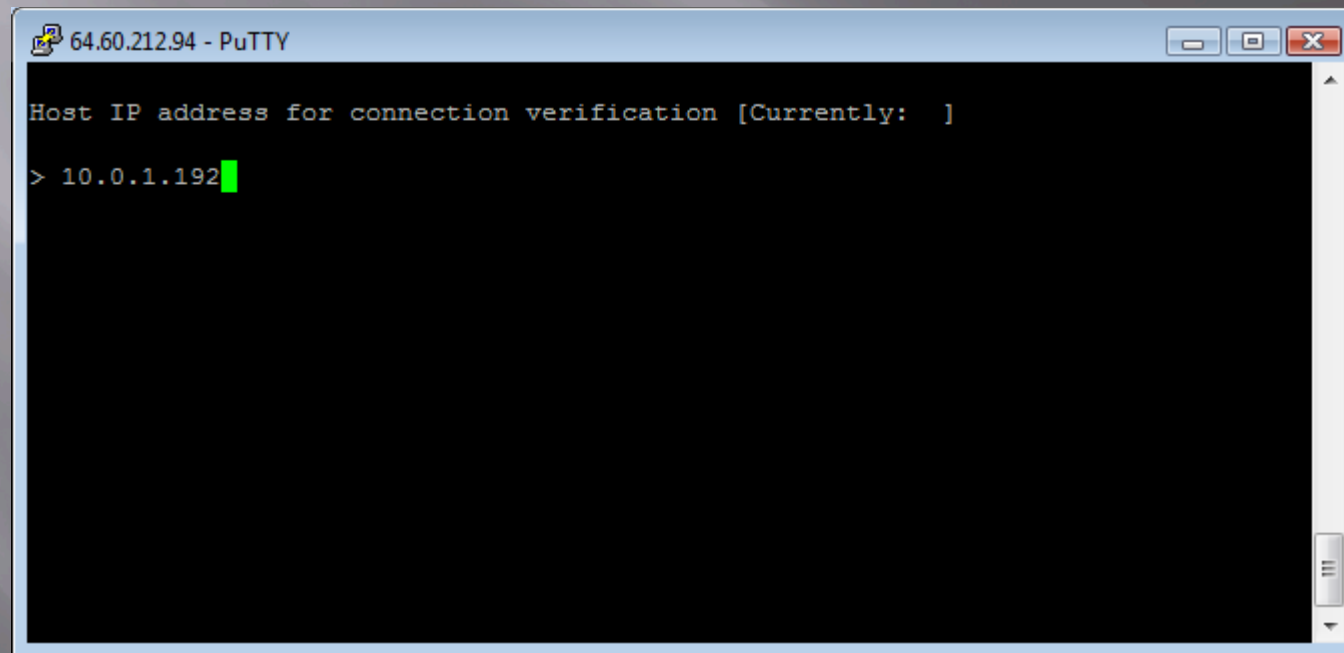
New Features
(Antelope Specific)

PPP dial-in, dial-out support:

Set the IP address used to see that the connection is alive:
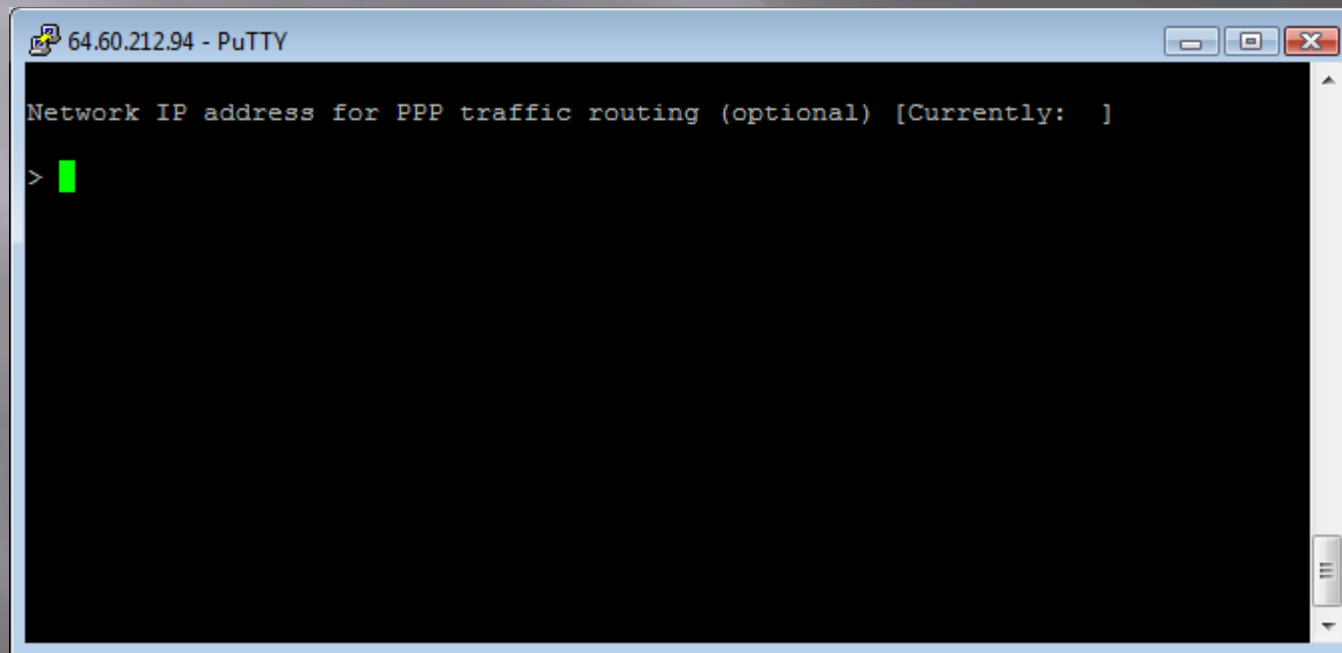
New Features
(Antelope Specific)

PPP dial-in, dial-out support:

Set the IP address used for PPP traffic routing:

New Features (Antelope Specific)

