

CellVoice 16

USER MANUAL

D-PK-CELLV



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Revision History

June 13, 2019	Updated the Firmware Upgrade section
January 2, 2014	Added Provisioning Web Timeout
July 26, 2013	Updated Wireless Modem Activation process
March 26, 2013	Added Variable Bindings, SNMP Alarms, Derived Controls, and "Discover" Sensors button
March 19, 2013	Added Sensor Support to Specifications Page
February 12, 2013	Fixed Modem Activation Instructions
January 17, 2013	Initial Release

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Contents

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1	Cell16 Overview	1
2	Specifications	2
3	Shipping List	3
3.1	Optional Shipping Items - Available by Request	5
3.2	Optional Cell16 Accessories	5
4	Installation	6
4.1	Tools Needed	6
4.2	Mounting	6
5	Cell16 Back Panel	7
5.1	Power Connection	7
5.2	LAN Connection	8
5.3	50-Pin Alarm and Control Relay Connector	8
5.4	Optional 66 Block Connector	8
5.5	Discrete Alarms	10
5.6	Analog Alarms	11
5.6.1	Switching Analog Alarms to Current Operation	11
5.6.2	Analog Step Sizes	12
5.6.3	D-Wire External Sensors	12
6	GPRS/CDMA Wireless Modem	14
6.1	Wireless Modem Activation	16
7	Quick Start: How to Connect to the Cell16	17
7.1	...via Craft Port (using TTY Interface)	17
7.2	...via LAN	25
8	TTY Interface	26
8.1	Set DCP Parameters	26
9	Cell16 Web Browser	27
9.1	Logging on to the Cell16	27
9.1.1	Changing the Default Password	28
9.2	Using RADIUS Authentication	29
10	Cell16 - Quick Turn Up	30
10.1	How to Send Email Notifications	30
10.2	How to Send SNMP Traps	32
10.3	How to Send SMS Notifications	34
10.4	Setting up Backup Mode	35
10.4.1	How to Setup or SMS Notifications in Backup Mode Only	36
11	Provisioning Menu Field Descriptions	38

11.1 System	39
11.2 User Profiles	41
11.3 Ethernet	43
11.4 SNMP	44
11.5 Backup Mode	45
11.6 Phone List	45
11.7 Notifications	46
11.7.1 Notification Settings	46
11.7.2 Schedule	48
11.8 Alarms	49
11.9 Controls	50
11.10 Analogs	51
11.11 Sensors	54
11.12 Ping Targets	56
11.13 Variable Bindings	57
11.14 SNMP Alarms	58
11.15 System Alarms	59
11.16 Timers	59
11.17 Date and Time	60
12 Monitoring via the Web Browser	61
12.1 Alarms	61
12.2 Controls	62
12.3 Analogs	63
12.4 Sensors	63
12.5 Ping Targets	64
12.6 SNMP Alarms	64
12.7 System Alarms	66
13 Device Access Descriptions	66
14 Firmware Upgrade and Configuration Restoration	67
15 Front and Back Panel LED	68
16 Reference Section	69
16.1 Display Mapping & System Alarms	69
16.2 SNMP Manager Functions	75
16.3 SNMP Granular Trap Packets	76
17 Frequently Asked Questions	78
17.1 General FAQs	78
17.2 SNMP FAQs	79
18 Technical Support	80
19 End User License Agreement	81

1 Cell16 Overview



Effective, easy-to-install, light-capacity alarm monitoring

The Cell16 is a compact, LAN-based, light-capacity remote telemetry unit. This unit is designed for easy installation at small and medium remote sites, making it cost-effective to deploy alarm monitoring throughout your entire telecom network.

Powerful monitoring for smaller sites

This telco-grade remote is housed in a durable aluminum case that can be rack-mounted. This SNMP remote is scaled to the needs of small sites, such as remote huts, collocation racks, and enclosed cabinets - perfect for any site where a large capacity RTU would be more than you need.

- 16 Discrete Alarm Inputs
- 2/18 Control Relay Outputs (Build option)
- 6 Analog Alarm Inputs
- 16 D-Wire temperature or humidity sensors
- 32 Ping Targets

SNMP or T/Mon

The device can report alarms to any SNMP manager or to the DPS Telecom T/Mon Remote Alarm Monitoring System. This Cell16 can also report via SNMP and DCPx concurrently to T/Mon.

Easy Alerts via Email or SNMP

Email notification reports alarm events to the e-mail addresses of specified personnel and creates a supplemental record of alarm events in addition to your master via SNMP traps.

Upgraded Web Browser

The overhauled web interface that boasts several new monitoring tools, including new analog gauges. You'll also notice the impressive speed boost. Menus load very quickly, and the alarm status updates automatically without requiring a page refresh.



The Cell16 can monitor other LAN devices at a site before LAN is available to the site.

2 Specifications

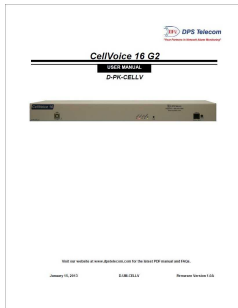
Discrete Alarm Inputs:	16
Analog Alarm Inputs:	6 (4 user-definable and 2 for input voltage monitoring)
Analog Input Range:	–90 to 90 VDC or 4 to 20 mA
Analog Thresholds:	4
Analog Accuracy:	+/- 1% (See Section 5.6.2 "Analog Step Sizes" for details)
Control Relays:	2 or 18
Ping Targets:	32
Sensors Supported:	16
Protocols:	SNMPv1, SNMPv2c, DCPx, TELNET, HTTP, HTTPS, Email
Dimensions:	1.7" H x 17.0" W x 6.6" D
Weight:	2.825 lbs.
Mounting:	19" or 23" rack or wall mount
Power Input:	-48VDC (-18 to -58 VDC)
Current Draw:	200mA @ -48VDC 400mA @ -24VDC
Fuse:	3/4 Amp GMT Fuse
Interfaces:	1 RJ45 10/100BaseT full-duplex Ethernet port 1 USB front-panel craft port 1 RJ11 connector for D-Wire sensor network
Visual Interface:	6 Front Panel LEDs 6 Back Panel LEDs
Operating Temperature:	32° - 140° F (0° - 60° C)
Operating Humidity:	0% - 95% non-condensing
MTBF:	60 years
Windows Compatibility:	XP, Vista, 7 32/64 bit
RoHS	5/6

3 Shipping List

Please make sure all of the following items are included with your Cell16 . If parts are missing, or if you ever need to order new parts, please refer to the part numbers listed and call DPS Telecom at **1-800-622-3314**.



Cell16 Unit
D-PK-CELLV



Cell16 User Manual
D-UM-CELLV



Cell16 Resource CD



6 ft. USB Download Cable
D-PR-046-10A-06



Antenna
2-901-00802-00



14 ft. Ethernet Cable
D-PR-923-10B-14



x 2
Two Locking 2-pin Power Connectors
2-820-35102-00



19" Rack Ears
D-CS-325-10A-00



23" Rack Ears
D-CS-325-10A-01



x 3
Three 3/4-Amp GMT Fuses
2-741-00750-00



x 4
Two Standard Rack Screws
1-000-12500-06



x 8
3/8" Ear Screws
2-000-60375-05



x 4
Four Metric Rack Screws
2-000-80750-03



x 4
Zip Ties
1-012-00106-00



Pads
2-015-00030-00

3.1 Optional Shipping Items - Available by Request



D-Wire Temperature Sensor
D-PK-DSNSR-12001.00001



D-Wire Temperature/Humidity Sensor
D-PK-DSNSR-12002.00002

3.2 Optional Cell16 Accessories

If you would like to order any of these accessories, or if you would like more information about them, call DPS Telecom at **(800) 622-3314**.



Pluggable Back Panel
D-PK-16PAN

The Cell16 's pluggable back panel allows for screw-in barrier plug connections for the Cell16 's alarms and relays.

4 Installation

4.1 Tools Needed

To install the Cell16 , you'll need the following tools:



Phillips No. 2 Screwdriver



Small Standard No. 2 Screwdriver



**PC with terminal emulator,
such as HyperTerminal**

4.2 Mounting

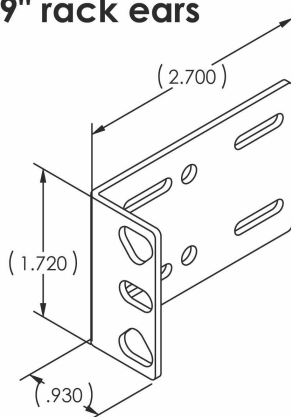


Cell16 can be flush or rear-mounted

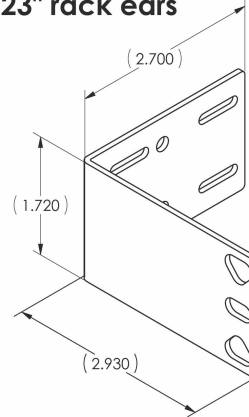
The Cell16 mounts in a 19" or 23" rack and can be mounted in the flush-mount or rear mount locations, as shown in.

The rack ears can be rotated 90° for wall mounting or 180° for other mounting options.

19" rack ears



23" rack ears



5 Cell16 Back Panel



Cell16 back panel connections


5.1 Power Connection

The Cell16 uses dual power inputs, powered through two barrier plug power connectors.




Locking RIA power inputs

To connect the Cell16 to a power supply:

1. Locate the metal grounding lug next to the symbol . Use the grounding lug to connect the unit to earth ground.
2. Insert the eyelet of the earth ground cable between the two nuts on the grounding lug (Ground cable not included).
3. Choose a barrier plug power connector to attach your power cable to. One plug is used for main power and the other is used for backup power. Both plugs are interchangeable so it does not matter which plug you select. Each plug's right terminal is Ground and its left terminal is Battery Lead.
4. Insert a battery ground into the power connector plug's right terminal (GND) and tighten the screw.
5. Insert a battery lead to the plug's left terminal and tighten its screw.
6. Insert fuse into the fuse distribution panel.
7. Check the power status LED for polarity.
8. Measure voltage. Connect the black cable onto the ground connector of your Digital Voltage Meter (DVM) and red cable onto the other connector of your DVM. The voltmeter should read between the values listed on the silk screen next to the power connector.
9. Insert the local fuse into the power fuse slot. The power plug can be inserted into the power connector only one way to ensure the correct polarity.

Note: The negative voltage terminal is on the left and the GND terminal is on the right.

10. Verify that the  LED is lit. To confirm that power is correctly connected, the front panel status LED will flash RED and GREEN, indicating that the firmware is booting up.

5.2 LAN Connection

To connect the unit to LAN, insert a standard RJ45 Ethernet cable into the 10/100BaseT Ethernet port on the back of the unit. If the LAN connection is OK, the LNK LED will light **SOLID GREEN**.

5.3 50-Pin Alarm and Control Relay Connector

The primary connectors for discrete alarms, analog alarms and control relays are the 50-pin apmhenol connectors on the Cell16 's back panel.






































































































































5.4 Optional 66 Block Connector

The unit is also available with an optional 66 Block Connector for connecting discrete alarms, analog alarms and control relays. Pinout and wire color coding are shown.

				Corresponding 50-Pin Connector Pin #
Wire color (wire/stripe)	Connection	66 Block Pair #		
WHT/BLU	ALM 1	1		26
BLU/WHT	GND 1			1
WHT/ORG	ALM 2	2		27
ORG/WHT	GND 2			2
WHT/GRN	ALM 3	3		28
GRN/WHT	GND 3			3
WHT/BRN	ALM 4	4		29
BRN/WHT	GND 4			4
WHT/GRY	ALM 5	5		30
GRY/WHT	GND 5			5
RED/BLU	ALM 6	6		31
BLU/RED	GND 6			6
RED/ORG	ALM 7	7		32
ORG/RED	GND 7			7
RED/GRN	ALM 8	8		33
GRN/RED	GND 8			8
RED/BRN	ALM 9	9		34
BRN/RED	GND 9			9
RED/GRY	ALM 10	10		35
GRY/RED	GND 10			10
BLK/BLU	ALM 11	11		36
BLU/BLK	GND 11			11
BLK/ORG	ALM 12	12		37
ORG/BLK	GND 12			12
BLK/GRN	ALM 13	13		38
GRN/BLK	GND 13			13
BLK/BRN	ALM 14	14		39
BRN/BLK	GND 14			14
BLK/GRY	ALM 15	15		40
GRY/BLK	GND 15			15
YEL/BLU	ALM 16	16		41
BLU/YEL	GND 16			16
YEL/ORG	CTRL 1 NC	17		42
ORG/YEL	CTRL 1 NO			17
YEL/GRN	CTRL 1 CO	18		43
GRN/YEL	CTRL 2 CO			18
YEL/BRN	CTRL 2 NC	19		44
BRN/YEL	CTRL 2 NO			19
YEL/GRY	FA CO	20		45
GRY/YEL	FA NO			20
VIO/BLU	ANA 1 -	21		46
BLU/VIO	ANA 1 +			21
VIO/ORG	ANA 2 -	22		47
ORG/VIO	ANA 2 +			22
VIO/GRN	ANA 3 -	23		48
GRN/VIO	ANA 3 +			23
VIO/BRN	ANA 4 -	24		49
BRN/VIO	ANA 4 +			24
VIO/GRY	GND	25		50
GRY/VIO	GND			25

} optional

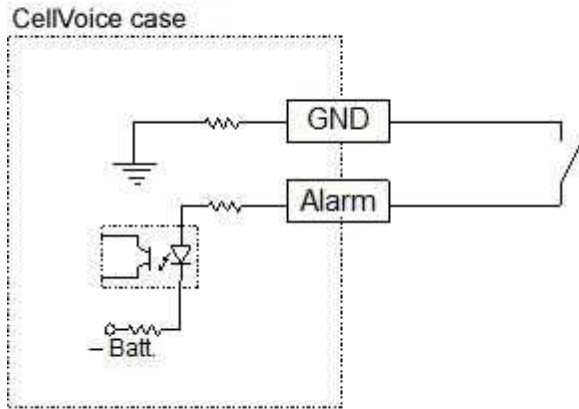
Optional 66 block connector pinout

				Wire color (wire/stripe)	Connection	66 Block Pair #	Corresponding 50-Pin Connector Pin #
				WHT/BLU	CT3NC	1	26
				BLU/WHT	CT3NO	1	1
				WHT/ORG	CT3CO	2	27
				ORG/WHT	CT4CO	2	2
				WHT/GRN	CT4NC	3	28
				GRN/WHT	CT4NO	3	3
				WHT/BRN	CT5NC	4	29
				BRN/WHT	CT5NO	4	4
				WHT/GRY	CT5CO	5	30
				GRY/WHT	CT6CO	5	5
				RED/BLU	CT6NC	6	31
				BLU/RED	CT6NO	6	6
				RED/ORG	CT7NC	7	32
				ORG/RED	CT7NO	7	7
				RED/GRN	CT7CO	8	33
				GRN/RED	CT8CO	8	8
				RED/BRN	CT8NC	9	34
				BRN/RED	CT8NO	9	9
				RED/GRY	CT9NC	10	35
				GRY/RED	CT9NO	10	10
				BLK/BLU	CT9CO	11	36
				BLU/BLK	CT10CO	11	11
				BLK/ORG	CT10NC	12	37
				ORG/BLK	CT10NO	12	12
				BLK/GRN	CT11NC	13	38
				GRN/BLK	CT11NO	13	13
				BLK/BRN	CT11CO	14	39
				BRN/BLK	CT12CO	14	14
				BLK/GRY	CT12NC	15	40
				GRY/BLK	CT12NO	15	15
				YEL/BLU	CT13NC	16	41
				BLU/YEL	CT13NO	16	16
				YEL/ORG	CT13CO	17	42
				ORG/YEL	CT14CO	17	17
				YEL/GRN	CT14NC	18	43
				GRN/YEL	CT14NO	18	18
				YEL/BRN	CT15NC	19	44
				BRN/YEL	CT15NO	19	19
				YEL/GRY	CT15CO	20	45
				GRY/YEL	CT16CO	20	20
				VIO/BLU	CT16NC	21	46
				BLU/VIO	CT16NO	21	21
				VIO/ORG	CT17NC	22	47
				ORG/VIO	CT17NO	22	22
				VIO/GRN	CT17CO	23	48
				GRN/VIO	CT17NO	23	23
				VIO/BRN	CT18CO	24	49
				BRN/VIO	CT18NC	24	24
				VIO/GRY	CT18NO	25	50
				GRY/VIO	GND	25	25

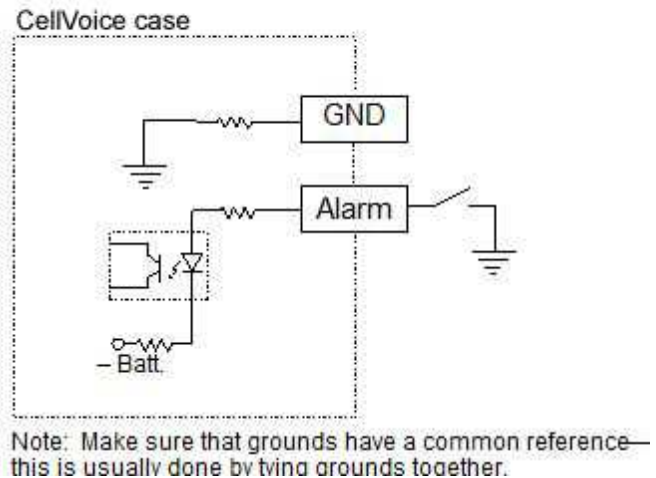
Optional 66 block connector pinout for controls

5.5 Discrete Alarms

Dry Contact



Contact to Ground



Discrete alarm points can connect as a dry contact or a contact to ground

This device features 16 discrete alarm inputs — also called digital inputs or contact closures. Discrete alarms are either active or inactive, so they're typically used to monitor on/off conditions like power outages, equipment failures, door alarms and so on.

