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# Herrick Technology Laboratories, Inc.

## Price List



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## **General Information**

### **Pricing and Orders:**

Pricing provided in this document is “Most Favored Customer or U.S. Government” pricing. Additional discounts may be available for quantities greater than those listed. While every effort has been made to ensure the accuracy of this document, HTL reserves the right to change pricing, specifications, options and accessories without notice. Please contact your HTL representative or [Marketing@herricktechlabs.com](mailto:Marketing@herricktechlabs.com) for a quotation and the latest technical data.

### **Delivery:**

FOB Origin. Delivery of the products contained in this document is typical accomplished within 120 to 180 days after receipt and acceptance of an order. HTL recognizes that schedule requirements vary and in many cases is able to accommodate. Please contact your HTL representative or [Marketing@herricktechlabs.com](mailto:Marketing@herricktechlabs.com) with your requirements.

### **Payment Terms:**

As a small business HTL requests performance based payments per FAR-32-104(b)(c)(d). Payment schedules will be negotiated prior to award.

### **Warranty:**

HTL warrants products to be free from defects in materials and workmanship for a period of two (2) years from the date of shipment.

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# HTLx

## Miniature Quad Transceiver



**HTLx Core Module**  
Shown with Apple iPhone 6



**HTLx-U with Tactical Front Panel Option**



**HTLx-U**

### DESCRIPTION

#### Small Form-Factor Multichannel VHF/UHF/Microwave Transceiver

The HTLx is a 4 channel Software Defined Radio designed to support various ES and EA missions.

- Extended frequency range 2 MHz-18000 MHz
- 4 Phase Coherent or Independent Transceivers (remotely configurable)
- Each channel can be remotely configured
- Integrated Selective Availability Anti-Spoofing Module (SAASM) GPS\*, Chip Scale Atomic Clock (CSAC) and (Inertial Navigation System (INS) device.
- High performance FPGA including integrated ARM9 cores with NEON coprocessors enable high performance signal processing applications against modern waveforms. Upgradable via replacement of the digital board.
- Open Architecture including an SDK with Board Support Package and REDHAWK interface to enable rapid development of new capabilities.

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## HTLx

### Miniature Quad Transceiver

| Model      | Part Number / Option Number | Description   | Unit Price   |             |             |
|------------|-----------------------------|---|--------------|-------------|-------------|
|            |                             |   | 1 to 5       | 6 to 15     | 16 to 25    |
| HTLx       |                             | Miniature Quad VHF/UHF/Microwave Transceiver. Core Module   | \$85,000.00  | \$80,750.00 | \$78,735.00 |
| SAASM GPS  |                             | SAASM GPS for HTLx Core Module  | \$6,000.00   | \$6,000.00  | \$6,000.00  |
| HTLx-U     |                             | Miniature Quad VHF/UHF/Microwave Transceiver. Core Module mounted in the Universal Enclosure w/ Commercial Front Panel. | \$100,887.00 | \$95,845.00 | \$93,450.00 |
| HTLx-U/TFP |                             | Optional Tactical Front Panel for the HTLx-U. Replaces the standard Commercial Front Panel                              | \$505.00     | \$505.00    | \$505.00    |
| HTLx-U/RMM |                             | Removable Media Module for HTLx-U   | \$3,800.00   | \$3,800.00  | \$3,800.00  |
| HTLx-U/RMK |                             | Rack Mount Kit for HTLx-U   | \$5,100.00   | \$5,100.00  | \$5,100.00  |
|            |                             |   |              |             |             |

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## HTLx+-TP

### Tactical Quad Transceiver System



**Environmentally-Hardened HTLx+-TP Shown**

#### **FEATURES**

- Wideband Quad Transceiver
- 2 MHz – 18 GHz RX/TX
- 100 MHz instantaneous BW/channel
- 4 independent or phase coherent channels
- Unit-to-unit coherency (N-channel)
- Ethernet or USB Control
- 2 x VRT 10 GigE Data via SFP+ connections

#### **DESCRIPTION**

##### **Small Form-Factor Multichannel VHF/UHF/Microwave Transceiver**

The HTLx+ is a 4 channel Software Defined Radio designed to support various missions.

