P4S4 Bench Test Wiring Setup

Introduction

Sometimes it's preferred for the Pronto4 system to be setup on a bench prior to vehicle installation to aid the user in software development and/or familiarization with the system. This bulletin depicts the proper bench test wiring of each available Pronto4 configuration. The user should select the corresponding Computer End configuration to their own and use as a guide for the setup.

Purpose

Each section instructs the user proper setup with detailed information including diagrams and labeled photographs. There is a diagram, a Services End photo, a Computer End photo, and an overhead view photo.

> Note: Cable 152 is a 1-wire that goes into pin 3 of P208 and brings out +12V DC

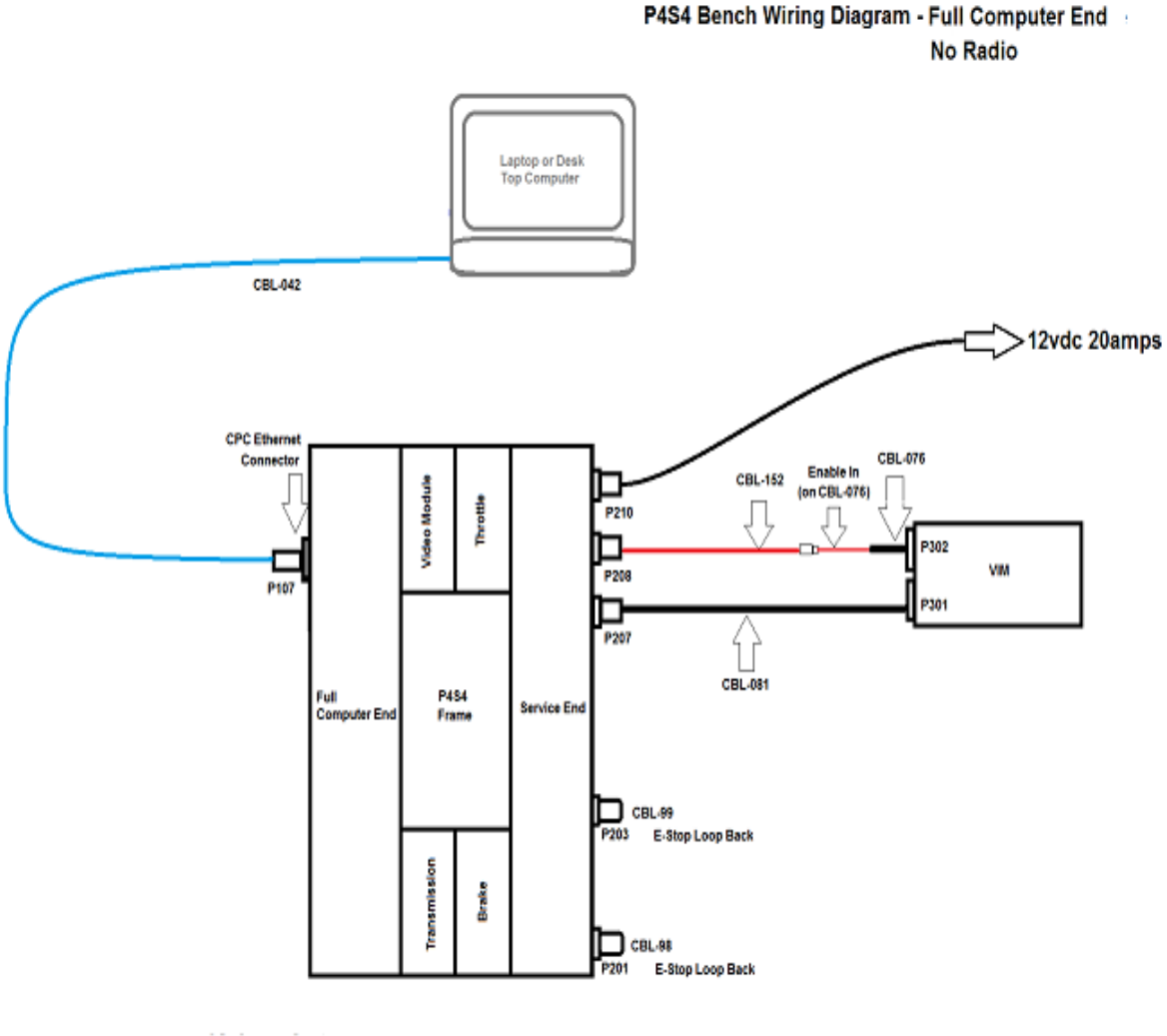
Configurations

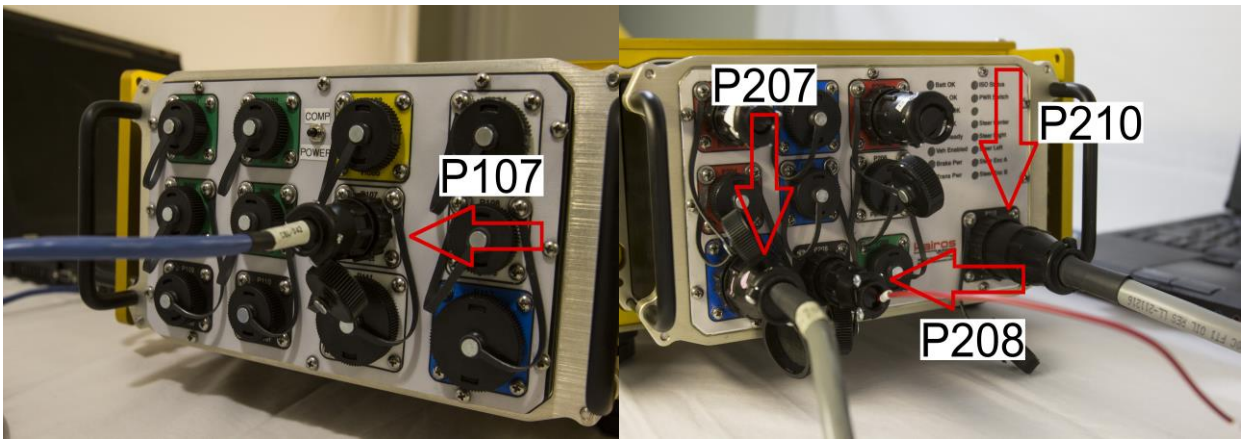
- Full Computer End
- Full Computer End w/ Radio
- Reduced CPU Computer End
- Reduced CPU Computer End w/ Radio
- Alternate Computer End
- Alternate Computer End w/ Radio
- Alternate Computer End Diagnostics w/o Radio
- External Computer End

Full Computer End

The Full Computer End contains a full panel of sockets. With cable (CBL-152), to tie in +12V DC to the Vehicle Integration Module (VIM), use cable (CBL-076) and the VIM to fully test the system on the bench. To allow the Enable circuit to function properly and operation of the servos, the Enable In line of CBL-76 needs a +12vdc signal. Normally, this would come from the vehicle's ignition circuit. The easiest way to simulate this on the bench is to connect the 4 pin CPC connector of cable (CBL-152) (optional equipment) to P208 and the push-on connector of cable (CBL-152) to the Enable IN connector of cable (CBL-76). Connect cable (CBL-98) to P201 and cable (CBL-99) to P203.