The Cell16's discrete alarm points are single-lead signals referenced to ground. The ground side of each alarm point is internally wired to ground, so alarm points can connect either as a dry contact or a contact to ground.

In a dry contact alarm: The alarm lead brings a contact to the ground lead, activating the alarm.

In a contact to ground alarm: A single wire brings a contact to an external ground, activating the alarm.

You can reverse the polarity of each individual discrete alarm point, so that the alarm is activated when the contact is open. This is done with a software configuration change.

5.6 Analog Alarms

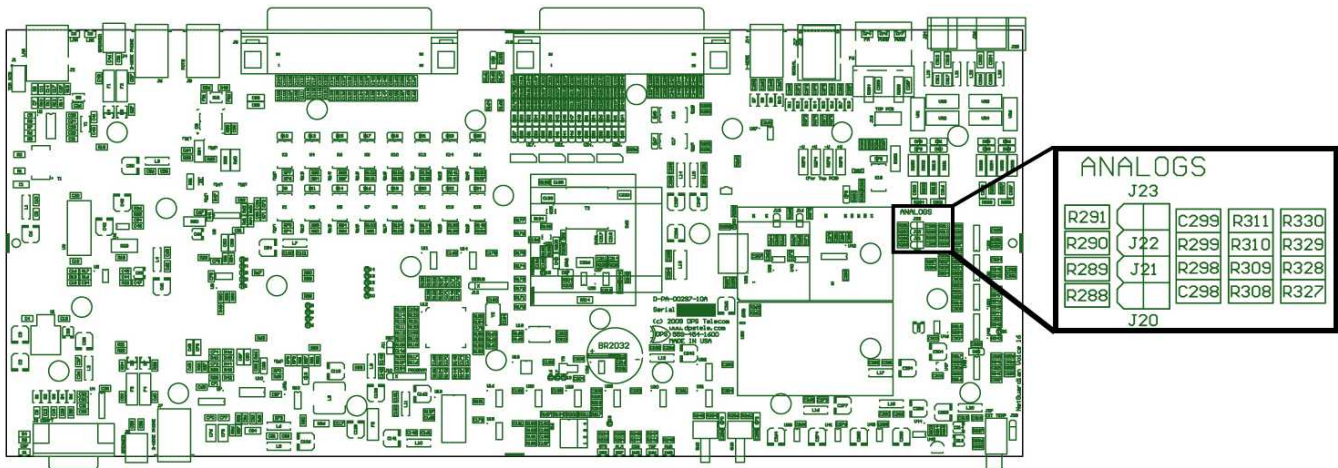
The Cell16 's analog alarm inputs measure continuous ranges of voltage or current. Analog alarms are typically used to monitor battery voltage, charging current, temperature, humidity, wind speed, or other continuously changing conditions. The measurement range of the analog channels is -90 to +90 VDC or 4 to 20 mA. To configure the analogs for current sensing (4 - 20mA) please review the next section for jumper position.

You can use analogs 1 through 4 to monitor whatever you like. Analogs 5 and 6 are pre-configured to monitor Battery A and B. Read the following table to see where to connect the analogs.

Analog #	Connection
ANA 1	User-definable; connects to the 50-pin amphenol.
ANA 2	User-definable; connects to the 50-pin amphenol.
ANA 3	User-definable; connects to the 50-pin amphenol.
ANA 4	User-definable; connects to the 50-pin amphenol.
ANA 5	Pre-configured to monitor Battery A.
ANA 6	Pre-configured to monitor Battery B.

By default, the analog inputs are configured to measure voltage. You can switch the analog inputs to measure current by resetting jumpers on the Cell16 's circuit board. See the next section, **5.6.1**, for more information.

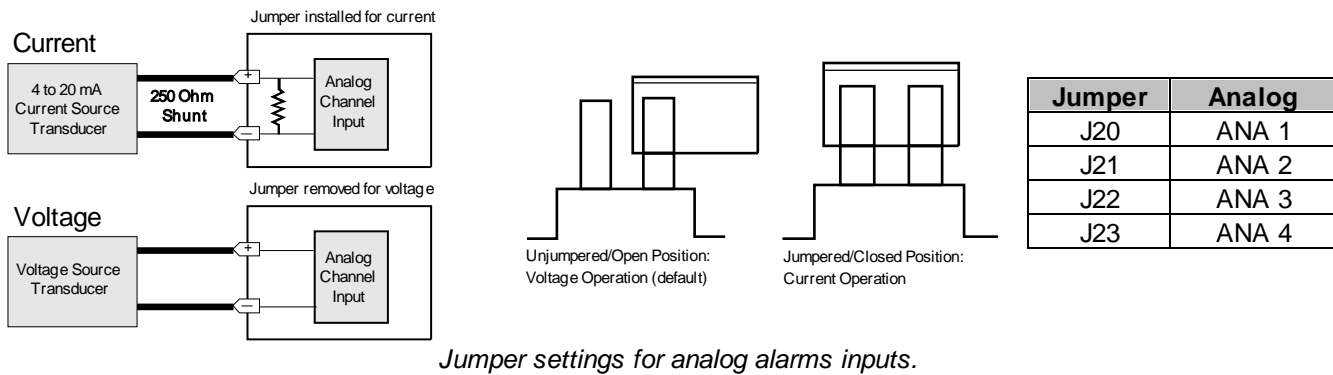
5.6.1 Switching Analog Alarms to Current Operation



Adjustable jumpers on the Cell16 circuit board

To test the analog alarm voltage/current jumpers, follow these steps:

1. Make sure the Cell16 is depowered and disconnected from all network connections.
2. Remove the screws from the sides of the Cell16 case.
3. Slide the top cover of the case off to expose the circuit board.
4. The adjustable jumpers are shown in. All alarm inputs can be individually configured for current or voltage operation. Remember that the default jumper position is OPEN for measuring voltage. **Note:** Each jumper inserts a 250-ohm shunt resistor across the input. This must be taken into account when defining the analog input reference scale.



- Slide the top cover of the case back into position and replace the screws.
- Reconnect and power up the Cell16 .

5.6.2 Analog Step Sizes

Analog Step Sizes		
Input Voltage Range	Resolution (Step Size)	Accuracy
0-5 V	.0015 V	+/- .05V
5-14 V	.0038 V	+/- .14V
14-30 V	.0081 V	+/- .30V
30-70 V	.0182 V	+/- .70V
70-90 V	.0231 V	+/- .90V

Analog step sizes

5.6.3 D-Wire External Sensors

The ports on your Cell16 labeled **Digital Sensors** support up to **16 D-Wire sensors**. Your Cell16 powers and communicates with your D-Wire sensors via simple RJ-11 connections. You can chain your 16 sensors to the D-Wire port on the Cell16 .

The max cable length depends on the number of sensors daisy chained together. The cable lengths and corresponding number of sensors can be seen in the table below.

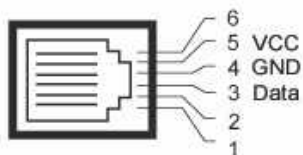
Maximum Cable Lengths			
Number of Nodes	Spec'd Max (ft)	Number of Nodes	Spec'd Max (ft)
1	800	9	150
2	700	10	125
3	475	11	125
4	350	12	100
5	275	13	100
6	225	14	100
7	200	15	75
8	175	16	75

Maximum Cable Lengths

Note: Some sensors may consume 2 analog channels (the combined temp/humidity sensor, D-PK-DSNSR-12002, for example).

Connecting D-Wire Sensors

Warning: Be sure to only use a **straight-through RJ-11 cable** (part #D-PR-901-10A-XX, pinout below) to connect any digital sensor port on the Cell16 to the **In** jack on a D-Wire sensor. Chain additional sensors to the D-Wire sensor (using the same straight-through cables) from the **Out** jack on the previous sensor to the **In** jack on the next (i.e. Out on sensor 4 to In on sensor 5).



Pinout for the Cell16 and D-Wire Sensor RJ-11 jacks

The D-Wire line of sensors includes temp/humidity, additional analogs, discretes, and more. Contact DPS at 1-800-693-0351 for information about available D-Wire sensors.

For details about configuring your sensors through the web interface, see the **Sensors** section of this manual.



6 GPRS/CDMA Wireless Modem

The Cell16 is available with an optional GPRS/GSM or CDMA wireless modem, allowing you to report alarms from your remote sites without LAN or dialup connections via SMS notifications over a cellular band.

On the back of your Cell16 with a wireless modem, you'll see the antenna node protrude from the back panel of the unit and a label above the node indicating the type of modem - GPRS/GSM (Sprint) or CDMA (Verizon) - installed in your unit.

Note: You cannot access to your Cell16 's web or TTY interfaces over cellular connection. You must configure the unit via the front-side craft connection or over LAN.

Note: If your Cell16 model is **CDMA** enabled: The Electronic Serial Number (ESN) will be located on the back of the unit (**You will not need to open up the unit to retrieve the ESN**). Your cellular carrier will need this number to enable your Cell16 's wireless modem.

To Enable Wireless Alarm Reporting:

1. Disconnect power connections to the Cell16
2. Remove the 3 screws on the bottom of the Cell16 near the front panel.
3. Remove the 3 screws on the top of the Cell16 near the back panel.
4. Remove the Cell16 's cover.
5. If your Cell16 model is **GPRS/GSM** enabled: Insert a SIM card in the available modem slot.



Open your Cell16 to insert your SIM card or take down your ESN

6. Replace the Cell16 's top-cover and fasten it to the Cell16 with the 6 screws you removed in steps 1 and 2.
7. Attach the antenna that came with your Cell16 (2-901-00802-01) to the node labeled **Antenna**, and tighten the nut to fasten it to the Cell16 .





The Antenna attaches to the Cell16 's back panel to facilitate cellular signal reception

Note: Your Cell16 cannot have both wireless and dialup modems. If you ordered your Cell16 with the wireless modem, it will not have a dialup modem or the ability to send alphanumeric pager notifications.

6.1 Wireless Modem Activation

WARNING: Do not reset or power off the modem during activation.

1. Set up your wireless data account through Multi-Tech or your preferred service provider.
2. Verify that the antenna is screwed onto the back panel of the unit.
3. Locate the **Model #** and **ESN/MEID**. These can be found on the *Read Me First* page that is included with your unit, or on the back panel of your device.



Read Me First

Wireless Modem Model: _____

ESN/MEID: _____

GPRS: The wireless modem included in this product does not have a SIM card. You will need to populate the SIM card provided by the wireless carrier you have chosen.

CDMA: This modem has not been activated. You will need to provide the ESN to the wireless carrier you have chosen.

See your user manual for Modem Activation Procedure

www.dpstele.com

July 25, 2013 "We protect your network like your business depends on it"™ D-OC-AD104.15100

4. Go to the Multi-Tech Support page and open the link for 'Cellular Modem Activation'
www.multitech.com
5. Follow the instructions that are associated with your modem model and service provider.

Important: If you are having trouble finding your modem's model number, please contact DPS support at 559-454-1600.

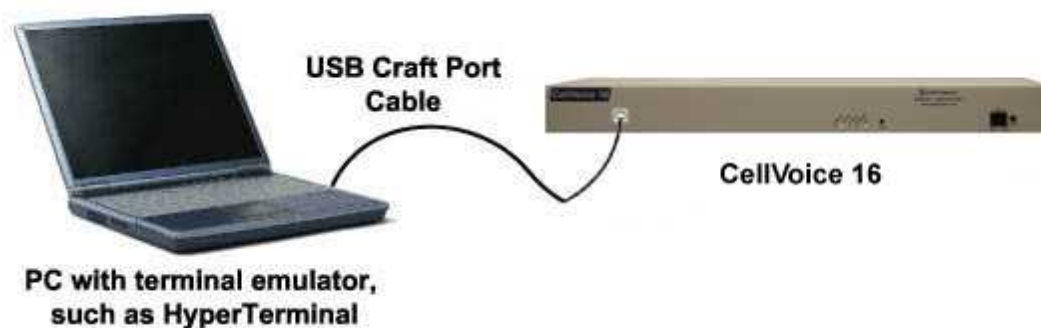
7 Quick Start: How to Connect to the Cell16

Most Cell16 users find it easiest to give the unit an IP address, subnet and gateway through the front craft port (TTY interface) to start. Once these settings are saved and you reboot the unit, you can access it over LAN to do the rest of your databasing via the Web Browser interface.

Alternative option: You can skip the TTY interface by using a LAN crossover cable directly from your PC to the Cell16 and access its Web Browser. See Section 7.2.

7.1 ...via Craft Port (using TTY Interface)

The simplest way to connect to the Cell16 is over a physical cable connection between your PC's USB port and the unit's USB craft port. **Note:** You must be connected via craft port or Telnet to use the TTY interface. Make sure you are using a standard A-B USB cable (this same cable is commonly used for USB printers) to make a USB craft port connection. We'll be using HyperTerminal to connect to the unit in the following example - however, most terminal-emulating programs are also compatible.



Note: The following images display the setup process done in Windows XP.

The following steps will occur the first time any DPS USB equipment is used on this PC. If you've used a different DPS USB device before and have installed the DPS USB drivers, then **skip to Step 9**.

