



**INVITATION TO BID (ITB)**  
**Contract #: O-0922**  
**Managed Field Switch Replacement**

---

*ITB Issue Date & Cone of Silence Effective Date: 10/27/2022*

*ITB Response Due Date: 11/30/2022*

**RESPONSIBLE DEPARTMENT**

Operations: PM-  
Shari Callahan, IT Manager

**PROCUREMENT DEPARTMENT**

Shannon Bush, Contracts and Procurement Manager  
1104 East Twiggs Street, Suite 300  
Tampa, Florida 33602  
Telephone Number: (813) 272-6740  
Email: Procurement@tampa-xway.com

**THE RESPONSIBILITY OF SUBMITTING A BID PROPOSAL PACKAGE IN RESPONSE TO THIS SOLICITATION DOCUMENT TO THEA ON OR BEFORE THE STATED DEADLINE SHALL BE SOLELY AND STRICTLY OF THE BIDDER. THEA SHALL IN NO WAY BE RESPONSIBLE FOR DELAYS CAUSED BY THE UNITED STATES MAIL, OR ANY OTHER DELIVERY SERVICE, OR CAUSED BY ANY OTHER OCCURRENCE.**

**BIDDERS SHALL READ THE SOLICITATION/CONTRACT DOCUMENTS IN THEIR ENTIRETY PRIOR TO SUBMITTING A BID PACKAGE.**

**BY SUBMITTING A BID PROPOSAL PACKAGE, THE BIDDER ACKNOWLEDGES THEY HAVE READ, UNDERSTAND, AND ACCEPT THE TERMS AND CONDITIONS TO BE MET AND THE CHARACTER AND QUALITY OF THE SCOPE OF WORK TO BE PROVIDED**

Legal Entity Name (Bidder): \_\_\_\_\_

Address of Bidder: \_\_\_\_\_

FEIN: \_\_\_\_\_

Name of Authorized Officer: \_\_\_\_\_ Title: \_\_\_\_\_

E-mail: \_\_\_\_\_ Phone Number: \_\_\_\_\_

TABLE OF CONTENTS

<u>TITLE</u>	<u>PAGE</u>
I. INTRODUCTION.....	3
II. INSTRUCTIONS TO BIDDERS.....	3
III. QUALIFICATIONS: .....	4
IV. DOING BUSINESS IN THE STATE OF FLORIDA.....	4
V. SELECTION PROCESS.....	4
VI. SCHEDULE OF EVENTS.....	4
VII. TERMS AND CONDITIONS .....	5

**Exhibits-**

- A. Scope of Services
- B. Public Entity Crime
- C. Drug-Free Workplace
- D. Bid Proposal Form
- E. Bid Tabulation Sheet
- F. Conflict of Interest Form
- G. Experience and References

**Construction Drawings/Specification Attachment(s)-**

- 1. Specifications for Ruggedcom switches

## I. INTRODUCTION

The Tampa-Hillsborough County Expressway Authority (THEA) is soliciting sealed bids from qualified contractors to provide 100 new Ruggedcom switches and warranty for the Tampa Hillsborough Expressway Authority (THEA) Reversible Expressway System Network for THEA's Headquarters, located at 1104 E. Twiggs St, suite 300, Tampa, FL 33602.

## II. INSTRUCTIONS TO BIDDERS

1. THEA must receive all submittals at the location, date, and time identified in **Section VI., Schedule of Events**. Any submittal received after the stated time and date shall not be considered. It shall be the sole responsibility of the firm to have its package delivered to THEA however, facsimile or telegraphic submittals will not be accepted. Delay in delivery shall not be the responsibility of THEA. Submittals received after the deadline shall not be considered and may be returned only at the firm's expense.
2. Each firm shall examine all documents and shall determine all matters relating to the interpretation of such documents.
3. The following exhibits are required by THEA to be completed by the bidder and submitted as part of the Bid Proposal Package:
  - B. Public Entity Crime
  - C. Drug-Free Workplace
  - D. Bid Proposal Form
  - E. Bid Tabulation Sheet
  - F. Conflict of Interest Form
  - G. Experience and References
4. One (1) original sealed Bid Proposal Package and the required forms above must be delivered to THEA's Procurement Department in one package, clearly marked on the outside, "**Invitation to Bid O-0922 for the Tampa-Hillsborough County Expressway Authority**" with date sent and delivered to:

Procurement Office  
1104 East Twiggs Street, Suite 300  
Tampa, FL 33602
5. THEA shall not be liable for any expenses incurred in the preparation of the bid proposal package.
6. THEA reserves the right to accept or reject any or all bid proposal packages, to waive irregularities and technicalities, and to request resubmission or to re-advertise for all or any part of the work. THEA shall be the sole judge of the submittals and the resulting negotiated agreement that is in THEA's best interest, and THEA's decision shall be final.
7. The successful firm shall be required to execute an agreement, in form and content acceptable to THEA, indemnifying and holding harmless THEA, its officials, officers, employees, and agents from all claims.