Once this is accomplished, the system will provide the +12V DC signal to the Enable IN circuit of the VIM and the system will work in Auto mode. Please refer to the diagrams below for clarification.

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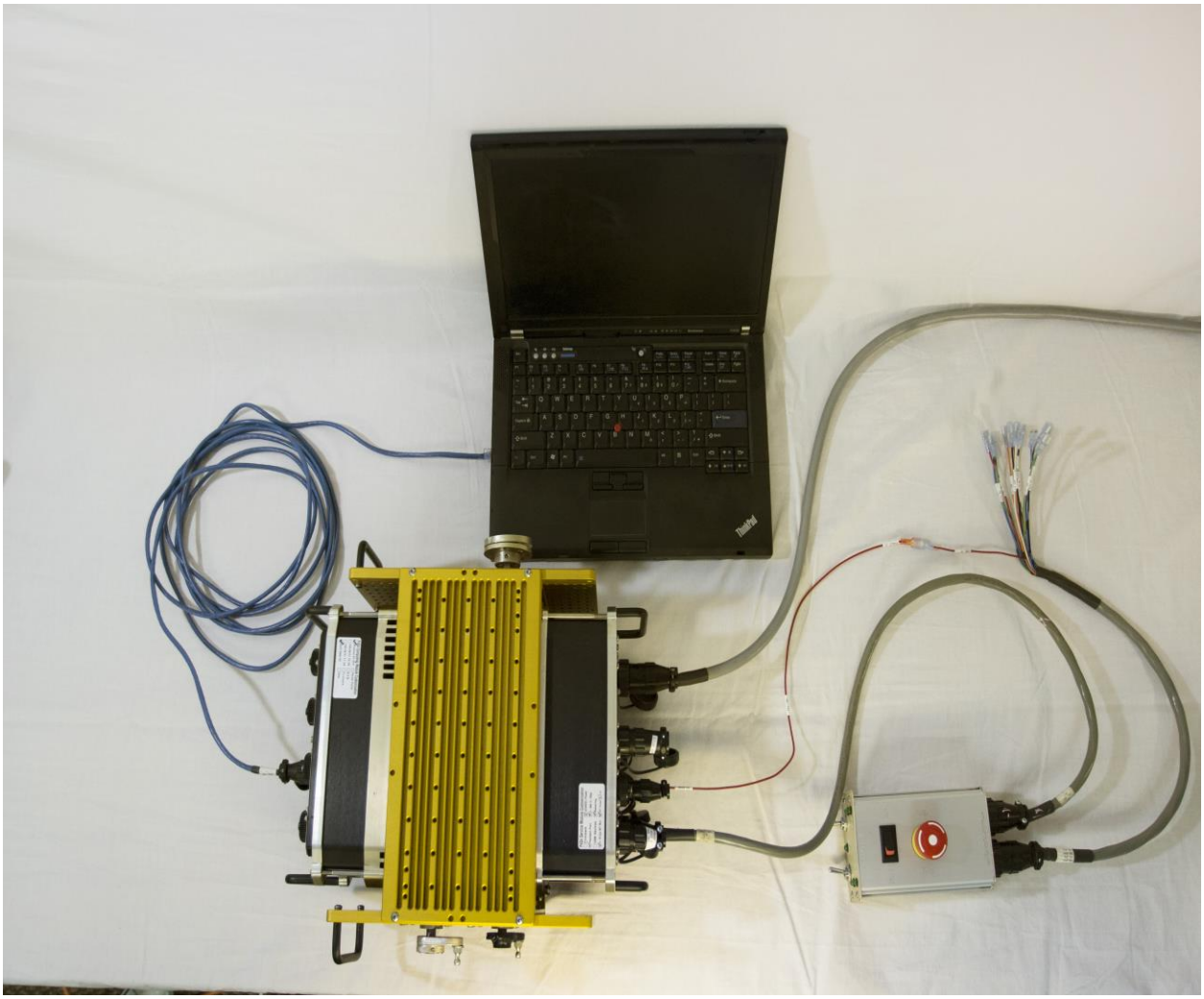