PPP dial-in, dial-out support:
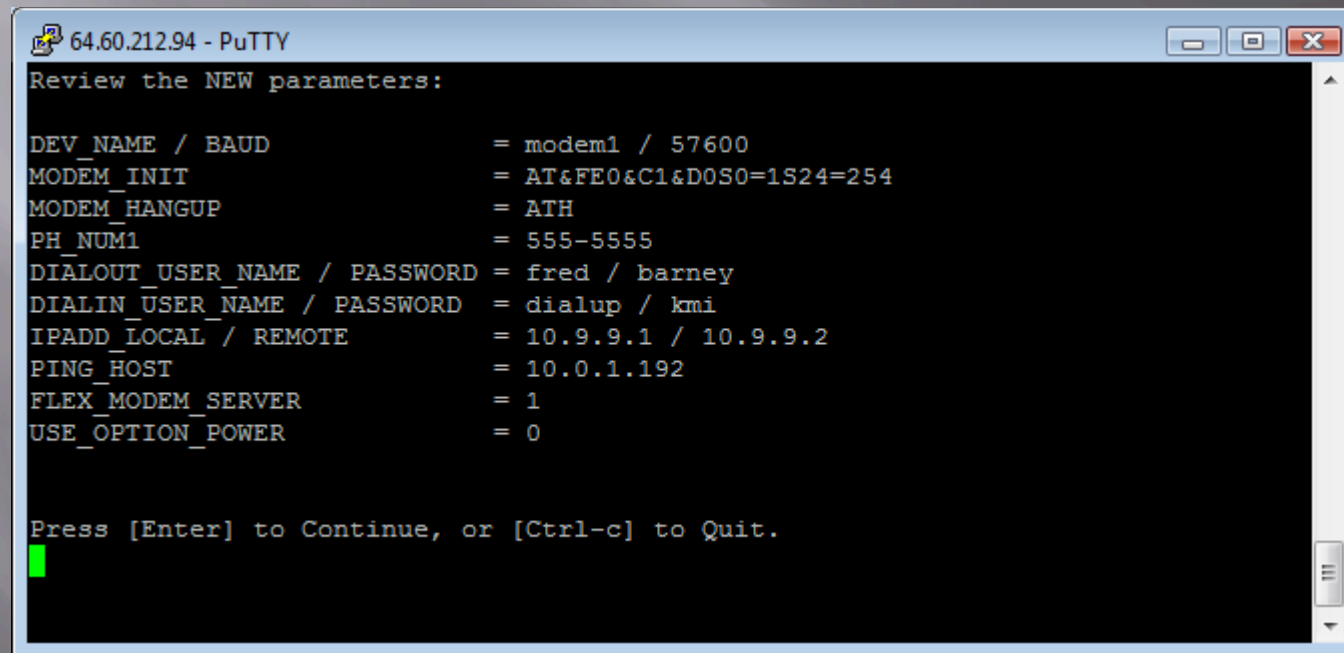
Select how device is powered (external hardware):
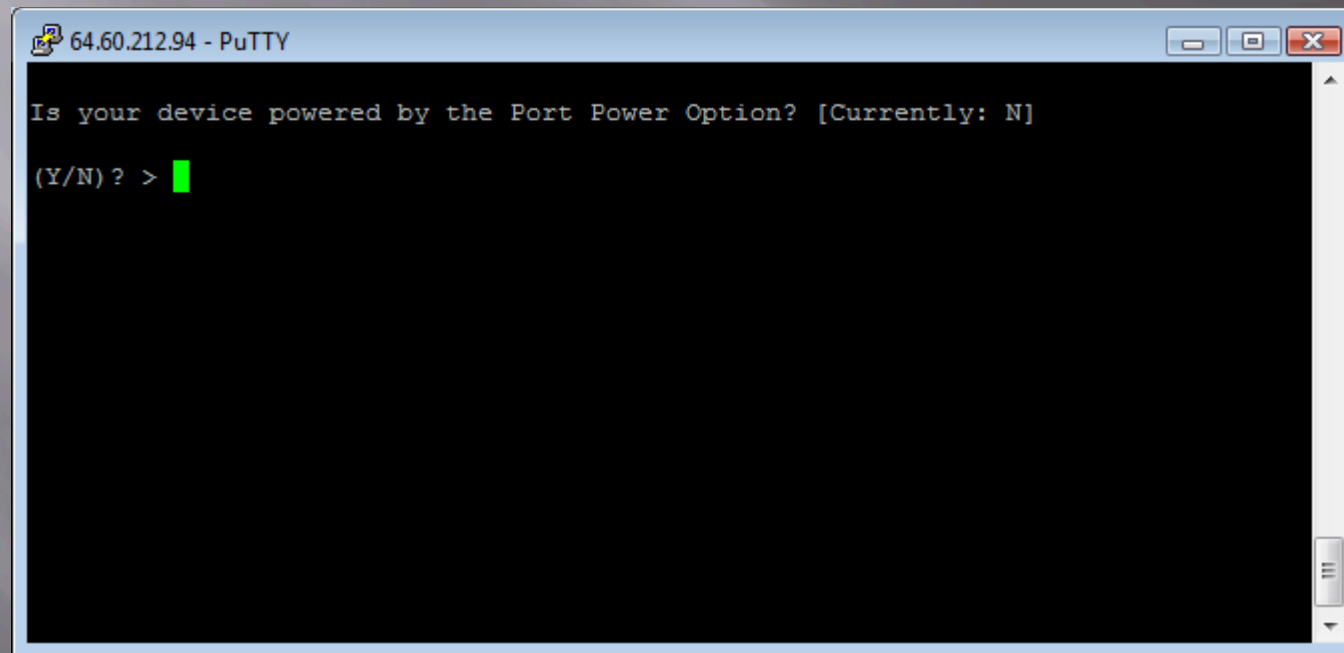
New Features
(Antelope Specific)

PPP dial-in, dial-out support:

Review:

```
64.60.212.94 - PuTTY                                              [_][□][X]
Review the NEW parameters:

DEV_NAME / BAUD                = modem1 / 57600
MODEM_INIT                     = AT&FE0&C1&D0S0=1S24=254
MODEM_HANGUP                   = ATH
PH_NUM1                        = 555-5555
DIALOUT_USER_NAME / PASSWORD   = fred / barney
DIALIN_USER_NAME / PASSWORD    = dialup / kmi
IPADD_LOCAL / REMOTE           = 10.9.9.1 / 10.9.9.2
PING_HOST                      = 10.0.1.192
FLEX_MODEM_SERVER              = 1
USE_OPTION_POWER               = 0


Press [Enter] to Continue, or [Ctrl-c] to Quit.
```

New Features (Antelope Specific)

PPP recap:

-Supports:
  - Full time connection (PPP interfaced cellular gateways)
  - Hardwired PPP client or server
  - Flexible PPP modem connection (acts as the "ISP" to accept incoming PPP connections when idle, and switches to client mode when needed)
- Connections:
  - Internal modem
  - External device
  - Internal serial port (the Basalt/Granite has 3, plus the modem)
  - Supports digitizer supplied switched power

New Features
(Antelope Specific)

PPP dial generator module:

The PPP support is at the OS/protocol level. Once the connection is established, you have a fully functional IP connection (all ports and services). The connection will time out after a 5 minute period of inactivity.

In addition, a new PPP Dial Generation module for Rockhound 'stimulates' the PPP connection to switch to client mode and dial for various user-specified reasons.