- Extended frequency range 2 MHz-18 GHz
- 4 Phase Coherent or Independent Transceivers; supports ganging multiple units together coherently
- Each channel can be remotely configured
- Integrated Selective Availability Anti-Spoofing Module (SAASM) GPS\*, Chip Scale Atomic Clock (CSAC) and (Inertial Navigation System (INS) device.
- High performance FPGA including integrated ARM9 cores with NEON coprocessors enable high performance signal processing applications against modern waveforms. Upgradable via replacement of the digital board.
- Open Architecture including an SDK with Board Support Package and REDHAWK interface to enable rapid development of new capabilities.

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## HTLx+-TP

### Tactical Quad Transceiver System

| Model    | Part Number / Option Number | Description  | Unit Price   |             |             |
|----------|-----------------------------|--|--------------|-------------|-------------|
|          |                             |  | 1 to 5       | 6 to 15     | 16 to 25    |
| HTLx+-TP |                             | Tactical Quad Transceiver System. <b>System includes:</b> packaged in a Special Rugged, Conduction Cooled Mobile/Tactical Enclosure; 2 MHz to 18,000 MHz Rx/Tx, 4 x 100 MHz Instantaneous BW / Channel (Rx/Tx); Altera Stratix 10 SG280 SoC (GX2800 FPGA) for 100 MHz Digital Signal Processing (DSP); PolyPNTR - based SAASM GPS, INS, LN-CSAC; MIL-STD-810G Tested for High/Low Temperature, Shock, Vibration, Humidity, Drop, Dust/Sand and Rain. | \$102,560.00 | \$97,435.00 | \$95,000.00 |
|          |                             |  |              |             |             |

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## HTLx-T

### Miniature Quad Transceiver



#### HTLx T

Shown with Apple iPhone 6

#### **DESCRIPTION**

##### **Small Form-Factor Multichannel VHF/UHF Transceiver**

The HTLx-T is a 4 channel Software Defined Radio designed to support various ES and EA missions in the tactical environment.

- Extended frequency range 2 MHz-6000 MHz
- 4 Phase Coherent or Independent Transceivers (remotely configurable)
- Each channel can be remotely configured
- Integrated Selective Availability Anti-Spoofing Module (SAASM) GPS\*, Chip Scale Atomic Clock (CSAC) and (Inertial Navigation System (INS) device.
- High performance FPGA including integrated ARM9 cores with NEON coprocessors enable high performance signal processing applications against modern waveforms. Upgradable via replacement of the digital board.
- Open Architecture including an SDK with Board Support Package and REDHAWK interface to enable rapid development of new capabilities.



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## HTLx-T

### Miniature Quad Transceiver

| Model     | Part Number | Description  | Unit Price  |             |             |
|-----------|-------------|--|-------------|-------------|-------------|
|           |             |  | 1 to 5      | 6 to 15     | 16 to 25    |
| HTLx-T    |             | Miniature Quad VHF/UHF Transceiver, Tactical Package without SAASM | \$89,900.00 | \$85,405.00 | \$83,270.00 |
| SAASM GPS |             | SAASM GPS for HTLx-T   | \$6,000.00  | \$6,000.00  | \$6,000.00  |

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## DR-4

### Small Form-Factor Wideband Recorder



#### DR-4 Small Form-Factor Wideband Recorder Chassis

#### **DESCRIPTION**

##### **Small Form-Factor Wideband Recorder**

The DR-4 is an SSD array which is interoperable with multiple HTL radio transceivers to support a variety of recorder based ConOps.