Full Computer End w/ Radio

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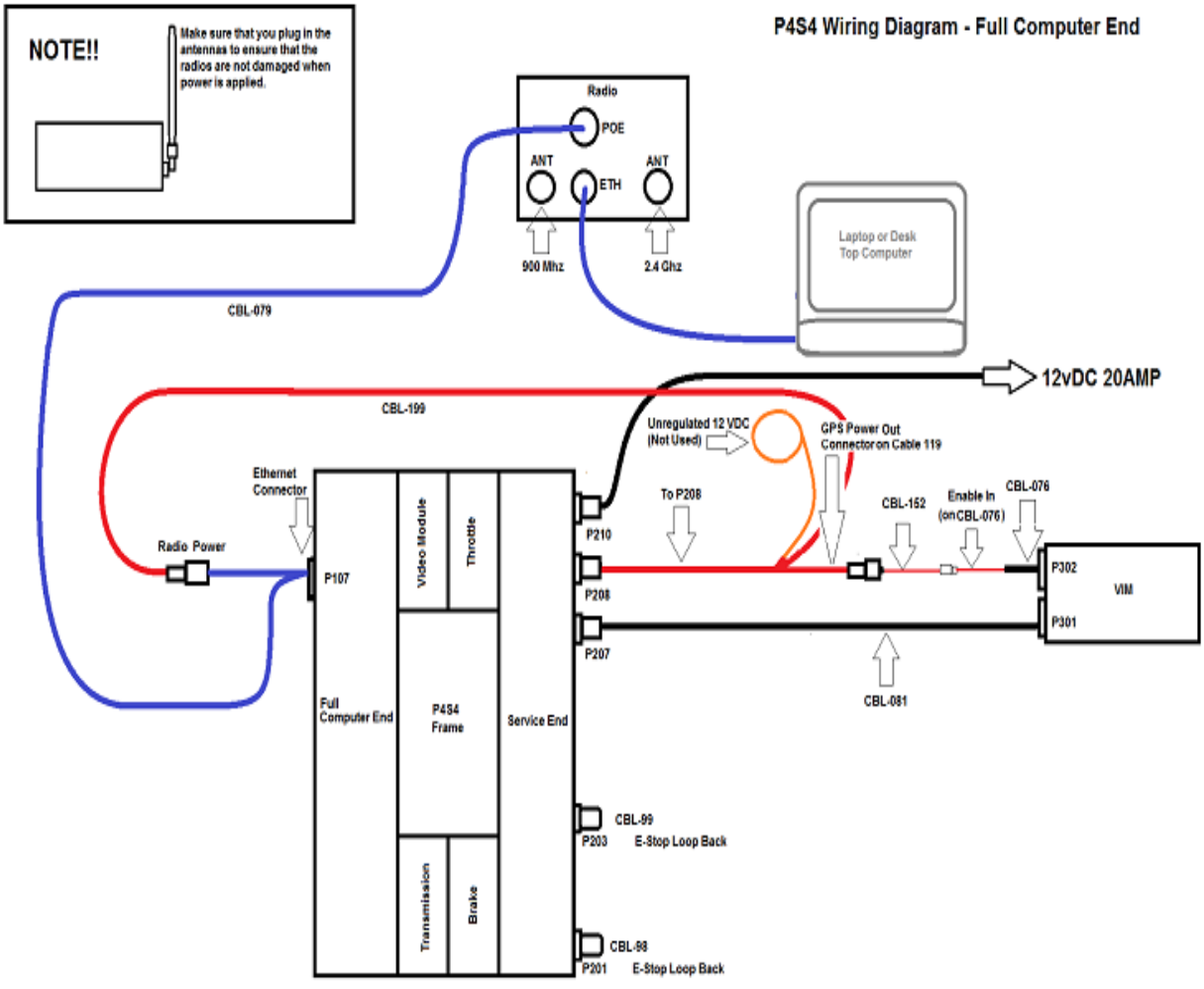

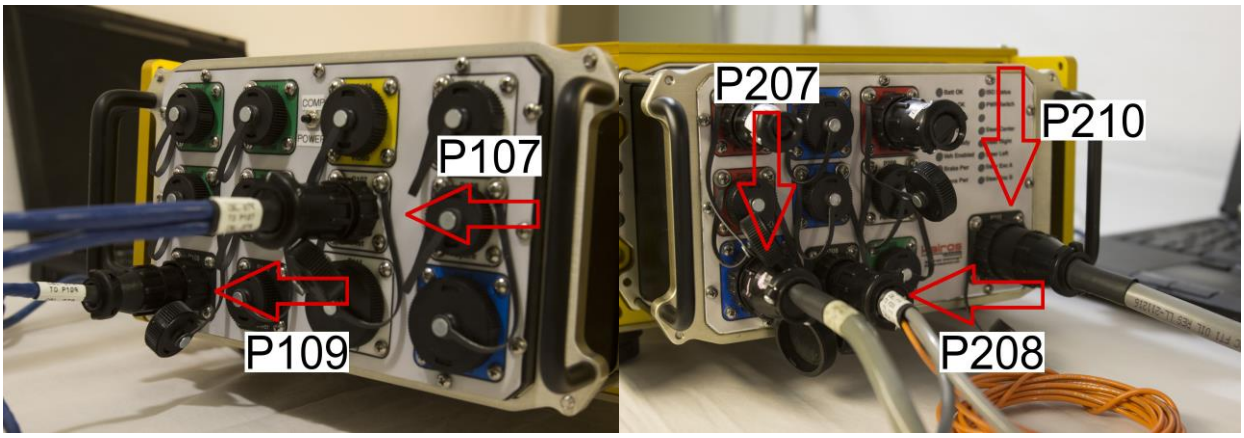
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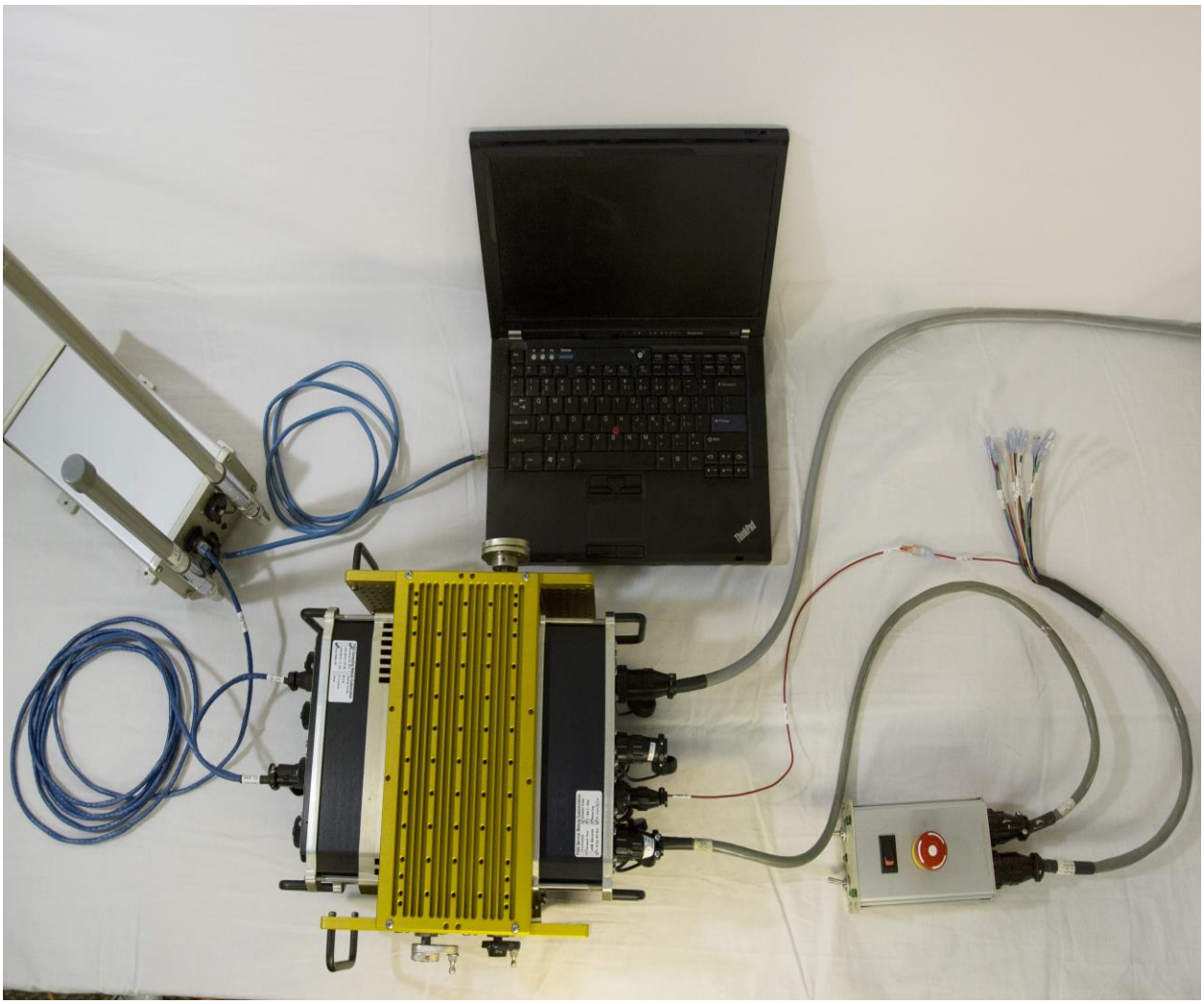