New Features
(Antelope Specific)

PPP dial generator module:

Dial for event triggers or SOH changes

PPP Dial Generation		
Dial on event	?	false ▼
Dial on SOH	?	false ▼
Dial on interval	?	0
Max retry	?	480

Message from webpage ⚠

⚠ Dial on interval

Dial periodically for the purposes of checkin or to send continuously acquired data, in minutes. Set to zero to disable interval dialing. (Dynamic Parameter)

OK

Message from webpage ⚠

⚠ Max retry

Maximum amount of time to attempt a connection before giving up, in minutes (Dynamic Parameter)

OK
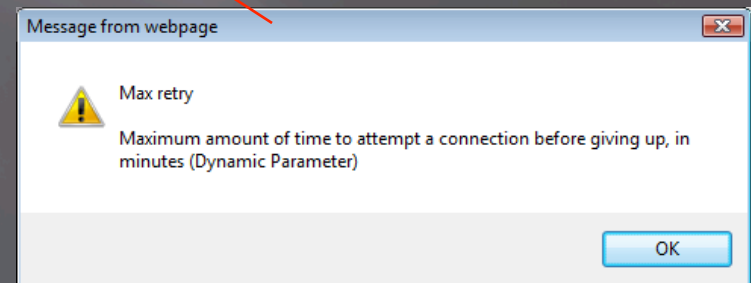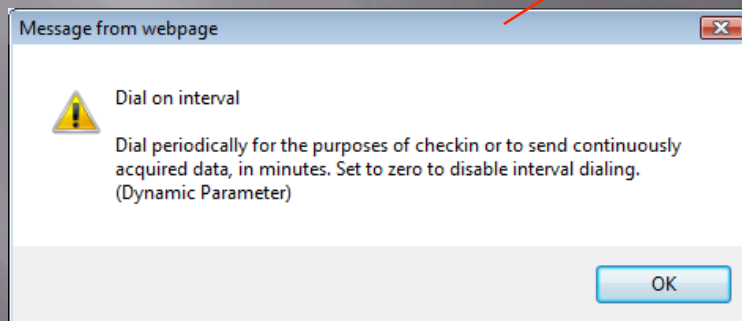
New Features
(Antelope Specific)

Altus2orb support:

- GetEventSummary packet support
- More complete parameter block support (up/down)
- Allow parameter changes through the Altus parameter block

New Features
(General)

- Waveform Viewer "all" selection for affecting multiple channels
- Site Summary page to show network setup, versions, modules
- Recorded Files page allows multiple file delete

- MiniSEED archiver supports Steim1 and Steim2 compression
- SSH tunneling supported in web server
- SCP File Sender module added
- SOH File Generation module added
- New GPIO modules for control of external relays

- General speed, stability, efficiency improvements

New Support Wiki

http://wiki.kmi.com/wiki/index.php/Main_Page

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Main Page - KMI Support WIKI

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Main Page

Welcome to the Kinemetrics Support Wiki

This is a collection of support information that is maintained to support customers and users of Kinemetrics products.

Information available on this site includes manuals, application notes, tutorials, software/firmware downloads and drawings.

This site is maintained dynamically, so if you don't find information that you believe should be there, let us know and we will review it and add it to the site if appropriate.

Need more help?

- Contact us at support@kmi.com for technical support help
- Contact us at sales@kmi.com for Sales support or product selection questions
- For the Kinemetrics Rock products, we have an informal e-mail users' group. Through this we can inform you occasionally of product, software, and documentation updates. You can request to join the group by e-mailing support@kmi.com
- The Kinemetrics main web site is here: www.kmi.com

Kinemetrics provides free technical support for all products by e-mail.

For technical questions and assistance, be sure to state the current software or firmware version numbers when you email us for support. Our standard technical support response time is 3 business days.

If you require direct telephone support by our engineers, require training courses, system developments or engineering services, please contact Kinemetrics' Sales dept. for a support contract quote.

This page was last modified on 5 January 2011, at 21:37.

This page has been accessed 331 times.

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http://wiki.kmi.com/wiki/index.php/Rock

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Rock

The Rock family of Kinemetrics Instrumentation includes the following products:

Basalt: 4 to 8 channels

Granite: 12 to 36 channels

Dolomite: Central recording system based on the Granite

Slate: Field processor (no ADC channels)

Marmot: Field processor with BRTT's Antelope software

Resources:

- Rock Manuals
- Rock Application Notes
- Rock FAQ
- Rock Software and Firmware
- Rock Training Resources
- Rock User's Group Episodes
- Rock Drawings

This page was last modified on 1 February 2011, at 16:38.

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Rock Manuals

Dolomite Central Recording System manual (300718)

Rock Digitizer Quick Start (300690A)

Rock Digitizer manual (300715F)

Rock Extended Serial Interconnect manual (300717)

Rockhound Software User manual (304702M)

Slate User's manual (300632)

Rock

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http://wiki.kmi.com/wiki/index.php/Rock_Released

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Rock Released

Rock software here has gone through full and normal release testing and is what is shipped with current Rock products.

General guidance is that you should always be using the latest released software in your instrumentation unless there is a clearly understood reason not to.

If you report suspected software problems to Kinemetrics, one of the first things you will likely be asked to do is to install the latest release software.

Contents [hide]

Rock User's Group

Join the Rock User's Group!

- Keep informed of technical updates and product use tips
- Free, useful technical product information
- Share what you have learned and learn from others

Subscribe

Digitizer Firmware

Instructions for Updating Rockhound

Instructions for Updating Rockhound v1.2.1 7/13/2010

Linux Update

Kinemetrics

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Rock Experimental

Disclaimer: Experimental software listed here is pre-released software that is made available to provide advance access to new features or to quickly address necessary changes or corrections for specific problems.

Although some testing has been done, this software has not gone through complete release testing and may have problems that would be found during full release testing.

Although we are interested in solving and addressing any problems found with this software, you should be aware that by its nature experimental software is dynamic and may be subject to more problems than released software.

Update for Rockhound in a digitizer, Slate, or PC.

Rockhound v3.8.1f BETA

(download using right-click and Save Target As)

Roll-up patch for the Digitizer Linux system.

Linux Update 16 (beta 15)

(download using right-click and Save Target As)

Rock Software and Firmware

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Rock Training Resources

Contained here are several small tutorials giving detailed step-by-step instructions for several common activities with the Rock products:

Using PuTTY

Using WinSCP

Logging into Linux

Passwords

Managing files with WinSCP

Network Configuration

Changing Sample Rates

Changing Trigger Levels

Changing Recording Format

Changing Voltage Ranges

Channel Sensitivity

Enabling Continuous Recording

Enabling the RB Server

Enabling RocktoEW

Enabling RocktoSeedLink

Updating Rockhound through the web

Updating Linux through the web

Updating Rockhound through WinSCP

Updating Linux through WinSCP

Serial Ports

SOH Channels

Rock

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Changing Voltage Ranges

How to change voltage ranges on a
Rock using the web interface

http://wiki.kmi.com/wiki/index.php/Rock_Drawings

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Rock Drawings

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Rock Cables

112297C Power and Battery

112259A Power and Battery (with charger)

112250A Power with charger (no battery connection)

112293C Ethernet

112294B Console

112295C Full Serial

Basalt/Granite Cables

111938A Serial Interconnect

111946A Modem

111941B Dual Serial

112075A Time Over Ethernet

Slate/Marmot cables

112298B Single Serial

Dolomite

504200A Dolomite Assembly

504021A Dolomite Wiring Diagram

504020A Dolomite Assembly

504205 Dolomite Assembly, 100VAC Option

504206 Dolomite Wiring Diagram 110VAC Option

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You are the only user logged in

You h...

