

Prepared by: Donna Emerson

Date: 3/10/2022

800-472-7373

support@tessco.com

[tessco.com](http://tessco.com)

**Tessco will use commercially reasonable efforts to hold pricing for 30 days.**

Quote Number: 2878091-030922  
 BILL TO: 2878091-0000

SHIP TO: 2878091-0000

Page: 1  
 Date: 03/10/22

City of Phoenix  
 Communications Shop  
 251 W Washington St. 5th F  
 Phoenix, AZ 85003

City of Phoenix  
 2441 South 22nd Avenue  
 Communications Shop  
 Phoenix, AZ 85009

Telephone: 602-262-7789  
 Name: Brad Johnson  
 01570355 NON-GSA  
 US Dollars

SKU	Unit of measure	Description	Manufacturer part number	Order qty	Unit price	Extended price
443818	1 EA	1/4"x 5/8"x72" V Gnd Bar Estimated lead time 4-5 weeks	RGBVKIT145872A	1	82.40	82.40
241213	1 EA	4" Boot Without Cushion Product currently available in stock. Promo priced until 4/30	C20100026	1	6.20	6.20
528576	1 EA	4" Round Cushion 3/8"7/8 ECI-38-782-4 Product currently available in stock. Promo priced until 3/31	ECI-38-782-4	1	15.94	15.94
210335	5 PK	*3/8"Cbl Cushion Plugs 5p Estimated lead time 5/2022	C20100151	1	4.63	4.63
239863	5 PK	Cushion plug, 7/8" cr Product currently available in stock. Promo price until 4/30	C20105271	1	1.54	1.54
244241	1 EA	*Enersys 12v Front Term Estimated lead time 8-9 week	12V92FT	1	487.95	487.95
245001	1 EA	*66 Cross Connect Block Product currently available in stock.	HPW66M125	1	22.24	22.24
237314	1 EA	*Rack Fill Panel, 2RU Estimated lead time 6-7 weeks	DPFP2	1	23.17	23.17
584016	1 EA	*20A GMT Fuse Product currently available in stock.	127240RC	3	6.61	19.83
547062	100 PK	*Stainless Bridging Clips SA1-SS-100 Estimated lead time 5/2022	SA1-SS-100	1	10.54	10.54
441175	1 EA	N-Male 1/2" Superflex Cbl F4PNMV2-HC Estimated lead time 2-3 weeks	F4PNMV2-HC	6	22.24	133.44
443818	1 EA	1/4"x 5/8"x72" V Gnd Bar	RGBVKIT145872A	1	82.40	82.40

*Products affected by duties, taxes, tariffs, and other fees subject to change at any time.*

Quotation number: 2878091-030922  
 BILL TO: 2878091-0000

SHIP TO: 2878091-0000

Page: 2  
 Date: 03/10/22

City of Phoenix  
 Communications Shop  
 251 W Washington St. 5th F  
 Phoenix, AZ 85003

City of Phoenix  
 2441 South 22nd Avenue  
 Communications Shop  
 Phoenix, AZ 85009

Telephone: 602-262-7789  
 Name: Brad Johnson  
 01570355 NON-GSA  
 US Dollars

SKU #	Unit of measure	Description	Manufacturer part number	Order qty	Unit price	Extended price
<hr/>						
546577	100 FT	Estimated lead time 4-5 weeks 12ga 2cond Red,Black zip 5179-100 Product currently available in stock.	5179-100	1	94.86	94.86
<hr/>						
317964	100 FT	Estimated lead time 3-4 weeks 14ga 2cond Red,Black zip 5178-100	5178-100	1	57.55	57.55
<hr/>						
302718	1 EA	19" RM Battery Shelf Blac 405-4360-1 Product currently available in stock.	405-4360-1	1	160.11	160.11
514990	1 FT	*7/8" Heliax AVA Cable AVA5-50	AVA5-50	140	2.61	365.40
414440	1 EA	*Cable Handling/Cutting CABLE CUT ATTENTION DISTRIBUTION CENTER: (1) cut 140 feet Estimated lead time 4-5 weeks	CABLE CUT	1	0.00	0.00
<hr/>						
333438	1 EA	*N/F 7/8" EZfit AVA/FXL 78EZNF Product currently available in stock.	78EZNF	1	32.37	32.37
393905	1 EA	*N/M 7/8" EZfit AVA/FXL 78EZNM Product currently available in stock.	78EZNM	1	28.03	28.03
527855	1 EA	Standard Ground Kit 7/8" GKFORM60-78 Estimated lead time 6-7 weeks	GKFORM60-78	3	20.43	61.29
88078	10 PK	7/8" Hanger Kit CLAMP-105 Product currently available in stock.	CLAMP-105	2	20.19	40.38
71504	10 PK	*Universal Angle Adapter ANGLE-UI Estimated lead time 7-8 weeks	ANGLE-UI	2	57.96	115.92
73802	1 EA	5" Boot for 7/8" Cable BB783 Product currently available in stock.	BB783	1	78.33	78.33
278889	1 EA	Hoisting Grip, 7/8" HOIST1-78L Estimated lead time 5-6 weeks	HOIST1-78L	1	17.02	17.02

*Products affected by duties, taxes, tariffs, and other fees subject to change at any time.*

Quotation number: 2878091-030922  
BILL TO: 2878091-0000

SHIP TO: 2878091-0000

Page: 3  
Date: 03/10/22

City of Phoenix  
Communications Shop  
251 W Washington St. 5th F  
Phoenix, AZ 85003

City of Phoenix  
2441 South 22nd Avenue  
Communications Shop  
Phoenix, AZ 85009

Telephone: 602-262-7789  
Name: Brad Johnson  
01570355 NON-GSA

US Dollars

SKU	Unit of measure	Description	Manufacturer part number	Order qty	Unit price	Extended price
328732	1 EA	VHF Combiner Arrestor Estimated lead time 2-3 weeks	VHF50HN-B	1	101.50	101.50

All items above with an \* are  
Non-Cancellable and Non-Returnable  
and will be ordered especially for you.  
Please allow for extended delivery.

Lead times are estimated. Please contact  
us if improved lead times are required.  
Availability is subject to change.

A PO is required to reserve stock.  
Any changes made to this quote affects  
pricing. Tessco will use commercially  
reasonable efforts to hold pricing for  
30 days. Pls call for current pricing.

Shipping charges may change  
based on product availability.

The longest dimension of an item on your  
order results in an added handling fee  
from the carrier. This fee is included  
in the delivery charges for your order.

*Products affected by duties, taxes, tariffs, and other fees subject to change at any time.*

Quotation number: 2878091-030922  
BILL TO: 2878091-0000

SHIP TO: 2878091-0000

Page: 4  
Date: 03/10/22

City of Phoenix  
Communications Shop  
251 W Washington St. 5th F  
Phoenix, AZ 85003

City of Phoenix  
2441 South 22nd Avenue  
Communications Shop  
Phoenix, AZ 85009

Telephone: 602-262-7789  
Name: Brad Johnson  
01570355 NON-GSA

US Dollars

---

SKU #	Unit of measure	Description	Manufacturer part number	Order qty	Unit price	Extended price
----------	--------------------	-------------	-----------------------------	--------------	---------------	-------------------

---

Ship via: 5 Day      Estimated weight: 181 lbs  
Terms: N 30 INVOICE DATE  
Based on Pricing level at time of request.  
To confirm price and availability, build a  
Worksheet on [www.tessco.com](http://www.tessco.com) <<http://www.tessco.com>>  
for your current, everyday lowest total cost.

Destination & handling: 349.24  
AZ Sales tax: 202.04  
Total: 2,594.32

*Products affected by duties, taxes, tariffs, and other fees subject to change at any time.*

March 14, 2022

---

# NetGuardian M16 and Accessories for F572

---

*A RECOMMENDATION FOR  
City of Phoenix Communications*

Proposal ID: QA406E09\_1:NetGuardian M16 and Accessories for F572

**PRESENTED TO:**

**John Sater** | *Microwave Engineer*  
**City of Phoenix Communications**

**PRESENTED BY:**

**Ronald Stover** | *Sales Engineer*



4955 E. Yale Ave.  
Fresno CA, 93727  
Ph. 800 622-3314  
Fax. 559 454-1688

March 14, 2022

John Sater, Microwave Engineer

Phoenix, AZ 85009 US

City of Phoenix Communications

PROPOSAL: QA406E09\_1:NETGUARDIAN M16 AND ACCESSORIES FOR F572

Dear John,

Thanks again for contacting us regarding your project for F572. We are looking forward to providing you a monitoring solution for your site. Based on your email request, we created this proposal to include information and pricing for the NetGuardian M16.

*By deploying the NetGuardian M16, you will continue to receive the following benefits:*

- DPS Telecom RTU that has been successful deployed in City of Phoenix network in the past
- Low learning curve since City of Phoenix is already familiar with NetGuardian
- The RTU line is a Telco-Grade multi-generational, and built specifically for this type of high reliability operation to support your operations.
- A built-in, user-friendly web browser, and no special software to load on your computer for configuring the device.
- Having FREE LIFETIME FIRMWARE upgrades, which you can easily download to your NetGuardian M16 via LAN to make sure you have all the latest & greatest

Although City of Phoenix Communications may already be familiar with this equipment, we have included the "Technical Overview" and "Application Drawing" sections in this proposal for reference.

You will notice that the investment page features pricing tables based on the unit quantity purchased. For more information on the "Unit Quantity Discount" please reference the attached *Discount Schedule*.

As we continue to build our partnership with this new project, remember that DPS stands behind our products. We're committed to maintaining a long-term positive relationship with you. We always give you our 30-Day No-Risk Money-Back Guarantee and 24-hour emergency technical support. These are services that no other company in our industry will match.