Reduced CPU Computer End

The Reduced CPU Computer End houses P111 (Utility), P108 (USB), and P107 (Ethernet) ports. With cable (CBL-152), to tie in +12V DC to the Vehicle Integration Module (VIM), use cable (CBL-076) and the VIM to fully test the system on the bench. To allow the Enable circuit to function properly and operation of the servos, the Enable In line of CBL-76 needs a +12vdc signal. Normally, this would come from the vehicle's ignition circuit. The easiest way to simulate this on the bench is to connect the 4 pin CPC connector of cable (CBL-152) (optional equipment) to P208 and the push-on connector of cable (CBL-152) to the Enable IN connector of cable (CBL-76). Connect cable (CBL-98) to P201 and cable (CBL-99) to P203.
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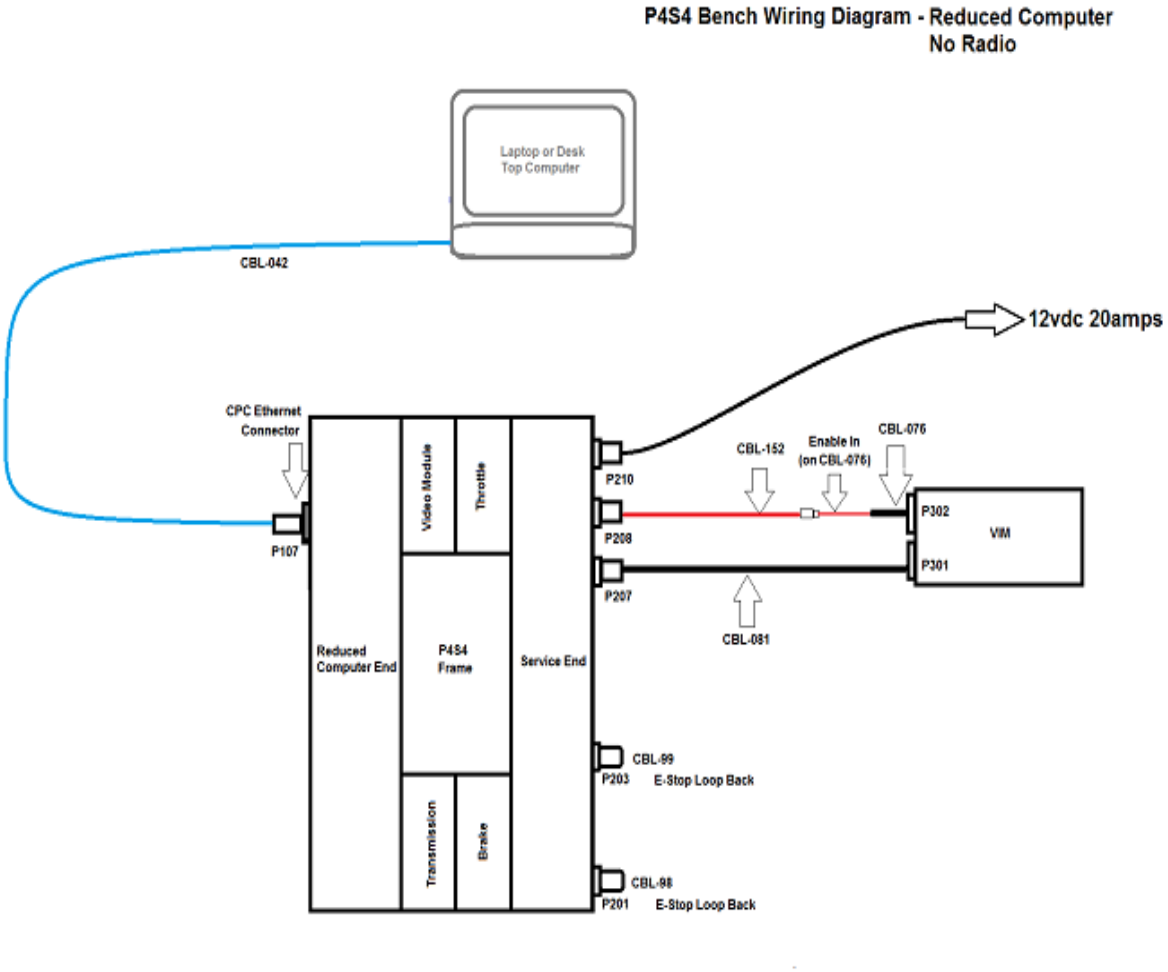