You are the only user logged in

You have been granted Full Access

Usage Hint:

Antelope Support

The system includes a module to provide a BRTT Antelope compatible ORB server.

The module is called Ring Buffer Server and can be added to the system to make the digitizer's data available to an Antelope system via ORB to ORB transfers.

Show Next Hint

OK

Done　　　　　　　　　Internet | Protected Mode: On　　　　105%

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Station KMI

Kinemetrics Granite

Station KMI

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   Interactive file viewer
Parameters:
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   System operation
   Layout display
   Channel summary
   Site summary
   Apply changes now
   Advanced features
Tools:
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   Error-log
   Maintenance-log
   Connect
   Limited access
Links:
   Kinemetrics web site
   Kinemetrics contacts
   Tech support email

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Status
Triggered: No
Events count: 7
Total events: 1206
Last trigger data time: N/A
Last event RTC: N/A
Alarm: Off
Timing system type: GPS
Time quality: 90
Temperature: 29.3c
Humidity: 29.1%
Battery: 13.2 (Charging)
Storage: 2.5 GB FREE

Data Flow Stats	System Info
Packet arrivals: 6218	Serial number: 101
Incomplete groups: 0	System started on: 2011/02/03 21:59:15 GMT
Missing groups: 0	Restart count: 4019
Last data gap: None	Number of streams (incl SOH): 22
Last gap Ch Id: None	IP Address: 10.0.1.146
Groups queued: 222	Software version: 3.7
	KMI Rock filesystem 2.1.0 Update 16 (beta 15)

Data Flow	Clock Quality	Clock Drift	Alarm
OK	90.0%	Not Locked	Off
Temperature	Humidity	Storage Used	Battery
29.3c	29.14%	10.0%	13.2V

It's 2011/02/03 22:04:31 GMT

Add Left Frame

Done   Internet | Protected Mode: Off   90%

http://10.0.1.146/

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State-of-Health Selection

Short Term Parameters (last 24 hrs)		Long Term Parameters (one year)	
DIG1 Temperature	false	DIG1 Temperature	false
DIG1 Humidity	false	DIG1 Humidity	false
DIG1 TCXO Drift	false	DIG1 TCXO Drift	false
DIG1 Clock Quality	false	DIG1 Clock Quality	false
DIG1 TCXO DAC	false	DIG1 TCXO DAC	false
DIG1 Battery	false	DIG1 Battery	false
DIG1 DC Volts	false	DIG1 DC Volts	false
DIG1 Current	false	DIG1 Current	false

OK   Cancel

Done   Internet | Protected Mode: Off   90%

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State-of-Health

Data Flow	Clock Quality	Clock Drift	Alarm
OK	100.0%	0.040us	Off
Temperature	Humidity	Storage Used	Battery
29.0c	29.14%	10.0%	13.2V

Show timing details

Short term DIG1 Temperature

31.9

23.9

|00 |04 |08 |12 |16 |20

DIG1 TEMPERATURE (MAX 30.0

Long term DIG1 Temperature

34.8

23.3

DIG1 LONG TERM TEMPERATURE (MAX 34.8)

|M |A |M |J |J |A |S |O |N |D |J

Done

Internet | Protected Mode: Off   90%

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State-of-Health

Data Flow	Clock Quality	Clock Drift	Alarm
OK	100.0%	0.040us	Off
Temperature	Humidity	Storage Used	Battery
29.0c	29.18%	10.0%	13.2V

Timing System Status

Timing system type: GPS
Satellites in view: 6
Last timing lock: 2011/02/03 22:09:17 GMT
Timing locked since: 2011/02/03 22:06:27 GMT
GPS Position: 34.150467N -118.100800E 166m
GPS Status: Doing position fixes
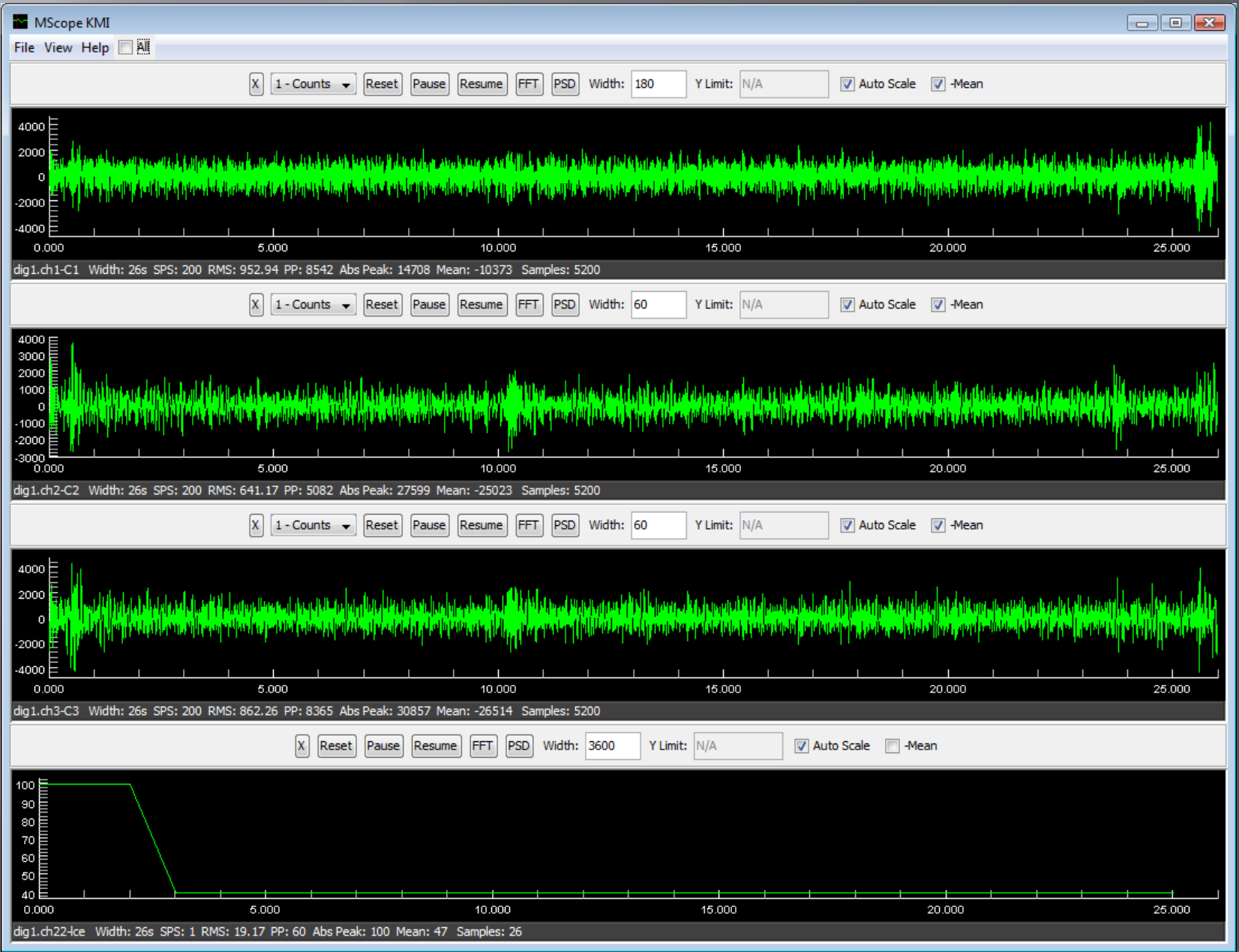Antenna: OK
Almanac: Incomplete