- Interoperable with HTLx & HTLw based systems to provide RF record/RF playback capability from 2 MHz to 18 GHz
  - HTLx: Record/playback one to four 80 MHz channels
  - HTLw: Record/playback one 1000 MHz channel
- Recorded data is precision time-stamped
- Low SWaP recorder: 2U, 3.47”H x 5.65”W x 9.5”D, 3.4 lbs (with SSDs), 50W typical
- Four removable COTS 2.5” PCIe NVMe SSDs
- Selectable Recording Bandwidth:
  - HTLx: 80,70, 60, 50, 40, 30, 20, 18, 10, 5 and 1.25 MHz
  - HTLw: 1000, 500, 250, and 100 MHz
- Thunderbolt 3.0 Data Offload

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## DR-4

### Small Form-Factor Wideband Recorder

| Model         | Part Number /<br>Option Number | Description  | Unit Price  |             |             |
|---------------|--------------------------------|--|-------------|-------------|-------------|
|               |                                |  | 1 to 5      | 6 to 15     | 16 to 25    |
| DR-4          |                                | Small Form Factor Wideband Recorder<br>Chassis only does not include SSD's. 4 SSD's<br>required, see SSD options below | \$37,335.00 | \$35,470.00 | \$34,585.00 |
|               |                                |  |             |             |             |
| DR-4/SSD1.92T |                                | Lot of 4 SSD's. 1.92 TB Commercial Temp<br>mounted in removable trays  | \$5,785.00  | \$5,495.00  | \$5,360.00  |
| DR-4/SSD3.85T |                                | Lot of 4 SSD's. 3.85 TB Commercial Temp<br>mounted in removable trays  | \$10,040.00 | \$9,540.00  | \$9,305.00  |
|               |                                |  |             |             |             |

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## HTLw

### Miniature Quad Transceiver



#### *DESCRIPTION*

##### **Small Form-Factor Multichannel Microwave Transceiver**

The HTLw is a 4 channel Software Defined Radio designed to support various missions.

- Extended frequency range: 20 MHz-18 GHz
- 1 GHz instantaneous BW / channel
- 4 Phase Coherent or Independent Transceivers; coherent ganging of multiple units supported by back-panel connectors
- Each channel can be remotely configured for Rx or Tx
- Ethernet or USB Control
- PDW and VRT 10 GigE Data via SFP+ connections
- Multi-unit coherency support

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## HTLw

### Miniature Quad Transceiver

| Model      | Part Number / Option Number | Description   | Unit Price   |              |              |
|------------|-----------------------------|---|--------------|--------------|--------------|
|            |                             |   | 1 to 5       | 6 to 15      | 16 to 25     |
| HTLw       |                             | Miniature Quad VHF/UHF/Microwave Wideband Transceiver. Core Module  | \$165,565.00 | \$157,285.00 | \$153,355.00 |
| HTLw-U     |                             | Miniature Quad VHF/UHF/Microwave Wideband Transceiver mounted in the Universal Enclosure w/ Commercial Front Panel. | \$181,450.00 | \$172,380.00 | \$168,070.00 |
| HTLw-U/TFP |                             | Optional Tactical Front Panel for the HTLw-U. Replaces the standard Commercial Front Panel                          | \$505.00     | \$505.00     | \$505.00     |
| SAASM GPS  |                             | SAASM GPS for HTLw-U. Supports standard Commercial and Optional Tactical Front Panels                               | \$6,000.00   | \$6,000.00   | \$6,000.00   |
| HTLw-U/RMM |                             | Removable Media Module for HTLw-U   | \$3,800.00   | \$3,800.00   | \$3,800.00   |
| HTLw-U/RMK |                             | Rack Mount Kit for HTLw-U   | \$5,100.00   | \$5,100.00   | \$5,100.00   |
|            |                             |   |              |              |              |

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## HTLw-TP

# Tactical Quad Transceiver System



**Environmentally-Hardened HTLw+-TP Shown**

### *DESCRIPTION*

#### **Small Form-Factor Multichannel Microwave Transceiver**

The HTLw is a 4 channel Software Defined Radio designed to support various missions.