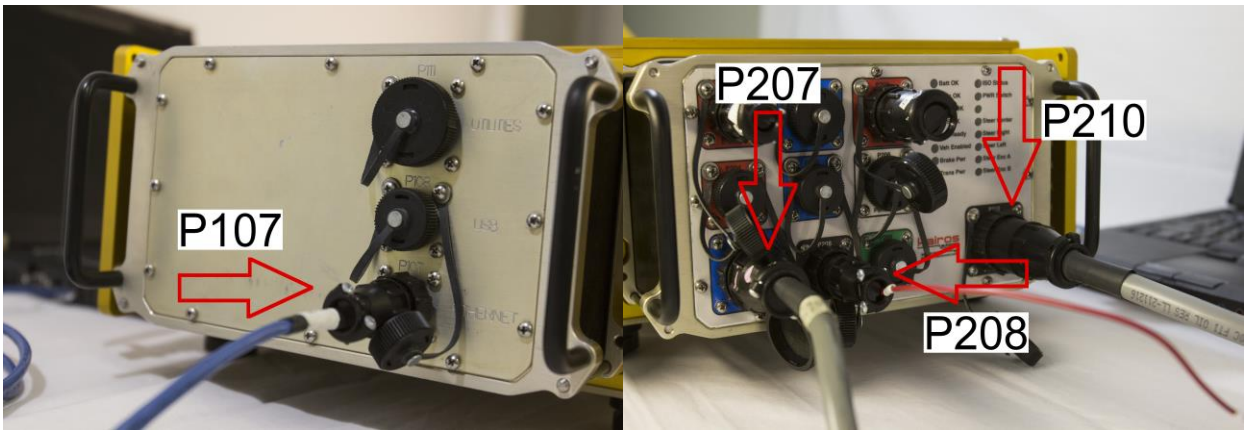
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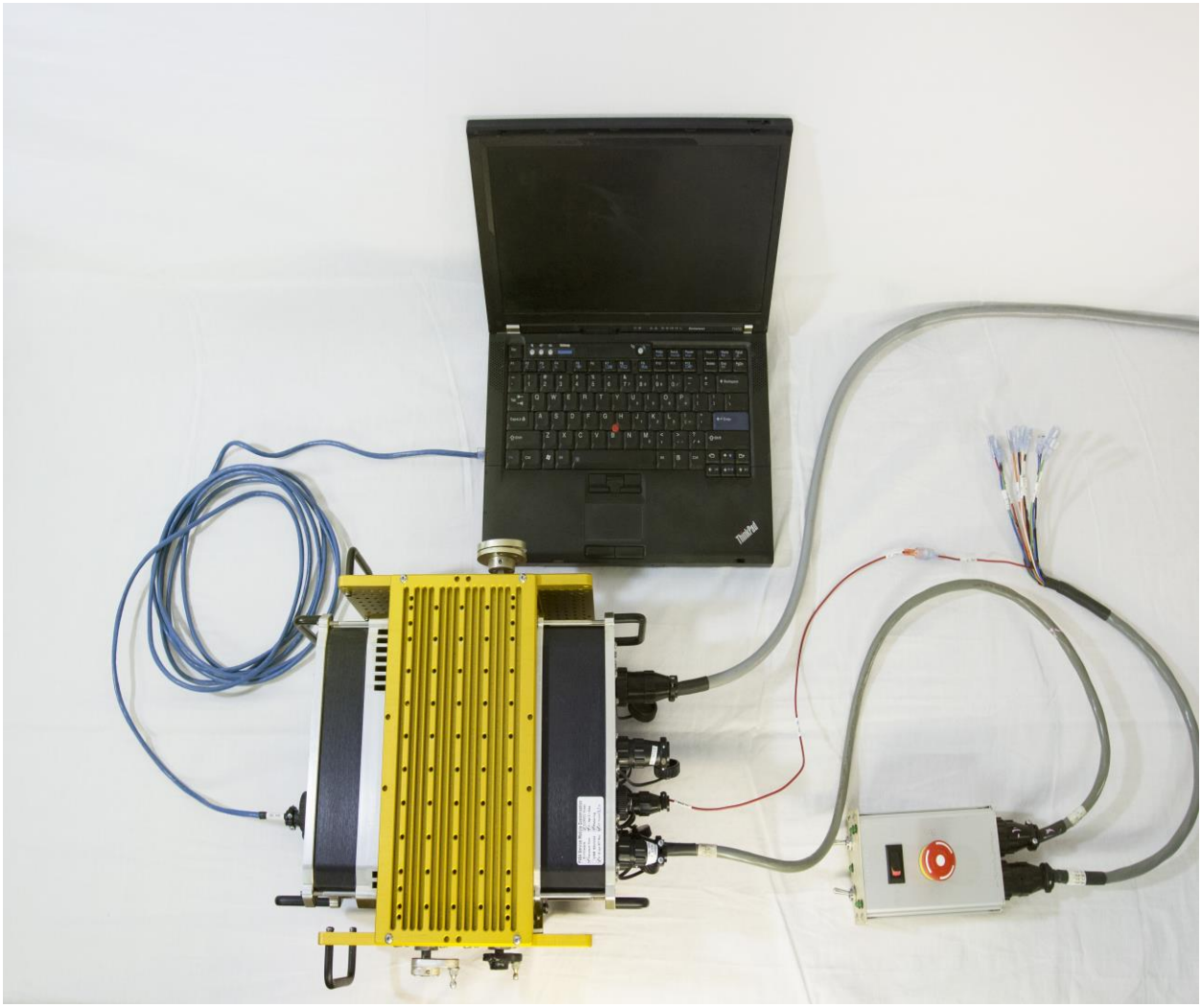