Satellite SNR values

SV 14	SV 18	SV 22	SV 31
5.2	0.0	5.8	-1.4
SV 29	SV 3	SV 11	SV 24
0.0	4.4	5.4	7.2
SV 21	SV 19	SV 28	SV 5
-1.4	5.6	0.0	0.0

Hide timing details

Short term DIG1 Temperature

31.9

Done   Internet | Protected Mode: Off   90%

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Recorded Files

20110201215528.dig1.ch1.KMI.evt
(257KB) Select for delete: ☐

20110201215649.dig1.ch1.KMI.evt
(257KB) Select for delete: ☐

20110201223038.dig1.ch1.KMI.evt
(257KB) Select for delete: ☐

Delete Selected

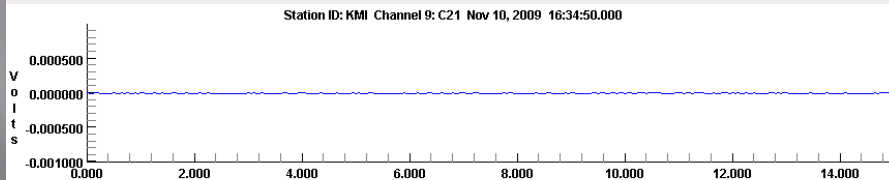Interactive File Viewer

This page provides thumbnail views of recorded files, as well as links to a larger image of the file (by clicking the thumbnail). If you click on the filename, you can download or directly open the file.

Done

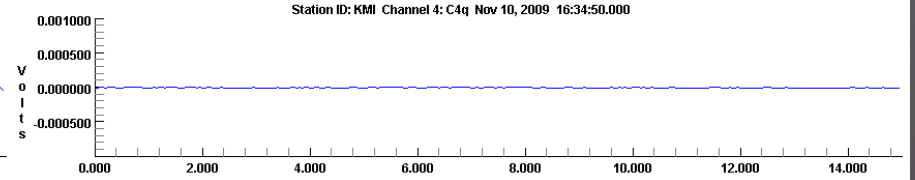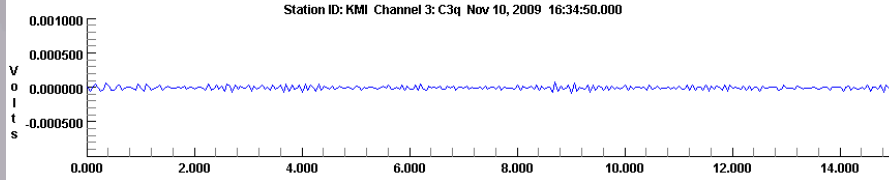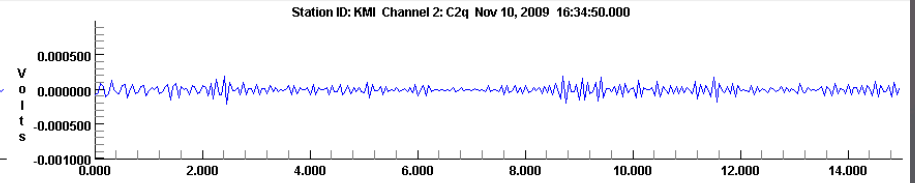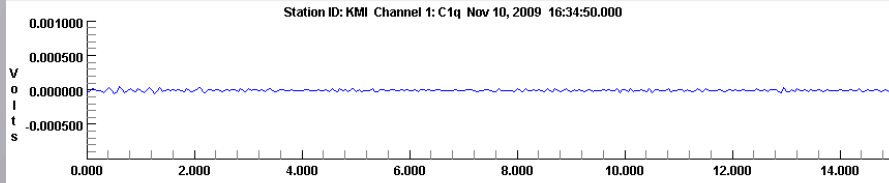Internet | Protected Mode: Off
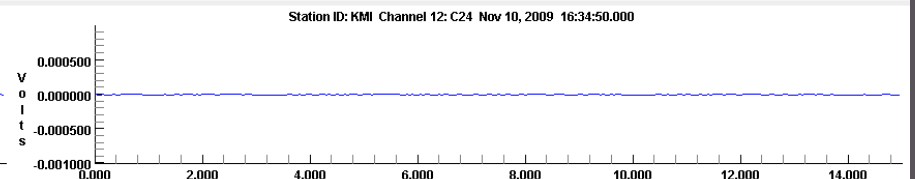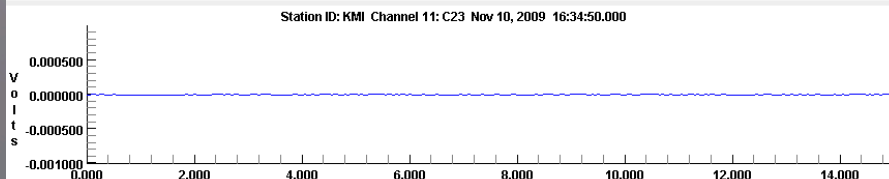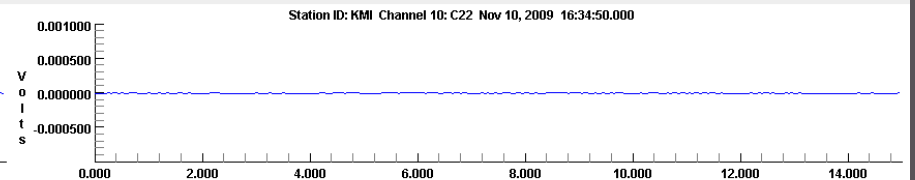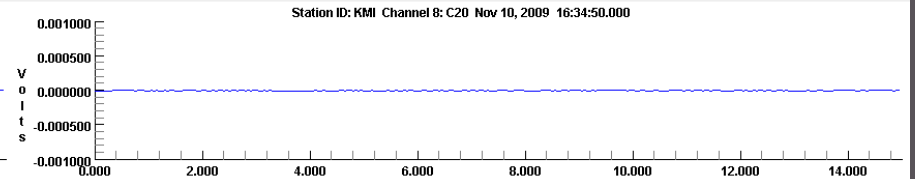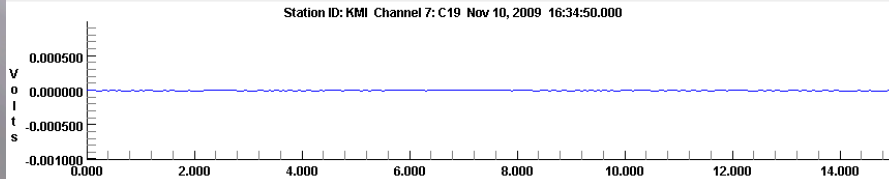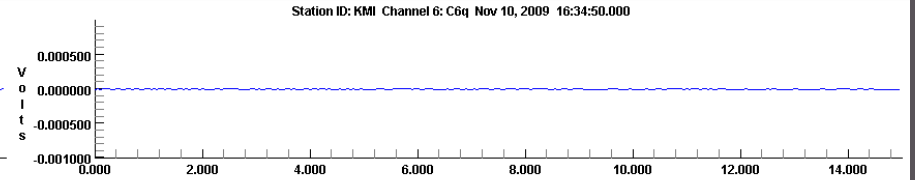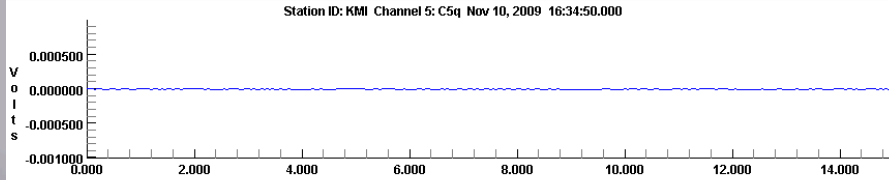
90%