*We look forward to working with you.*

*Sincerely,*

**Ronald Stover | Sales Engineer**

## TABLE OF CONTENTS

INTRO LETTER .....	
EXECUTIVE SUMMARY .....	1
WHY SELECT DPS TELECOM? .....	3
<i>A No Risk Guarantee</i>	
<i>A Long-Term Customer Relationship Mindset</i>	
<i>24-hour Emergency Technical Support</i>	
<i>Expert Consultation at your fingertips</i>	
TECHNICAL OVERVIEW .....	5
TECHNICAL OVERVIEW - A .....	5
TECHNICAL OVERVIEW - B .....	7
TECHNICAL OVERVIEW - C .....	8
DRAWINGS .....	9
INVESTMENTS .....	19
QA406E09_1: NetGuardian M16 and Accessories for F572 .....	19
SUCCESS STORIES .....	20
Central Arizona Project protects its 336-mile water distribution system with T/Mon and NetGuardians - A .....	
MOMENTUMTEL - MARK HAYES .....	26
REFERRALS .....	27
WARRANTY .....	28
TECHNICAL SUPPORT POLICY .....	30
RMA POLICY .....	31
DISCOUNT SCHEDULE .....	32
CLIENT LIST .....	33
DPS TEAM .....	34



# EXECUTIVE SUMMARY

## ***HOW THIS SOLUTION WILL BENEFIT CITY OF PHOENIX COMMUNICATIONS***

### **Our Understanding of Your Monitoring Problems**

Since 1986, DPS Telecom has developed custom solutions, for hundreds of organizations monitoring needs. DPS has the experience and expertise to help City of Phoenix Communications successfully meet its unique monitoring requirements.

#### **Most vendors aren't monitoring specialists**

- Your project demands monitoring and a reliable partner**

You have a project that involves monitoring, and you need a "go to" supplier with reliable solutions.

- You can't get a perfect fit without an expert**

If you buy from a company that doesn't specialize in monitoring, what they have is what you get. You may only get one or a few choices that won't be the perfect fit for your unique network.

### **DPS Delivers the Results You Expect**

Network monitoring gives you confidence that your revenue-generating equipment is operational and online. This dependable, powerful solution, backed by strong business relationships, will help City of Phoenix Communications effectively manage its network, and this project, in the following ways:

#### **DPS is the monitoring industry expert**

- DPS does monitoring all the time**

At DPS, monitoring isn't just something else that we do. It is what we do. We're serious remote monitoring professionals. We're the industry experts, and you'll be leveraging that expertise as a DPS client.

- DPS has the knowledge to customize solutions for you**

DPS has dozens of products (each with multiple build options) that can be deployed in countless combinations to meet your unique needs for capacity and capability. For the

10% of your project spec that isn't covered by an existing product, DPS can customize something for you quickly. We do these projects all the time.

# WHY SELECT DPS TELECOM?

## UNIQUE VALUE FOR CITY OF PHOENIX COMMUNICATIONS

**D**PS Telecom is looking to develop a long-term partnership with you. We are committed to creating the custom solution you need. You want a partner who understands your industry and the business issues driving you to look for solutions. You want to partner with an organization that delivers on the expectations it sets. And you want that partner to care about the business outcomes you need to achieve when implementing new technologies. Consider the following compelling reasons why you should partner with DPS Telecom for City of Phoenix Communications's network alarm management needs:

### A NO RISK GUARANTEE

There is NO-RISK to buy our equipment. Our total client satisfaction policy states, "If you buy our equipment and you are not satisfied for any reason during the first 30 days, simply return it." We do not want you to use DPS equipment if you are not happy with it. DPS is very confident that once you implement our solution and experience our support, the thought of returning it will never cross your mind.

### A LONG-TERM CLIENT RELATIONSHIP MINDSET

DPS invests a lot of time in developing solutions for our customers. We know that your success is the key to our success. Not only do we want you to be happy with the products and services you receive from DPS, we want you to be happy enough to tell others! We are not interested in just getting the sale. We want a long-term relationship with you - from our consultative quoting process to our on-site installation and training. As your needs change, we will be there to enhance our products to address those evolving needs.

### 24-HOUR EMERGENCY TECHNICAL SUPPORT

There's nothing like a person-to-person, real time conversation to effectively communicate with our partners. That's why we consider it so important that you get a fast response and a real person when you call DPS. We have our phone personnel on the job from 7 AM to 6 PM, Pacific Time. After hours you can get a live person in a relatively short time by activating our emergency tech support paging system, right from your own phone. You do not have to wait until the next morning before you can speak to a technical support representative. You will be

called back within 15 minutes, no charge. Here is what some of our partners have to say about our tech support:

#### **Industry best technical support**

DPS has the best customer and tech support of any vendor I have worked with in the twenty-five years I have been in the industry. Whenever any of our people have called for assistance, our needs were quickly taken care of. I wish that all vendors' support were as good as yours is. I look forward to continuing to use DPS as our primary alarm vendor. Thank you again for your support.

- R. Konshuk, WA

#### **No finger pointing technical support**

The level of technical support was outstanding. As you know when interfacing with another vendor's products, there is lots of finger pointing when things are not working properly. Your technical support group was very cooperative and worked with the other vendor to solve the compatibility issue that arose during turn up.

- B . Herlihy, MA

#### **"Sales" treatment from technical support**

A customer, as it relates to dealing with a vendor, can sometimes have an experience that is not too pleasant. However, this is not the case with DPS. I have never called on any of your people without being treated in the most friendly and courteous manner. You are to be commended for the culture you have engendered with your folks at DPS. A customer can normally expect this type of treatment when dealing with sales. What's really amazing is that I experience the same treatment when dealing with your service people- I've never been told. "This is not our problem." Honestly, on several occasions, it wasn't your problem, but a case of the "dumbs" on my part. Your people always guided me to the solution of the problem, regardless of "whose" problem it was.

- R. Boston - GA

## **EXPERT CONSULTATION AT YOUR FINGERTIPS**

---

**S**ince 1986 DPS Telecom has been developing dependable, powerful solutions for network management. We have implemented literally hundreds of solutions across multiple markets and industries, giving us the experience and versatility that you need on your side. From legacy gear to the latest telemetry protocols, our Network Management System consultants are fully capable of developing a solution just for you. We pride ourselves on being experts with flexibility and no risk.

# TECHNICAL OVERVIEW

## NETGUARDIAN M16 G2

**T**he NetGuardian M16 G2 is a small to mid-size IP-based RTU that forms the foundation of many successful alarm strategies. It will be responsible for collecting critical site information and reporting it to either a T/Mon or SNMP manager.

The **NetGuardian M16 G2** is a RoHS alarm remote that provides 16 discrete alarm inputs, 6 analog inputs, 2 or 18 control relays, all in a 1 rack unit of space. We've included front and back panel views of the unit.

The **discrete inputs** of the NetGuardian M16 G2 monitor items such as door alarms, equipment alarms and other ON/OFF events. The discrete alarms are "software reversible" to support both N/O and N/C alarm wiring. Qual times for on-set and on-clear.

The **analog alarms** are used for measuring such critical events as temperature and voltage (+/- 92VDC or 4-20mA). Each of the analog alarms can be assigned qualification times so that transient and nuisance alarms can be filtered out. 6 analogs - 2 power and 4 general purpose each with analog support and four programmable threshold alarms. Shunts to go from voltage to current, adds 250 ohms resistor.

The **control relays** are a convenient and time efficient way of remotely switching equipment in the field.

The NetGuardian M16 G2 comes standard with **dual power feeds**. Please refer to the NetGuardian description to confirm if your NetGuardian is configured for either: -48VDC, -24VDC, Wide range (-36 thru -42V), +24, or new +24V/-48V operation. You will be able to connect the secondary power feed to a backup source. The dual power feeds will automatically draw from both power sources and provide an internal alarm if one source fails. With separately fused A and B power feeds, the NetGuardian M16 G2 will stay online, even if you blow a fuse.

It also supports **SNMP v1, SNMP v2c & SNMP v3 Traps** which permits robust message delivery. When coupled with the controls features, it offers a convenient and time efficient way of remotely switching equipment in the field via the NetGuardian's internal relays.

The NetGuardian offers a **Web Browser** interface for easy and convenient centralized alarm management and unit configuration that can run on any platform or operation system. This means if you get notified of an alarm away from your normal workstation you can go to the nearest computer (with internet access) and log onto the NetGuardian. The user-friendly interface allows complete access to all the functions of the unit and enables the user to quickly set up alarm point descriptions, view alarm status, issue controls,

and configure paging information, as well as additional options. For security this unit also supports (HTTPS).

The following functions are model dependent; *please refer to the appendix section to determine if they are available in your build:*

### **Integrated Temperature and Battery Sensor**

The integrated temperature sensor will monitor the ambient temperature at the rack level and the battery sensor will monitor the voltage of the power feeds supplying the NetGuardian. The integrated temperature sensor measures a range of -40 F to 180 F (-40 C to 82 C). Each integrated sensor takes the place of an analog input, and does not need any external connections. No other analog input can be connected to the input point used for the integrated sensors.

### **Real-time clock**

The Real-Time Clock in the NetGuardian M16 G2 maintains the current date and time during a power failure. Each time an alarm occurs, a time-date stamp will be included in the SNMP trap and DCP alarm messages.

### **D-Wire Sensor Network**

A single RJ11 jack allows for up to 16 D-Wire analog sensors to be daisy chained from the unit. D-Wire sensors provide an easy and convenient way to monitor critical analog conditions. (Can also support internal D-Wire sensor).

DPS offers **FREE LIFETIME FIRMWARE** upgrades, which you can easily download to your NetGuardian via LAN to make sure you have all the latest & greatest benefits that have been developed.

# TECHNICAL OVERVIEW

## D-WIRE

The latest DPS sensors allow you to keep tabs on environments like never before. D-Wire sensors allow you to run a daisy-chain of up to **16 sensors** at a maximum of 600 feet from a single D-Wire port on your RTU.

D-Wire sensors use a simple RJ-11 connection for both data and power. This allows for an easy connection so you don't have to go through the trouble of worrying about tangled masses of sensors at your RTU. D-Wire sensors are also automatically detected for simple configuration.

D-Wire sensors can easily daisy-chain up to 16 sensors together at a maximum of 600 feet to make monitoring your facility easy, giving you complete visibility of your remote site. All you have to do is plug the sensor in, set your alarm thresholds and you're good to go.

Please see the Appendix section for your DPS Telecom RTU to confirm DPS Sensor Network(D-Wire Serial Port) build option.