Reduced CPU Computer End w/ Radio

The Reduced CPU Computer End houses P111 (Utility), P108 (USB), and P107 (Ethernet) ports. With cable (CBL-152), to tie in +12V DC to the Vehicle Integration Module (VIM), use cable (CBL-076) and the VIM to fully test the system on the bench. To allow the Enable circuit to function properly and operation of the servos, the Enable In line of CBL-76 needs a +12vdc signal. Normally, this would come from the vehicle's ignition circuit. The easiest way to simulate this on the bench is to connect the 4 pin CPC connector of cable (CBL-152) (optional equipment) to P208 and the push-on connector of cable (CBL-152) to the Enable IN connector of cable (CBL-76). Connect cable (CBL-98) to P201 and cable (CBL-99) to P203.
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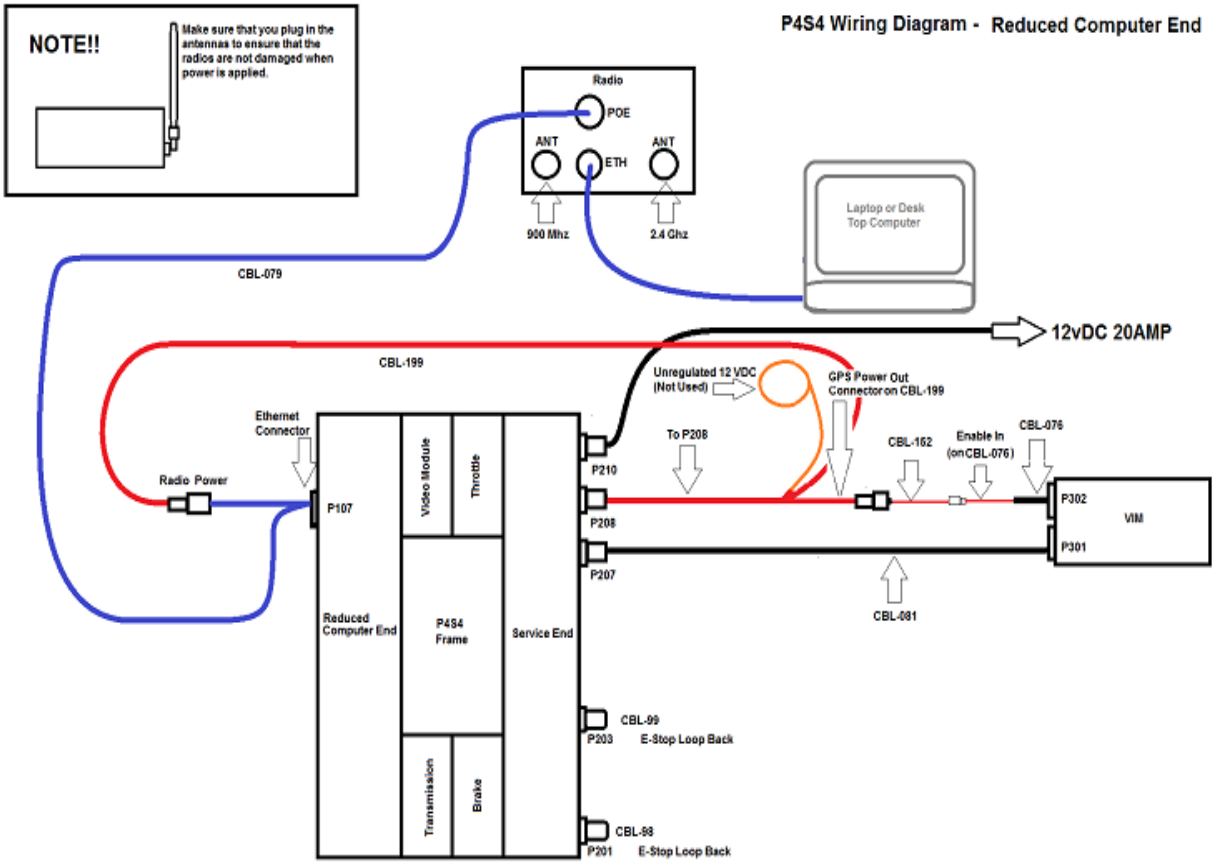

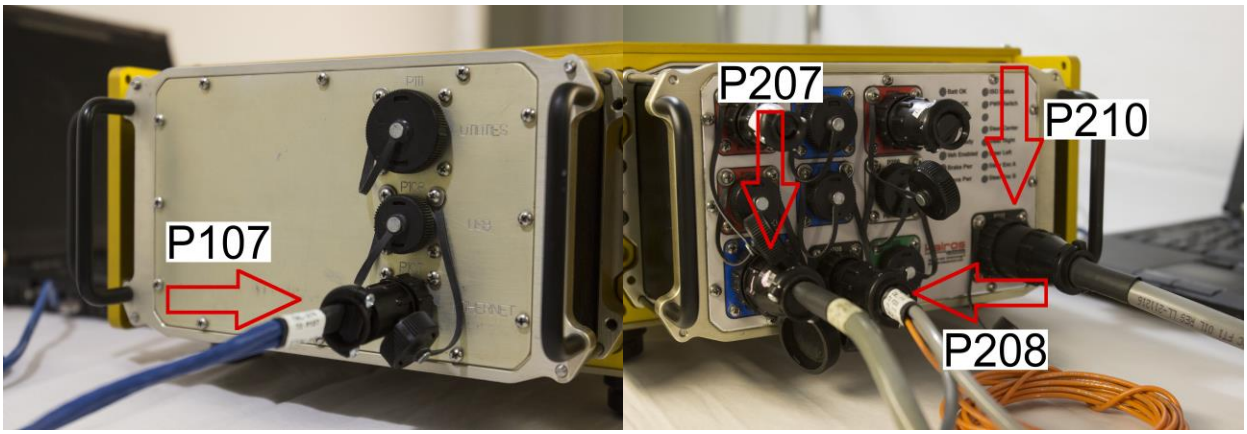
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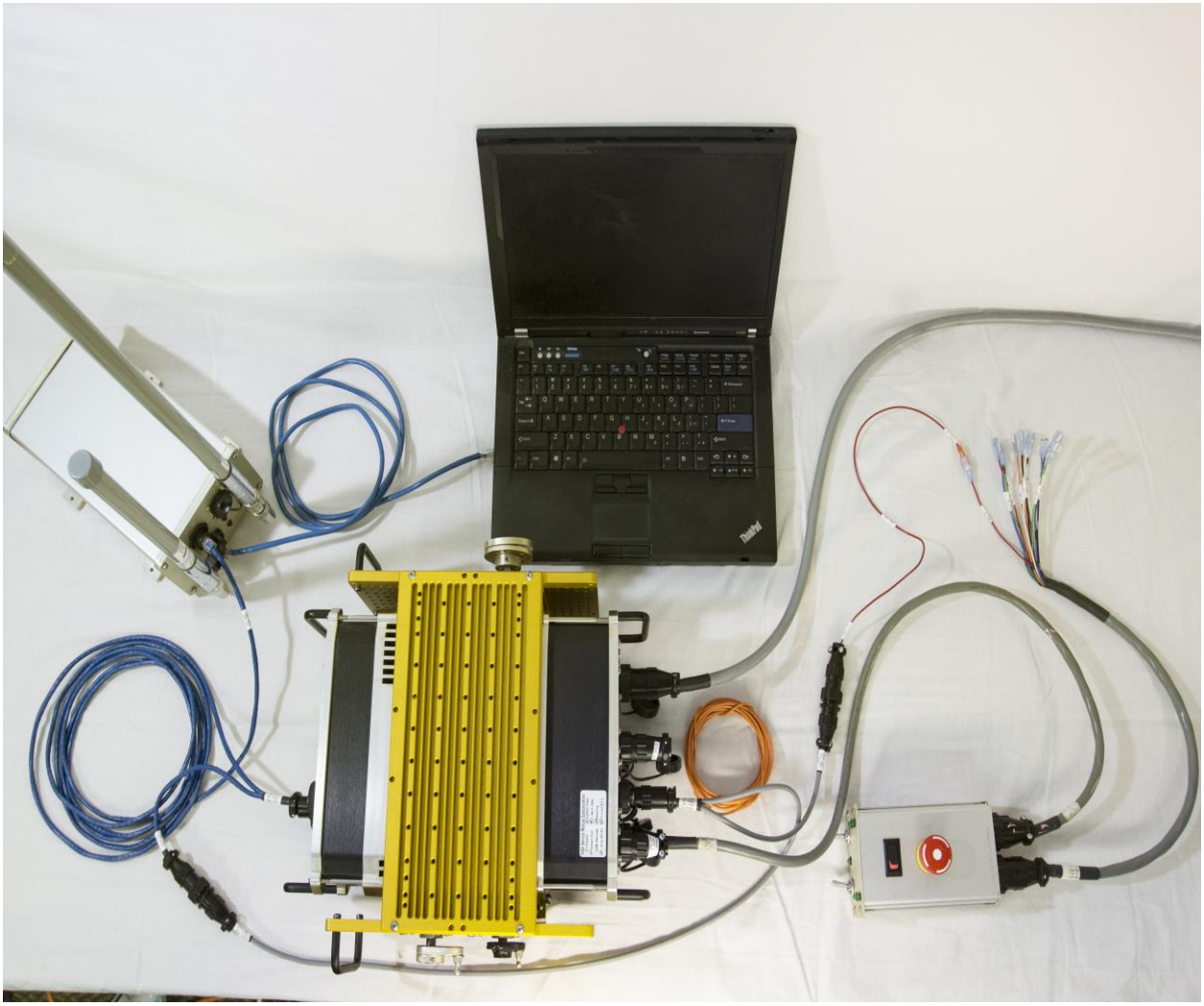