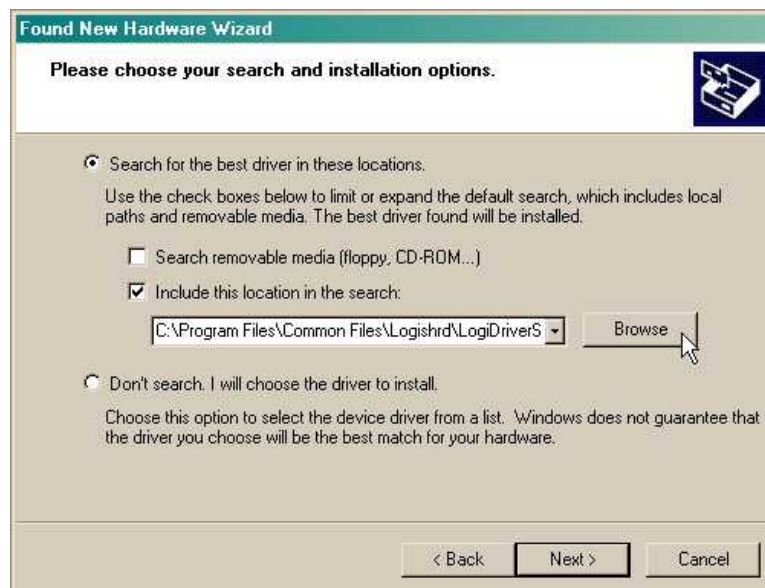
When you first connect the Cell16 to your PC via USB, a "Found New Hardware" message will appear:



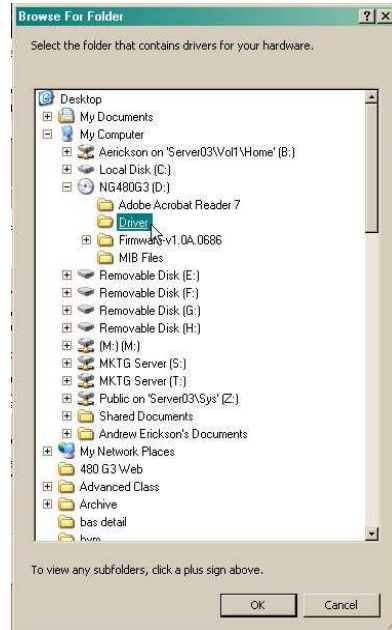
1. Click the "Found New Hardware" message/icon to launch the "Found New Hardware Wizard".



2. Select "Install from a list or specific location (Advanced)"
3. Click "Next >"



4. Select "Search for the best driver in these locations."
5. Insert Cell16 Resource Disc (CD) into your PC.
6. Click "Browse"



7. Select the "Driver" folder of your Cell16 Resource Disc Disc (CD) and click "OK"

The following message will confirm installation of a new "USB Communications Port"



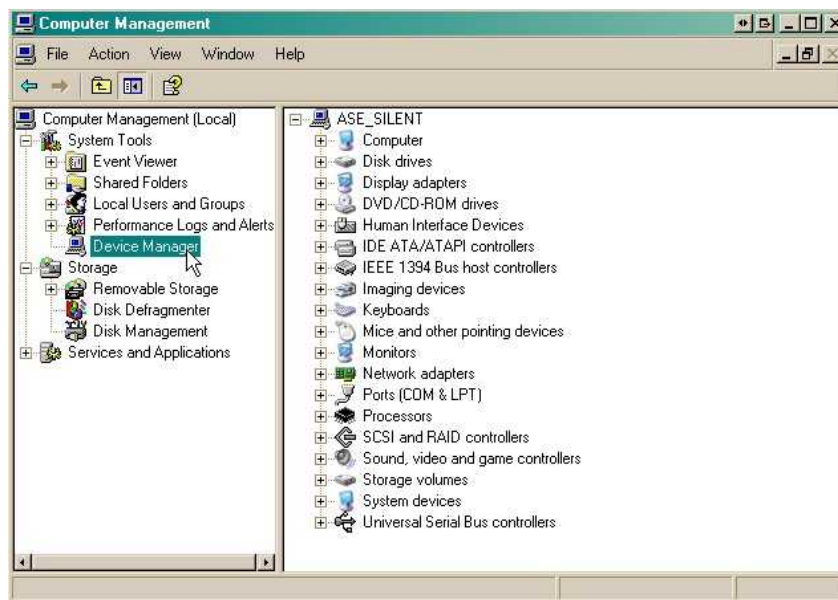
8. Click "Finish" to close the Wizard.

Now that the driver has been installed, a new COM port is being emulated on your PC. Before using

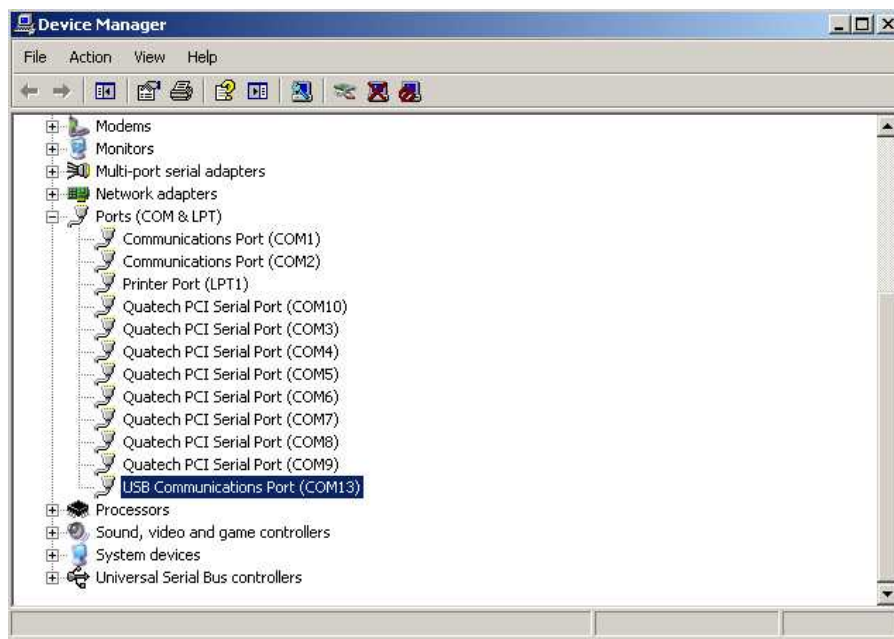
hyperterminal, you must confirm the identity of that new COM port (COM1, COM2, COM3...) in the Windows Device Manager.



9. Right-click the "My Computer" icon on your desktop, then click "Manage"



10. Click "Device Manager" in the left pane.



11. Expand the "Ports (COM & LPT)" section in the right pane. Look for "USB Communications Port (COMx)". Note the number of the COM port ("COM3" in the example above).

Now that you know which COM port to use, it's time to launch HyperTerminal (or other terminal software):

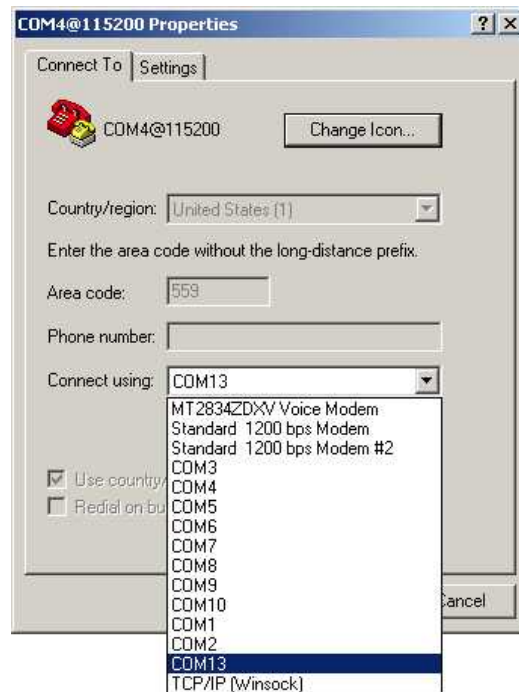
12. Click on the **Start** menu > select **Programs > Accessories > Communications > HyperTerminal**.



13. At the Connection Description screen, enter a name for this connection. You may also select an icon. The name and icon do not affect your ability to connect to the unit.



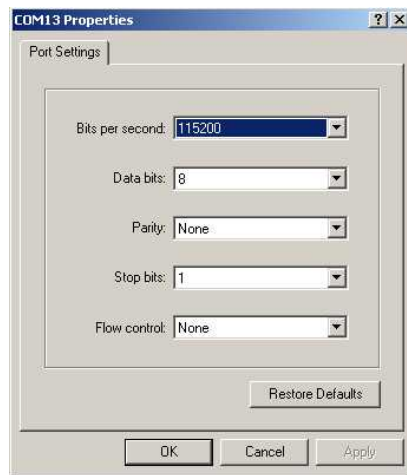
14. At the Connect To screen, use the drop-down menu to select the COM port you found earlier in the Device Manager.



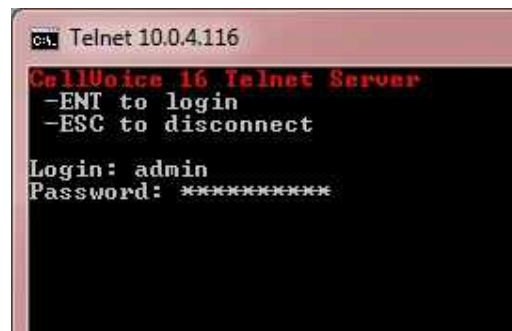
15. Select the following COM port options:

- Bits per second: 115200
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: **None**

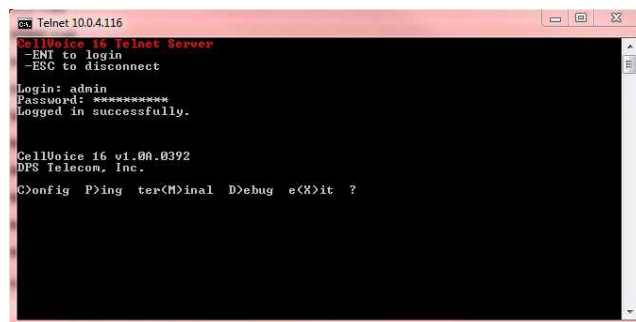
Once connected, you will see a blank, white HyperTerminal screen. Press Enter to activate the configuration menu.



16. When prompted, enter the default user name **admin** and password **dpstelecom**. NOTE: If you don't receive a prompt for your user name and password, check the Com port you are using on your PC and make sure you are using the cable provided. Additional cables can be ordered from DPS Telecom.



17. The Cell16's main menu will appear. Type C for C)onfig, then E for E)thernet. Configure the unit's IP address, subnet mask, and default gateway.



18. ESC to the main menu. When asked if you'd like to save your changes, type Y for Y)es. Reboot the Cell16 to save its new configuration.

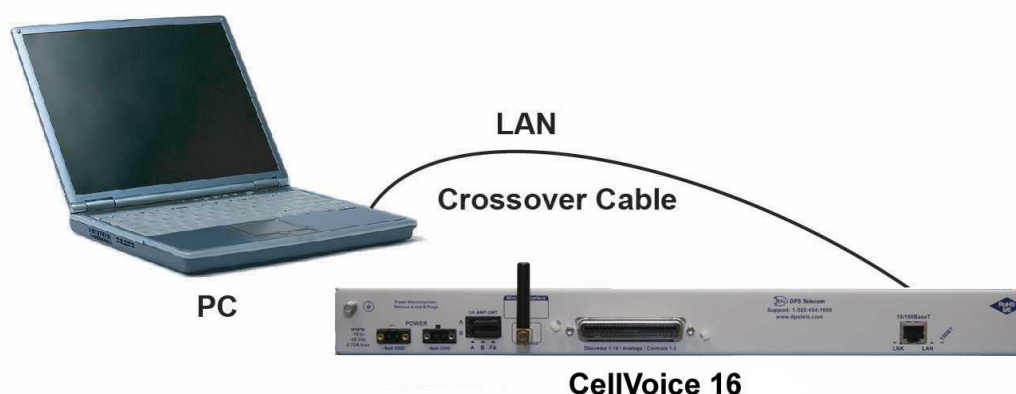
```
Linked      : No
DHCP        : Disabled
Host Name   :
Unit IP     : 126.10.230.127 (126.10.230.127)
Subnet Mask : 255.255.192.0 (255.255.192.0)
Gateway     : 126.10.255.23 (255.255.255.255)
Unit MAC    : 00.10.81.00.53.33 (00.10.81.00.53.33)

U)nit Addr S)ubnet G)ateway D)HCP H)ost (ESC) ? <--
E)thernet S)tats n(V)ram re(B)oot (ESC) ?

Do you want to save changes (y/N) : _
```

Now you're ready to do the rest of your configuration via LAN. Plug the Cell16 into your LAN and see the "Logging On to the Cell16 " section to continue databasing using the Web Browser.

7.2 ...via LAN



Connection through Ethernet port

To connect to the Cell16 via LAN, all you need is the unit's IP address (Default IP address is 192.168.1.100).

If you **DON'T** have LAN, but **DO** have physical access to the Cell16 , connect using a LAN crossover cable.

NOTE: Newer PCs should be able to use a standard straight-through LAN cable and handle the crossover for you. To do this, you will temporarily change your PC's IP address and subnet mask to match the Cell16 's factory default IP settings. Follow these steps:

1. Get a LAN crossover cable and plug it directly into the Cell16 's LAN port.
2. Look up your PC's current IP address and subnet mask, and write this information down.
3. Reset your PC's IP address to **192.168.1.200**. Contact your IT department if you are unsure how to do this.
4. Reset your PC's subnet mask to **255.255.0.0**. You may have to reboot your PC to apply your changes.
5. Once the IP address and subnet mask of your computer coincide with the unit, you can access the unit via a Telnet session or via Web browser by using the unit's default IP address of **192.168.1.100**.
6. Provision the Cell16 with the appropriate information, then **change your computer's IP address and subnet mask back to their original settings**.

Now you're ready to do the rest of your configuration via LAN. Plug your LAN cable into the Cell16 and see Section 9, "Logging On to the Cell16 " to continue databasing using the Web Browser.

8 TTY Interface

The TTY interface is the Cell16 's built-in interface for basic configuration. From the TTY interface, you can:

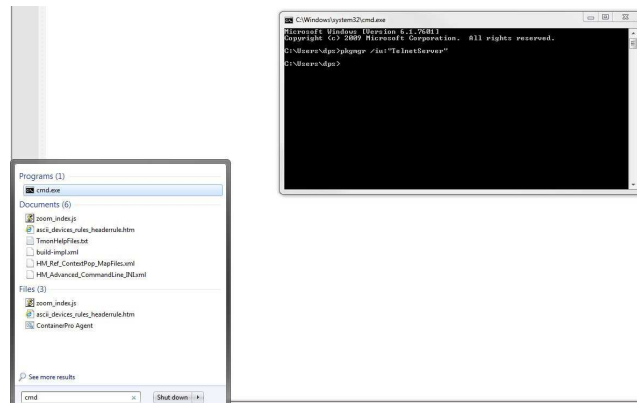
- Edit the IPA, subnet, and gateway
- Set DCP info for T/Mon polling
- Configure primary port
- Ping other devices on the network
- Set unit back to factory defaults
- Debug and troubleshoot
- Disable RADIUS

For more advanced configuration tools, please use the Web Browser Interface.

For Telnet, connect to the IP address at port 2002 to access the configuration menus after initial LAN/WAN setup.

Telnet sessions are established at port 2002, not the standard Telnet port as an added security measure.

If you're using Windows 7, then you'll need to install telnet before you can use the TTY interface. To install telnet, open up your command line (type "cmd" into the search bar in the **Start Menu**). Select **cmd.exe** to run the command line.

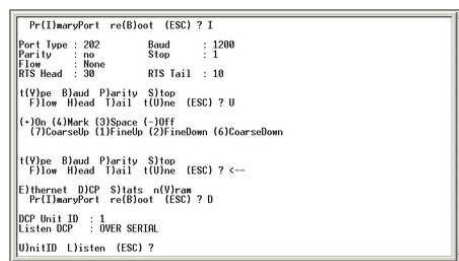


From the command line, type in **pkgmgr /iu:"TelnetServer"** then press **enter**. When the command prompt appears again, the installation is complete.

Menu Shortcut Keys

The letters before or enclosed in parentheses () are menu shortcut keys. Press the shortcut key to access that option. Pressing the ESC key will always bring you back to the previous level. Entries are not case sensitive.

8.1 Set DCP Parameters

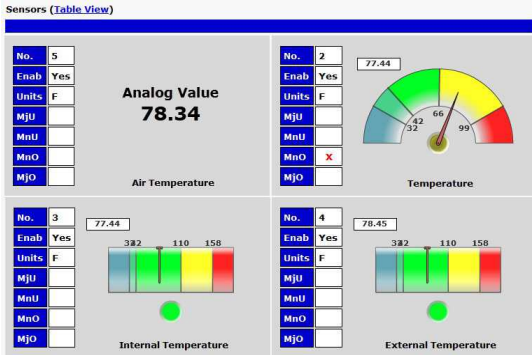


Setting DCP Parameters

1. Login to the TTY interface and press C)onfig > D)CP.
2. Set the DCP Address (Unit ID).
3. Set the DCP listening type (toggle through the options). Choose over serial, over LAN*, or disabled.