## 8. CONE OF SILENCE

**Firms, their agents, or associates shall refrain from contacting or soliciting any THEA staff or members of the Board of Directors directly or indirectly regarding this ITB during the selection process. Failure to comply with this provision may result in the disqualification of the firm. All requests for clarification or additional information should be made in writing via email to: [Procurement@tampa-xway.com](mailto:Procurement@tampa-xway.com) AT THE DISCRETION OF THEA, ANY VIOLATION OF THE REQUIREMENTS SET FORTH IN THIS SECTION SHALL CONSTITUTE GROUNDS FOR IMMEDIATE REJECTION OF THE BID PROPOSAL PACKAGE AND THE BIDDER SHALL BE DEEMED NON-RESPONSIVE.**

### III. QUALIFICATIONS:

1. The bidder must include with its bid proposal package all completed required forms as indicated in Section II Instructions to bidders. Failure to submit all completed forms may be cause for rejection at the sole option of THEA.

### IV. DOING BUSINESS IN THE STATE OF FLORIDA

All bidders shall be in good standing with and authorized to do business in the State of Florida. Furthermore, it is the responsibility of the bidder to confirm that all of its Subcontractors are also in good standing and authorized to do business in the State of Florida as may be required pursuant to §607.1501, §605.0902, and §605.0905 Florida Statutes.

If a bidder is not required to register pursuant to Florida Statutes, the successful bidder shall be able to submit documentation demonstrating non-applicability of the statute.

THEA shall not execute an agreement if the successful bidder and subcontractors are not registered and in good standing to do business in the State of Florida as required by the referenced Florida Statutes.

### V. SELECTION PROCESS

THEA intends to purchase the Product/Services from the responsible and responsive bidder. The selection process for this ITB will consist of the following.

Bid Proposal Packages will be evaluated on whether the bidder is responsible and responsive to this solicitation, with the objective to evaluate those bids and responses and to award a contract for the work to the firm with the **lowest total bid price**.

THEA will determine if the firm's bid is responsive and is a responsible bidder, in its sole and absolute discretion, considering all relevant facts and information. THEA reserves the right at its sole discretion to reject any and all bids if it is determined the Total Lump Sum Price is excessive, best offers are determined to be unreasonable or it is in THEA's best interest to do so.

#### **FINAL SELECTION:**

The bidder with the **lowest total lump sum price** will be presented to THEA's Board of Directors for consideration and approval with a recommendation that the bidder be selected per the Schedule of Events below.

### VI. SCHEDULE OF EVENTS

EVENT	DATE/TIME
Release of Invitation to Bid (ITB) to THEA's website and Demandstar. Cone of Silence Effective Date	10/27/2022
Deadline for Questions/Request for Clarification to the Procurement Office ( <a href="mailto:Procurement@tampa-xway.com">Procurement@tampa-xway.com</a> )	11/9/2022 by 12:00 p.m. EST
Deadline for THEA to respond to firm's questions and posting to THEA's website and Demandstar.	11/14/2022 by 5:00 p.m. EST

EVENT	DATE/TIME
Bid Proposal Package Due Date/Time (Deadline) <i>Location:</i> Tampa-Hillsborough County Expressway Authority ATTN: Procurement 1104 East Twiggs Street, Suite 300 Tampa, FL 33602	11/30/2022 by 11:15 a.m. EST
Public Opening of Proposals <i>Location:</i> Tampa-Hillsborough County Expressway Authority 1104 East Twiggs Street, Suite 300 Tampa, FL 33602	11/30/2022 @ 1:30 p.m. EST
Post Notice of Intended Ranking to THEA’s website and Demandstar.	12/2/2022 by 5:00 p.m. EST
Board Approval of Final Ranking & Award of Contract <i>Location:</i> Tampa-Hillsborough County Expressway Authority 1104 East Twiggs Street, Suite 300 Tampa, FL 33602	12/12/2022 @ 1:30 p.m. EST
Posting of Award of Contract to THEA’s website and Demandstar.	12/12/2022 by 5:00 p.m. EST

**VII. TERMS AND CONDITIONS**

THEA reserves the right to reject all bid proposal packages, any bid proposal packages not conforming to this Invitation to Bid, and to waive any irregularity or informality with respect to any proposal. THEA further, reserves the right to request clarification of information submitted and to request additional information from one or more firms.