Alternate Computer End

The Alternate Computer End houses P111 (Diagnostics), P109 (Power), and P107 (Ethernet) ports. With cable (CBL-152), to tie in +12V DC to the Vehicle Integration Module (VIM), use cable (CBL-076) and the VIM to fully test the system on the bench. To allow the Enable circuit to function properly and operation of the servos, the Enable In line of CBL-76 needs a +12vdc signal. Normally, this would come from the vehicle's ignition circuit. The easiest way to simulate this on the bench is to connect the 4 pin CPC connector of cable (CBL-152) (optional equipment) to P208 and the push-on connector of cable (CBL-152) to the Enable IN connector of cable (CBL-76). Connect cable (CBL-98) to P201 and cable (CBL-99) to P203.
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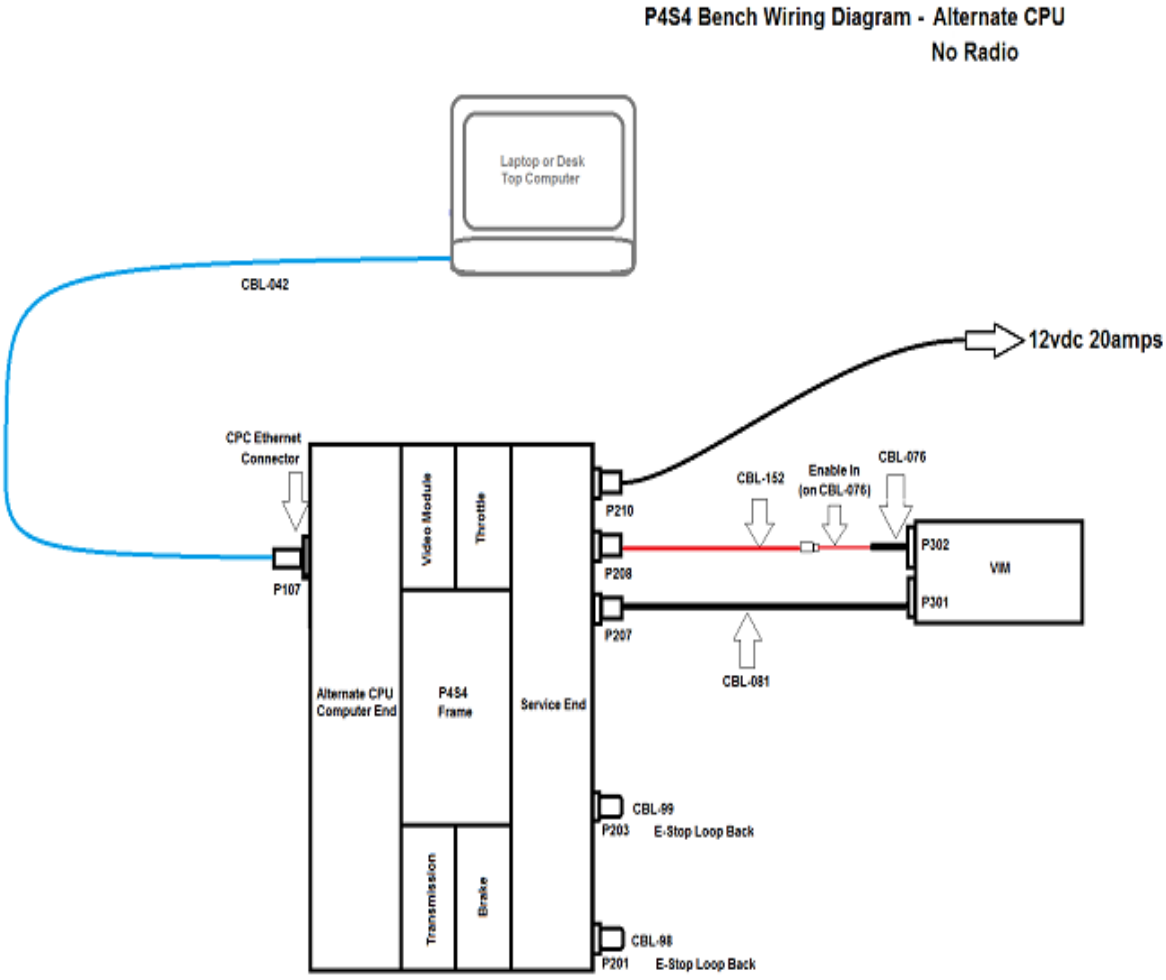