Note: If not using DCP to communicate with a DPS master, set the address to 0 and disable listening.

9 Cell16 Web Browser



The Cell16 features a built-in Web Browser Interface that allows you to manage alarms and configure the unit through the Internet or your Intranet. You can quickly set up alarm point descriptions, view alarm status, issue controls, configure paging information, and more.

NOTE: Max number of users allowed to simultaneously access the Cell16 via the Web is 1.

9.1 Logging on to the Cell16

For Web Interface functionality, the unit must first be configured with some basic network information. If this step has not been done, refer to the section "Quick Start: How to Connect to the Cell16 " for instructions on initial configuration setup.

1. To connect to the Cell16 from your Web browser, enter its IP address in the address bar of your web browser. It may be helpful to bookmark the login page to avoid entering this each time.
2. After connecting to the unit's IP address, enter your login information and click OK. **NOTE:** The factory default username is "**admin**" and the password is "**dpstelecom**".

Enter your password to enter the device's Web Browser Interface

3. In the left frame you will see the **Monitor** menu (blue) and **Edit** menu (green) The Monitor menu links are used to view the current status of alarms. The Edit menu is used to change the unit's configuration settings. All the software configuration will occur in the **Edit** menu. The following sections provide detailed information regarding these functions.



Hot Tip!

The maximum number of users allowed to simultaneously access the Cell16 via the Web is 1.

9.1.1 Changing the Default Password

The password can be configured from the **Provisioning > User Profiles** screen. The minimum password length is four characters; however, DPS recommends setting the minimum password length to at least five characters.

Use the following steps to change the logon password:

1. From the **Edit** menu select **System**.
2. Enter the new user name in the **User** field.
3. Enter the new password in the **Password** field.
4. Click the **Save** button.

User Profile 1 (Administrator Profile)	
Suspend this Profile	<input type="checkbox"/>
Username	<input type="text" value="admin"/>
Password	<input type="password" value="....."/>
Confirm Password	<input type="password" value="....."/>
Access Rights	
Check all	<input type="checkbox"/>
Edit logon profiles	<input checked="" type="checkbox"/>
Write config (change unit configuration)	<input checked="" type="checkbox"/>
View monitor pages	<input checked="" type="checkbox"/>
Send relay commands	<input checked="" type="checkbox"/>
TTY access (access via Craft port or via Telnet)	<input checked="" type="checkbox"/>
Initialize config to factory defaults	<input checked="" type="checkbox"/>
Upload new firmware, description recordings, or config	<input checked="" type="checkbox"/>
Get audit log	<input checked="" type="checkbox"/>
Purge (delete) audit log	<input checked="" type="checkbox"/>
Get (backup) config	<input checked="" type="checkbox"/>
Get and delete analog history	<input checked="" type="checkbox"/>
Get and delete description recordings	<input checked="" type="checkbox"/>
<input type="button" value="Save"/>	
Go to profiles summary	

Edit User Profile section of the Provisioning > User Profiles menu

9.2 Using RADIUS Authentication

RADIUS (Remote Authentication Dial In User Service) is an industry-standard way to manage logins to many different types of equipment in one central location. The Cell16 connects to your central RADIUS server. Every time a device receives a login attempt (usually a username & password), it requests an authentication from the RADIUS server. If the username & password combination is found in the server's database, an affirmative "access granted" reply is sent back to the unit device, allowing the user to connect.

RADIUS

Global Settings

Retry: 3

Time-out: 5sec

Server 1

IPA: 255.255.255.255 (Disabled)

Port: 1812

Secret: labnetwork

Server 2

IPA: 255.255.255.255 (Disabled)

Port: 1812

Secret:

Save

RADIUS configuration screen

Username:

Password:

Login

*RADIUS server prompt for Username **and** Password.*

Global Settings	
Retry	Enter the number of times the RADIUS server should retry a logon attempt
Time-out	Enter the number of seconds before a logon request is timed out
Servers 1 / 2	
IPA	Enter the IP address of the RADIUS server
Port	Port 1812 is an industry-standard port for using RADIUS
Secret	Enter the RADIUS secret in this field

After successfully entering the settings for the RADIUS server, the Cell16 Web Browser will prompt users for both a Username and Password, which will be verified using the information and access rights stored in the RADIUS database.

RADIUS logons are **case-sensitive**. If the RADIUS server is unavailable or access is denied, the local user profiles will work via craft port access only. Also, the "dictionary.dps" files (included on the Resource Disk) needs to be loaded on the RADIUS server for access-right definition. If RADIUS is enabled on the Cell16, local authentication will be invalid through the web and can only work via craft port.

Note: RADIUS can be temporarily disabled from the TTY interface. To disable RADIUS, navigate to **C)onfig > E)thernet > R)ADIUS** on the TTY interface. When prompted (y/N) to Enable RADIUS, type 'N' to disable RADIUS.

10 Cell16 - Quick Turn Up

The next 4 sections of this manual will walk you through some of the most common tasks for using the Cell16 . You will learn how to send email notifications, and send SNMP traps to your alarm master - all using the Web browser. For details on entering your settings into each Web browser menu, the section "Provisioning Menu Field Descriptions" section.

10.1 How to Send Email Notifications

1. Click on the **Notifications** button in the **Provisioning** menu. You can setup as many as 8 different notifications. Begin the setup "wizard" by clicking **Edit** for a notification number. In this example, we'll setup Notification 2 to send emails.

Notifications				
Summary				
Id	Notify On	Type	Details	
1	Disabled			Edit Test
2	Disabled			Edit Test
3	Disabled			Edit Test
4	Disabled			Edit Test
5	Disabled			Edit Test
6	Disabled			Edit Test
7	Disabled			Edit Test
8	Disabled			Edit Test

2. At the **Notification Setting** screen, use the drop down box to set what events to use for this notification. Now, select the **Send Email Notification** button and click **Save and Next**.

Notification 1	
Status	Notify on Alarms only
Type	<input checked="" type="radio"/> Send Email <input type="radio"/> Send SNMP <input type="radio"/> Voice Call <input type="radio"/> TRIP Dialup (T/Mon)

3. At the **Email Notification** screen, you'll enter your email server settings. Enter the **IP address** or **Host Name** of your email server. Enter the **Port Number** (usually 25) and the **"To" Email Address** of the technician that will receive these emails. If authentication is required, chose the type and fill in the necessary fields. Click **Next**.

Notification 1 (Email)	
SMTP Server IP or Host Name	
Port (Usually Use 25)	0
"From" E-mail Address (Global)	NGLT2@dpstele.net
"To" E-mail Address	
How to authenticate	
<input checked="" type="radio"/> No authentication <input type="radio"/> POP before SMTP authentication <input type="radio"/> SMTP authentication	
POP Server IP or Host Name	
POP Port (Usually Use 110)	0
User name	
Password	
Back	Save and Next

4. At the **Schedule** screen, you'll select the exact days/times you want to receive email notifications. You can set 2 schedules per notification. For example, you may want to receive notifications at certain times during the week, and at different hours on the weekend. Use the check boxes to select the days of the week, and select the time from the drop down menus. Click **Finish**. To try a test notification, click the **Test** button (See next step.)

Notification 1 (Schedule)

Id	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Notification Time
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Any Time
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Any Time

Back Save and Finish

5. If you chose to test the email notification you've just setup, you will prompted with a pop up . Click **OK** to send a test email alarm notification. Confirm all your settings by checking your email to see if you've received it. **NOTE:** This test only means that your notification settings are correct, but you still need to assign the notification to an alarm point. See the next step.

6. Now you will associate this notification to an alarm (system, base, analog, etc.) You have 8 notification devices available to use. In the image below, you might assign **Notification Device 1** to **Alarm 1**. This means that you would receive an email notification when an alarm for **Alarm 1** (SERVER ROOM) occurs.

DPS Telecom
Network Monitoring Solutions

Upload | Logout (admin)

Monitor
Alarms
Controls
Analog
Sensors
System Alarms
Provisioning
System
User Profiles
Ethernet
SNMP
Phone List
Notifications
Alarms
Controls
Analog

Notifications

Summary

Id	Notify On	Type	Details
1	Disabled		
2	Disabled		
3	Disabled		
4	Disabled		
5	Disabled		
6	Disabled		
7	Disabled		
8	Disabled		

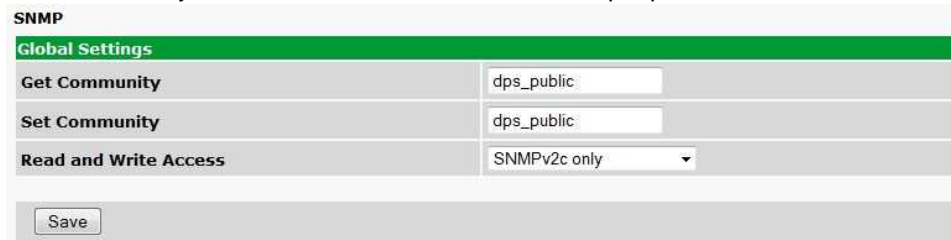
Alarms

Id	Description	Display Map	Rev.	1	2	3	4	5	6	7	8
1	SERVER ROOM	Advanced<<		<input checked="" type="checkbox"/>							
2	WEST SIDE DOOR	Advanced>>									
3	RECTIFIER	Advanced>>									
4	MICROWAVE	Advanced>>									

On Set: Alarm
On Clear: Clear
Qual. Time: 0sec
Qual. Type: OnSet

10.2 How to Send SNMP Traps

1. Click on the **SNMP** button in the **Provisioning** menu. Enter the **SNMP GET** and **SNMP SET** community strings for your network, then click **Save**. The typical SNMP SET and GET community strings for network devices is "public". As an added security measure, we've made our default "dps_public".



SNMP

Global Settings

Get Community	dps_public
Set Community	dps_public
Read and Write Access	SNMPv2c only

Save

2. Click on the **Notifications** button in the **Provisioning** menu. You can setup as many as 8 different notifications. Begin the setup "wizard" by clicking **Edit** for a notification number. In this example, we'll setup Notification 4 to send SNMP traps to your alarm master.



Notification 4

Status	Notify on both Alarms and Clears
Type	<input type="radio"/> Send Email <input checked="" type="radio"/> Send SNMP <input type="radio"/> Voice Call <input type="radio"/> TRIP Dialup (T/Mon)

Back Save and Next

3. At the **Notification Setting** screen, use the drop down box to set what events to use for this notification. Now, select the **Send SNMP Notification** button and click Next.



Notification 1

Status	Notify on Alarms only
Type	<input type="radio"/> Send Email <input checked="" type="radio"/> Send SNMP <input type="radio"/> Voice Call <input type="radio"/> TRIP Dialup (T/Mon)

4. At the **SNMP Notification** screen, you'll enter your network's SNMP settings. Enter the **IP address** of your SNMP Trap Server. Enter the **Trap Port Number** (usually 162) and the **Trap Community** password. Click **Save and Next**.



Notification 4 (SNMP)

SNMP Trap Server IP	
Trap Port No. (Usually Use 162)	0
Trap Community	
Trap Type	SNMPv3
SNMPv3 user (see SNMP menu)	User 1 ()

Back Save and Next

5. At the **Schedule** screen, you'll select the exact days/times you want to receive SNMP notifications. You can set 2 schedules per notification. For example, you may want to receive notifications at certain times during the week, and at different hours on the weekend. Use the check boxes to select the days of the week, and select the time from the drop down menus. Click **Save and Finish**. To try a test notification, click the **Test** button (See next step.)

Notification 1 (Schedule)

Id	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Notification Time
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="radio"/> Any Time <input type="radio"/> 12 h 0 min AM to 11 h 59 min PM
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="radio"/> Any Time <input type="radio"/> 12 h 0 min AM to 11 h 59 min PM

6. If you chose to test the email notification you've just setup, you will prompted with a pop up . Click **OK** to send a test SNMP alarm notification. Confirm all your settings by checking your alarm master to see if the SNMP trap was received.

NOTE: This test only means that your notification settings are correct, but you still need to assign the notification to an alarm point. See Step 6 in "How to Send Email Notifications" for more detail.

10.3 How to Send SMS Notifications

1. Click on the **Notifications** button in the **Provisioning** menu. You can setup as many as 8 different notifications. Begin the setup "wizard" by clicking on **Edit** for a notification number. In this example, we'll setup Notification 8 to send an SMS notification.

2. At the **Notification Setting** screen, select the conditions you want to be notified of from the drop down: **Notify on both Alarms and Clears**, **Notify on Alarms only**, **Notify on Clears only**. (Selecting Notification Disabled means you will not receive any type of alerts.) Select **Send SMS** and click Save and Next.

Notification 1

Status	Notify on both Alarms and Clears ▼
Type	<input type="radio"/> Send Email <input type="radio"/> Send SNMP <input type="radio"/> Voice Call <input checked="" type="radio"/> Send SMS
<input type="button" value="Back"/> <input type="button" value="Save and Next"/>	

3. At the next screen, you'll enter the phone number or email address that the Cell16 should send a message to when the alarm that corresponds to this notification is triggered. Enter the phone number or email address, select an email gateway if necessary, and choose whether you want the Cell16 to dial ONLY if a Backup Mode Point is set. Then click **Save and Next**.

Note: When sending an SMS, you can either use hyphens to separate phone numbers or type the entire number in without hyphens (555-555-5555 or 5555555555). However, if you are sending an SMS using the **Email Gateway**, you must remove all dashes. **Example:** 555-555-5555 becomes 5555555555@txt.att.net

Notification 1 (SMS)

Phone Number or Email Address	555-555-5555
Email Gateway	None ▼ This is required for SMS-to-Email
Backup Mode	<input type="checkbox"/> Send notification only if in Backup Mode.
<input type="button" value="Back"/> <input type="button" value="Save and Next"/>	

5. At the **Schedule** screen, you'll select the exact days/times you want to receive notifications. You can set 2 schedules per notification. For example, you may want to send after hours or at certain times during the week, and at different hours on the weekend. Use the check boxes to select the days of the week, and select the time from the drop down menus. Click **Save and Finish**. To try a test notification, click the **Test** button (See next step.)

Notification 1 (Schedule)

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Notification Time
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Any Time <input type="radio"/> 12 h 0 min AM to 11 h 59 min PM
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Any Time <input type="radio"/> 12 h 0 min AM to 11 h 59 min PM
<input type="button" value="Back"/> <input type="button" value="Save and Finish"/>								

6. Click **Test** to send a test SMS notification. **NOTE:** This test only means that your notification settings are correct, but you still need to assign the notification to an alarm point (See step 6 of the "How to Send Email Notifications" section).

10.4 Setting up Backup Mode

This section will guide you through the process of setting up Backup Mode. Backup Mode is a system alarm feature capable of alerting you in the instance that DCP, SNMP, or a Notification fails. Even in instances LAN failure, Backup Mode works wirelessly with SMS notifications to make sure that you receive an alert.

To setup Backup Mode:

1. Set the conditions for Backup Mode in the **Provisioning > Backup Mode** menu. Backup Mode will remain inactive until a checked condition fails. Once a checked condition fails, the Backup Mode alarm will be activated.

Backup Mode

DCP Fail	<input type="checkbox"/>
SNMP Fail	<input type="checkbox"/>
Notification 1	<input checked="" type="checkbox"/>
Notification 2	<input checked="" type="checkbox"/>
Notification 3	<input type="checkbox"/>
Notification 4	<input type="checkbox"/>
Notification 5	<input type="checkbox"/>
Notification 6	<input type="checkbox"/>
Notification 7	<input type="checkbox"/>
Notification 8	<input type="checkbox"/>
User Defined - Display: <input type="text" value="1"/> Point: <input type="text" value="1"/> Display Map	<input type="checkbox"/>

Backup Mode is a System Alarm and its status can be viewed from the **Monitor > System Alarms** menu.