- Extended frequency range: 20 MHz-18 GHz
- 1 GHz instantaneous BW / channel
- 4 Phase Coherent or Independent Transceivers; coherent ganging of multiple units supported by back-panel connectors
- Each channel can be remotely configured for Rx or Tx
- Ethernet or USB Control
- PDW and VRT 10 GigE Data via SFP+ connections
- Multi-unit coherency support

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## HTLw-TP

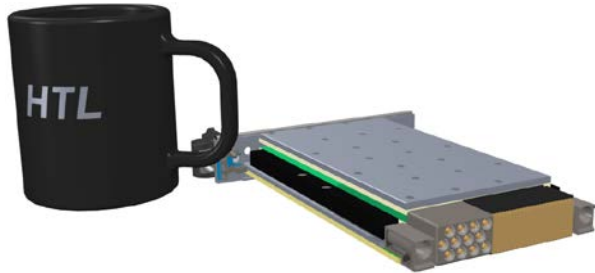
### Tactical Quad Transceiver System

| Model    | Part Number / Option Number | Description  | Unit Price   |              |              |
|----------|-----------------------------|--|--------------|--------------|--------------|
|          |                             |  | 1 to 5       | 6 to 15      | 16 to 25     |
| HTLx+-TP |                             | Tactical Quad Transceiver System. <b>System includes:</b> packaged in a Special Rugged, Conduction Cooled Mobile/Tactical Enclosure; 20 MHz to 18,000 MHz Rx/Tx, 4 x 1000 MHz Instantaneous BW / Channel (Rx/Tx); Altera Arria 10 SX660 SoC for 1000 MHz Digital Signal Processing (DSP); PolyPNTR - based SAASM GPS, INS, LN-CSAC; MIL-STD-810G Tested for High/Low Temperature, Shock, Vibration with Performance for Medium Altitude Flight in Tactical Aircraft. | \$150,000.00 | \$142,500.00 | \$138,940.00 |
|          |                             |  |              |              |              |

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# HTLv-1A

## 3U VPX Quad Transceiver Module



**HTLv-1A, 3U VPX Quad  
Transceiver Module**

### ***DESCRIPTION***

#### **3U OpenVPX Quad Channel HF/VHF/UHF Transceiver Module**

The HTLv-1A is a multichannel Software Defined Radio packaged as a 3U REDI/VITA 67.3 conduction-cooled VPX module designed to support various missions.

- Frequency range 2 MHz – 6 GHz
- 4 Phase Coherent or Independent Transceivers
- Pluggable Unit-to-Unit Coherency Via OpenVPX Backplane VITA 67.3
- 80 MHz instantaneous BW for each channel
- Each channel can be remotely configured for Tx/Rx
- Support for external Selective Availability Anti-Spoofing Module (SAASM) GPS\*, Chip Scale Atomic Clock (CSAC) and Inertial Navigation System (INS) device.
- High performance SoC FPGA including integrated Cortex-A53 cores with NEON coprocessors
- Processors Linked together through SERDES Transceivers and Hybrid Memory Cube
- Platform enables high performance signal processing applications against modern waveforms.



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## HTLv-1A

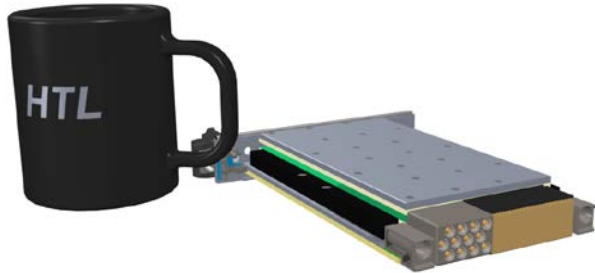
### 3U VPX Quad Transceiver Module

| Model   | Part Number /<br>Option Number | Description                                   | Unit Price  |             |             |
|---------|--------------------------------|---|-------------|-------------|-------------|
|         |                                |   | 1 to 5      | 6 to 15     | 16 to 25    |
| HTLv-1A |                                | 3U VPX Quad Transceiver Module, 2 MHz to 6GHz | \$44,750.00 | \$42,515.00 | \$41,455.00 |
|         |                                |   |             |             |             |
|         |                                |   |             |             |             |