**D-Wire Temperature Sensor (D-PK-DSNSR-12001)** A large variety of DPS Telecom Remote Telemetry Units (RTUs) will support the D-Wire Temperature Sensor (D-PK-DSNSR-12001). This sensor is easy to install by simply plugging the sensor into the DPS Sensor Network (D-Wire port) on the RTU, with no additional wiring or power required. The probe temperature range is -40 F to 180 degrees Fahrenheit (-40C to 82.2C).

You will be able to view the D-Wire Temperature Sensor's real-time temperature readings via the RTU's web browser interface. This unit will also allow you to set four alarm thresholds(major, minor under, major, minor over). An alarm will be triggered any time any of the thresholds are reached.

# TECHNICAL OVERVIEW

## SENSORS

### **Power Out Alert Sensor (Discrete)**

The Power Out Alert Sensor (Discrete) plugs into any 110 VAC circuit that needs to be monitored. When power is interrupted for **three to eight consecutive minutes**, the sensor outputs a contact closure. This sensor will work with any RTU discrete input.

# NetGuardian M16 G2

16 Discrete Alarms  
18 Control Relays  
6 Analogs Channels  
Integrated Temperature  
RJ11 D-Wire Sensor Port  
3-Port 10/100BaseT Ethernet  
RS232 Serial  
Dual GigE Fiber

# NetGuardian M16

12046

DPS Telecom (559)454-1600  
Fresno, CA 93727 [www.dpstele.com](http://www.dpstele.com)

Front



Craft USB Port

Real-Time Clock  
(remembers date/time settings after power cycle)

GMT Fuses and LED Indicators

Status LEDs

Dual GigE Fiber

D-Wire Port  
CAT5  
Temp / Humidity

4-Port 10/100 BaseT Ethernet

Integrated Temperature

Copper Ethernet

Earth Ground

Power Disconnection  
Remove A and B Plugs

POWER

A

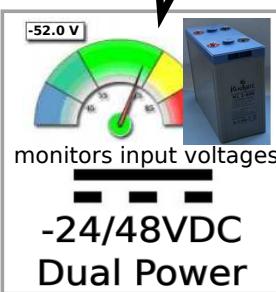
B

3/4 AMP GMT

A

B

Discretes 1-16 / Analogs / Controls 1-2



Built-In terminal server so you can remotely access equipment via RS232 serial.



66 Block and 25-pair cable is typical for terminating alarms, analogs, and controls.



Central Master Station  
T/Mon by DPS Telecom



Notification



Built-In Web Interface



SNMP manager



Cyber Secure

DPS Telecom

Drawings

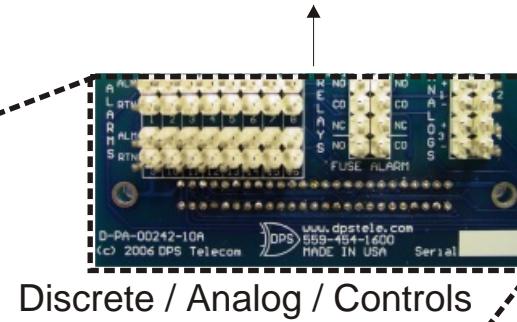
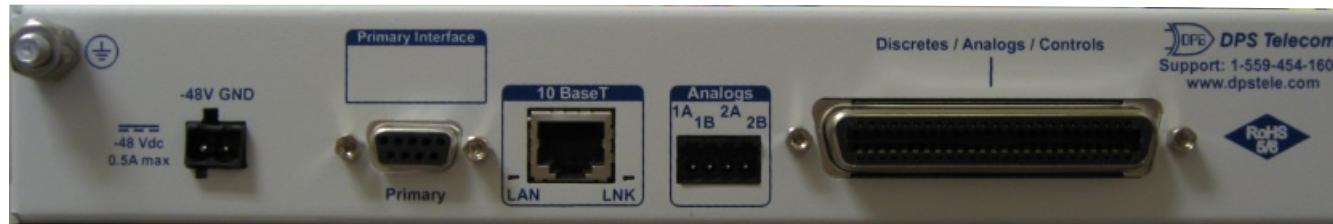
(559)454-1600  
[sales@dpstele.com](mailto:sales@dpstele.com)

# Wire Wrap Adapter

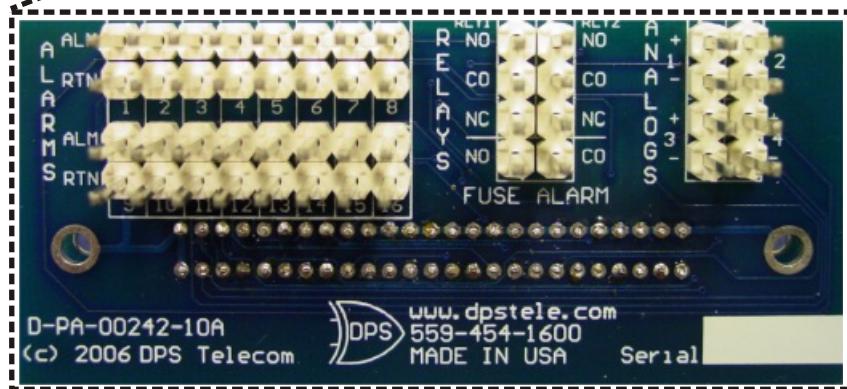
Drawings

# Wire Wrap Adapter for NetGuardian 216

## Rear View



Discrete / Analog / Controls



The back panel shown  
may not match your final  
configuration

## DRAWING

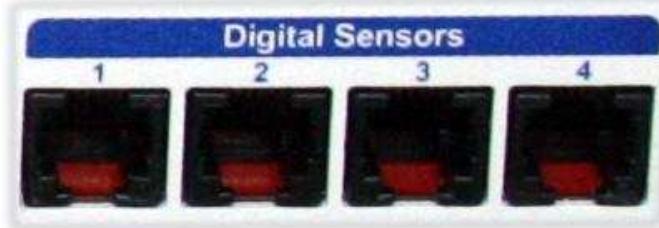
---

# D-Wire Sensor(s)

Drawings

# D-Wire Sensor Network

D-Wire Ports on compatible NetGuardian RTUs



D-Wire RJ-11  
(Data and Power)

Split core transducer  
for easy installation

D-Wire Current Sensor  
via Analog Module 0-12Vdc

Transducer wraps  
around cable

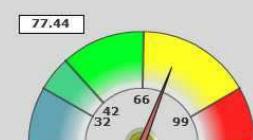


Sensors (Table View)

No.	5
Enab	Yes
Units	F
MjU	
MnU	
MnO	
MjO	

Analog Value  
**78.34**

Air Temperature



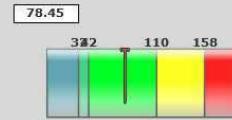
Temperature

No.	3
Enab	Yes
Units	F
MjU	
MnU	
MnO	
MjO	



Internal Temperature

No.	4
Enab	Yes
Units	F
MjU	
MnU	
MnO	
MjO	



External Temperature

D-Wire sensors are simple and inexpensive plug-and-play style sensors. Typically they are used for environmental monitoring of temperature and/or humidity. A D-Wire Analog Module can be used to interface to other kinds of sensor devices and voltages, including current transducers. D-Wire sensors can be configured and monitored with the easy-to-use web interface and are a great way to extend the capability of your RTU.

D-Wire Temperature and  
Humidity Sensor



Daisy-chain multiple  
sensors together



Call 1-800-622-3314 For Pricing and Information

Visit our website at [www.dpstele.com](http://www.dpstele.com)

D-PK-DSNSR

4955 East Yale Avenue, Fresno, Ca **Drawings** 00-622-3314 • Fax 559-454-1688

# Temperature Sensor

## D-PK-DSNSR-12001

### Overview

D-Wire sensors track environmental in your server room, telecom shelter, PBX closet, or data center using convenient daisy-chained architecture. With D-Wire sensors, you don't have to worry about analog capacity on your RTUs, tangled masses of wires at your RTU, or even the trouble of wiring analog connectors.

D-Wire sensors from DPS use simple RJ-12 connectors, in and out, and allow you to chain up to 16 sensors to a single DPS RTU's D-Wire port. Your sensor chain can be a maximum aggregate total length of 600 feet, so you can run sensors out as far as you need to monitor your equipment, without having to place analog-capable RTUs in multiple places.



### Features

D-PK-DSNSR-12001 Specs	
Power Requirements	RJ12 BUS Power
Installation Type	Plug 'n' Play
Operating Temp	-20° to 70°C
Storage Temp	-40° to 85°C
Measurement Frequency	3 sec. per sensor deployed
Measurement Range	T: -20° to 70°C
Accuracy	+/-1% (+/- 0.05V)
Resolution	10 Bit (.0048 V/step)
Case Type	Aluminum Powder-coated
Orientation	RJ12 on bottom, mounting bracket on top
D-Wire Comm Terminal	RJ12 x2
Analog Termination	N/A
Wire Gauge Range	14-30 AWG
Mounting Style	Single Screw, Wall Mount
Sensor Health Status	Supervised by host RTU
MTBF	15 Years

**Drawings**

### Benefits of the Temperature Sensor

- D-Wire sensors do not need a power source. "Plug 'n' Play" functionality.
- The analog signal is digitized at the sensor, so the cable is less susceptible to noise and can be longer.
- Analog value is sent to the RTU for data logging and real-time reading.
- DPS Telecom D-Wire Sensors are more economical compared to 3rd-party alternatives.
- Sensors are uniquely identified by the host or RTU, allowing them to be supervised. This means if a sensor is unplugged or the cable is broken, the RTU can detect this and notify you.