System Alarms		
Pnt	Description Display Map	State
33	Default configuration	Clear 
34	DCP poller inactive	Clear 
39	SNMP community error	Clear 
41	Notification 1 failed	Clear 
42	Notification 2 failed	Alarm 
43	Notification 3 failed	Alarm 
44	Notification 4 failed	Clear 
45	Notification 5 failed	Clear 
46	Notification 6 failed	Clear 
47	Notification 7 failed	Clear 
48	Notification 8 failed	Clear 
49	NTP failed	Clear 
50	Timed tick	Clear 
51	Dynamic memory full	Clear 
52	Unit reset	Clear 
55	Modem failed	Alarm 
56	Bad signal	Clear 
57	Backup Mode	Alarm 

10.4.1 How to Setup or SMS Notifications in Backup Mode Only

You can choose to have the Cell16 send you an SMS or Voice notification in the instance that a condition fails and Backup Mode becomes active. After choosing the conditions of Backup Mode, as outlined in **Section 10.5**, proceed to the steps below.

To setup SMS Notifications in Backup Mode Only:

You can choose to have the Cell16 send you an SMS notification in the instance that a condition fails and Backup Mode becomes active. In order to do this, you will need to create a Backup Mode notification. After choosing the conditions of Backup Mode, as outlined in **Section 10.5** "Setting up Backup Mode," proceed to the steps below.

1. Navigate to **Provisioning > Notifications**.
2. Choose a notification and click "Edit." Backup Mode is configured to use wireless SMS notifications, so select **Send SMS**. Fill out the information and check the box next to **Send notification only if in Backup Mode**. By checking this box, this notification will not be sent unless Backup Mode becomes active.
3. Click **Save and Next**, and finish configuring the notification.

Notification 3 (SMS)	
Phone Number or Email Address	<input type="text" value="555-555-5555"/>
Email Gateway	<input type="text" value="None"/> This is required for SMS-to-Email
Backup Mode	<input checked="" type="checkbox"/> Send notification only if in Backup Mode.
<input type="button" value="Back"/> <input type="button" value="Save and Next"/>	

Note: For more detailed information on configuring notifications, see sections **11.7.1** "Notification Settings," or **10.4** "How to Send SMS Notifications."

4. After setting up your Backup Mode notification, you will need to assign that notification to an alarm. Backup Mode notifications are typically used to alert you in instances that LAN-based notifications fail to deliver. You can assign your Backup Mode to an alarm by checking the notification number on the **Provisioning > Alarms** menu.

CellVoice 16

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Notifications

Summary				
ID	Notify On	Type	Details	
1	Both	SNMP	126.10.230.172:162	Edit Test
2	Both	Email	126.10.230.172:162 / email@dpstele.net	Edit Test
3	Both	SMS	555-555-5555	Edit Test
	Disabled	Email	?	Edit Test
	Disabled	Email	?	Edit Test
	Disabled	Email	?	Edit Test
	Disabled	Email	?	Edit Test
	Disabled	Email	?	Edit Test

CellVoice 16

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Alarms

ID	Description	Display Map	Rev.	1	2	3	4	5	6	7	8
1	Alm 1	Advanced<<	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On Set: <input type="text" value="Alarm"/> On Clear: <input type="text" value="Clear"/> Qual. Time: <input type="text" value="0sec"/> Qual. Type: <input type="text" value="OnSet"/>											
2	SERVER ROOM	Advanced>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	WEST SIDE DOOR	Advanced>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	RECTIFIER	Advanced>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	MICROWAVE	Advanced>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: The Cell16 cycles through alarm notifications in numerical order. This means that Backup Mode notifications should be placed last, behind all other alarms to ensure that they are delivered after all other notifications have failed.

11 Provisioning Menu Field Descriptions

Cell16 configuration is performed from the **Provisioning** menus (the menu options in green on the left-side of the web interface). The following pages provide a brief description of the options available in each menu.

Saving Configuration Changes to the Cell16 :

At the bottom of each screen you access from the **Provisioning** Menu, you will see a **Save** button. Clicking Save will cache your changes locally. The web interface will then prompt you to either **Write** your changes to the unit or **Reboot** the unit for changes to take effect in the top-left corner of your browser. The relevant options will be highlighted in the **Device Access** options.

Note: If the unit prompts you to both Write changes to the unit **and** Reboot, you will Write your changes first. Rebooting before without writing to the unit (if a Write is required) will cause you to lose your configuration changes.

Please **WRITE** to the unit after you are finished with your changes!
Please **REBOOT** the unit for changes to take effect!

Status messages on the Cell16 Device Access menu, inform you how to implement your changes

Device Access
Backup Config
Read
Write
Initialize
Get Log
Purge Log
Reboot

Device Access
Backup Config
Read
Write (required)
Initialize
Get Log
Purge Log
Reboot

The control menu highlights items that must be completed for your changes to take effect

11.1 System

From the **Provisioning > System** menu, you will configure and edit the global system, call, T/Mon and control settings for the Cell16 .

System Settings	
Global Settings	
Name	CellVoice 16
Location	Fresno, CA
Contact	555-555-5555
DTMF Pass Code	<input type="text"/> (Used when user first dials into the unit)
DTMF Record Pass Code	1234 (Used when user wants to record a description)
Rings Before Pickup	3
DCP Responder Settings Display Map	
<input checked="" type="radio"/> Disable DCP <input type="radio"/> DCP over LAN	
DCP Unit ID / Protocol	1 / DCPx
DCP over LAN port / Protocol	2001 / UDP
Analogs and Sensors History	
Get history	history.csv
Erase history	<input type="button" value="Erase"/>
Voice Description Recording Options	
Backup Description Recordings	CV16_voice.vc2
Restore Description Recordings	<input type="button" value="Restore"/>
Erase Description Recordings	<input type="button" value="Erase"/>
Unit Configuration	
Backup Config	config.bin
Initialize	<input type="button" value="Init"/>
<input type="button" value="Save"/>	

The Provisioning > System menu

Global System Settings	
Name	A name for this Cell16 unit. (Optional field)
Location	The location of this Cell16 unit. (Optional field)
Contact	Contact telephone number for the person responsible for this Cell16 unit. (Optional field)
DTMF Pass Code	This feature is not available on this model.
DTMF Record Pass Code	This feature is not available on this model.
Rings Before Pickup	This feature is not available on this model.
DCP Responder Settings <i>(For use with T/Mon)</i>	
DCP Unit ID / Protocol	User-definable ID number for this Cell16 unit (DCP Address) and desired protocol.
DCP LAN	Enter the DCP port for this Cell16 unit (UDP/TCP port) and desired protocol.
Analog and Sensors History	
Get History	Download a log of all configured analog and sensor values.
Erase History	Erase the log of all configured analog and sensor values.
Voice Description Recording Options	
Backup Description Recordings	This feature is not available on this model.
Restore Description Recordings	This feature is not available on this model.
Erase Description Recordings	This feature is not available on this model.

	User Profile
Get (backup) config	Backs-up all user profile configuration settings.
Get and delete analog history	Allows the user to access and delete the analog and sensor history.
Get and delete description recordings	Allows the user to access and delete the recorded analog and sensor history.

User profile field descriptions

Once you've finished configuring a profile, click **Save** to store your changes locally.

To access another profile, simply click **Go to profiles summary** at the bottom of the page. You may also navigate away from the user profiles screen at any time by clicking any of the menu options on the left side of the screen.

11.3 Ethernet

The **Edit > Ethernet** menu allows you to define and configure Ethernet settings.

Ethernet Settings

MAC Address	0:10:81:0:6f:19	
Host Name	<input type="text"/>	()
Enable DHCP	<input type="checkbox"/>	
Unit IP	<input type="text" value="206.169.87.183"/>	(206.169.87.183)
Subnet Mask	<input type="text" value="255.255.255.240"/>	(255.255.255.240)
Gateway	<input type="text" value="206.169.87.177"/>	(206.169.87.177)
DNS Server 1	<input type="text" value="8.8.8.8"/>	(8.8.8.8)
DNS Server 2	<input type="text" value="4.4.4.4"/>	(4.4.4.4)

The Provisioning > Ethernet menu

Ethernet Settings	
MAC Address	Hardware address of the Cell16 . (Not editable - For reference only.)
Host Name	Used only for web browsing. Example: If you don't want to remember this Cell16 's IP address, you can type in a name in this field, such as CV16. Once you save and reboot the unit, you can now browse to it locally by simply typing in "CV16" in the address bar. (no "http://" needed).
Enable DHCP	Used to turn on Dynamic Host Connection Protocol. NOT recommended, because the unit is assigned an IP address from your DHCP server. The IP you've already assigned to the unit becomes inactive. Using DHCP means the unit will NOT operate in a T/Mon environment.
Unit IP	IP address of the Cell16 .
Subnet Mask	A road sign to the Cell16 , telling it whether your packets should stay on your local network or be forwarded somewhere else on a wide-area network.
Gateway	An important parameter if you are connected to a wide-area network. It tells the Cell16 which machine is the gateway out of your local network. Set to 255.255.255.255 if not using. Contact your network administrator for this info.
DNS Server 1	Primary IP address of the domain name server. Set to 255.255.255.255 if not using.
DNS Server 2	Secondary IP address of the domain name server. Set to 255.255.255.255 if not using.

Note: DNS Server settings are required if a hostname is being used for ping targets.

11.4 SNMP

The **Provisioning > SNMP** menu allows you to define and configure the SNMP settings.

SNMP

Global Settings

Get Community

dps_public

Set Community

dps_public

Read and Write Access

SNMPv2c only

Save

SNMP Menu

Global Settings	
Get Community	Community name for SNMP requests.
Set Community	Community name for SNMP SET requests.
Read and Write Access	<div>This field defines how the Cell16 unit may be accessed via SNMP. This can be set to the following:<ul style="list-style-type: none">SNMP v2c and SNMP v1-only: Allows SNMPv1 and SNMPv2c access (Default)SNMP v2c only: Allows SNMPv2c access onlyAccess Disabled: Restricts all access to unit via SNMP</div>

Fields in the Provisioning > SNMP settings

11.5 Backup Mode

The **Provisioning > Backup Mode** menu allows you to define and configure Backup Mode alarms. The Backup Mode menu provides a list of preset alarms, as well as the ability to create user defined alarms from the Display Map. You can also create wireless Backup Mode notifications using Voice and SMS. For more information, see **Section 10.5 "Setting up Backup Mode."**

Backup Settings

DCP Fail	<input checked="" type="checkbox"/>
SNMP Fail	<input type="checkbox"/>
Notification 1	<input type="checkbox"/>
Notification 2	<input checked="" type="checkbox"/>
Notification 3	<input checked="" type="checkbox"/>
Notification 4	<input checked="" type="checkbox"/>
Notification 5	<input type="checkbox"/>
Notification 6	<input type="checkbox"/>
Notification 7	<input checked="" type="checkbox"/>
Notification 8	<input type="checkbox"/>
User Defined - Display: <input type="text" value="1"/> Point: <input type="text" value="1"/> Display Map	<input type="checkbox"/>

The Provisioning > Backup Mode menu.

11.6 Phone List

Up to 32 phone numbers can be stored for the Cell16 to call with alarm information. This list is unordered and should include all phone numbers for those that need to know and/or respond to alarms.

Phone List

Slot	Enab	Description	Phone Number
1	<input checked="" type="checkbox"/>	Tech1	559-454-1600
2	<input checked="" type="checkbox"/>	Tech2	800-622-3314
3	<input checked="" type="checkbox"/>	Tech3	800-693-0351

The Provisioning > Phone List menu

11.7 Notifications

From the initial **Provisioning > Notifications** menu, you will see which of the 8 notifications are enabled, their type, and details. Click on the **Edit** link for one of the notifications to begin configuration.

Once you've chosen which notification you want to setup, click the **Edit** button on the right-hand side to begin configuration. Then choose a notification method: Email, SNMP, or SMS. Now click **Save and Next** to continue to a Notification Settings screen.

11.7.1 Notification Settings

Email Notification Fields

Notification 1 (Email)

SMTP Server IP or Host Name		email@dpstele.net
Port (Usually Use 25)		25
"From" E-mail Address (Global)		CellIV16@dpstele.net
"To" E-mail Address		noc@dpstele.net
How to authenticate		
<input checked="" type="radio"/> No authentication <input type="radio"/> POP before SMTP authentication <input type="radio"/> SMTP authentication		
POP Server IP or Host Name		
POP Port (Usually Use 110)		0
User name		
Password		
<input type="button" value="Back"/> <input type="button" value="Save and Next"/>		

Editing Email Notification Settings

Email Notification	
SMTP Server IP or Host Name	The IP address of your email server.
Port Number	The port used by your email server to receive emails, usually set to 25.
"From" E-mail Address	Displays the email address (defined in the Edit menu > System) that the Cell16 will send emails from. Not editable from this screen.
"To" E-mail Address	The email address of the person responsible for this Cell16 , who will receive email alarm notifications.

Note: If you want to send authenticated emails, click the appropriate radio button. If you enable POP authentication, you will have to enter the relevant authentication information the fields below.

SNMP Notification Fields

Notification 1 (SNMP)

SNMP Trap Server IP	126.10.218.3
Trap Port No. (Usually Use 162)	162
Trap Community	
Trap Type	SNMPv2c ▼
<input type="button" value="Back"/> <input type="button" value="Save and Next"/>	

Editing SNMP notification settings

SNMP Notification	
SNMP Trap Server IP	The SNMP trap manager's IP address.
Trap Port No.	The SNMP port (UDP port) set by the SNMP trap manager to receive traps, usually set to 162.
Trap Community	Community name for SNMP TRAP requests.
Trap Type	Indicate whether you would like to send SNMP v1 or v2c traps.

SMS Notification Fields

Notification 1 (SMS)

Phone Number or Email Address	555-555-5555
Email Gateway	None <small>This is required for SMS-to-Email</small>
Backup Mode	<input type="checkbox"/> Send notification only if in Backup Mode.

Back Save and Next

Editing Call notification settings

Call Notification	
Phone Number or Email Address	Enter the phone number or email address that will receive the SMS.
Email Gateway	The Email Gateway should match your Cell16 's carrier.
Backup Mode	Check this box if you want the Cell16 to only dial if in Backup Mode.

Note: If you are going cross-carrier (eg. Verizon to ATT), you will need to select Verizon for the Email Gateway and use an ATT domain in the email address (e.g. phonenumber@txt.att.net).

11.7.2 Schedule

The notifications scheduling menu is where you will tell the Cell16 exactly which days and times you want to receive alarm notifications. You set 2 different schedules for each.

Notification 1 (Schedule)

Id	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Notification Time
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="radio"/> Any Time <input checked="" type="radio"/> 12 h 0 min AM to 11 h 59 min PM
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="radio"/> Any Time <input checked="" type="radio"/> 12 h 0 min AM to 11 h 59 min PM

Back Save and Finish

The Schedule creation screen

Notification Scheduling	
Days of the week	From either Schedule 1 or 2, check which days you want to receive notifications.
Any Time	Select this is if you want to receive alarm notifications at any time for the day(s) you've selected.
Notification Time	Tells the unit to only send notifications during certain hours on the day(s) you've selected.

11.8 Alarms

Discrete alarms are configured from the **Provisioning > Alarms** menu. Descriptions for the alarm points, polarity (normal or reversed) and notification type(s) are defined from this menu. You also have the option to use **Basic** or **Advanced** configuration methods, explained in this section.

The screenshot shows the 'Alarms' configuration window. It has a table with columns: Id, Description, Display Map, Rev., and eight notification device checkboxes (1-8). Two alarm points are listed: '1 Front Door' and '2 Side Door'. For each point, there are fields for 'On Set' and 'On Clear' with 'Qual. Time' (5sec and 15sec respectively) and 'Message' (Alarm and Clear respectively). There are also 'Advanced<<' and 'Advanced>>' links for each point.