THEA requires that the bidder selected will not discriminate under the agreement against any person in accordance with federal, state, and local governments' regulations. THEA requires the bidder selected make an affirmative statement to the effect that their retention shall not result in conflict of interests with respect to THEA.

THEA requires that the bidder make an affirmative statement to the effect that they have not contacted, or attempted to contact, any member of the Board of Directors, or THEA staff, except as expressly permitted in the ITB.

## EXHIBIT A



### **I. SCOPE OF WORK - Managed Field Switch Replacement**

#### **1. DESCRIPTION**

- 1.01 This section provides a general summary or overview of the work to be performed in procuring 100 new Ruggedcom switches for the Tampa Hillsborough Expressway Authority (THEA) Reversible Expressway System Network.
- 1.02 Currently, THEA uses 8-year old Ruggedcom RS900G-HI-D2LC10 that provides secure network access and management for digital data for the Reversible Expressway System Network and has been programmed for replacement in THEA's FY23 capital program budget.

#### **2. SCOPE OF WORK**

- 2.01 The general Scope of Work consists of but is not limited to: Providing all equipment and warranty information for switches required.
  - Quote and Purchase 100 Ruggedcom RSG920P switches and estimate shipping time and costs  
(Refer to specification sheet provided for ALL required switches)
  - 5-years of warranty information for the switches

#### **3. SUBMITTALS**

- 3.01 Submit the following:
  - Specifications and cut sheets for the switches
  - Price per switch with quantity of 100 switches and shipping costs
  - MFG Warranty information for the switches
  - Extended Warranty Options for the switches

#### **4. EXECUTION**

- 4.01 Work Sequence
  - 4.01.01 Upon Board Approval, the Vendor will receive a Notice to Proceed with Procurement of this Hardware.
  - 4.01.02 Vendor shall keep THEA Project Manager aware of shipping times and tracking of shipment. Vendor shall deliver equipment

## EXHIBIT A

as it arrives and add to THEA inventory in proper location as instructed.

### 4.02 Issue Escalation

In the event issues arise during the execution of the work, the issue escalation and resolution will be processed as detailed herein.

4.02.01 All issues shall be directed to the Project Manager assigned to the project. The Vendor shall provide all supporting documentation relative to the issue being escalated, and any documentation not provided in the initial contact with the Project Manager shall not be considered.

4.02.02 Questions asked by THEA may be expressed verbally and followed up in writing within one (1) calendar day (excluding weekends and THEA observed holidays). Responses provided by the Vendor may be expressed verbally and followed up in writing within one (1) working day.

4.02.03 The Vendor shall provide a similar issue escalation process for their organization with personnel of similar levels of responsibility.

## 5. MEASUREMENT AND PAYMENT

5.01 The Vendor shall submit within 10 calendar days of Notice to Proceed (NTP), the specifications of the switches and the proof of purchase of these switches as well as any tracking information.

5.02 50% of the cost of the switches can be invoiced following approval of the items listed in section 5.01. 25% of the cost of the switches can be invoiced upon proof of equipment in route. i.e. tracking information. The remaining will be invoiced and paid upon receipt of the equipment.

5.03 THEA PM must sign off that both payment parameters have been met.

5.04 THEA is a tax-exempt organization. THEA will provide the 'Consumer's Certificate of Exemption.'

**[END OF SCOPE OF WORK]**

## EXHIBIT B

### SWORN STATEMENT UNDER SECTION 287.133 (3)(a) FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

1. This sworn statement is submitted by \_\_\_\_\_ as  
\_\_\_\_\_ of  
\_\_\_\_\_ whose business address is  
\_\_\_\_\_ and (if applicable) its Federal  
Employer Identification Number (FEIN) is \_\_\_\_\_.
  
2. I understand that a “public entity crime” as defined in Section 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity in Florida or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
  
3. I understand that “convicted” or “conviction” as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
  
4. I understand that “affiliate” as defined in Paragraph 287.133(1)(a), Florida Statutes, means:
  - A. A predecessor or successor of a person convicted of a public entity crime; or
  - B. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm’s length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.
  