**Holes for air intake**

1.81" wide  
(46 mm)



0.81" deep  
(20.6 mm)

**Screw hole for  
mounting**

0.5" high  
(12.7 mm)



2.31" high  
(58.7 mm)

**RJ12 D-Wire in/out**  
Use this port to connect  
the sensor to your RTU or  
other sensors



**RTU**

**Daisy-chain up to 16  
D-Wire sensors.**



**Call 1-800-622-3314 for Pricing**

Visit our website at [www.dpstele.com](http://www.dpstele.com)

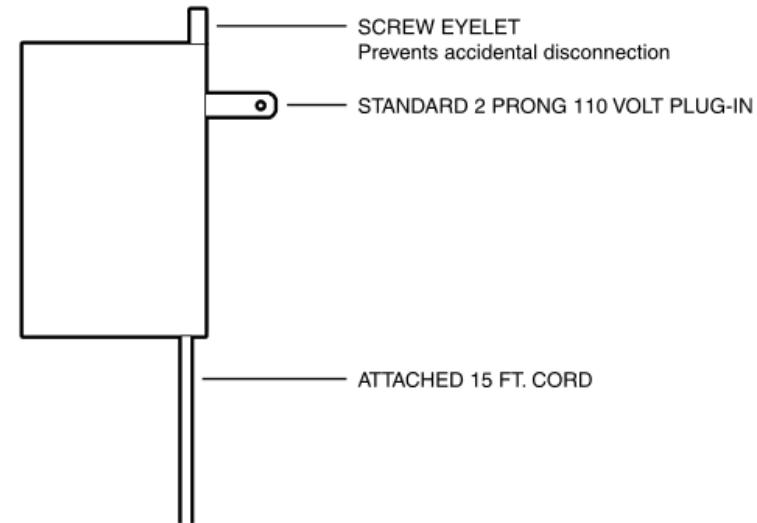
4955 East Yale Avenue, Fresno, California 93727 • 800-622-3314 • Fax 559-454-1688

# Accessories

Drawings

## Power Out Alert Sensor

D-PR-592-10A-00



**(559)454-1600**  
**[sales@dpstele.com](mailto:sales@dpstele.com)**  
**Drawings**

City of Phoenix Communications Investment

## QA406E09\_1:NetGuardian M16 and Accessories for F572

### **SOLUTION COST BREAKDOWN \_ NETGUARDIAN M16 AND ACCESSORIES FOR F572**

Proposal Valid For 30 Days

1% 10 Days / Net 45

*Please allow 30 days for equipment to ship from DPS Telecom.*

*Send Purchase Orders to [SalesPO@DPSTele.com](mailto:SalesPO@DPSTele.com)*

*Prices do not include shipping.*

*FedEx Ground Standard FOB Destination Prepay and Add.*

*Credit Limitations May Apply.*

#### **March 2022 : NetGuardian M16 and Accessories for F572**

<b>Ln Part #/Description</b>	<b>Qty</b>	<b>Price</b>	<b>Total</b>
1 D-PK-M16G2-12050.00001 NetGuardian M16G2,Dual -24/48VDC,6ana,1-Plug,RS232,2Rly,4SW	1	\$1,854.00	\$1,854.00
2 D-PK-WWADP-12001.00001 NetGuardian 216 / V16 / M16 Wire-Wrap Back Panel	1	\$118.00	\$118.00
3 D-PK-DSNSR-12001.00101 DPS Sensor Node, Temp, G2, Alum, RoHS	1	\$50.00	\$50.00
4 D-PR-592-10A-00 Sensor, AC Power Out Alert	1	\$85.00	\$85.00
SUB Total:			<b>\$2,107.00</b>

**TOTAL NetGuardian M16 and Accessories for F572** **\$2,107.00**

# SUCCESS STORIES

## HOW DPS TELECOM HELPED ORGANIZATIONS LIKE PMC ASSOCIATES

We know PMC Associates wants to know how other organizations have solved problems and achieved their goals in partnership with DPS Telecom. We know you're particularly interested in how we've helped other customers overcome challenges that might be similar to your own.

Central Arizona Project (CAP) is Arizona's single largest resource for renewable water supplies. CAP brings 1.5 million acre-feet of water from the Colorado River to Central and Southern Arizona every year, serving more than 5 million people. Handling a job at this scale requires a 336-mile long system of aqueducts, tunnels, pumping plants, and pipelines.

"You need one place that you can go to and see what's going on with your equipment. You can see failures. You can see problems before they become failures."

### Remote monitoring is crucial for a water utility

Sean Parsons, Communications Engineer at CAP, sums up the value of remote monitoring this way: "You can't have eyes on every piece of equipment, everywhere in the network, all at once without some kind of system to monitor those devices," he says. "You would have to have employees standing everywhere. You're going to need some kind of automated system."

An automated monitoring system gives you situational awareness of all your remote sites simultaneously.

"You need one place that you can go to and see what's going on with your equipment," Parsons explains. "You can see failures. You can see problems before they become failures."

A system that also gives you remote-control capability reduces wasted time and effort. You don't have to drive out to your remote facilities to manage them.



**Sean Parsons**

Communications Engineer  
Central Arizona Project

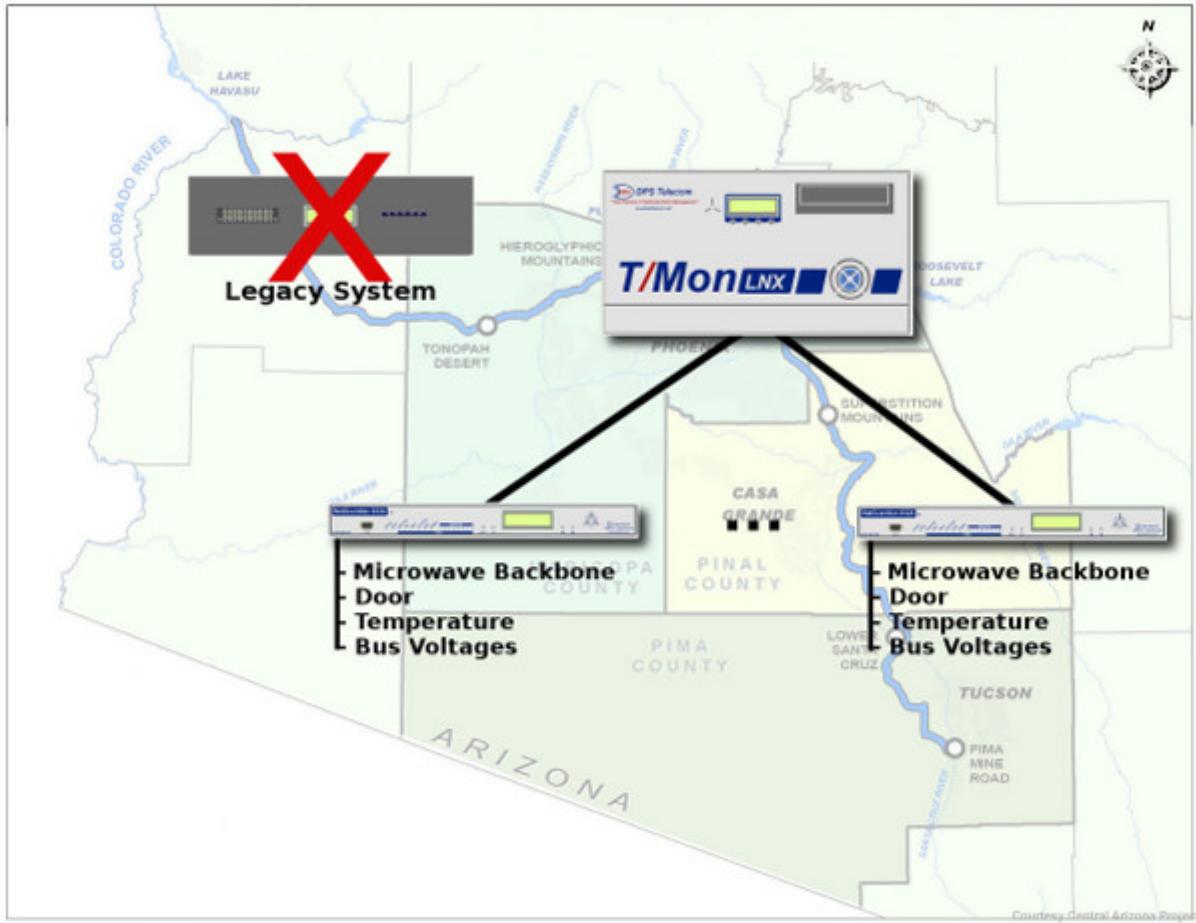
"The possibility of being able to make changes without having to go out and touch pieces of equipment directly adds value," says Parsons. "It cuts down on the number of man-hours it takes to maintain a system."

"We monitor our microwave backbone. We monitor our facilities themselves, too, so we can monitor if the door is open or closed. We can look at temperatures in the facility. We can monitor the bus voltages."

## CAP needed to transition away from a legacy monitoring system

Like many utilities, CAP had a legacy monitoring system that still performed at a rudimentary level, but it wasn't truly getting the job done anymore.

"We have an older system that's still in place," Parsons says. "It's not our primary system any longer, so we are working on getting that cut over and making it a more robust and more thoroughly planned system."



The water utility uses a T/Mon LNX polling NetGuardian RTUs to monitor its microwave backbone, doors, temperatures, bus voltages, and many other critical values.

## "Underutilized" monitoring gear became a chance to improve

CAP had purchased a modern T/Mon master station and new NetGuardian RTUs, but they hadn't yet completed the install.

"It was sitting in a rack underutilized," Parsons says. "We were told 'You already spent the money, so you guys better get it working.'"

Parsons was tasked with setting up the NetGuardians and wiring remote-site equipment into them.