The Provisioning > Alarms menu

Basic Alarm Configuration	
ID	Alarm ID number.
Description	User-definable description for the discrete alarm point.
Rev (Reverse)	Reverse: Check this box to reverse the polarity of the alarm point. Leaving this option un-checked means a normally open contact closure is an alarm. When polarity is reversed, a normally closed alarm point is clear when closed.
Notification Devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for that alarm point.
Advanced Alarm Configuration (Advanced>>)	
On Set	User-definable description (condition) that will appear for the discrete alarm input on Set. Example: "Alarm".
On Clear	User-definable description (condition) that will appear for the discrete alarm input on Clear. Example: "Alarm Cleared".
Qual. Time (Qualification Time)	The length of time that must pass, without interruption, in order for the condition to be considered an Alarm or a Clear.
Qual. Type (Qualification Type)	Allows you to choose whether you want to apply the Qualification Time to the alarm Set, Clear, or Both.

11.9 Controls

The Cell16 's 2-18 control relays can be configured in the **Provisioning > Controls** menu. You can enter your own description for these relays and designate them to a notification device(s).

Controls

Id	Description Display Map		1	2	3	4	5	6	7	8
1	Front Door Details<<		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Derived Description: <input type="text"/> Parse Momentary time (e.g. 5s, 1m): <input type="text" value="1sec"/>										
2	Side Door Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Back Door Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Tower Lights Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Router 1 Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Router 2 Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Switch 1 Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Switch 2 Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Media Converter Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Server A Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Server B Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Server C Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	IP Camera Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Encoder Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Decoder Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Media Switcher Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Back Lights Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Front Lights Details>>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Save](#)

The Provisioning > Controls screen

Basic Controls Configuration	
ID	ID number for the control relay.
Description	User-definable description for the Cell16 's control relay.
Momentary Time	Control on time (in milliseconds) when you execute the MOM command. Max limit of 600 seconds.
Notification Devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for the control relay.
Derived Description	Control relays and virtual alarms can be created with a derived formula. See below for more information.

Derived Description Coding

_OR : Set the current operation to OR.

_AN : Set the current operation to AND.

_XR : Set the current operation to XOR.


D : Tag to change the active display number.

G : Tag to change the active group number.

. : Used like a comma to delimit numbers.

- : Used to specify a range of points.

Examples:

 Spaces included in the bolded code below are for readability purposes only.

_OR D1.3-5 is logically equivalent to (1.3 || 1.4 || 1.5)

_AN D 1.3-5 D2.6 _OR D3.7 is logically equivalent to ((1.3 && 1.4 && 1.5 && 2.6) || 3.7)

_OR D01.03-05 D02.06 _AN D02.07 D03.10.-12 is logically equivalent to ((1.3 || 1.4 || 1.5 || 2.6&& (2.7 && 3.10 && 3.12))

_AN D1.3-5D2.6_OR.7D3.10.12 is logically equivalent to (((1.3 && 1.4 && 1.5 && 2.6) || 2.7 || 3.10 || 3.12))

o will not parse

_AN D1-2 : Control will parse

_OR G1 will latch if any alarm in group 1 is active

11.10 Analogs

The Cell16 can have up to 6 analog channels. The 5th and 6th channels are dedicated to monitoring the power input (channel is not used if build option was not selected). These channels support the entire range of power inputs that the Cell16 can support. Channels 1-4 are user-definable. Each channel must be individually configured to monitor data.

Note: Only analogs supported by the units hardware will appear in the Cell16 web browser interface.

User Analogs

User Analogs			1	2	3	4	5	6	7	8
Id	Enab	Description Display Map								
1	<input checked="" type="checkbox"/>	Room Temperature Details<<	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Record Freq: 5min Deadband: 1 On Set: Alarm On Clear: Clear Qual. Time: 0sec Qual. Type: OnSet ▼			Scaling: Actual to Display Units: VDC to VDC Low ref: -35 to -35 High ref: 35 to 35				Thresholds: MjU: 1.00 MnU: -2.00 MnO: -3.00 MjO: -4.00			
Analog Gauge Type: <div> None     </div>										
2	<input checked="" type="checkbox"/>	Humidity Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input checked="" type="checkbox"/>	Battery Voltage Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input checked="" type="checkbox"/>	Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input checked="" type="checkbox"/>	Power Input A Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input checked="" type="checkbox"/>	Power Input B Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="button" value="Save"/>										

The Provisioning > Analogs menu

Basic Analog Configuration	
ID	Analog ID number.
Enab	Check this box to enable the analog.
Description	User-definable description for the analog channel.
Notification Devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for that alarm point.
Advanced Analog Configuration (Details>>)	
Record Freq	The amount of time, in minutes (min) or seconds (s), between each log of each analog value to history.
Deadband	The amount (in volts) that the channel needs to go above or below a threshold in order to cause an alarm.
On Set	User-definable description (condition) that will appear for the temperature alarm on Set. Example: "Alarm".
On Clear	User-definable description (condition) that will appear for the temperature alarm Clear. Example: "Alarm Cleared".
Qual Time (Qualification Time)	The length of time that must pass, without interruption, in order for the condition to be considered an Alarm or a Clear.
Qual. Type (Qualification Type)	Allows you to choose whether you want to apply the Qualification Time to the alarm Set, Clear, or Both.
Units	User-definable display units or optional choice between Fahrenheit and Celsius temperatures. The most common are: VDC = Voltage %H = Humidity F = Fahrenheit C = Celsius
Low Ref	User-definable lower reference/scaling level. This scales the information collected by the sensor (in mA or VDC) to a meaningful unit for the user. For example, for a temperature sensor, the lower input collected by the sensor may be 4mA (for a 4-20mA sensor), which would correspond to a specific temperature you define in this field.
High Ref	User-definable upper reference/scaling level. This scales the information collected by the sensor (in mA or VDC) to a meaningful unit for the user. For example, for a temperature sensor, the upper input collected by the sensor may be 20mA (for a 4-20mA sensor), which would correspond to a specific temperature you define in this field.
Thresholds	These settings are set to indicate the severity of the alarm depending on which threshold values have been passed. Enter values for Major Under (MjU), Minor Under (MnU), Minor Over (MnO), and Major Over (MjO).
Analog Gauge Type	Select the color-coded gauge that best represents your data. Selecting None will disable the analog gauge and only a numerical representation of the value will be displayed under Monitor > Analogs .

11.11 Sensors

The Cell16 supports up to 16 daisy-chained D-Wire sensors via its D-Wire input. Sensors connected to the Cell16 will appear on the Cell16's web interface. The background color of the ROM field informs the user of the sensor's configuration state.

Also, the Cell16's first D-Wire sensor is used to monitor the internal temperature. The internal temperature sensor measures a range of -40° F to 180° F (-40° C to 82.2° C) within an accuracy of about $\pm 2^\circ$.

Basic configuration for the Cell16's D-Wire temperature sensors can be accomplished from the **Provisioning > Sensors** menu. From this screen, you can configure D-Wire sensors, select notification devices, and set thresholds.

Sensors (■ - detected and configured ■ - detected and NOT configured ■ - NOT detected and configured ■ - sensor type NOT supported)

[Discover](#)

ID	ROM ID	Description	Display Map	1	2	3	4	5	6	7	8
1	28bfb41040000f3	Humidity 2	Details<<	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Record Freq:

Deadband:

On Set:

On Clear:

Qual. Time:

Qual. Type:

Sensor Type:
Humidity

Thresholds:

MjU:

MnU:


MnO:


MjO:


Analog Gauge Type:


None

☐


☐


☒


☐


☐

2	2850cc77030000f9	Temperature	Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	2809c83b040000d6	Internal Temperature	Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	28596e7c020000e0	External Temperature	Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	224bf22400000043	Air Temperature	Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	3db1720150070068	OnBoard Temp Sensor	Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Provisioning > Sensors menu

Basic Sensor Configuration	
Discover	Resets sensor communication to locate attached sensors.
ID	Sensor ID number.
ROM ID	<p>The ID number found on the sticker of the temperature sensor node. Your Cell16 will automatically detect the sensor ID when you plug a sensor into the unit. The color of the sensor ID field will tell you the status of the connected sensor.</p> <p>Green - The sensor is connected and properly configured.</p> <p>Yellow - The sensor is connected but has not yet been configured (fill in your configuration fields and click Save to configure the sensor).</p> <p>Red - The sensor is not detected and configured (i.e. a previous configured sensor is no longer connected).</p> <p>Blue - The sensor is not supported by the Cell16 .</p> <p>To reconfigure or disable the Sensor ID, simply delete any data in this field and click Save.</p> <p>The unit will refresh the sensor ID on that channel.</p>
Description	User-definable description for the sensor channel.
Notification Devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for that alarm point.
Advanced Sensor Configuration (Details>>)	
Record Freq	The amount of time, in minutes (min) or seconds (s), between each recorded sensor value.
Deadband	The amount (in native units) that the channel needs to go above or below a threshold in order to cause an alarm.
On Set	User-definable description (condition) that will appear for the temperature alarm on Set. Example: "Alarm".
On Clear	User-definable description (condition) that will appear for the temperature alarm Clear. Example: "Alarm Cleared".
Qual Time (Qualification Time)	The length of time that must pass, without interruption, in order for the condition to be considered an Alarm or a Clear.
Qual. Type (Qualification Type)	Allows you to choose whether you want to apply the Qualification Time to the alarm Set, Clear, or Both.
Sensor Type	<p>The type of connected sensor.</p> <p>Note: The correct sensor type won't display until the Cell16 receives a reading from the sensor. Before this first reading, sensor type defaults to "Humidity."</p>
Thresholds	These settings are set to indicate the severity of the alarm depending on which threshold values have been passed. Enter values for Major Under (MjU), Minor Under (MnU), Minor Over (MnO), and Major Over (MjO).
Analog Gauge Type	Select the color-coded gauge that best represents your data. Selecting None will disable the analog gauge and only a numerical representation of the value will be displayed under Monitor > Sensors .

Note: Before plugging in any additional D-Wire Sensors, set up the internal sensor.

11.12 Ping Targets

The **Provisioning > Ping Targets** menu allows you to configure the Description, IP Address, and Notification Devices for each of your 32 ping targets.

Ping Targets												
Id	Enab	Description Display Map	Server (IP or Hostname)	1	2	3	4	5	6	7	8	
1	<input type="checkbox"/>	Cisco Router	126.102.218.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	Ethernet Switch 1	126.102.218.24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	Ethernet Switch 2	126.102.218.12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	Ethernet Switch 2	126.102.218.14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	Router 2	126.102.218.67	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	Media Converter	126.102.218.29	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	Microwave Transmitter	126.102.218.90	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	Cisco 15454	126.102.218.43	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	Calix	126.102.218.31	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	<input type="checkbox"/>	Modem	126.102.218.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	<input type="checkbox"/>	PBX	126.102.218.15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	<input type="checkbox"/>	Proxy Server	126.102.218.39	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Provisioning > Ping Targets menu

Provisioning Ping Targets	
ID	ID number for the ping target.
Enab	Check this box to enable the ping target.
Description	User-definable description for the ping target.
Server (IP or Hostname)	IP address or hostname of the device you would like to ping.
Notification Devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for ping target.

11.13 Variable Bindings

Note: Variable bindings are used when setting up SNMP alarms.

Variable Bindings	
Id	OID
1	<input type="text" value="0"/>
2	<input type="text" value="0"/>
3	<input type="text" value="0"/>
4	<input type="text" value="0"/>
5	<input type="text" value="0"/>
6	<input type="text" value="0"/>
7	<input type="text" value="0"/>
8	<input type="text" value="0"/>
9	<input type="text" value="0"/>
10	<input type="text" value="0"/>
11	<input type="text" value="0"/>

The Provisioning > Variable Bindings menu

Provisioning Variable Bindings	
Id	Identification number for the variable binding.
OID	OID of the variable binding. Note: Using a * in this field is like a "wild card" - any value is accepted.

11.14 SNMP Alarms

SNMP Alarms

Id		Description Display Map	1	2	3	4	5	6	7	8															
1	Alarm 1	Details<<	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>															
<table border="1"> <thead> <tr> <th>Enterprise/OID</th> <th>Generic</th> <th>Specific</th> <th>Variable Binding</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Set: 0</td> <td>warmStart(1)</td> <td>0</td> <td>None</td> <td></td> </tr> <tr> <td>Clear: 0</td> <td>authenticationFailure(4)</td> <td>0</td> <td>None</td> <td></td> </tr> </tbody> </table>											Enterprise/OID	Generic	Specific	Variable Binding	Value	Set: 0	warmStart(1)	0	None		Clear: 0	authenticationFailure(4)	0	None	
Enterprise/OID	Generic	Specific	Variable Binding	Value																					
Set: 0	warmStart(1)	0	None																						
Clear: 0	authenticationFailure(4)	0	None																						
2	Alarm 2	Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>															
3	Alarm 3	Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>															
4	Alarm 4	Details>>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>															

The Provisioning > SNMP Alarms menu

SNMP Alarms Settings	
ID	SNMP Alarm ID number.
Description	User-definable description for the SNMP alarm.
Notification Devices	Check which notification device(s), 1 through 8, will send alarm notifications in response to this SNMP alarm.

Advanced SNMP Alarms Settings (Details>>)	
Enterprise/OID	Enterprise OID for SNMPv1 or Trap OID for SNMPv2c.
Generic	Generic Trap number for SNMP v1 only .
Specific	Specific Trap number for SNMPv1 only .
Variable Binding	If defined, additional OID (from equipment connected to control relay) to uniquely identify the SNMP trap.
Value	Value of the variable binding. Must be integer or string (when searching for a specific string, the string must be contained within the received trap variable binding value). Note: Using a * in this field is like a "wild card" - any value is accepted.

11.15 System Alarms

See "Display Mapping" in the Reference Section for a complete description of system alarms.

System Alarms

Pnt	Description Display Map	Silence	1	2	3	4	5	6	7	8
33	Default configuration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	DCP poller inactive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39	SNMP community error	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41	Notification 1 failed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42	Notification 2 failed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43	Notification 3 failed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44	Notification 4 failed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Provisioning > System Alarms menu

Editing System Alarms	
Pnt (Point)	The system alarm point number
Description	Non-editable description for this System (housekeeping) Alarm.
Silence	Check this box to choose to silence this alarm.
Notification Devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for that alarm point.

11.16 Timers

The **Timers** are user-definable, and allow you to choose the intervals between **Web Refresh**, **Timed Tick**, **DCP Poller Timeout**, **Ping Cycle**, **SNMP Timeout**, and **Web Timeout**. Enter the amount of time, in seconds (sec) or minutes (m), in the value field and click **Save**.

Timers

Web Refresh (1s-60s): How often web browser is refreshed when in monitor mode.	<input type="text" value="1sec"/>
Timed Tick (0s-60m, 0=off): This is a 'heartbeat' function that can be used by masters who don't perform integrity checks.	<input type="text" value="0sec"/>
DCP Poller Timeout (1m-30m, 0=off): DCP polls must be received within this time interval or the DCP poller inactive alarm will set.	<input type="text" value="5min"/>
Ping Cycle (30s-30m, 0=off): Time interval between each ping cycle.	<input type="text" value="4min"/>
SNMP Timeout (1m-30m, 0=off): SNMP Get Requests must be received within this time interval. (Only used for Backup Mode)	<input type="text" value="5min"/>
WebTimeout (1m-30m): Maximum idle time allowed before the web interface will automatically logout.	<input type="text" value="150sec"/>
<input type="button" value="Save"/>	

The Provisioning > Timers menu

11.17 Date and Time

Date and Time

Unit Time

Date: Month **Oct** Day **8** Year **2012**

Time: Hour **12** Minute **25** PM

Automatic Time Adjustment (NTP)

☐ Enable NTP

NTP Server Address or Host Name:

Time Zone: GMT-08:00 Pacific Time

Adjust Clock for Daylight Saving Time (DST)

☐ Enable DST

Start Day: Month **Mar** Weekday **Second Sunday** Hour **2** AM

End Day: Month **Nov** Weekday **First Sunday** Hour **2** AM

The Provisioning > Date and Time menu

Unit Time	
Date	Set today's date.
Time	Set the current time.
Automatic Time Adjustment (NTP)	
Enable NTP	Check this box to enable Network Time Protocol.
NTP Server Address or Host Name	Enter the NTP server's IP address or host name, then click Sync . Example: us.pool.ntp.org. Note: Make sure to configure DNS before using host name instead of IP address.
Time Zone	Select your time zone from the drop-down menu.
Adjust Clock for Daylight Savings Time (DST)	
Enable DST	Check this box to have the CellVoice 16 observe Daylight Savings.
Start Day	Select the month, weekday, and time when Daylight Savings will begin.
End Day	Select the month, weekday, and time when Daylight Savings will end.