5. I understand that a “person” as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.



**EXHIBIT B**

6. Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members or agents who are active in the management of \_\_\_\_\_, the entity, nor any affiliate of the entity have been convicted of a public entity crime subsequent to July 1, 1989.

\_\_\_\_\_  
By

\_\_\_\_\_  
Date

STATE OF  
COUNTY OF

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_ who is personally known to me or who produced a \_\_\_\_\_ as identification and who did take an oath.

\_\_\_\_\_  
Notary Public

My commission expires:

# EXHIBIT C

## DRUG-FREE WORKPLACE FORM

The undersigned firm, in accordance with Florida Status 287.087 hereby certifies that \_\_\_\_\_ does:

Name of Business

1. Publish a statement of notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in Paragraph 1.
4. In the statement specified in paragraph 1, notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employees will abide by the terms of a statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Florida Statute 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction of, or require the satisfactory participation in a drug abuse assistance or rehabilitation program is such is available in the employee's community, by any employee who is convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through the implementation of paragraphs 1 thru 5.

As the person authorized to sign this statement, I certify that this firm complies with the above requirements.

\_\_\_\_\_  
Firm's Signature

\_\_\_\_\_  
Date

**EXHIBIT D**

**BID PROPOSAL FORM**

**(Print this page on bidder’s letterhead and attach with response)**

Date: \_\_\_\_\_

TAMPA-HILLSBOROUGH COUNTY EXPRESSWAY AUTHORITY (THEA)

Attention: Procurement Department  
1104 East Twiggs Street, Suite 300  
Tampa, FL 33602

Subject: ITB O-0922; Managed Field Switch Replacement

Dear THEA:

Having carefully examined the Instructions to Bidders, Supplementary Instructions to Bidders, General Provisions, Supplementary General Provisions, Special Provisions and Technical Specifications, Plans or Drawings (if issued), of the above subject project and contract, as well as the premises and the conditions affecting the work, the undersigned proposes to furnish all labor and materials called for by them and equipment necessary and to accomplish the entire work within the time period indicated in accordance with the said documents for the prices presented in the price schedules included on the attached BID TABULATION SHEET.

The undersigned acknowledges that they understand the following conditions that within the price schedules amounts indicated with brackets around the amounts are considered to be deductions or credits to the overall project cost. Calculations of price schedule extensions and price totals shall appropriately account for individual deductive and additive pay items.

**TOTAL LUMP SUM PRICE: \$** \_\_\_\_\_

**WRITTEN AMOUNT:**

\_\_\_\_\_ **DOLLARS AND** \_\_\_\_\_ **CENTS**

The undersigned firm agrees to keep this offer open for acceptance for One Hundred Twenty (120) days after date of opening the Bid Proposal Package.

The signer of this Bid Proposal Package hereby declares that the only person, persons, company or parties interested in this Bid Proposal Package as principals are named herein, that this Bid Proposal Package is made without connection with any other person, persons, company or parties submitting a proposal; and that it is in all respects fair and in good faith, without collusion or fraud.

\_\_\_\_\_  
**Name of Bidder**

\_\_\_\_\_  
**Authorized Signature**

\_\_\_\_\_  
**Date**

EXHIBIT E

TAMPA HILLSBOROUGH EXPRESSWAY AUTHORITY

CONTRACT NO.: O-0922

THEA PROJECT/SERVICE TITLE:  
Managed Field Switch Replacement



UNIT	QUANTITY	DESCRIPTION	COST PER UNIT (\$)	AMOUNT (\$)
EA	100	Cost of Ruggedcom switches		
EA	1	Cost of Warranty		
EA	1	Cost of Shipping		
<b>TOTAL AMOUNT \$</b>				

**EXHIBIT F**

**CONFLICT OF INTEREST STATEMENT**

Check one of the boxes below:

To the best of our knowledge, the undersigned bidder has no potential conflict of interest due to any other clients, contracts, or property interest for this solicitation and project.

**OR**

The undersigned bidder, by attachment to this form, submits information which **may** be a potential conflict of interest due to other clients, contracts or property interest for this solicitation and project.

BIDDER:

By: \_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Printed Name of Signer

\_\_\_\_\_  
Title of Signer

\_\_\_\_\_  
Date Signed

# EXHIBIT G

## EXPERIENCE AND REFERENCES

3.0 Experience:

3.0.1. State the total work volume and value that your organization has been responsible for in the past five years in:

a. Total Dollar value \_\_\_\_\_

b. Number of Contracts \_\_\_\_\_

3.0.2. List the dollar volume and number of government projects you have completed in the past 5 years:

a. Dollar Value \_\_\_\_\_

b. Number of government projects \_\_\_\_\_

3.1 Provide the following information on at least three projects that Bidder has performed within the past five (5) years that were similar to this project. List chronologically, starting with the last project. Complete a new questionnaire for each representative project.