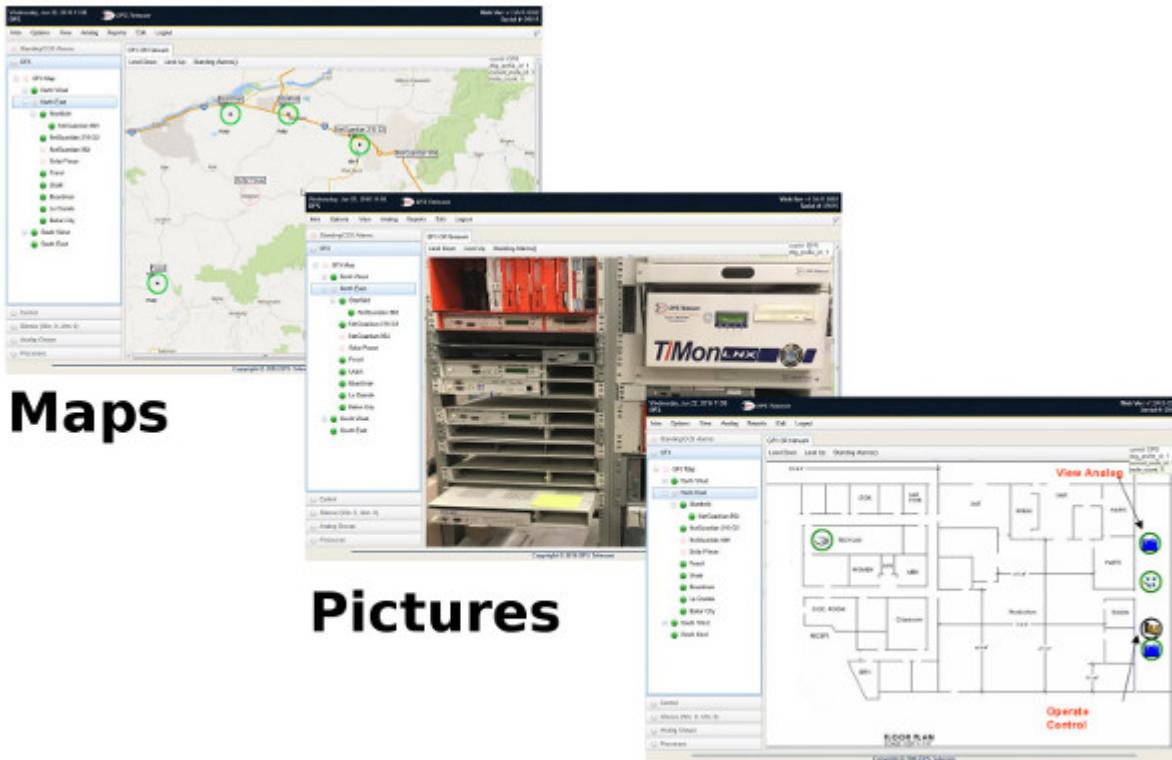
"If there is a piece of equipment where we don't have any other way to know what's going on, we will hook it to the NetGuardians to be able to see what's going on."

"I was the new guy," he recalls, "They handed me a couple of 832As that had been decommissioned and said, 'Why don't you see if you can get this working and get these deployed?'"

"So I began doing that. As we began integrating things, we more or less figured out how to use the units. We went to DPS HQ for Factory Training shortly thereafter," Parsons remembers. "Eventually it began to take off. As it became more and more successful for us, it began to build momentum. Now it's the primary system."

## T/Mon and NetGuardians bring a wide range of equipment into the monitoring system

"We are primarily using the T/Mon now as our Master," he says. "We have NetGuardians at most of our larger facilities. We monitor our microwave backbone. We monitor our facilities themselves, too, so we can monitor if the door is open or closed. We can look at temperatures in the facility. We can monitor the bus voltages."



The new WebGFX interface in T/Mon makes it easier for technicians to quickly pinpoint and resolve network alarms.

The key, for Parsons, is gaining remote visibility and control over devices where he otherwise can't. "We look at the ability to turn on and turn off the generators and a few other discrete points depending on the site," he says. "Primarily, if there's a piece of equipment where we don't have any other way to know what's going on, we'll hook it to the NetGuardians to be able to see what's going on."

"I know my site will stay up. It's a small investment up front that pays dividends on the back end."

## Factory Training made it easier to work with SNMP

Parsons recently attended DPS Advanced Factory Training in California. During class, he learned about newer T/Mon functions and SNMP configuration.

"I received the Basic Factory Training a while ago, and it was sufficient to get me started with the units. I understood how they worked," he says. "But recent software updates have added more functionality and changed the way the units are used. And we recently decided to implement SNMP. I didn't have enough training to utilize that. I really desperately wanted to get that piece of it."

## New interfaces are easier for CAP to use

Monitoring interfaces are used daily, usually by multiple people. That means they absolutely must be easy and straightforward to avoid wasting your time.

"The changes that DPS has recently implemented seemed to fill in all the gaps," Parsons says. "It seems like those things are a lot better planned out, and they require a lot less effort on my part as an engineer to figure out how to use them."

The Web GFX interface in T/Mon, which displays alarms as icons on top of maps, diagrams, and photographs, makes it easier for CAP's team of technicians to interpret new alarms.

"The graphics feature has a lot of potential to cut back on the required familiarity. A lot of our techs haven't been to all the sites. So, it's good to be able to use a photograph or rack elevation or illustrative diagram to point somebody to the failure," Parsons explains. "It goes beyond just 'There's a major failure, go there and figure it out.' I see that as useful to get people familiar with the sites and what's out there."

## The next step at CAP: detailed battery monitoring

Parsons has his eye on improving remote visibility of his battery plants. Although this requires an investment in additional monitoring equipment, he sees big value in it.

"Most people oversimplify batteries," Parsons says. "They think it's just a battery: power goes in, power goes out, and there's nothing to it. They don't realize that batteries degrade over time. How long it takes a

battery to degrade is directly proportional to how you take care of your batteries. So if you ignore them and you keep them in hot rooms and you don't take care of them, they fail in a few years. Usually, you don't see that failure until you depend on that battery and realize it's dead. Proactively monitoring your batteries and periodically doing capacity testing means that, at any given moment, you know how your batteries will perform."

"I know my site will stay up," he says with a grin. "It's a small investment up front that pays dividends on the back end."

# MOMENTUM

T E L E C O M

*November 3, 2020*

Andrew,

Our NetGuardian 832A's have been deployed in our data centers for nearly 20 years of continued service. These 832A's have been a reliant and stable and steady appliance during many evolutions in the network and corporate change of control.

The 832A has delivered service of various applications of:

- Internet Protocol via ping target alerting
- Analog contact monitoring, such as external generator alerting
- Discrete contact monitoring
- Control latching capabilities

Our confidence in determination of upgrade of the existing 832A and choosing DPS Telecom was the proven track record over these 20 years.

I would highly recommend DPS Telecom products and solutions for remote monitoring & control needs.

Sincerely,

**Mark I. Hayes**  
VP Voice Operations  
Momentum Telecom

## REFERRALS

South Texas Electric Co-op  
Warren Buchhorn  
2849 FM447  
Nursery, TX  
(361) 485-6396

South Florida Water Management District  
Les Richards  
3301 Gun Club  
West Palm Beach, FL  
(561) 682-6148

Sedona Fire District  
Robert Motz  
2860 Southwest Drive  
Sedona, AZ  
(928) 204-8928

Thurston County Department of  
Communications  
David Taylor  
2703 Pacific Ave. SE  
Olympia, WA  
(360) 704-2736

Harrison County 911  
Robert Clark  
15309-B Community Road  
Gulfport, MS  
(228) 328-3385

NYC Transit  
Warren Hochman  
2 Broadway  
New York, NY  
(646) 252-2805

Salt River Project  
Angel Parra  
PO Box 52025  
Phoenix, AZ  
(602) 236-8924

Project Mutual Telephone  
Russ Terry  
507 G St.  
Rupert, ID  
(208) 436-7151

Dakota County  
Ron Jansen  
2860 160th St. West  
Rosemount, MN  
(952) 891-7886

Gaston County  
Barry Styers  
P.O. Box 1578  
Gastonia, NC  
(704) 309-5162

San Juan County Office of Emergency  
Management  
Charles Rash  
209 South Oliver Drive  
Aztec, NM  
(505) 334-4715

State of Alaska  
Darrell Bowman  
Enterprise Technology Services  
Anchorage, AK  
(907) 748-2840

# WARRANTY

DPS Telecom warrants, to the original purchaser only, that its products a) substantially conform to DPS' published specifications and b) are substantially free from defects in material and workmanship. This warranty expires two years from the date of product delivery with respect to hardware and ninety days from the date of product delivery with respect to software. If the purchaser discovers within these periods a failure of the product to substantially conform to the specifications or that the product is not substantially free from defects in material and workmanship, the purchaser must promptly notify DPS. Within reasonable time after notification, DPS will endeavor to correct any substantial non-conformance with the specifications or substantial defects in material and workmanship, with new or used replacement parts. All warranty service will be performed at the company's office in Fresno, California at no charge to the purchaser, other than the cost of shipping to and from DPS, which shall be the responsibility of the purchaser. If DPS is unable to repair the product to conform to the warranty, DPS will provide at its option one of the following: a replacement product or a refund of the purchase price for the non-conforming product. These remedies are the purchaser's only remedies for breach of warranty. Prior to initial use the purchaser shall have determined the suitability of the product for its intended use.

DPS does not warrant a) any product, components or parts not manufactured by DPS, b) defects caused by the purchaser's failure to provide a suitable installation environment for the product, c) damage caused by use of the product for purposes other than those for which it was designed, d) damage caused by disasters such as fire, flood, wind or lightning unless and to the extent that the product specification provides for resistance to a defined disaster, e) damage caused by unauthorized attachments or modifications, f) damage during shipment from the purchaser to DPS, or g) any abuse or misuse by the purchaser.

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

In no event will DPS be liable for any special, incidental, or consequential damages based on breach of warranty, breach of contract, negligence, strict tort, or any other legal theory. Damages that DPS will not be responsible for include but are not limited to, loss of profits; loss of savings or revenue; loss of use of the product or any associated equipment; cost of capital; cost of any substitute equipment, facilities or services; downtime; claims of third parties including customers; and injury to property.

The purchaser shall fill out the requested information on the Product Warranty Card and mail the card to DPS. This card provides information that helps DPS make product improvements and develop new products.

For an additional fee DPS may, at its option, make available by written agreement only an extended warranty providing an additional period of time for the applicability of the standard warranty.

## **Technical Support**

If a purchaser believes that a product is not operating in substantial conformance with DPS' published specifications or there appear to be defects in material and workmanship, the purchaser should contact our

technical support representatives. If the problem cannot be corrected over the telephone and the product and problem are covered by the warranty, the technical support representative will authorize the return of the product for service and provide shipping information. If the product is out of warranty, repair charges will be quoted. All non-warranty repairs receive a 90-day warranty.