12 Monitoring via the Web Browser

12.1 Alarms

This selection provides the status of the base alarms by indicating if an alarm has been triggered. Under the **State** column, the status will appear in red if an alarm has been activated. The status will be displayed in green when the alarm condition is not present.

Alarms		
<u>Id</u>	<u>Description</u> Display Map	<u>State</u>
1	Front Door	Clear
2	Side Door	Clear
3	Back Door	Clear
4	Tower Lights	Clear
5	Motion Sensor 1	Clear
6	Motion Sensor 2	Clear
7	Commercial Power	Clear
8	Media Converter	Clear
9	Router 1	Clear
10	Router 2	Clear
11	Modem	Clear
12	Rectifier	Clear
13	Microwave Transmitter	Clear
14	Switch 1	Clear
15	Switch 2	Clear
16	PBX	Clear

Click on Alarms in the Monitor menu to see if any base alarms have been triggered.

12.2 Controls

Use the following rules to operate the Cell16 's control:

1. Select **Controls** from the **Monitor** menu.
2. Under the **State** field, you can see the current condition of the control.
3. To issue the control, click on a command (**OPR** - operate, **RLS** - release, or **MOM** - momentary)

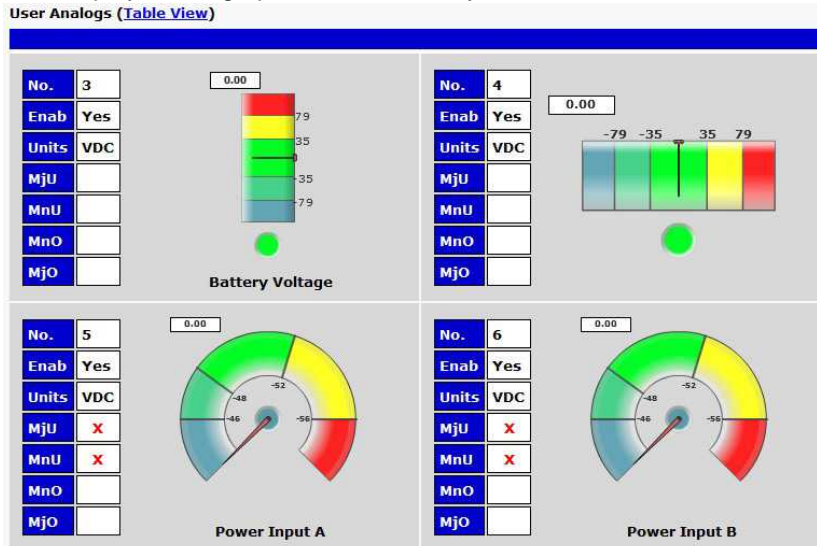
Controls			
Id	Description Display Map	State	Command
1	Front Door	Released	OPR RLS MOM
2	Side Door	Released	OPR RLS MOM
3	Back Door	Released	OPR RLS MOM
4	Tower Lights	Released	OPR RLS MOM
5	Router 1	Released	OPR RLS MOM
6	Router 2	Released	OPR RLS MOM
7	Switch 1	Released	OPR RLS MOM
8	Switch 2	Released	OPR RLS MOM
9	Media Converter	Released	OPR RLS MOM
10	Server A	Released	OPR RLS MOM
11	Server B	Released	OPR RLS MOM
12	Server C	Released	OPR RLS MOM
13	IP Camera	Released	OPR RLS MOM
14	Encoder	Released	OPR RLS MOM
15	Decoder	Released	OPR RLS MOM
16	Media Switcher	Released	OPR RLS MOM
17	Back Lights	Released	OPR RLS MOM
18	Front Lights	Released	OPR RLS MOM

View and operate control relays from the Monitor > Controls menu

Control Relay Operation	
ID	ID number for the control relay.
Description	Description for the Cell16 's control relay defined in the Provisioning > Controls menu.
State	Status of the control relay. Can either be Released or Latched .
Command	OPR - Latch the relay. RLS - Release the relay. MOM - Momentarily latch the relay, then automatically release the relay. The duration of the latch is defined in the Provisioning > Controls menu.

12.3 Analogs

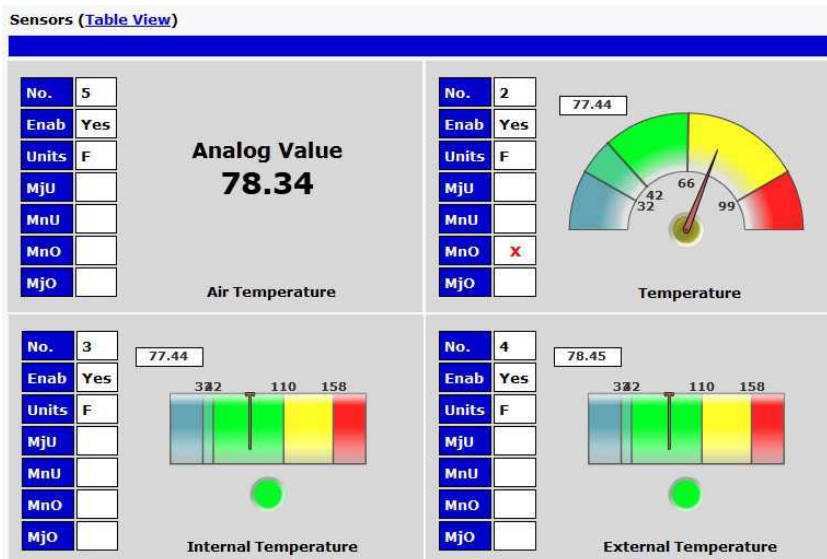
The **Monitor > Analogs** screen provides a description of each analog channel, the current reading, the units being read, and alarm conditions (major under, minor under, major over, minor over) according to your temperature settings. If configured under **Provisioning > Analogs**, your analog values will be displayed as a graphical gauge. Selecting **Table View** will display a non-graphical interface of your values.



Click on Analogs in the Monitor menu to view the current channel readings.

12.4 Sensors

This selection provides the status of the system's analog channels by indicating if an alarm has been triggered. The **Monitor > Sensors** screen provides a description of each analog channel, the current reading, the units being read, and alarm conditions (major under, minor under, major over, minor over) according to your temperature settings. If configured under **Provisioning > Sensors**, your analog values will be displayed as a graphical gauge. Selecting **Table View** will display a non-graphical interface of your values, and give you access to the "Discover" function which resets sensor communication to locate connected sensors.



The Monitor > Sensors menu

12.5 Ping Targets

Ping Targets can be viewed by going to **Monitor > Ping Targets**. Here you can view the state (either **Clear** or **Alarm**) for each of your configured Ping Targets. Up to 32 ping targets may be configured.

Ping Targets		
Id	Description Display Map	State
1	Cisco Router	Clear
2	Ethernet Switch 1	Clear
3	Ethernet Switch 2	Clear
4	Ethernet Switch 2	Clear
5	Router 2	Clear
6	Media Converter	Clear
7	Microwave Transmitter	Clear
8	Cisco 15454	Clear
9	Calix	Clear
10	Modem	Clear
11	PBX	Clear
12	Proxy Server	Clear

View the status of Ping Targets from the Monitor > Ping Targets menu.

12.6 SNMP Alarms

This selection provides the status of the SNMP alarms by indicating if an alarm has been triggered. Under the **State** column, the status will appear in red if an alarm has been activated. The status will be displayed in green when the alarm condition is not present.

SNMP Alarms		
Id	Description Display Map	State
1		Clear 
2		Clear 
3		Clear 
4		Clear 
5		Clear 
6		Clear 
7		Clear 
8		Clear 
9		Clear 
10		Clear 
11		Clear 
12		Clear 

The Monitor > SNMP Alarms menu

12.7 System Alarms

System alarms are not-editable, housekeeping alarms that are programmed into Cell16 . The **Monitor > System Alarms** screen provides the status of the system alarms by indicating if an alarm has been triggered. Under the **State** column, the status will appear in red if an alarm has been activated. The status will be displayed in green when the alarm condition is not present.

See "Display Mapping" in the Reference Section for a complete description of system alarms.

System Alarms		
Pnt	Description Display Map	State
33	Default configuration	Clear
34	DCP poller inactive	Clear
39	SNMP community error	Clear
41	Notification 1 failed	Clear
42	Notification 2 failed	Alarm
43	Notification 3 failed	Clear
44	Notification 4 failed	Clear

View the status of System Alarms from the Monitor > System Alarms menu.

13 Device Access Descriptions

The **Device Access** options, listed in pink on the left side of the web interface, provide options for generating reports, updating the Cell16 's firmware, and rebooting the unit. Click any of the options under **Device Access** to perform the desired action.



The control menu is located in the bottom left of the web interface

Device Access Option	Description
Backup Config	Backs up the units configuration settings
Read	Reads a configuration file from the unit
Write	Commits all changes made in the web interface to the Cell16 's non-volatile memory
Initialize	Sets the unit's configuration to factory default values
Get Log	Opens the Cell16 's event log in Notepad (or another plain text editor).
Purge Log	Deletes the Cell16 's event log history.
Reboot	Reboots the Cell16 .

14 Firmware Upgrade and Configuration Restoration

To access the **Firmware Load and Configuration Restoration** screen, click on **Upload** on the top right corner of the web interface.



To upload firmware or restore a backup configuration, click on **Upload** on the top right corner of the web interface

At the **Upload** screen, simply browse for the configuration file or firmware update you've downloaded from www.dpstele.com and click **Load**.



Browse for downloaded firmware upgrade

15 Front and Back Panel LED



Front panel LEDs

LED	Status	Description
Craft	Flashing Green	Transmitting data over craft port
	Flashing Red	Receiving data over craft port
Status	Flashing Green	Application is running
	Flashing Red	Boot Loader is running
Alarm*	Flashing Red	New alarm
	Solid Red	Standing alarm acknowledged
Voice	Solid Green	Call in progress
	Off	Unit ready for call
Modem	Flashing Green	Transmitting to the modem
	Flashing Red	Receiving from the modem
Power	Solid Green	Power supply OK
	Off	No voltage or power leads reversed

Front Panel LED Descriptions

**If DCP is disabled, the Alarm LED will go Solid Red without acknowledgment.*



Back panel LEDs

LED	Status	Description
PWR A/B	Solid Green	Power supply OK
	Off	No voltage or power leads reversed
LNK	Solid Green	LAN Connected
LAN	Flashing Green	Transmit and receive activity over Ethernet port
FA	Solid Red	Blown Fuse
100BT	Solid Green	LAN connection speed is 100BaseT
	Off	LAN connection speed is 10BaseT

Back Panel LED Descriptions

16 Reference Section

16.1 Display Mapping & System Alarms

	Description	Port	Address	Point
Display 1	Discrete Alarms	99	1	1-16
	Default Configuration	99	1	33
	DCP Poller Inactive	99	1	34
	SNMP Community Error	99	1	39
	Notification 1 Failed	99	1	41
	Notification 2 Failed	99	1	42
	Notification 3 Failed	99	1	43
	Notification 4 Failed	99	1	44
	Notification 5 Failed	99	1	45
	Notification 6 Failed	99	1	46
	Notification 7 Failed	99	1	47
	Notification 8 Failed	99	1	48
	NTP Failed	99	1	49
	Timed Tick	99	1	50
	Dynamic Memory Full	99	1	51
	Unit Reset	99	1	52
	Modem Failed	99	1	55
	Bad signal	99	1	56
	Backup Mode	99	1	57
Display 2	Controls	99	1	1-18
	Undefined	99	1	19-32
	Ping Targets	99	1	33-64
Display 3	Analog 1 Minor Under	99	1	1
	Analog 1 Minor Over	99	1	2
	Analog 1 Major Under	99	1	3
	Analog 1 Major Over	99	1	4
	Control	99	1	9-16
	Value	99	1	17-32
	Analog 2 Minor Under	99	1	33
	Analog 2 Minor Over	99	1	34
	Analog 2 Major Under	99	1	35
	Analog 2 Major Over	99	1	36
	Control	99	1	41-48
	Value	99	1	49-64
Display 4	Analog 3 Minor Under	99	1	1
	Analog 3 Minor Over	99	1	2
	Analog 3 Major Under	99	1	3
	Analog 3 Major Over	99	1	4
	Control	99	1	9-16
	Value	99	1	17-32
	Analog 4 Minor Under	99	1	33
	Analog 4 Minor Over	99	1	34
	Analog 4 Major Under	99	1	35
	Analog 4 Major Over	99	1	36
	Control	99	1	41-48
	Value	99	1	49-64
Display 5	Power A Minor Under	99	1	1
	Power A Minor Over	99	1	2
	Power A Major Under	99	1	3

	Power A Major Over	99	1	4
	Control	99	1	9-16
	Value	99	1	17-32
	Power B Minor Under	99	1	33
	Power B Minor Over	99	1	34
	Power B Major Under	99	1	35
	Power B Major Over	99	1	36
	Control	99	1	41-48
	Value	99	1	49-64
Display 6	Digital sensor 1 Minor Under	99	1	1
	Digital sensor 1 Minor Over	99	1	2
	Digital sensor 1 Major Under	99	1	3
	Digital sensor 1 Major Over	99	1	4
	Digital sensor 1 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 2 Minor Under	99	1	33
	Digital sensor 2 Minor Over	99	1	34
	Digital sensor 2 Major Under	99	1	35
	Digital sensor 2 Major Over	99	1	36
	Digital sensor 2 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64

Display Mapping

Display	Description	Port	Address	Point
Display 7	Digital sensor 3 Minor Under	99	1	1
	Digital sensor 3 Minor Over	99	1	2
	Digital sensor 3 Major Under	99	1	3
	Digital sensor 3 Major Over	99	1	4
	Digital sensor 3 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 4 Minor Under	99	1	33
	Digital sensor 4 Minor Over	99	1	34
	Digital sensor 4 Major Under	99	1	35
	Digital sensor 4 Major Over	99	1	36
	Digital sensor 4 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64
Display 8	Digital sensor 5 Minor Under	99	1	1
	Digital sensor 5 Minor Over	99	1	2
	Digital sensor 5 Major Under	99	1	3
	Digital sensor 5 Major Over	99	1	4
	Digital sensor 5 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 6 Minor Under	99	1	33
	Digital sensor 6 Minor Over	99	1	34
	Digital sensor 6 Major Under	99	1	35
	Digital sensor 6 Major Over	99	1	36
	Digital sensor 6 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64
Display 9	Digital sensor 7 Minor Under	99	1	1
	Digital sensor 7 Minor Over	99	1	2
	Digital sensor 7 Major Under	99	1	3
	Digital sensor 7 Major Over	99	1	4
	Digital sensor 7 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 8 Minor Under	99	1	33
	Digital sensor 8 Minor Over	99	1	34
	Digital sensor 8 Major Under	99	1	35
	Digital sensor 8 Major Over	99	1	36
	Digital sensor 8 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64

Display Mapping

Display	Description	Port	Address	Point
Display 10	Digital sensor 9 Minor Under	99	1	1
	Digital sensor 9 Minor Over	99	1	2
	Digital sensor 9 Major Under	99	1	3
	Digital sensor 9 Major Over	99	1	4
	Digital sensor 9 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 10 Minor Under	99	1	33
	Digital sensor 10 Minor Over	99	1	34
	Digital sensor 10 Major Under	99	1	35
	Digital sensor 10 Major Over	99	1	36
	Digital sensor 10 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64
Display 11	Digital sensor 11 Minor Under	99	1	1
	Digital sensor 11 Minor Over	99	1	2
	Digital sensor 11 Major Under	99	1	3
	Digital sensor 11 Major Over	99	1	4
	Digital sensor 11 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 12 Minor Under	99	1	33
	Digital sensor 12 Minor Over	99	1	34
	Digital sensor 12 Major Under	99	1	35
	Digital sensor 12 Major Over	99	1	36
	Digital sensor 12 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64
Display 12	Digital sensor 13 Minor Under	99	1	1
	Digital sensor 13 Minor Over	99	1	2
	Digital sensor 13 Major Under	99	1	3
	Digital sensor 13 Major Over	99	1	4
	Digital sensor 13 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 14 Minor Under	99	1	33
	Digital sensor 14 Minor Over	99	1	34
	Digital sensor 14 Major Under	99	1	35
	Digital sensor 14 Major Over	99	1	36
	Digital sensor 14 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64