## EXHIBIT G

3.2.1 Project Title: \_\_\_\_\_

- a. Date Project Completed: \_\_\_\_\_
- b. Project Name: \_\_\_\_\_
- c. Owner Name: \_\_\_\_\_
- d. Owner Address: \_\_\_\_\_
- e. Owner Telephone: \_\_\_\_\_
- f. Name of Reference for this Project: \_\_\_\_\_
- g. Relationship of Reference to Owner: \_\_\_\_\_
- h. Title and Position Reference held for this Project: \_\_\_\_\_  
\_\_\_\_\_
- i. Firm name where Reference was employed for this Project: \_\_\_\_\_  
\_\_\_\_\_
- j. Reference's Telephone: \_\_\_\_\_
- k. Dollar Amount: \_\_\_\_\_
- l. List any other special criteria i.e. specialized repair or equipment, etc. worked: \_\_\_\_\_  
\_\_\_\_\_
- m. Describe Your Specific Scope of Work: \_\_\_\_\_  
\_\_\_\_\_  
    n. General Contract Amount: \_\_\_\_\_
- o. Your Participation was: \_\_\_\_\_
- p. Completion Date: \_\_\_\_\_
- q. Was Project completed on time? \_\_\_\_\_
- r. Was Project completed within budget? \_\_\_\_\_
- If not, explain: \_\_\_\_\_  
    \_\_\_\_\_
- s. Penalties imposed? (Yes or No; if Yes, explain) \_\_\_\_\_  
\_\_\_\_\_
- t. Any liens, claims, or lawsuits? (Yes or No, if Yes, explain): \_\_\_\_\_  
\_\_\_\_\_
- u. If a D/W/MBE or Small Business Enterprise (SBE) percentage goal was required, indicate what the goal was and what success did your firm have in achieving the goal. \_\_\_\_\_  
\_\_\_\_\_
- v. Provide names and phone numbers of the D/W/MBE or SBE firms used on the project: \_\_\_\_\_  
\_\_\_\_\_
- w. Any other pertinent information? \_\_\_\_\_

[Use additional sheets as necessary]

## EXHIBIT G

3.2.2     Project Title: \_\_\_\_\_

- a. Date Project Completed: \_\_\_\_\_
- b. Project Name: \_\_\_\_\_
- c. Owner Name: \_\_\_\_\_
- d. Owner Address: \_\_\_\_\_
- e. Owner Telephone: \_\_\_\_\_
- f. Name of Reference for this Project: \_\_\_\_\_
- g. Relationship of Reference to Owner: \_\_\_\_\_
- h. Title and Position Reference held for this Project: \_\_\_\_\_  
\_\_\_\_\_
- i. Firm name where Reference was employed for this Project: \_\_\_\_\_  
\_\_\_\_\_
- j. Reference's Telephone: \_\_\_\_\_
- k. Dollar Amount: \_\_\_\_\_
- l. List any other special criteria i.e. specialized repair or equipment, etc. worked: \_\_\_\_\_  
\_\_\_\_\_
- m. Describe Your Specific Scope of Work: \_\_\_\_\_  
\_\_\_\_\_
- n. General Contract Amount: \_\_\_\_\_
- o. Your Participation was: \_\_\_\_\_
- p. Completion Date: \_\_\_\_\_
- q. Was Project completed on time? \_\_\_\_\_
- r. Was Project completed within budget? \_\_\_\_\_
  - a. If not, explain: \_\_\_\_\_
- s. Penalties imposed? (Yes or No; if Yes, explain) \_\_\_\_\_  
\_\_\_\_\_
- t. Any liens, claims, or lawsuits? (Yes or No, if Yes, explain): \_\_\_\_\_  
\_\_\_\_\_
- u. If a D/W/MBE or Small Business Enterprise (SBE) percentage goal was required, indicate what the goal was and what success did your firm have in achieving the goal. \_\_\_\_\_  
\_\_\_\_\_
- v. Provide names and phone numbers of the D/W/MBE or SBE firms used on the project: \_\_\_\_\_  
\_\_\_\_\_
- w. Any other pertinent information? \_\_\_\_\_