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## HTLv-2A

### 3U VPX Dual Transceiver Module



**HTLv-2A, 3U VPX Dual  
Transceiver Module**

#### *DESCRIPTION*

##### **3U OpenVPX Dual Channel HF/VHF/UHF/Microwave Transceiver Module**

The HTLv-2A is a multichannel Software Defined Radio packaged as a 3U REDI/VITA 67.3 conduction-cooled VPX module designed to support various missions.

- Frequency range 2 MHz – 18 GHz
- 2 Phase Coherent or Independent Transceivers
- Pluggable Unit-to-Unit Coherency Via OpenVPX Backplane VITA 67.3
- 80 MHz instantaneous BW for each channel
- Each channel can be remotely configured for Tx/Rx
- Support for external Selective Availability Anti-Spoofing Module (SAASM) GPS\*, Chip Scale Atomic Clock (CSAC) and Inertial Navigation System (INS) device.
- High performance SoC FPGA including integrated Cortex-A53 cores with NEON coprocessors
- Processors Linked together through SERDES Transceivers and Hybrid Memory Cube
- Platform enables high performance signal processing applications against modern waveforms.

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## HTLv-2A

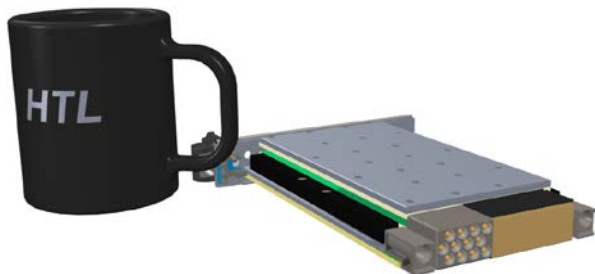
### 3U VPX Dual Transceiver Module

| Model   | Part Number /<br>Option Number | Description                                     | Unit Price  |             |             |
|---------|--------------------------------|---|-------------|-------------|-------------|
|         |                                |   | 1 to 5      | 6 to 15     | 16 to 25    |
| HTLv-2A |                                | 3U VPX Dual Transceiver Module, 2 MHz to 18 GHz | \$48,750.00 | \$46,315.00 | \$45,160.00 |
|         |                                |   |             |             |             |
|         |                                |   |             |             |             |

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## PNTRv-A

### 3U VPX Reference Module



**PNTRv-A, 3U VPX Reference  
Module**

#### ***DESCRIPTION***

#### **3U OpenVPX Precision Navigation and Timing Reference Module**

The PNTRv-A design requirements were derived from the Joint Airborne SIGINT Architecture (JASA) specification. The key specifications of interest for the design of the PNTR from the JASA specification follow. It should be noted that JASA defines a Threshold and an Objective set of requirements.

- Provides low noise 100MHz reference using Chip Scale Atomic Clock (CSAC)
- Integrated inertial navigation system (INS) with GPS
- Optional SAASM GPS available with RS232 key fill connectivity
- 100MHz outputs
- Programmable 250 MHz outputs
- Output 1PPS synchronous to 100MHz
- On board antenna switching to devices
- 1 GbE Control Interface to OpenVPX Backplane