Display Mapping

Display	Description	Port	Address	Point
Display 13	Digital sensor 15 Minor Under	99	1	1
	Digital sensor 15 Minor Over	99	1	2
	Digital sensor 1 Major Under	99	1	3
	Digital sensor 15 Major Over	99	1	4
	Digital sensor 15 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 16 Minor Under	99	1	33
	Digital sensor 16 Minor Over	99	1	34
	Digital sensor 16 Major Under	99	1	35
	Digital sensor 16 Major Over	99	1	36
	Digital sensor 16 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64
Display 14	SNMP Alarms	99	1	1-32
	Undefined	99	1	33-64

Display Mapping

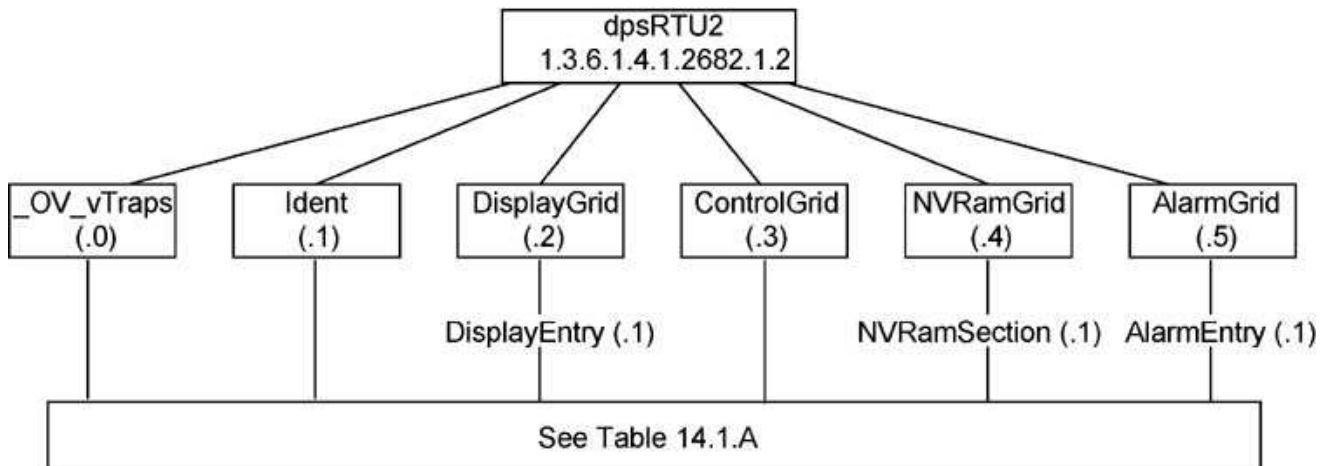
Display	Points	Alarm Point	Description	Solution
1	33	Default configuration	The internal NVRAM may be damaged. The unit is using default configuration settings.	Login to the Cell16 's web browser and configure the unit. Power cycle to see if the alarm clears.
	34	DCP poller inactive	The Cell16 is configured to listen for DCP polls but has not received a poll in over 5 minutes.	Check if unit can ping T/Mon or disable if not in use.
	39	SNMP community error	Community string does not match your SNMP master's community string.	Verify both community strings to make sure they match.
	41	Notification 1 failed	A notification 1 event, such as a page or email, was unsuccessful.	Verify that you can ping both devices.
	42	Notification 2 failed	A notification 2 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	43	Notification 3 failed	A notification 3 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	44	Notification 4 failed	A notification 4 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	45	Notification 5 failed	A notification 5 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	46	Notification 6 failed	A notification 6 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	47	Notification 7 failed	A notification 7 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	48	Notification 8 failed	A notification 8 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	49	NTP failed	Communication with Network Time Server has failed.	Try pinging the Network Time Server's IP Address as it is configured. If the ping test is successful, then check the port setting and verify the port is not being blocked on your network.
	50	Timed Tick	Toggles state at constant rate as configured by the Timed Tick timer variable. Useful in testing integrity of SNMP trap alarm reporting.	To turn the feature off, set the Timed Tick timer to 0.
	51	Dynamic memory full	Not expected to occur.	Call DPS Tech Support (559) 454-1600.
	52	Unit reset	Unit has rebooted.	If unintentional, call DPS Tech Support: (559) 454-1600.
1	55	Modem failed	The Modem component to the Cell16 has stopped responding.	Check if Modem is properly placed in socket. Contact DPS Tech Support (559) 454-1600.
	56	Bad signal	The Wireless Modem does not detect a cellular signal.	Ensure that the cellular antenna is properly connected to the Cell16 . If possible, reposition the Cell16 to find a cellular signal. If unsuccessful, contact DPS.
	57	Backup Mode	See Section 10.5, "Backup Mode."	Alarm specific.

System Alarms Display Map

16.2 SNMP Manager Functions

The SNMP Manager allows the user to view alarm status, set date/time, issue controls, and perform a resync. The display and tables below outline the MIB object identifiers. Table 14.2 begins with dpsRTU; however, the MIB object identifier tree has several levels above it. The full English name is as follows:

root.iso.org.dod.internet.private.enterprises.dps-lnc.dpsAlarmControl.dpsRTU. Therefore, dpsRTU's full object identifier is 1.3.6.1.4.1.2682.1.2. Each level beyond dpsRTU adds another object identifying number. For example, the object identifier of the Display portion of the Control Grid is 1.3.6.1.4.1.2682.1.2.3.3 because the object identifier of dpsRTU is 1.3.6.1.4.1.2682.1.4 + the Control Grid (.3) + the Display (.3).



Tbl. B1 (O.) _OV_Traps points
_OV_vTraps (1.3.6.1.4.1.2682.1.2.0)
PointSet (.20)
PointClr (.21)
SumPSet (.101)
SumPClr (.102)
ComFailed (.103)
ComRestored (.014)
P0001Set (.10001) through P0064Set (.10064)
P0001Clr (.20001) through P0064Clr (.20064)

Tbl. B3 (.3) ControlGrid points
ControlGrid (1.3.6.1.4.1.2682.1.2.3)
Port (.1)
Address (.2)
Display (.3)
Point (.4)
Action (.5)

Tbl. B2 (.1) Identity points
Ident (1.3.6.1.4.1.2682.1.2.1)
Manufacturer (.1)
Model (.2)
Firmware Version (.3)
DateTime (.4)
ResyncReq (.5)*
* Must be set to "1" to perform the resync request which will resend TRAPs for any standing alarm.

Tbl. B6 (.6) Analog Channels
Channel Entry (1.3.6.1.4.1.2682.1.4.6.1)
Channel Number (.1)
Enabled (.2)
Description (.3)
Value (.4)
Thresholds (.5)*
*If Mj, Mn is assumed

Tbl. B3 (.2) DisplayGrid points
DisplayEntry (1.3.6.1.4.1.2682.1.2.2.1)
Port (.1)
Address (.2)
Display (.3)
DispDesc (.4)*
PntMap (.5)*

Tbl. B5 (.5) AlarmEntry points
AlarmEntry (1.3.6.4.1.2682.1.2.5.1)
Aport (.1)
AAddress (.2)
ADisplay (.3)
APoint (.4)
APntDesc (.5)*
AState (.6)
* For specific alarm points, see

16.3 SNMP Granular Trap Packets

The tables below provide a list of the information contained in the SNMP Trap packets sent by the Cell16 .

SNMP Trap managers can use one of two methods to get alarm information:

1. Granular traps (not necessary to define point descriptions for the Cell16) **OR**
2. The SNMP manager reads the description from the Trap.

UDP Header	Description
1238	Source port
162	Destination port
303	Length
0xBAB0	Checksum

UDP Headers and descriptions

SNMP Header	Description
0	Version
Public	Request
Trap	Request
1.3.6.1.4.1.2682.1.4	Enterprise
126.10.230.181	Agent address
Enterprise Specific	Generic Trap
8001	Specific Trap
617077	Time stamp
1.3.7.1.2.1.1.1.0	Object
Cell16 v1.0K	Value
1.3.6.1.2.1.1.6.0	Object
1-800-622-3314	Value
1.3.6.1.4.1.2682.1.4.4.1.0	Object
01-02-1995 05:08:27.760	Value
1.3.6.1.4.1.2682.1.4.5.1.1.99.1.1.1	Object
99	Value
1.3.6.1.4.1.2682.1.4.5.1.2.99.1.1.1	Object
1	Value
1.3.6.1.4.1.2682.1.4.5.1.3.99.1.1.1	Object
1	Value
1.3.6.1.4.1.2682.1.4.5.1.4.99.1.1.1	Object
1	Value
1.3.6.1.4.1.2682.1.4.5.1.5.99.1.1.1	Object
Rectifier Failure	Value
1.3.6.1.4.1.2682.1.4.5.1.6.99.1.1.1	Object
Alarm	Value

SNMP Headers and descriptions

17 Frequently Asked Questions

Here are answers to some common questions from Cell16 users. The latest FAQs can be found on the Cell16 support web page, <http://www.dpstele.com>.

If you have a question about the Cell16 , please call us at **(559) 454-1600** or e-mail us at support@dpstele.com.

17.1 General FAQs

Q. How do I telnet to the Cell16 ?

- A.** You must use **Port 2002** to connect to the Cell16 . Configure your Telnet client to connect using TCP/IP (**not** "Telnet," or any other port options). For connection information, enter the IP address of the Cell16 and Port 2002. For example, to connect to the Cell16 using the standard Windows Telnet client, click Start, click Run, and type "telnet <Cell16 IP address> 2002."

Q. How do I connect my Cell16 to the LAN?

- A.** To connect your Cell16 to your LAN, you need to configure the unit IP address, the subnet mask and the default gateway. A sample configuration could look like this:

Unit Address: 192.168.1.100

subnet mask: 255.255.255.0

Default Gateway: 192.168.1.1

Save your changes by writing to NVRAM and reboot. Any change to the unit's IP configuration requires a reboot.

Q. When I connect to the Cell16 through the craft port on the front panel it either doesn't work right or it doesn't work at all. What's going on?

- A.** Make sure your using the right COM port settings. Your COM port settings should read:

Bits per second: 9600 (9600 baud)

Data bits: 8

Parity: None

Stop bits: 1

Flow control: None

Important! Flow control **must** be set to **none**. Flow control normally defaults to hardware in most terminal programs, and this will not work correctly with the Cell16 .

Q. The LAN link LED is green on my Cell16 , but I can't poll it from my T/Mon.

- A.** Some routers will not forward packets to an IP address until the MAC address of the destination device has been registered on the router's Address Resolution Protocol (ARP) table. Enter the IP address of your gateway and your T/Mon system to the ARP table.

Q. What characteristics of an alarm point can be configured through software? For instance, can point 4 be used to sense an active-low signal, or point 5 to sense a level or an edge?

- A.** The unit's standard configuration is for all alarm points to be level-sensed. You **cannot** use configuration software to convert alarm points to TTL (edge-sensed) operation. TTL alarm points are a hardware option that must be specified when you order your Cell16 . Ordering TTL points for your Cell16 does not add to the cost of the unit. What you can do with the configuration software is change any alarm point from "Normal" to "Reversed" operation. Switching to Reversed operation has different effects, depending on the kind of input connected to the alarm point:
- **If the alarm input generates an active-high signal**, switching to Reversed operation means the Cell16 will declare an alarm in the absence of the active-high signal, creating the practical equivalent of an active-low alarm.
 - **If the alarm input generates an active-low signal**, switching to Reversed operation means the Cell16 will declare an alarm in the absence of the active-low signal, creating the practical equivalent of an active-high alarm.
 - **If the alarm input is normally open**, switching to Reversed operation converts it to a normally closed alarm

point.

- **If the alarm input is normally closed**, switching to Reversed operation converts it to a normally open alarm point.

Q. I'm unsure if the voltage of my power supply is within the specified range. How to I test the voltage?

- A.** Connect the black common lead of a voltmeter to the ground terminal of the battery. Connect the red lead of the voltmeter to the batter's VCD terminal. The voltmeter should read between +12 and +30VDC.

17.2 SNMP FAQs

Q. Which version of SNMP is supported by the SNMP agent on the Cell16 ?

- A.** SNMP v1.

Q. How do I configure the Cell16 to send traps to an SNMP manager? Is there a separate MIB for the Cell16 ? How many SNMP managers can the agent send traps to? And how do I set the IP address of the SNMP manager and the community string to be used when sending traps?

- A.** The Cell16 begins sending traps as soon as the SNMP managers are defined. The Cell16 MIB can be found on the DPS Telecom website. The MIB should be compiled on your SNMP manager. (**Note:** MIB versions may change in the future.) The unit supports 2 SNMP managers, which are configured by entering its IP address in the Trap Address field of Ethernet Port Setup. To configure the community strings, choose SNMP from the Edit menu, and enter appropriate values in the Get, Set, and Trap fields.

Q. Does the Cell16 support MIB-2 and/or any other standard MIBs?

- A.** The Cell16 supports the bulk of MIB-2.

Q. Does the Cell16 SNMP agent support both Cell16 and T/MonXM variables?

- A.** The Cell16 SNMP agent manages an embedded MIB that supports only the Cell16 's RTU variables. The T/MonXM variables are included in the distributed MIB only to provide SNMP managers with a single MIB for all DPS Telecom products.

Q. How many traps are triggered when a single point is set or cleared? The MIB defines traps like "major alarm set/cleared," "RTU point set," and a lot of granular traps, which could imply that more than one trap is sent when a change of state occurs on one point.

- A.** Generally, a single change of state generates a single trap.

Q. What does "point map" mean?

- A.** A point map is a single MIB leaf that presents the current status of a 64-alarm-point display in an ASCII-readable form, where a "." represents a clear and an "x" represents an alarm.

Q. The Cell16 manual talks about control relay outputs. How do I control these from my SNMP manager?

- A.** The control relays are operated by issuing the appropriate set commands, which are contained in the DPS Telecom MIB.

Q. How can I associate descriptive information with a point for the RTU granular traps?

- A.** The Cell16 alarm point descriptions are individually defined using the Web Browser.

Q. My SNMP traps aren't getting through. What should I try?

- A.** Try these three steps:
1. Make sure that the Trap Address (IP address of the SNMP manager) is defined. (If you changed the Trap Address, make sure you saved the change to NVRAM and rebooted.)
 2. Make sure all alarm points are configured to send SNMP traps.
 3. Make sure the Cell16 and the SNMP manager are both on the network. Use the unit's ping command to ping the SNMP manager.

18 Technical Support

DPS Telecom products are backed by our courteous, friendly Technical Support representatives, who will give you the best in fast and accurate customer service. To help us help you better, please take the following steps before calling Technical Support:

1. Check the DPS Telecom website.

You will find answers to many common questions on the DPS Telecom website, at <http://www.dpstele.com/support/>. Look here first for a fast solution to your problem.

2. Prepare relevant information.

Having important information about your DPS Telecom product in hand when you call will greatly reduce the time it takes to answer your questions. If you do not have all of the information when you call, our Technical Support representatives can assist you in gathering it. Please write the information down for easy access. Please have your user manual and hardware serial number ready.

3. Have access to troubled equipment.

Please be at or near your equipment when you call DPS Telecom Technical Support. This will help us solve your problem more efficiently.

4. Call during Customer Support hours.

Customer support hours are Monday through Friday, from 7 A.M. to 6 P.M., Pacific time. The DPS Telecom Technical Support phone number is **(559) 454-1600**.

Emergency Assistance: *Emergency assistance is available 24 hours a day, 7 days a week. For emergency assistance after hours, allow the phone to ring until it is answered with a paging message. You will be asked to enter your phone number. An on-call technical support representative will return your call as soon as possible.*

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