[Use additional sheets as necessary]



## EXHIBIT G

3.2.3     Project Title: \_\_\_\_\_

- a. Date Project Completed: \_\_\_\_\_
- b. Project Name: \_\_\_\_\_
- c. Owner Name: \_\_\_\_\_
- d. Owner Address: \_\_\_\_\_
- e. Owner Telephone: \_\_\_\_\_
- f. Name of Reference for this Project: \_\_\_\_\_
- g. Relationship of Reference to Owner: \_\_\_\_\_
- h. Title and Position Reference held for this Project: \_\_\_\_\_  
\_\_\_\_\_
- i. Firm name where Reference was employed for this Project: \_\_\_\_\_  
\_\_\_\_\_
- j. Reference's Telephone: \_\_\_\_\_
- k. Dollar Amount: \_\_\_\_\_
- l. List any other special criteria i.e. specialized repair or equipment, etc. worked: \_\_\_\_\_  
\_\_\_\_\_
- m. Describe Your Specific Scope of Work: \_\_\_\_\_  
\_\_\_\_\_
- n. General Contract Amount: \_\_\_\_\_
- o. Your Participation was: \_\_\_\_\_
- p. Completion Date: \_\_\_\_\_
- q. Was Project completed on time? \_\_\_\_\_
- r. Was Project completed within budget? \_\_\_\_\_
  - a. If not, explain: \_\_\_\_\_
- s. Penalties imposed? (Yes or No; if Yes, explain) \_\_\_\_\_  
\_\_\_\_\_
- t. Any liens, claims, or lawsuits? (Yes or No, if Yes, explain): \_\_\_\_\_  
\_\_\_\_\_
- u. If a D/W/MBE or Small Business Enterprise (SBE) percentage goal was required, indicate what the goal was and what success did your firm have in achieving the goal. \_\_\_\_\_  
\_\_\_\_\_
- v. Provide names and phone numbers of the D/W/MBE or SBE firms used on the project: \_\_\_\_\_  
\_\_\_\_\_
- w. Any other pertinent information? \_\_\_\_\_

[Use additional sheets as necessary]

product description



Figure similar

20-Port Managed Gigabit Ethernet Switch with 4 PoE-Ports, 128-bit Encryption

RUGGEDCOM RSG920P is a fully managed Ethernet switch with 128-bit Encryption and 20 non-blocking Gigabit Ethernet ports; support for 4 SFP modules and 4 PoE ports; -40 °C to +85 °C operating temperature (fanless)

product type designation	RUGGEDCOM RSG920P
<b>transfer rate</b>	
transfer rate	10 Mbit/s, 100 Mbit/s, 1000 Mbit/s
number of ports / maximum	20
<b>interfaces / for communication / integrated</b>	
number of electrical connections	
<ul style="list-style-type: none"> <li>for network components or terminal equipment</li> </ul>	16
<ul style="list-style-type: none"> <li>for Power-over-Ethernet / for network components or terminal equipment</li> </ul>	4
number of electrical connections	
<ul style="list-style-type: none"> <li>for SFP</li> </ul>	4
<b>interfaces / other</b>	
number of electrical connections	
<ul style="list-style-type: none"> <li>for operator console</li> </ul>	2
<ul style="list-style-type: none"> <li>for management purposes</li> </ul>	2
<ul style="list-style-type: none"> <li>for signaling contact</li> </ul>	1
<ul style="list-style-type: none"> <li>for power supply</li> </ul>	1
type of electrical connection	
<ul style="list-style-type: none"> <li>for operator console</li> </ul>	RJ45, USB
<ul style="list-style-type: none"> <li>for management purposes</li> </ul>	RJ45, USB
<ul style="list-style-type: none"> <li>for signaling contact</li> </ul>	3-pole terminal block, screwable
<ul style="list-style-type: none"> <li>for power supply</li> </ul>	3-pole or 4-pole terminal block, screwable
<b>signal inputs/outputs</b>	
relay design	Form-C contact relay (SPDT)
type of relay output	Changeover contact
operational current / of the signaling contacts	
<ul style="list-style-type: none"> <li>at DC / at 30 V / maximum</li> </ul>	2 A
<b>supply voltage, current consumption, power loss</b>	
product options / wide range power supply	Yes
<b>type of voltage / 1 / of the supply voltage</b>	DC
<ul style="list-style-type: none"> <li>power loss [W] / 1 / rated value</li> </ul>	27 W
<ul style="list-style-type: none"> <li>supply voltage / 1 / rated value</li> </ul>	9 ... 60 V
<b>type of voltage / 3 / of the supply voltage</b>	DC
<ul style="list-style-type: none"> <li>supply voltage / 3 / rated value</li> </ul>	98 ... 300 V
<b>type of voltage / 4 / of the supply voltage</b>	AC