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## PNTRv-A

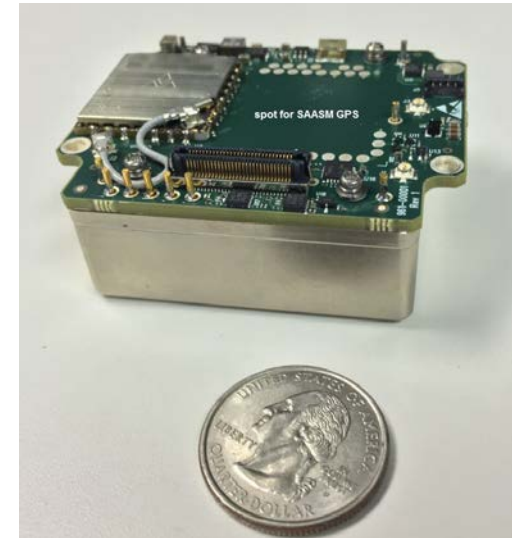
### 3U VPX Reference Module

| Model   | Part Number /<br>Option Number | Description                                      | Unit Price  |             |             |
|---------|--------------------------------|--|-------------|-------------|-------------|
|         |                                |  | 1 to 5      | 6 to 15     | 16 to 25    |
| PNTRv-A |                                | 3U VPX Precision Navigation and Reference Module | \$35,400.00 | \$33,630.00 | \$32,790.00 |
|         |                                |  |             |             |             |
|         |                                |  |             |             |             |

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## HTL PNTR

# Precision Navigation and Timing Reference



### **DESCRIPTION**

Low SWAP applications

- Provides low noise 10MHz reference using Chip Scale Atomic Clock (CSAC)
- Integrated inertial navigation system (INS) with GPS
- Optional SAASM GPS available with RS232 key fill connectivity
- Dual 1PPS outputs at LVDS
- Dual 10MHz outputs at CMOS
- Outputs 1PPS synchronous to 10Mhz
- <1.4W with SAASM GPS
- On board antenna switching to devices
- Integrated charging of external super-cap, used for CSAC holdover during battery switching

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## HTL PNTR

### Precision Navigation and Timing Reference

| Model    | Part Number / Option Number | Description  | Unit Price  |             |             |
|----------|-----------------------------|--|-------------|-------------|-------------|
|          |                             |  | 1 to 5      | 6 to 15     | 16 to 25    |
| HTL PNTR |                             | Precision Navigation and Timing Reference with SAASM GPS | \$12,150.00 | \$11,545.00 | \$11,255.00 |
|          |                             |  |             |             |             |
|          |                             |  |             |             |             |

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# HOTSHOT+

## Wideband $\frac{3}{4}$ ATR Transceiver

Shown with Motorola Razr XT910

### FEATURES

- Expandable, configurations based on two HTLx+ Wideband Quad Transceiver Cores
  - 8 Independent or Phase Coherent Channels
  - 100 MHz Instantaneous Bandwidth/Channel
- 2 MHz – 18 GHz Rx/Tx
- Ethernet or USB Control
- Rugged, Conduction-cooled Tactical Enclosure



### DESCRIPTION

#### $\frac{3}{4}$ ATR Short Form-Factor Wideband Processing System based on HTLx Wideband Quad Transceiver 'Cores

The HOTSHOT+ is an 8 channel Software Defined Radio designed to support various missions.

- 2x Gigabit Ethernet Control/Data Input/Output (I/O)
- 4x SFP+ 10 Gigabit Ethernet Data I/O
- Serial & General Purpose I/O
- 2x Altera Stratix 10 SG280 SoC (GX2800 FPGA) for DSP
- Single Board Computer (SBC) for Antenna, Amplifier and HOTSHOT+ ATR Command, Control & Cybersecurity with Secure Boot, Removable SSD, HW Encryption, ATA Security Erase and HW Zeroization Features (Panic Support/Secure Erase)
- 1/10 Gigabit Ethernet (1/10 GbE) Switch for 1 GbE C2 and 10 GbE Data Coherence and Distribution
- VITA 49 Output formats



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# HOTSHOT+

## Transceiver System

| Model           | Part Number | Description                                   | Unit Price   |              |              |
|-----------------|-------------|---|--------------|--------------|--------------|
|                 |             |   | 1 to 5       | 6 to 15      | 16 to 25     |
| HOTSHOT+ System |             | Software Defined Wideband Transceiver System. | \$240,000.00 | \$228,000.00 | \$222,300.00 |
|                 |             |   |              |              |              |