

ECU Description and Specifications

The ECU shall allow veterans with mobility impairments to operate electronic devices, including televisions, computers, lights and appliances. The ECU shall help the most severely disabled Veterans by interfacing with items used in a hospital room setting such as television, bed settings (up/down), lights, phone and nurse call. These items shall be controlled through use of alternative input methods accessible to these severely disabled Veterans. The ECU technology shall provide a wide variety of alternative input methods to accommodate Veterans with all types of disabilities, such as Amyotrophic Lateral Sclerosis (ALS) where the motor neuros degenerate or die preventing the ability to initiate or control voluntary movements. These alternative methods should include voice recognition, touchscreen, *Sip (inhale)-and-Puff (exhale)*, eye gaze and head tracker technologies. Additionally, the ECU shall allow Veterans to access the internet to connect with family and friends via e-mail, social media and Skype, as well as utilize YouTube to view videos. The ECU shall also provide access to an eBook reader, music player, computer games suite and productivity tools suite that includes a work processor, calendar, clock and calculator.

Contractor shall provide that also meet the ECU specifications described below:

- *Computer-based unit:* Consists of a software program and the necessary peripherals that allow a computer to function as an ECU.
- *IR technology Z-wave transmitter:* The ECU device sends an infrared signal to the control unit, which in turn sends another infrared signal to the appliance to control infrared devices in the Veteran's environment.
- *Touchscreen device:* Allows for direct touch user input to control device.
- *Software program:* Allows communication and control of Veteran's environment.
- *Windows OS:* Allows for installation of software program.
- *2 switch ports:* Allows for alternative access methods using mechanical switches, such as sip-n-puff and pneumatic switches.
- *2 USB ports:* Allows for alternative access methods, including head control and eye gaze.
- *Stereo adapter for 3.5mm microphone headset:* Allows for alternative access method using voice activation.
- *IR controller:* Allows for control of Infrared devices in user's environment.
- *High-volume built-in speakers:* Allows for clear, intelligible amplification of synthesized speech for communication.
- *Eye Tracker Camera:* Allows Veteran's to control the device using eye movement.
- *Mounting Bracket for Eye Tracker Camera:* Allows for mounting of eye tracking camera to device.
- *Microphone and Sip (inhale)-and-Puff (exhale) Input Device:* Allows Veteran's, who do not the use of their hands, to control the device using microphone and pneumatic switch through sip-and-puff inputs.
- *Floor stand:* Allows device to be utilized while Veteran is in bed or in a wheelchair.
- *Bed control interface:* Allows Veteran's to control the hospital bed using the device.
- *WiFi Thermostat:* Allows Veteran's to control thermostat in the environment using the device.
- *WiFi front door camera:* Allows Veteran's to control security camera in the environment.