<ul style="list-style-type: none"> <li>supply voltage / 4 / rated value</li> </ul>	88 ... 264 V
<b>ambient conditions</b>	
ambient temperature	
<ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> <li>during transport</li> <li>note</li> </ul>	-40 ... +85 °C -40 ... +85 °C -40 ... +85 °C A maximum operating temperature of +85 °C is permissible for a duration of 16 hours
operating condition / fanless operation	Yes
protection class IP	IP40
<b>design, dimensions and weights</b>	
design	compact
width	152 mm
height	177 mm
depth	165.6 mm
net weight	4.7 kg
product feature / conformal coating	optional
material / of the enclosure	Cast Aluminum Enclosure
fastening method	
<ul style="list-style-type: none"> <li>19-inch installation</li> <li>35 mm top hat DIN rail mounting</li> <li>wall mounting</li> </ul>	No Yes Yes
<b>product features, product functions, product components / general</b>	
storage capacity	
<ul style="list-style-type: none"> <li>of message buffer / maximum</li> </ul>	1536 Kibyte
switch latency period	4 µs
transfer rate / of the switch	108.92 Gbit/s
product feature	
<ul style="list-style-type: none"> <li>no head-off-line-blocking</li> <li>Store &amp; Forward switching method</li> </ul>	Yes Yes
<b>product functions / management, configuration, engineering</b>	
product function	
<ul style="list-style-type: none"> <li>CLI</li> <li>web-based management</li> <li>MIB support</li> <li>RMON</li> <li>port mirroring</li> <li>CoS</li> </ul>	Yes Yes Yes Yes Yes Yes
product function / switch-managed	Yes
protocol / is supported	
<ul style="list-style-type: none"> <li>Telnet</li> <li>HTTP</li> <li>HTTPS</li> <li>TFTP</li> <li>SFTP</li> <li>GMRP</li> <li>LLDP</li> <li>SNMP v1</li> <li>SNMP v2</li> <li>SNMP v2c</li> <li>SNMP v3</li> <li>IGMP (snooping/querier)</li> </ul>	Yes Yes Yes Yes Yes Yes Yes Yes No Yes Yes Yes
number of groups / at IGMP	256
product function	
<ul style="list-style-type: none"> <li>for MIB support / by BRIDGE-MIB</li> <li>for MIB support / by IF-MIB</li> <li>for MIB support / by RMON-MIB</li> <li>for MIB support / by RSTP-MIB</li> </ul>	RFC4188 RFC2863 RFC2819 RFC4318

<ul style="list-style-type: none"> <li>• for MIB support / by SNMPv2-MIB</li> <li>• for MIB support / by SNMPv2-SMI</li> <li>• for MIB support / by SNMPv2-TC</li> <li>• for MIB support / by TCP-MIB</li> <li>• for MIB support / by UDP-MIB</li> </ul>	RFC1907 RFC2578 RFC2579 RFC2012 RFC2013
<b>product functions / VLAN</b>	
product function	
<ul style="list-style-type: none"> <li>• VLAN - port based</li> </ul>	Yes
number of VLANs / maximum	255
protocol / is supported / GVRP	Yes
<b>product functions / DHCP</b>	
product function	
<ul style="list-style-type: none"> <li>• DHCP client</li> <li>• DHCP Option 82</li> <li>• DHCP Option 66</li> <li>• DHCP Option 67</li> </ul>	Yes Yes No No
<b>product functions / redundancy</b>	
product function	
<ul style="list-style-type: none"> <li>• redundancy procedure STP</li> <li>• redundancy procedure RSTP</li> <li>• redundancy procedure MSTP</li> <li>• eRSTP</li> </ul>	Yes Yes Yes Yes
protocol / is supported	
<ul style="list-style-type: none"> <li>• STP</li> <li>• RSTP</li> <li>• MSTP</li> </ul>	Yes Yes Yes
<b>product functions / security</b>	
product function	
<ul style="list-style-type: none"> <li>• IEEE 802.1x (radius)</li> </ul>	Yes
protocol / is supported	
<ul style="list-style-type: none"> <li>• TACACS+</li> <li>• SSH</li> <li>• SSL</li> </ul>	Yes Yes Yes
key length	
<ul style="list-style-type: none"> <li>• with SSL</li> <li>• with RSA</li> </ul>	128 bit 1024 bit
product function / port-rate-limiting	Yes
adjustable port-rate-limitation	128 kbit/s ... 8 Mbit/s
<b>product functions / time</b>	
product function	
<ul style="list-style-type: none"> <li>• SNTP client</li> <li>• SNTP server</li> </ul>	Yes Yes
protocol / is supported	
<ul style="list-style-type: none"> <li>• SNTP</li> </ul>	Yes
<b>standards, specifications, approvals / CE</b>	
certificate of suitability / CE marking	Yes
standard	
<ul style="list-style-type: none"> <li>• for EMC</li> </ul>	FCC Part 15 (Class A), EN55022 (CISPR22 Class A)
<b>standards, specifications, approvals / other</b>	
laser protection class	Complies with 21 CFR chapter 1, subchapter J
certificate of suitability	
<ul style="list-style-type: none"> <li>• IEC 61850-3</li> </ul>	Yes
<b>standards, specifications, approvals / product conformity</b>	
product conformity	
<ul style="list-style-type: none"> <li>• acc. to IEEE 802.3-10BaseT</li> <li>• acc. to IEEE 802.3u-100BaseTX</li> <li>• acc. to IEEE 802.3u-100BaseFX</li> </ul>	Yes Yes Yes

