

Statement of Work
Patient Environment Control Units (ECU)
Spinal Cord Injury Unit

A. GENERAL INFORMATION

1. Title of Project: ECU Expansion for SCI Unit

2. Type of Contract Contemplated: *Firm Fixed Price*

B. SCOPE

Provide environmental control and speech generation to Veterans on the expanding SCI unit.

C. REQUIREMENT/SALIENT CHARACTERISTICS/SPECIFICATIONS

Common Nomenclature (commercial description): autonOME PECU Environmental Control Unit (ECU)

Kind of material (i.e., type, grade, alternatives, etc.):

Electrical Data (i.e., 110 v, 60 Hz, 3 Ph, etc.):

Dimensions, size, capacity:

<u>Component</u>	<u>Specification</u>
2017 Wall box	17X17 surface mounted aluminum case 12 Channel IR relay board PCB phone board pig tail audio splitter USB data coupler Female DB25 connection Front facing USB coupler XLR power adapter- female 2 female 3.5mm plugs Nurse-call 1/4" connection- female. Nurse call integration and access Ribbon Cable for phone number pad

3.5mm IR emitter female bulkhead connection
4 power outlet Power Strip
5 channel USB hub
Custom Tablet power supply
IR out 3.5mm female connection
microphone 3.5mm female connection
2 sound cards with audio in and out ports
USB pressure switch
IR Transceiver with available 3.5mm female jack. Capable of learning new IR devices via direct programming window
Cable management to include cable covering

2017 Junction box

custom bed controller PCB board
Available barb connector for sip and puff input
3.5mm female port for switch input
embedded pressure switch
DB25 male termination for bed control, nurse call, switch
3.5mm Speaker connection for compatible systems
Bed connector for specific bed make and model
8.5X4.5X2.5 inches- Surface mounted
Break away connection

13 AutonoME Tablet

Windows 10 operating system
Patient interface software
1.4GHz processor- Dual core
8GB of Random access memory
256 SSD storage device
344X216X2.2 (mm) dimensions
13.5X8.5X2.2 (inches) dimensions
5.9LBS
8hr standalone battery life
13.3 inch LED HD display
Touch enabled
Wi-Fi and Bluetooth capabilities
2 USB 2.0, Speaker Out, Mic In, Auditory Feedback Port
2 X 3.5mm Jacks, radio switch
2 X built-in high quality speakers
-capable of integrating with: switch, sip and puff, voice, eye gaze, touch and head mouse input methods
dual switch or single switch scanning

Patient interface

- Fully customizable patient interface software
- advanced forms of Speech Augmentation: messages banking, variety of keyboards, messages integration, 2-step eye keyboard assortment, etc.
- configuration of advanced forms of alternate access visual and auditory feedback available depending on the individual need
- Custom delete user functionality
- capable of internet and computer access
- interface for outbound telephone calls
- Infrared transmission engagement
- Nurse call access point
- Capable of interfacing with multiple input methods simultaneously capable of auto scanning and tap to advance scanning
- Comes with chess and solitaire games
- Capable of integrating with long press/ puff nurse all access
- Comes with computer control component for computer access
- Integration with the "Yes You Can" patient education PDF file
- Word prediction capabilities
- Capable of remote editing
- Equipped with remote access and support
- Allows patient to save, create and edit notes.
- Provides patient access to e-books, kindle, etc.

Sip and puff access/ microphone device- The Dual

- unidirectional microphone
- sip and puff input
- capable of both sip and puff for switch scanning access
- capable of voice input
- Built in pressure switch
- can be used for desktop control via Microsoft speech recognition control hospital room environment via voice or sip and puff switch scanning
- Capable of mounting to both flat and round surfaces for increased accommodation of individual patient needs

Compatible input methods

- Eye gaze
- Sip and puff switch scanning
- voice access and control
- head mouse/ head tracker capabilities
- direct selection/ touch input
- Switch input- Single and Dual switch scanning

Wall mounted Articulating arm

Support weight of both TV and tablet/ Patient interface
Provide dual mount for TV and tablet/ Patient interface
72" long

- Joint of articulating arm capable of rotating beyond 180 degrees on any axis
- Provides +/- 15 degrees of tilt towards or away from the patient to accommodate special needs

ECU capabilities

- Capable of light access via 37 pin connector and direct relay integration via spare 3.5mm jack
- Access and control standard hospital bed via alternate form of access: head up, head down, feet up and feet down
- provide access to nurse call system via alternate forms of access
- Provide access to TV functions – volume, channels, etc.

Eye gaze

Tracking- Hybrid infrared video eye and binocular and monocular tracking
Working volume - minimum of 300X200X200mm3 (WxHxD)
Accuracy, static - 0.5 degree
Accuracy, over full working volume - 1 degree

Intended use: To enable Veterans with limited movement and ability to control their environment (bed, nurse call, phone, TV, lights) while a patient on the SCI unit. The system can also be used as a communication device to give Veterans who cannot speak the ability to communicate their needs. There is sufficient hard drive space to also use the tablets to access informational and training videos as part of the effort to improve patient education.

Equipment with which the item will interface:

Nurse call
Bed
Room lights
Television
Phone

End item application:

Original equipment manufacturer part number:

Other pertinent information that describes the item, material or service required:

D. OTHER UNIQUE REQUIREMENTS

Discuss any other unique requirements or considerations, e.g.

Compatibility with Existing Equipment:

SCI unit has 7 existing ECU units that interface to provide environmental control. Compatibility with the bed, TV, lights, and nurse call is ensured during installation with appropriate interface cable.

Applicable DICOM compliance, Directives or IT Policies: Tablet computers do not interface with VA employee network. They interface with the guest network only.

Coordination with On-going Construction Project (provide the project number):

This ECU expansion project is in coordination with Phase II and expansion to open the remaining beds in the existing SCI unit.

Training:

Built into the cost of the ECU systems is staff training on use of all equipment both hardware and the Grid 3 software. ASI staff will set up several level of user control chosen by Syracuse VA SCI Department to enable AT and Nurse training staff to be “super users” and have ability to make programming changes to the Grid 3 software.

Service and/or Maintenance:

Maintenance of cables and hardware interface to the bed, lights, and nurse call to be provided by Biomedical Engineering Department. Maintenance to user interface including switch access, sip n puff, eye gaze to be provided by the Assistive Technology Department.

Deliverable Schedule

Deliverable	Description	Quantity/Media	Date Completed
1	<p>Deliver, install, and provide training on one ECU PECU hospital System in a patient room and program Grid 3 software to Syracuse VA specifications. Includes autoNoME PECU hospital system</p> <p>- Includes medical grade grid pad Tablet PC with Grid 3 Software and custom autoNoME grid-set, Dual high volume speakers for AAC, Wall components and cables to interface with Nurse Call, TV, Telephone, Bed control & Lights.</p> <p>Hospital articulating swing arm with Dual Monitor Mount</p> <p>Includes installation and staff training</p>	one	5/13/18
2	<p>SCI AT Team, nursing staff and patients to trial ECU system for 2 weeks and ensure all systems are functioning properly and there are no compatibility issues.</p>		5/27/18
3	<p>Begin installation of remaining 29 ECU systems. Systems will be shipped in lots of 5 units per pallet 3 pallets per shipment with tablet serial numbers sent to Syracuse VA prior to shipment to facilitate inventory tracking.</p>		6/30/18
3	<p>Installation – 2 units per day for a total of 15 working days</p>		6/20/2018

E. PLACE OF PERFORMANCE

Syracuse VAMC SCI Unit.

F. PERIOD OF PERFORMANCE

Thirty ECU systems to be operational 10 weeks from award of contract.