# TECHNICAL SUPPORT POLICY

## DPS Technical Support Policy

(559) 454-1600 Phone

(559) 454-1688 Fax

[support@dpstele.com](mailto:support@dpstele.com) Email

DPS has a standard customer support policy that covers all DPS products purchased. We have technicians on duty Monday through Friday, 7:00am to 6:00pm Pacific Time. If you need emergency technical support after these hours, we have a voicemail system (the only time DPS allows voicemail!!) that will page a technician.

After hour emergency technical support is initiated by calling our regular phone number, either the 800 or the 559 number, and following the subsequent directions. Your call is typically returned within 15 minutes. If technical support is unable to resolve the problem they will be able to escalate the call to the appropriate DPS personnel.

Technical support features have been built into many of our products. In many cases our technicians, with customer permission, can dial directly into our units to correct problems.

As a service to our customer, we will schedule special support hours. For instance, if a customer plans to turn up a site or install a DPS product on a Saturday or during the week at 5:00am, we can have a technician on stand-by.

Our tech support policies have been in place for years and have been proven to be extremely beneficial to our customers.

## RMA POLICY

DPS Telecom Technical Support  
(559) 454-1600 Phone  
(559) 454-1688 Fax  
[support@dpstele.com](mailto:support@dpstele.com) Email

In the event that you believe a DPS Telecom product requires repair, contact Technical support at the above number. Prior to calling DPS, be sure to have the following information available: your company name, your name, your e-mail address, DPS unit type (EG: NetGuardian 832a), unit serial number and description of problem. A technician will provide further direction and issue an RMA number if needed. Products may not be returned to DPS Telecom unless an RMA number has been issued.

DPS Telecom, on average, returns RMA units within 4 weeks and will email the RMA submitter on the return shipment with a tracking number.

## Discount Schedule

### Unit Quantity Discount Schedule

This Unit Quantity Discount applies on a per order basis and only to quantities of products with same part number. **Previous orders do not affect this schedule.** This schedule will be the default discount schedule unless an Annual Dollar Volume has been activated. Orders may not be scheduled out more than 60 days in advance.

<u>Units</u>	<u>Discount</u>	<u>Units</u>	<u>Discount</u>
<b>1 - 10</b>	0%	<b>100 - 499</b>	10%
<b>11 - 25</b>	5%	<b>500 - 999</b>	12%
<b>26 - 99</b>	7.5%	<b>1000 +</b>	<i>Call DPS Telecom</i>

Examples: Jan 23rd order for 26 units qualifies for a 7.5% discount

May 10th order for 12 units qualifies for a 5.0% discount

### Annual Dollar Volume Schedule

The Annual Dollar Volume Schedule (ADVS) consists of a series of tiers. When DPS prepares a proposal, the ADVS discount level will be based on client's total post-discounted purchases of DPS products in the preceding annual period up to and including the current proposed purchase.

<u>Annual Dollar Volume</u>	<u>Discount</u>
<b>0-99k</b>	0%
<b>100k - 249k</b>	5%
<b>250k - 499k</b>	9%
<b>500k - 999k</b>	12%
<b>1M - 2.49M</b>	15%
<b>2.5M +</b>	17%

Example: A May 5th PO for \$35K with \$475K of total other post-discounted purchases in the preceding annual period qualifies for a 12% discount.

Clients must register with the sales department to be put on this schedule.

### Additional Notes - Both Schedules

**No discounts shall be given in either schedule for non-recurring engineering charges, consultation fees, maintenance agreements, special offers, on-site training, turn-up assistance, taxes and travel expenses.**

DPS also offers discounts off of the post-discounted invoiced amount; 1% for net 10-day payment and 2% if the invoiced amount is prepaid. These discounts apply to all goods and services and are not included in the ADVS calculations.

If a client is registered for an ADVS discount, the client will receive the larger of the two discounts computed on each proposal line item. A trade-in credit/discount supersedes all other DPS discounts.

DPS reserves the right to change the discount schedule at any time and without notice.

# DPS CLIENT LIST

## PARTIAL DPS TELECOM CLIENT LIST BY INDUSTRY

### *Telecommunications*

3 Rivers Telephone  
Adelphia Communications  
AT&T  
Big Bend Telephone  
Bell Canada  
Bell South  
Cingular Wireless  
Cypress Communications  
EATEL  
Frontier Communications  
Guam Cellular & Paging  
IXC Communications  
KMC Telecom  
MCI Worldcom  
McLeod USA Network Services  
Nextel  
Nextlink  
PacWest Telecom  
Panhandle Telephone  
Pioneer Telephone  
PointOne Telecommunications  
Polar Communications  
Qwest Communications  
SBC  
Sprint PCS  
Triangle Telephone  
Verizon Wireless  
XO

### *Utilities*

Advanced Electric Company  
Alabama Power Company  
Consumers Energy  
Dominion  
Duke Energy  
El Paso Energy  
Florida Power  
Mississippi Power Co.  
Niagara Mohawk  
PG & E  
Sierra Pacific Power  
Southern California Edison  
Southern Company

### *Miscellaneous*

City of Columbus  
Cubic Defense System  
General Dynamics  
Houston Chronicle  
Indyne  
ITT Federal Services  
Lockheed Martin  
PC Connection  
SES Americom  
State Farm Insurance  
State of California  
State of South Carolina  
Texas Lonestar Networks

### *Manufacturing/Integration*

ADC Telecommunications  
Adesta Communications  
Alcatel  
CopperCom  
Hewlett Packard  
Illinois Superconductor Corp.  
Lucent Technologies  
M/A-Com  
Motorola  
Nortel  
Lockheed Martin Defense Systems  
Orius  
Raytheon  
Siemens  
Volt

### *Transportation*

BNSF Railroad  
CN Rail  
LA Metro  
New Jersey Transit Rail  
New York City Transit  
Virginia Dept of Transportation

### *Cable*

Bright House Networks  
Comcast  
Telvue  
Time Warner Cable

# DPS TEAM FOR CITY OF PHOENIX COMMUNICATIONS

## THE PEOPLE YOU HAVE WORKING FOR YOU

**D**PS Telecom is committed to serving you with a quality team of people that will deliver the customer service you deserve and expect. Here are some of the people you'll be working with when you partner with us.



RONALD STOVER  
*Sales Engineer*

*Ron has been with DPS since day one. Originally a test tech, Ron eventually became involved with new product design verification. For the last 15 years, he has been involved with every aspect of project development. I really enjoy talking to people using our products. They use them in many exciting ways. I like being part of their success."*

*Contact Ronald at  
[rstover@dpstele.com](mailto:rstover@dpstele.com)*

## APPENDIX

### **D-PK-DSNSR-12001.00101**

#### **DPS Sensor Node, Temp, G2, Alum, RoHS**

Temperature Probe G2 that connects into the DPS Sensor network. Temperature range -40F to 180F (-40C to 82.2C). Can daisy chain one or more DPS Sensors (Includes one 7 ft. cable). Specifications: Two RJ11 connector, wall mountable via integrated bracket, aluminum case, alodined bottom. Powered by DPS RTUs, RoHS, White.

### **D-PK-M16G2-12050.00001**

#### **NetGuardian M16G2,Dual -24/48VDC,6ana,1-Plug,RS232,2Rly,4SW**

NetGuardian M16 Monitors 16 contact alarm points and reports them to SNMP managers via LAN. Contains built in 4 Port Switch to allow other devices to connect to the LAN/Network. Also may report alarms to DPS Masters (T/Mon LNX, T/Mon NOC, T/MonSLIM) using DCPX protocol. RS232 port for terminal server / reach thru access. Supports: 16 alarms, 32 ping targets, 2 controls, 6 Analog alarms (4 general purpose, 2 dedicated for battery monitoring). D-Wire Support which features 1 internal temperature sensor and 1-RJ11 plug allowing up to 15 D-Wire sensors to be daisy chained together. Features: secure Web interface using HTTPS. Includes audible web feature. Specifications: Dual -48VDC powered via locking RIA plug, 10/100BaseT LAN, Real Time Clock (RTC), 1 RU, 19-inch or 23-inch rack mountable, firmware downloadable, craft USB port, RoHS, White. External temperature or humidity probes D-PK-DSNSR-12xxx Sold separately.

### **D-PK-WWADP-12001.00001**

#### **NetGuardian 216 / V16 / M16 Wire-Wrap Back Panel**

Adapter for NG216 G1-G3, NG216T, NG216F, Voice 16, and M16 that secures to the back of the remote and converts the the Amphenol connector to wire wrap termination. This device provides a convenient way of terminating alarms without using additional wall or rack space. The amphenol interface allows for quick connection & reconnection.

### **D-PR-592-10A-00**

#### **Sensor, AC Power Out Alert**

Plugs into any 110Vac circuit to be monitored, wires into any alarm panel. When power is interrupted for 3 to 8 consecutive minutes Power Out provides a dry contact closure output.