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Layout of station KMI

DIG1, CH 1, ROCK DATA INTERFACE
DATA INTEGRATOR
DIG1, CH 1, CHANNEL EXTRACTOR
DIG1, CH 1, CLASSIC STRONG MOTION FILTER
DIG1, CH 1, THRESHOLD TRIGGER

RING BUFFER SERVER
DIG1, CH 2, CHANNEL EXTRACTOR
DIG1, CH 2, CLASSIC STRONG MOTION FILTER
DIG1, CH 2, THRESHOLD TRIGGER

STATUS INTEGRATOR
DIG1, CH 3, CHANNEL EXTRACTOR
DIG1, CH 3, CLASSIC STRONG MOTION FILTER
DIG1, CH 3, THRESHOLD TRIGGER

WAVEFORM VIEWER
DIG1, CH 4, CHANNEL EXTRACTOR
DIG1, CH 4, CLASSIC STRONG MOTION FILTER
DIG1, CH 4, THRESHOLD TRIGGER

DIG1, CH 5, CHANNEL EXTRACTOR
DIG1, CH 5, CLASSIC STRONG MOTION FILTER
DIG1, CH 5, THRESHOLD TRIGGER

DIG1, CH 6, CHANNEL EXTRACTOR
DIG1, CH 6, CLASSIC STRONG MOTION FILTER
DIG1, CH 6, THRESHOLD TRIGGER

Done   Internet | Protected Mode: Off   90%

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Layout of station KMI

DIG1, CH 1, ROCK DATA INTERFACE → DATA INTEGRATOR → DIG1, CH 1, CHANNEL EXTRACTOR → DIG1, CH 1, CLASSIC STRONG MOTION FILTER → DIG1, CH 1, THRESHOLD TRIGGER → VOTER → RECORDER → ALTUS EVT FORMAT DATA ARCHIVER

RING BUFFER SERVER — DIG1, CH 2, CHANNEL EXTRACTOR → DIG1, CH 2, CLASSIC STRONG MOTION FILTER → DIG1, CH 2, THRESHOLD TRIGGER

STATUS INTEGRATOR — DIG1, CH 3, CHANNEL EXTRACTOR → DIG1, CH 3, CLASSIC STRONG MOTION FILTER → DIG1, CH 3, THRESHOLD TRIGGER

WAVEFORM VIEWER — DIG1, CH 4, CHANNEL EXTRACTOR → DIG1, CH 4, CLASSIC STRONG MOTION FILTER → DIG1, CH 4, THRESHOLD TRIGGER

DIG1, CH 5, CHANNEL EXTRACTOR → DIG1, CH 5, CLASSIC STRONG MOTION FILTER → DIG1, CH 5, THRESHOLD TRIGGER

DIG1, CH 6, CHANNEL EXTRACTOR → DIG1, CH 6, CLASSIC STRONG MOTION FILTER → DIG1, CH 6, THRESHOLD TRIGGER

DIG1, CH 7, CHANNEL EXTRACTOR → DIG1, CH 7, CLASSIC STRONG MOTION FILTER → DIG1, CH 7, THRESHOLD TRIGGER

DIG1, CH 8, CHANNEL EXTRACTOR → DIG1, CH 8, CLASSIC STRONG MOTION FILTER → DIG1, CH 8, THRESHOLD TRIGGER

DIG1, CH 9, CHANNEL EXTRACTOR → DIG1, CH 9, CLASSIC STRONG MOTION FILTER → DIG1, CH 9, THRESHOLD TRIGGER

DIG1, CH 10, CHANNEL EXTRACTOR → DIG1, CH 10, CLASSIC STRONG MOTION FILTER → DIG1, CH 10, THRESHOLD TRIGGER

DIG1, CH 11, CHANNEL EXTRACTOR → DIG1, CH 11, CLASSIC STRONG MOTION FILTER → DIG1, CH 11, THRESHOLD TRIGGER

DIG1, CH 12, CHANNEL EXTRACTOR → DIG1, CH 12, CLASSIC STRONG MOTION FILTER → DIG1, CH 12, THRESHOLD TRIGGER

COMMAND CONSOLE   E-MAIL MESSAGE SENDER   CONFIG / CONTROL WEB SERVER   STATUS SERVER   UPDATE MONITOR

DRAWN:2011/02/03 22:17:59 GMT

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Channel Configuration Summary

System Overview	
System type	Granite
Serial number	101
Number of channels	12
Number of streams (incl SOH)	22
SOH streams: deg, hum, vvb, vep, vec, cpu, dsk, lcq, vco, lce	

Channels and Sensors						
VCh	Id	SPS	Sensor Type	Full Scale	Sensitivity	G Range
1	C1	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
2	C2	200	32: EpiSensor [a]	5.0V	1.253V/g	4g
3	C3	200	32: EpiSensor [a]	5.0V	1.2494V/g	4g
4	C4	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
5	C5	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
6	C6	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
7	C7	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
8	C8	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
9	C9	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
10	C10	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
11	C11	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
12	C12	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g