• acc. to IEEE 802.3ab-1000BaseT	Yes
• acc. to IEEE 802.3z-1000BaseLX	Yes
• acc. to IEEE 802.3ad-Link Aggregation	Yes
• acc. to IEEE 802.3af-Power-over-Ethernet	Yes
• acc. to IEEE 802.3x-Flow Control	Yes
• acc. to IEEE 802.1d-MAC Bridges	Yes
• acc. to IEEE 802.1d-STP	Yes
• acc. to IEEE 802.1p-class of service	Yes
• acc. to IEEE 802.1Q-VLAN tagging	Yes
• acc. to IEEE 802.1Q-2005 (formerly IEEE 802.1s) MSTP	Yes
• acc. to IEEE 802.1w-RRST	Yes
• acc. to IEEE 802.1x-port based Network Access Control	Yes
• RFC768-UDP	Yes
• RFC783-TFTP	Yes
• RFC791-IP	Yes
• RFC792-ICMP	Yes
• RFC793-TCP	Yes
• RFC826-ARP	Yes
• RFC854-Telnet	Yes
• RFC894-IP over Ethernet	Yes
• RFC1112-IGMPv1	Yes
• RFC1519-CIDR	Yes
• RFC1541-DHCP (client)	Yes
• RFC2068-HTTP	Yes
• RFC2236-IGMPv2	Yes
• RFC2284-EAP	Yes
• RFC2475-Differentiated Service	Yes
• RFC2865-RADIUS	Yes
• RFC3414-SNMPv3-USM	Yes
• RFC3415-SNMPv3-VACM	Yes

#### further information / internet-Links

##### Internet-Link

- to website: Industry Mall/RUGGEDCOM selector
- to website: Siemens RUGGEDCOM
- to website: Selection guide for cables and connectors
- to website: Industrial communication
- to website: Industry Mall
- to website: Information and Download Center
- to website: Image database
- to website: CAx-Download-Manager
- to website: Industry Online Support

- <http://ruggedcom-selector.automation.siemens.com>
- <http://siemens.com/ruggedcom>
- <http://www.siemens.com/snst>
- <http://www.siemens.com/simatic-net>
- <https://mall.industry.siemens.com>
- <http://www.siemens.com/industry/infocenter>
- <http://automation.siemens.com/bilddb>
- <http://www.siemens.com/cax>
- <https://support.industry.siemens.com>

#### security information

##### security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, solutions, machines, equipment and/or networks. They are important components in a holistic industrial security concept. With this in mind, Siemens' products and solutions undergo continuous development. Siemens recommends strongly that you regularly check for product updates. For the secure operation of Siemens products and solutions, it is necessary to take suitable preventive action (e.g. cell protection concept) and integrate each component into a holistic, state-of-the-art industrial security concept. Third-party products that may be in use should also be considered. For more information about industrial security, visit <http://www.siemens.com/industrialsecurity>. To stay informed about product updates as they occur, sign up for a product-specific newsletter. For more information, visit <http://support.automation.siemens.com>. (V3.4)

last modified:

2/11/2021 