Communication Integration & Solutions Since 1945

725 W. Commerce Ave Suite 106

Gilbert, AZ 85233

(480)981-8875

Fax(480)-981-7146

PRICE QUOTE		3/8/2022	PRESENTED TO:			AZ ROC# 086328 CR67		
Summary - Quote for Codan equipment - FS572.			Contact: Organization: Department: Address: City, State Zip:	Brad Johnson City of Phoenix Wireless Infrastructure - Radio shop	Email: Phone: Fax: Cell:	bradwick.johnson@phoenix.gov 602-228-7439		
Contract Number (State, WSCA, GSA, Other)			Salesperson	HSE	Qte #	JB 01142022-1 rev1		
ITEM	DESCRIPTION	MAN	MODEL	PRICE	QTY	EXTENDED		
1	SUBRACK, MULTIPLE RECEIVERS	Codan	SR-39-3	\$ 1,020.10	1	\$ 1,020.10		
2	SYSTEM REGULATOR, 9-11 VDC, 14HP	Codan	SM-3-H0-014-00	\$ 832.33	1	\$ 832.33		
3	RX, MT-4E, VHF136-174MHz, CLASS A	Codan	VR-4E150-A0-000	\$ 2,553.62	5	\$ 12,768.10		
4	FIRMWARE / MT4E RX/ANALG, STAT/TONE	Codan	APP-FIRM20-W-XX	\$ -	5	\$ -		
5				\$ -	\$ -	\$ -		
6				\$ -	\$ -	\$ -		

Notes:  FS572	Hardware Total Gilbert TAX % Freight	\$ 14,620.53 \$ 1,140.40 \$ 751.03
---------------------	--	--

Project Total: Credit Card Payment Total:	\$ 16,511.96 \$ 17,172.44
--	------------------------------

Customer Signature	Date	PO Number
--------------------	------	-----------

<b>TERMS AND CONDITIONS</b>
All prices are expressed in US Dollars and are payable in US Dollars. Payment terms are Net 30 days. All prices are F.O.B. Gilbert, AZ. Customer will be billed for shipping and insurance costs. All quotations are valid for 30 days from quotation date unless otherwise contracted. In the event that DCI retains the services of an attorney to collect any amounts due hereunder, the "CUSTOMER" will pay all charges for any effort to collect including, but not limited to, attorney's FEES, court FEES and agency FEES. Project billing subject to incremental billings of 50% Notice to Proceed, 30% Equipment Delivery to DCI, 10% Installation/Labor Completed, 10% Acceptance unless otherwise contracted.

# QUOTATION

Date: 03/18/2022  
 Quote #: Q007H29C  
 Customer: 418449

Send Purchase Orders to Communications Supply Corp.  
 2301 Patriot Blvd. Glenview, IL 60026-8020

Customer

CITY OF PHOENIX  
 251 W WASHINGTON ST 5TH FL  
 PHOENIX, AZ 85003  
 JOHN SATER  
 Phone: 602-534-6933  
 Fax: --  
 Email: john.sater@phoenix.gov

City of Maricopa adding VHF radio capabilities

Line	Quantity	Part Number and Description	UM	Unit Price	Extended Price
1	1	GVSMRT-000059 <b>EATON APS3-421-B0A</b> ACCESS POWER SOLUTION WITH SC200 <b>Part Availability: 2-3 WEEKS ARO, NC.</b> Government Contract #: SOURCEWELL 151985-0	EA	3264.05	3,264.05
2	3	10121616 <b>EATON APR48-3G</b> ACCESS POWER RECTIFIER, 48VDC Government Contract #: SOURCEWELL 151985-0	EA	508.79	1,526.37
3	1	Non-Stock <b>EATON POWE RMB-09</b> RECTIFIER BLANK -- -- Government Contract #: SOURCEWELL 151985-0	EA	29.83	29.83
4	3	Non-Stock <b>EATON POWE 88-92310</b> APS3-421-B0A AC LINE CORDS C15TO NEMA 5-15P -- Government Contract #: SOURCEWELL 151985-0	EA	85.23	255.69
5	3	971894 <b>EATON 307-02000-13</b> 20 AMP CIRCUIT BREAKER Government Contract #: SOURCEWELL 151985-0	EA	43.47	130.41
6	2	GVSMRT-000055 <b>EATON 307-05000-07</b> LOAD BREAKER-CIRCUIT BREAKER (50A) MID TRIP PLUG-IN STYLE Government Contract #: SOURCEWELL 151985-0	EA	43.47	86.94

The impacts of COVID-19 cannot be reasonably determined at this time. This quote/proposal does not account for any potential adverse impacts COVID-19 may have on Seller's performance or obligations herein. In the event of any delays or adverse impacts, Seller reserves the right for an equitable adjustment of the delivery schedule and prices herein to offset the effects of COVID-19 delays, without fault or penalty of any kind.

BY ACCEPTING THIS QUOTE, YOU AGREE THAT THE TERMS AND CONDITIONS OF SALE PUBLISHED AT [WWW.WESCO.COM/TERMSOFSALE](http://WWW.WESCO.COM/TERMSOFSALE) ARE EXPRESSLY INCORPORATED INTO AND SHALL GOVERN THIS TRANSACTION.

# QUOTATION

Date: 03/18/2022  
 Quote #: Q007H29C  
 Customer: 418449

Communications Supply Corp (a WESCO company)  
 Send Purchase Orders to Communications Supply Corp.  
 2301 Patriot Blvd. Glenview, IL 60026-8020

City of Maricopa adding VHF radio capabilities

Line	Quantity	Part Number and Description	UM	Unit Price	Extended Price
7	1	971895 <b>EATON 307-10000-04</b> 20 AMP CIRCUIT BREAKER Government Contract #: SOURCEWELL 151985-0	EA	43.47	43.47
8	1	923274 <b>COMCABLES CN-C6-FKY-FF-BK</b> CAT 6 KEYSTONE UTP COUPLER BK Government Contract #: SOURCEWELL 151985-0	EA	4.55	4.55
9	1	637622 <b>COMCABLES PP-K24-FM-C</b> 24-PORT PATCH PANEL 1U UNLOADED, MODULAR, NON- SHIELDED 19" RACKMOUNT Government Contract #: SOURCEWELL 151985-0	EA	11.88	11.88
10	1	325042 <b>AMER PWR AR8429</b> HORIZONTAL CABLE ORGANIZER W/BRUSH STRIP, 1U BLACK <b>Part Availability: NO Anixter stock</b> Government Contract #: SOURCEWELL 151985-0	EA	44.40	44.40
11	10	Non-Stock <b>LYNN ELEC OLG20PPUC-005</b> PURPLE 5' PATCH CORDS WITH CLEAR BOOTS -- Government Contract #: SOURCEWELL 151985-0	EA	5.25	52.50

Quote Total: **5,450.09**

The impacts of COVID-19 cannot be reasonably determined at this time. This quote/proposal does not account for any potential adverse impacts COVID-19 may have on Seller's performance or obligations herein. In the event of any delays or adverse impacts, Seller reserves the right for an equitable adjustment of the delivery schedule and prices herein to offset the effects of COVID-19 delays, without fault or penalty of any kind.

BY ACCEPTING THIS QUOTE, YOU AGREE THAT THE TERMS AND CONDITIONS OF SALE PUBLISHED AT [WWW.WESCO.COM/TERMSOFSALE](http://WWW.WESCO.COM/TERMSOFSALE) ARE EXPRESSLY INCORPORATED INTO AND SHALL GOVERN THIS TRANSACTION.

# QUOTATION

Date: 03/18/2022  
 Quote #: Q007H29C  
 Customer: 418449

Communications Supply Corp (a WESCO company)  
 Send Purchase Orders to Communications Supply Corp.  
 2301 Patriot Blvd. Glenview, IL 60026-8020

City of Maricopa adding VHF radio capabilities

**TERMS** NET60  
**Freight Terms:** PPD/CHARGE  
**Shipment:** MATERIAL IN ANIXTER INVENTORY IS SUBJECT TO PRIOR SALE. ORDER ACCEPTANCE BASED UPON PRIOR CREDIT APPROVAL.  
 ALL MATERIAL NON-RETURNABLE WITHOUT RETURN AUTHORIZATION  
**Notes:**  
**Currency:** USD

Please refer all inquiries to:

**Travis McKinney**  
 Phone: 480-228-2814  
 Mobile: 480-228-2814  
 Fax: --  
 TRAVIS.MCKINNEY@ANIXTER.COM

2350 E RIVERVIEW DRIVE  
 SUITE 150  
 PHOENIX, AZ 85034  
 US

**Comments:**

COPPER CABLE PRICES VALID FOR 14 CALENDAR DAYS. ALL OTHER ITEMS VALID 20 DAYS, UNLESS NOTED AT THE ITEM LEVEL  
 \*\*\*SMALL ORDER FEE OF \$30 MAY APPLY TO ORDERS UNDER \$350\*\*\*

The impacts of COVID-19 cannot be reasonably determined at this time. This quote/proposal does not account for any potential adverse impacts COVID-19 may have on Seller's performance or obligations herein. In the event of any delays or adverse impacts, Seller reserves the right for an equitable adjustment of the delivery schedule and prices herein to offset the effects of COVID-19 delays, without fault or penalty of any kind.

BY ACCEPTING THIS QUOTE, YOU AGREE THAT THE TERMS AND CONDITIONS OF SALE PUBLISHED AT [WWW.WESCO.COM/TERMSOFSALE](http://WWW.WESCO.COM/TERMSOFSALE) ARE EXPRESSLY INCORPORATED INTO AND SHALL GOVERN THIS TRANSACTION.



## Sales Quotation

Quote # 5972723.1  
Quote Date MAR-16-2022  
Expiration Date APR-15-2022  
Quote Name SEL ICON Fire Station 572  
Contract State of AZ Networking  
ADSP016-137345  
Exp Date: 04/30/2022

## Submitted By

ISR     Angela M. Grenda  
(602) 472-7307  
Angela.Grenda@wwt.com  
AM     Quaid Jordan  
(602) 326-0278  
Quaid.Jordan@wwt.com

## Submitted To

City of Phoenix  
John Sater  
602-534-6933  
john.sater@phoenix.gov

## Issue PO To

World Wide Technology, LLC.  
1 World Wide Way  
Saint Louis, MO 63146 US

LINE #	MANUFACTURER PART #	MANUFACTURER	QTY	LEAD TIME	CUST. PRICE	EXT. PRICE
1	<b>9163XICN7722-1</b>  <b>Description:</b> FS72 ICON Node	SCHWEITZER ENGINEERING LABORATORIES	1	CALL	\$11,830.76	\$11,830.76
2	<b>9163XICN7722-2</b>  <b>Description:</b> SMTN ICON Node	SCHWEITZER ENGINEERING LABORATORIES	1	CALL	\$10,814.84	\$10,814.84
3	<b>9524A</b>  <b>Description:</b> GPS Antenna, 5V 40dB Gain	SCHWEITZER ENGINEERING LABORATORIES	2	CALL	\$263.84	\$527.68
4	<b>915900043</b>  <b>Description:</b> Bullet GPS Antenna Mounting Kit	SCHWEITZER ENGINEERING LABORATORIES	2	CALL	\$62.85	\$125.70
5	<b>915900139</b>  <b>Description:</b> Gas Tube Coaxial Surge Protector Kit	SCHWEITZER ENGINEERING LABORATORIES	2	CALL	\$111.55	\$223.10
6	<b>C965-08</b>  <b>Description:</b> (Key: 1852) 8' RG-8 Cable, TNC Connectors on Both Ends	SCHWEITZER ENGINEERING LABORATORIES	2	CALL	\$38.52	\$77.04
7	<b>C965-075</b>  <b>Description:</b> (Key: 1877) 75' RG-8 Cable, TNC Connectors on Both Ends	SCHWEITZER ENGINEERING LABORATORIES	2	CALL	\$131.92	\$263.84

<b>TOTALS</b>	
Subtotal	\$23,862.96
Estimated Shipping	\$0.00
Estimated Tax	\$2,051.62
<b>Total Price</b>	<b>\$25,914.58</b>

This quote is WWT Confidential Information.