Show voting details
Configuration as of: 2011/02/03 22:20:27 GMT

Done   Internet | Protected Mode: Off   95%

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3	C3	200	32: EpiSensor [a]	5.0V	1.2494V/g	4g
4	C4	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
5	C5	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
6	C6	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
7	C7	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
8	C8	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
9	C9	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
10	C10	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
11	C11	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g
12	C12	200	32: EpiSensor [a]	5.0V	1.2508V/g	4g

Channel Voting and Triggers

VCh	Id	Filter	Trigger	Trig Votes	Detrig Votes
1	C1	CSMFilter	ThresholdTrigger	1	1
2	C2	CSMFilter	ThresholdTrigger	1	1
3	C3	CSMFilter	ThresholdTrigger	1	1
4	C4	CSMFilter	ThresholdTrigger	1	1
5	C5	CSMFilter	ThresholdTrigger	1	1
6	C6	CSMFilter	ThresholdTrigger	1	1
7	C7	CSMFilter	ThresholdTrigger	1	1
8	C8	CSMFilter	ThresholdTrigger	1	1
9	C9	CSMFilter	ThresholdTrigger	1	1
10	C10	CSMFilter	ThresholdTrigger	1	1
11	C11	CSMFilter	ThresholdTrigger	1	1
12	C12	CSMFilter	ThresholdTrigger	1	1

System Voting and Triggers

Trig Votes	Detrig Votes	Pre-Event	Post-Event	Min Runtime
2	1	3 sec	10 sec	Unused

Hide voting details

Configuration as of: 2011/02/03 22:21:01 GMT

Done
Internet | Protected Mode: Off   95%

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Site Summary of station KMI

As of 2011/02/03 22:21:47 GMT

WAN

ROUTER
OUTSIDE IP ADDRESS: 64.60.212.2

GRANITE-12
STATION: KMI, S/N: 101
NUMBER OF STREAMS (INCL SOH): 22
INSIDE IP ADDRESS: 10.0.1.146
DNS: 10.0.1.24
DNS: 10.0.1.21
DNS: 10.0.1.22
DNS: 8.8.8.8
DNS: 4.2.2.1
DNS: 4.2.2.2

GPS

DRAWN:2011/02/03 17:23:40 GMT

Additional Info

GPS Position: 34.150543N -118.101160E 173m
Software version: 3.7
KMI Rock filesystem 2.1.0 Update 16 (beta 15)

Data Flow	Clock Quality	Clock Drift	Alarm
OK	100.0%	0.230us	Off
Temperature	Humidity	Storage Used	Battery
29.3c	29.14%	10.0%	13.2V

Modules Used in the Layout

Done   Internet | Protected Mode: Off   95%

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```
              GRANITE-12
        STATION: KMI, S/N: 101
   NUMBER OF STREAMS (INCL SOH): 22
    INSIDE IP ADDRESS: 10.0.1.146
           DNS: 10.0.1.24
           DNS: 10.0.1.21
           DNS: 10.0.1.22
           DNS: 8.8.8.8
           DNS: 4.2.2.1
           DNS: 4.2.2.2
```

GPS

DRAWN:2011/02/03 17:23:40 GMT

Additional Info
GPS Position: 34.150543N -118.101160E 173m
Software version: 3.7
KMI Rock filesystem 2.1.0 Update 16 (beta 15)

Data Flow	Clock Quality	Clock Drift	Alarm
OK	100.0%	0.230us	Off
Temperature	Humidity	Storage Used	Battery
29.3c	29.14%	10.0%	13.2V

Modules Used in the Layout	
Altus EVT Format Data Archiver	Channel Extractor
Classic Strong Motion Filter	Command console
Config/Control web server	Data Integrator
E-Mail Message Sender	Recorder
Ring Buffer Server	Rock Data Interface
Status Integrator	Status Server
Threshold Trigger	Update monitor
Voter	Waveform viewer

Internet | Protected Mode: Off   95%

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Maintenance Log

New maintenance entry

```
===========================================================================
Maintenance Log Entry Time: Thu Jun 25 02:54:44 GMT 2009
Visit date and Time: Today
Technician(s): DMP
Duration: 1 hour
Description:
    Did a bunch of stuff.
```

Done   Internet | Protected Mode: On   105%

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New Maintenance Log Entry	
Maintenance entry made	Wed Nov 25 15:53:27 GMT 2009
When was visit	
Technician(s)	
On-site time	
Maintenance performed	

NOTE: ALL fields must be filled out!

OK

Done

Internet | Protected Mode: On   105%

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Writing Your Own Rockhound Modules	Appnote47d.pdf	Delete

Kinemetrics Manuals		
Digitizer Quick Start	300690a.pdf	Delete
Dolomite Supplemental	300718nc.pdf	Delete
Rock Digitizer	300715D.pdf	Delete
Rockhound Reference	304702k.pdf	Delete
Serial Interconnect	300717.pdf	Delete

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http://www.iris.washington.edu/servlet/eventserver/eventsHTML.do?&Mag

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Close Window

Events Shown:	20 of 1629
Priortize:	recent events
Latitude Range:	33.15056 to 35.15056
Longitude Range:	-119.100914 to -117.100914
Date Range:	earliest available to latest available
Magnitude Range:	3.0 to 10.0
Depth Range:	all depths
Advanced Filter:	Automatic Logic

(Click column headers to sort)

Magnitude	Depth (km)	Time	Lat	Lon	Mag. Type	Mag. Contrib.	Event Source	Catalog
3.3	3.9	2009/08/07 08:53:30.6800	34.141	-117.488	ML	PAS	NEIC	WHDF
3.5	7.2	2009/08/01 12:55:55.6500	34.259	-117.384	MW	PAS	NEIC	WHDF
3.1	15.9	2009/07/14 04:14:22.0300	33.928	-118.359	ML	PAS	NEIC	WHDF
3.2	11.8	2009/06/22 11:27:09.4600	35.043	-119.035	ML	PAS	NEIC	WHDF
3.3	17.6	2009/06/21 14:29:33.4100	34.116	-117.324	ML	PAS	NEIC	WHDF
4.0	15.4	2009/05/19 22:49:11.4500	33.929	-118.34	ML	PAS	NEIC	WHDF
3.1	14.9	2009/05/18 03:45:10.5900	33.934	-118.346	ML	PAS	NEIC	WHDF
5.0	13.9	2009/05/18 03:39:36.3400	33.938	-118.336	MB	NEIC	NEIC	WHDF
3.1	13.4	2009/05/02 05:34:13.8800	34.067	-118.875	ML	PAS	NEIC	WHDF
4.4	14.0	2009/05/02 01:11:13.7000	34.069	-118.882	ML	PAS	NEIC	WHDF
3.0	4.0	2009/04/25 00:06:05.1700	33.896	-117.786	ML	PAS	NEIC	WHDF
3.8	4.1	2009/04/24 03:27:50.7300	33.894	-117.788	MW	PAS	NEIC	WHDF
3.6	4.7	2009/04/23 23:56:23.0800	33.894	-117.79	MW	PAS	NEIC	WHDF
3.0	15.1	2009/03/13 03:42:22.0900	34.016	-117.197	ML	PAS	NEIC	WHDF
3.0	12.0	2009/03/10 13:41:28.0700	33.968	-117.762	ML	PAS	NEIC	WHDF
3.4	7.5	2009/01/24 03:42:44.1200	33.984	-118.47	ML	PAS	NEIC	MHDF
3.1	18.4	2009/01/22 20:46:58.3000	34.2	-118.558	ML	PAS	NEIC	MHDF
3.3	15.1	2009/01/09 04:47:40.2900	34.098	-117.306	ML	PAS	NEIC	MHDF
4.4	14.2	2009/01/09 03:49:46.2700	34.107	-117.304	MB	NEIC	NEIC	MHDF
3.1	14.0	2008/12/31 11:05:05.0000	33.943	-118.784	ML	PAS	NEIC	MHDF

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http://10.0.1.146/

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Station KMI

Kinemetrics Granite

Station KMI

Overview
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Tools:
  Runtime-log
  Error-log
  Maintenance-log
  Connect
  Limited access
Links:
  Kinemetrics web site
  Kinemetrics contacts
  Tech support email
  Local events
  On-site weather
  Location map

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Your **National Weather Service** *forecast*
2 Miles ESE Pasadena CA

Enter address, "City, ST", or place name [   ] Go

NWS Los Angeles/Oxnard, CA   Last Update: 6:19 am PST Feb 3, 2011
Quick Forecast: 2 Miles ESE Pasadena CA

Current Conditions

SANTA FE DAM
Last Update on 03 Feb 12:57 PST
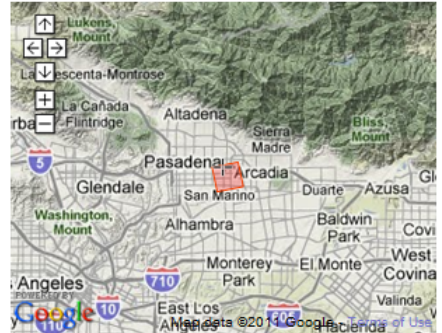
	Humidity:	26 %
	Wind Speed:	SW 6 G 13 MPH
64°F	Barometer:	30.32 in (N/A mb)
(18°C)	Dewpoint:	28°F (-2°C)
	Visibility:	Miles
	More Local Wx:	3 Day History:

Current Weather Hazards

Hazardous Weather Outlook

⊹ Requested Location   ☐ Forecast Area
Lat/Lon: 34.14N -118.1W   **Elevation:** 702 ft

[Enter address, city, st or place name] Go

| Today | Friday | Saturday | Sunday | Monday | Tuesday | Weekly Forecast |

Thursday, February 3

| Today | Tonight |

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Kinemetrics Granite

Station KMI

Overview
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  Layout display
  Apply changes now
  Advanced features
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  Connect
  Limited access
Links:
  Kinemetrics web site
  Kinemetrics contacts
  Tech support email
  Local events
  On-site weather
  Location map

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Google maps

34.15056,-118.100914

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245 N Carmelo Ave
Pasadena, CA 91107

Directions   Search nearby   Save to...   more ▾

Selected businesses at this address:

Oyo Corporation
Oyo Corporation USA
V-Tech Communications, Inc.

All businesses at this address »

Traffic   More...   Map   Satellite   Terrain

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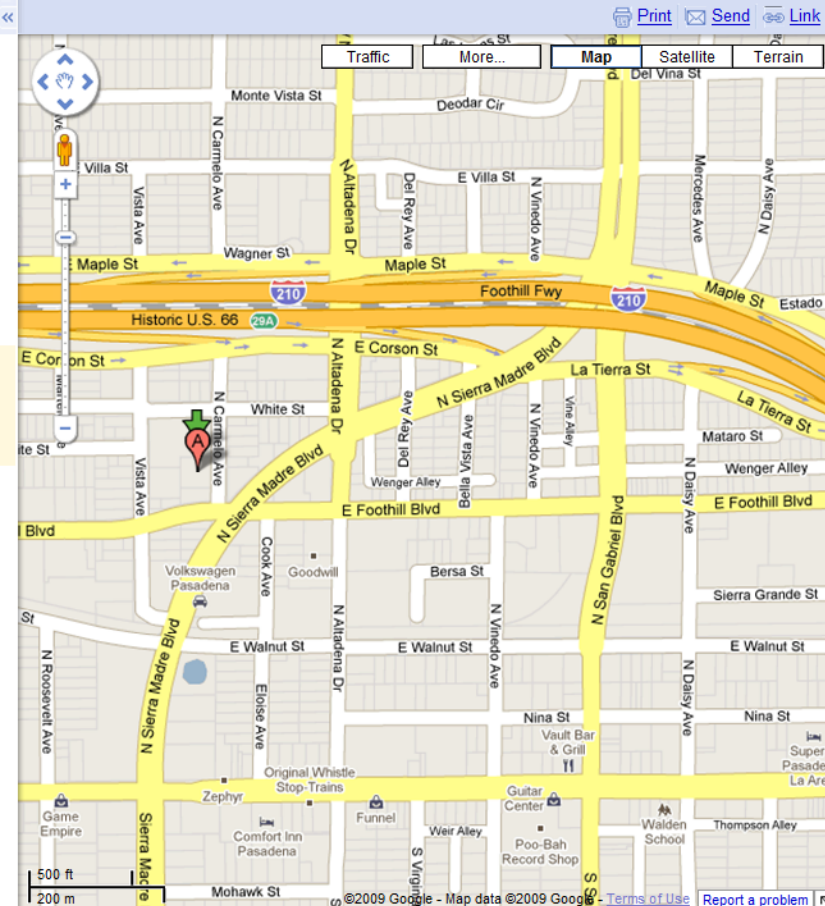
http://www.kmipoc.com/rockpoc/app?app_action=unitinfo&UniqId=0x1C7FD97C01

G100

WWW   **SFTP**   **SSH**

Unit Tag:	100
Unique Id:	0x1C7FD97C010000FE
IP Address:	64.60.212.93
Last Contact:	38 (secs)
Up Time:	7.65 (days)
Load Avg:	0.30
Disk Free:	root 421 MB / data 2088 MB
Temp:	24.50 C
Humidity:	32.44
Volts:	15.366
Amps:	0.329

```
Rock Finder
Found 10.0.1.146, Granite-12, SN 101
Found 10.0.1.161, Granite-24, SN 228
Found 10.0.1.147, Basalt-4, SN 4
Found 10.0.1.158, Granite-36, SN 103
Found 4 instruments
Press any key to continue . . .
```

Live Presentation