Seller provides all products and original manufacturer services to Buyer only in accordance with any applicable original manufacturer terms and conditions within the applicable end user license agreement, terms of service, or similar legal instrument.

Unless expressly stated herein, price quotes are valid for 30 days and are subject to change thereafter.

Due to recent trade tensions between the US and China, increasing tariffs have been levied on goods manufactured in each country that are imported into the other. As a result, prices quoted are subject to adjustment for changes in the tariff rates.

Unless expressly stated herein, prices do not include, and Buyer is responsible for, any and all taxes, handling, shipping, transportation, duties or other charges or fees relating to the sale and delivery of products.

Products may only be returned in accordance with the original manufacturer's RMA policy.

Items returned after 30 days of receipt may not be returnable due to vendor restrictions.

All delivery dates are approximate and not guaranteed.

Products will be shipped in accordance with FCA WWT's shipping point (Incoterms 2010), unless otherwise stated herein or agreed to by both parties in writing in a contract. Title and risk of loss will transfer to Buyer at WWT's shipping point.

Payment terms are net 30, unless otherwise agreed to by both parties in writing.

All products and services are provided to Buyer in accordance with Seller's terms of sale at <https://www.wwt.com/TermsAndConditions/TermsAndConditions.doc> ; provided that, if Buyer has a master agreement in place with WWT, the master agreement will apply in lieu thereof.

State Fees include Electronic Waste Fees specific to each state that fund recycling programs for Electronic Waste such as computers, monitors, televisions, audio equipment, printers, and other electronic devices as required by law. CA charges an Electronic Waste Fee for Monitor disposal.

As you may be aware, global supply chains across all industries are facing uncertain impacts from the Coronavirus. WWT is monitoring the situation closely and is in constant contact with our suppliers and partners so that quoted lead times are as accurate as possible. Due to the quickly evolving nature of this situation, please be advised that it is possible that quoted lead times and delivery dates may change with little or no notice. WWT will continue to work with customers and suppliers/partners to evaluate options to minimize any impact.

Within the 30 day quote validity period WWT reserves the right to revise the quote due to exchange rate fluctuations.



# QUOTATION

EMR Corporation  
17431 N. 25th Ave.  
Phoenix, AZ 85023  
623-581-2875 800-796-2875  
Fax: 623-582-9499  
Web: emr.com e-mail: sales@emr.com

**TO:**

CITY OF PHOENIX  
ACCTS. PAYABLE  
251 W. WASHINGTON ST.  
5TH FLOOR  
PHOENIX, AZ 85003-2295

**SHIP TO:**

CITY OF PHOENIX  
INFORMATION TECHNOLOGY DEPT  
2441 SOUTH 22ND AVENUE  
PHOENIX, AZ 85009

ATTN: BRAD JOHNSON

TEL: 602-228-7439

ATTN:

Quote No.	Date	Cust No	S/M	Referenced	Delivery	Terms	F.O.B.	Expiration
0013119	1/19/2022	CPCIN	EMR		6-8 WEEKS ARO	NET 30	ORIGIN	45 DAYS
Item	Quantity	UM	Part	Description			Net Unit	Net \$ Extension
001	1	EA	24108-0/P-5(03)	MULTICOUPLER VHF 8N P-5 Frequency: 154.070 - 155.670 MHz  TOTAL ESTIMATED TAX \$			1,832.60	1,832.60
								157.60
						<b>Total for Quote \$</b>		<b>1,990.20</b>

Net price is the final charge you pay after discount and exclusive of all taxes , surcharges, duties, transportation charges, freight, and insurance unless otherwise stated on this quotation.

EMR Corporation strictly adheres to all laws and regulations of the United States Government regarding the export and re -export of our products outside the United States of America. EMR Corporation requires notification regarding the intention to export any product outside the United States of America . Information for the export or re-export requires country of ULTIMATE destination , purchasing individual(s), corporations, financial institution(s), shipping documentation, and shipping entities. This information must be disclosed and on file at EMR Corporation prior to any shipments in accordance with the Export Administration Regulations . Any action contrary to U.S. laws is strictly prohibited.

Prepared by: Donna Emerson

Date: 3/10/2022

800-472-7373

support@tessco.com

[tessco.com](http://tessco.com)

**Tessco will use commercially reasonable efforts to hold pricing for 30 days.**

Quote Number: 2878091-030922  
 BILL TO: 2878091-0000

SHIP TO: 2878091-0000

Page: 1  
 Date: 03/10/22

City of Phoenix  
 Communications Shop  
 251 W Washington St. 5th F  
 Phoenix, AZ 85003

City of Phoenix  
 2441 South 22nd Avenue  
 Communications Shop  
 Phoenix, AZ 85009

Telephone: 602-262-7789  
 Name: Brad Johnson  
 01570355 GSA  
 US Dollars

SKU	Unit of measure	Description	Manufacturer part number	Order qty	Unit price	Extended price
591405	1 EA	*7"x7"x1.5" Sing WG Entry ZZ-SEF Estimated lead time 2-3 week lead time		1	45.10	45.10
501133	1 EA	20A 10x10 GMT Fuse Panel NPGMT1107 Estimated lead time 8-9 weeks		1	256.88	256.88
473328	1 EA	GMT Fuse, 15 Amp UGF-15 Estimated lead time 4-5 weeks		3	5.71	17.13
40924	1 FT	*LMR-195 LMR-195		15	0.40	6.00
414440	1 EA	*Cable Handling/Cutting CABLE CUT ATTENTION DISTRIBUTION CENTER: (1) cut 15 feet Product currently available in stock.		1	0.00	0.00
36421	1 EA	N Male Crimp-RG58/RG141 RFN-1005-3C Product currently available in stock.		2	3.14	6.28
463151	1 FT	#2-19Str Grn Ins Gnd Wire WSGW-2-19STG		10	1.63	16.30
414440	1 EA	*Cable Handling/Cutting CABLE CUT ATTENTION DISTRIBUTION CENTER: (1) cut 10 feet Product currently available in stock.		1	0.00	0.00
481111	1 FT	#6 Str Grn Ins Gnd Wire WSGW-6-19STG		10	0.65	6.50
414440	1 EA	*Cable Handling/Cutting CABLE CUT ATTENTION DISTRIBUTION CENTER: (1) CUT 10 FEET Estimated lead time 3-4 weeks		1	0.00	0.00
411046	1 EA	RM Supply/Backup, 40A SEC-40BRM Estimated lead time 5/2022		1	364.91	364.91
534733	1 EA	Power Distribution Panel DP-20GMT-12		1	268.39	268.39

*Products affected by duties, taxes, tariffs, and other fees subject to change at any time.*

Quotation number: 2878091-030922  
BILL TO: 2878091-0000

SHIP TO: 2878091-0000

Page: 2  
Date: 03/10/22

City of Phoenix  
Communications Shop  
251 W Washington St. 5th F  
Phoenix, AZ 85003

City of Phoenix  
2441 South 22nd Avenue  
Communications Shop  
Phoenix, AZ 85009

Telephone: 602-262-7789  
Name: Brad Johnson  
01570355 GSA

US Dollars

SKU	Unit of measure	Description	Manufacturer part number	Order qty	Unit price	Extended price
90123	1 EA	estimated lead time 4-5 weeks 150-158 3dB/6dB Omni	DB222-A	1	243.84	243.84
67290	1 EA	Estimated lead time 2-3 weeks Side Mt. Kit w/ 5" Clamps	DB5001-SP5	1	205.54	205.54

Product currently available in stock.  
All items above with an \* are  
Non-Cancellable and Non-Returnable  
and will be ordered especially for you.  
Please allow for extended delivery.

Lead times are estimated. Please contact  
us if improved lead times are required.  
Availability is subject to change.  
A PO is required to reserve stock.

Any changes made to this quote affects  
pricing. Tessco will use commercially  
reasonable efforts to hold pricing for  
30 days. Pls call for current pricing.

The delivery address for your order  
results in a surcharge from the  
carrier. This fee is included in the  
delivery charges for your order.

*Products affected by duties, taxes, tariffs, and other fees subject to change at any time.*

Quotation number: 2878091-030922  
BILL TO: 2878091-0000

SHIP TO: 2878091-0000

Page: 3  
Date: 03/10/22

City of Phoenix  
Communications Shop  
251 W Washington St. 5th F  
Phoenix, AZ 85003

City of Phoenix  
2441 South 22nd Avenue  
Communications Shop  
Phoenix, AZ 85009

Telephone: 602-262-7789  
Name: Brad Johnson  
01570355 GSA

US Dollars

---

SKU #	Unit of measure	Description	Manufacturer part number	Order qty	Unit price	Extended price
----------	--------------------	-------------	-----------------------------	--------------	---------------	-------------------

---

Ship via: 5 Day      Estimated weight: 101 lbs  
Terms: N 30 INVOICE DATE  
Based on Pricing level at time of request.  
To confirm price and availability, build a  
Worksheet on [www.tessco.com](http://www.tessco.com) <<http://www.tessco.com>>  
for your current, everyday lowest total cost.

Destination & handling: 370.00  
AZ Sales tax: 155.39  
Total: 1962.26

*Products affected by duties, taxes, tariffs, and other fees subject to change at any time.*