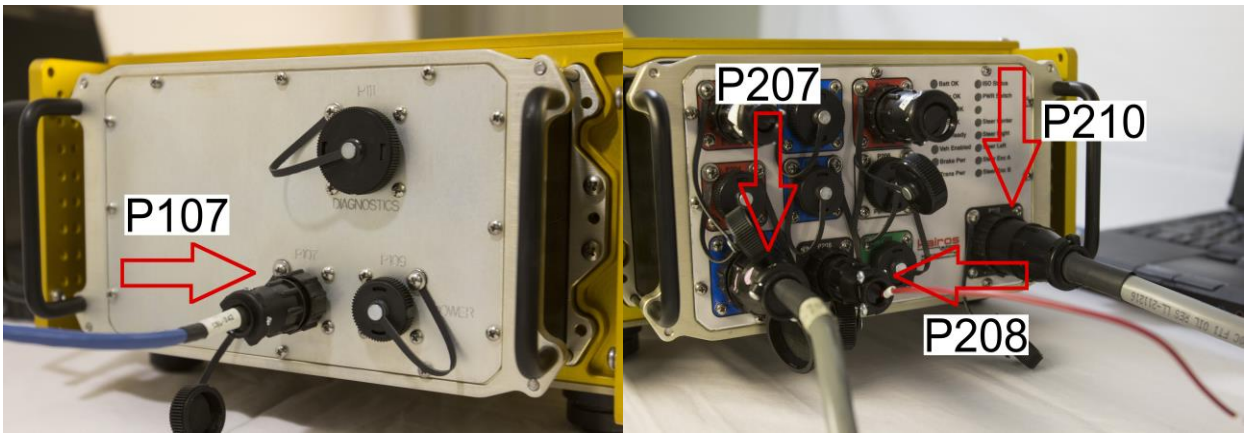
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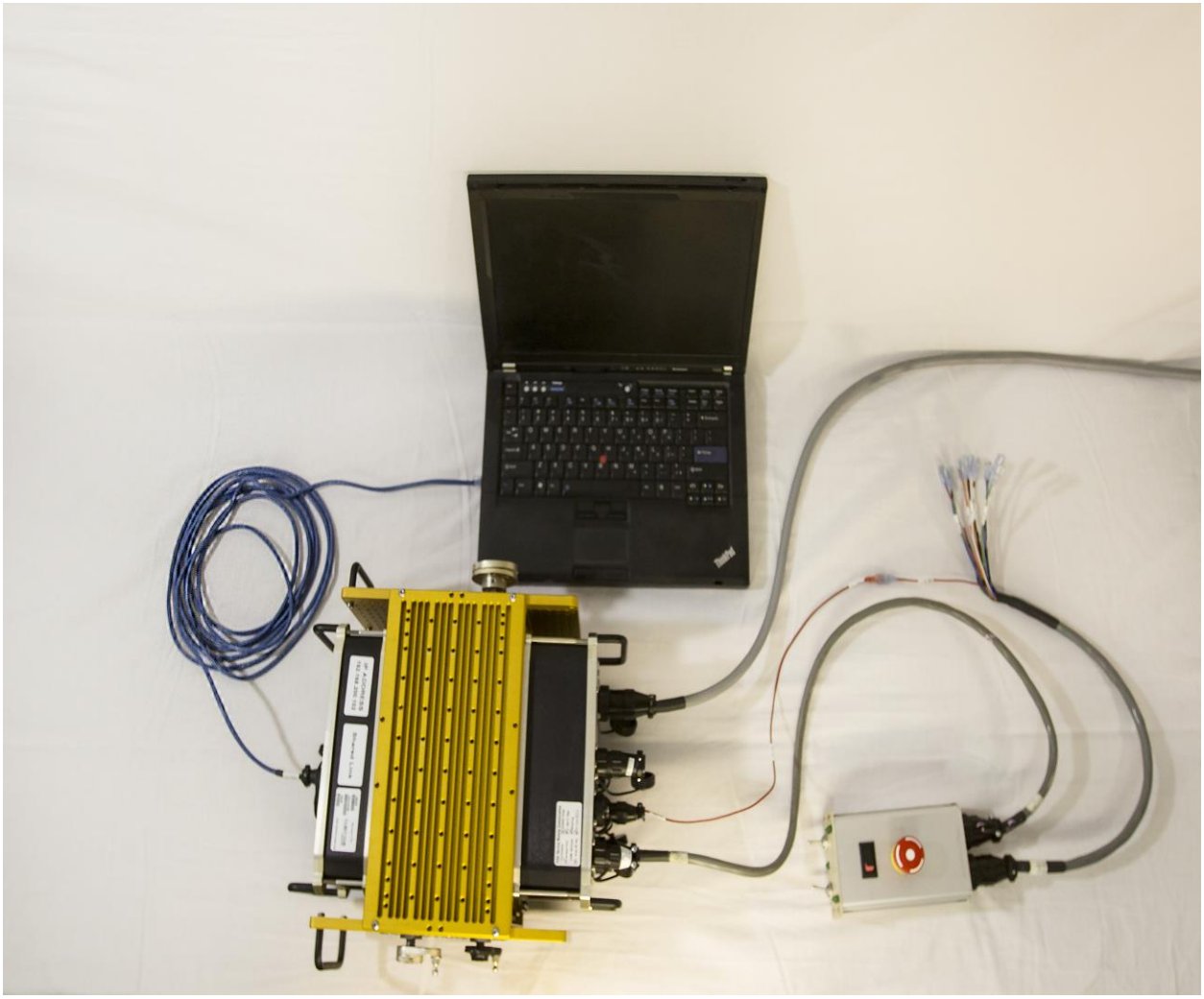

Alternate Computer End w/ Radio

The Alternate Computer End houses P111 (Diagnostics), P109 (Power), and P107 (Ethernet) ports. With cable (CBL-152), to tie in +12V DC to the Vehicle Integration Module (VIM), use cable (CBL-076) and the VIM to fully test the system on the bench. To allow the Enable circuit to function properly and operation of the servos, the Enable In line of CBL-76 needs a +12vdc signal. Normally, this would come from the vehicle's ignition circuit. The easiest way to simulate this on the bench is to connect the 4 pin CPC connector of cable (CBL-152) (optional equipment) to P208 and the push-on connector of cable (CBL-152) to the Enable IN connector of cable (CBL-76). Connect cable (CBL-98) to P201 and cable (CBL-99) to P203.
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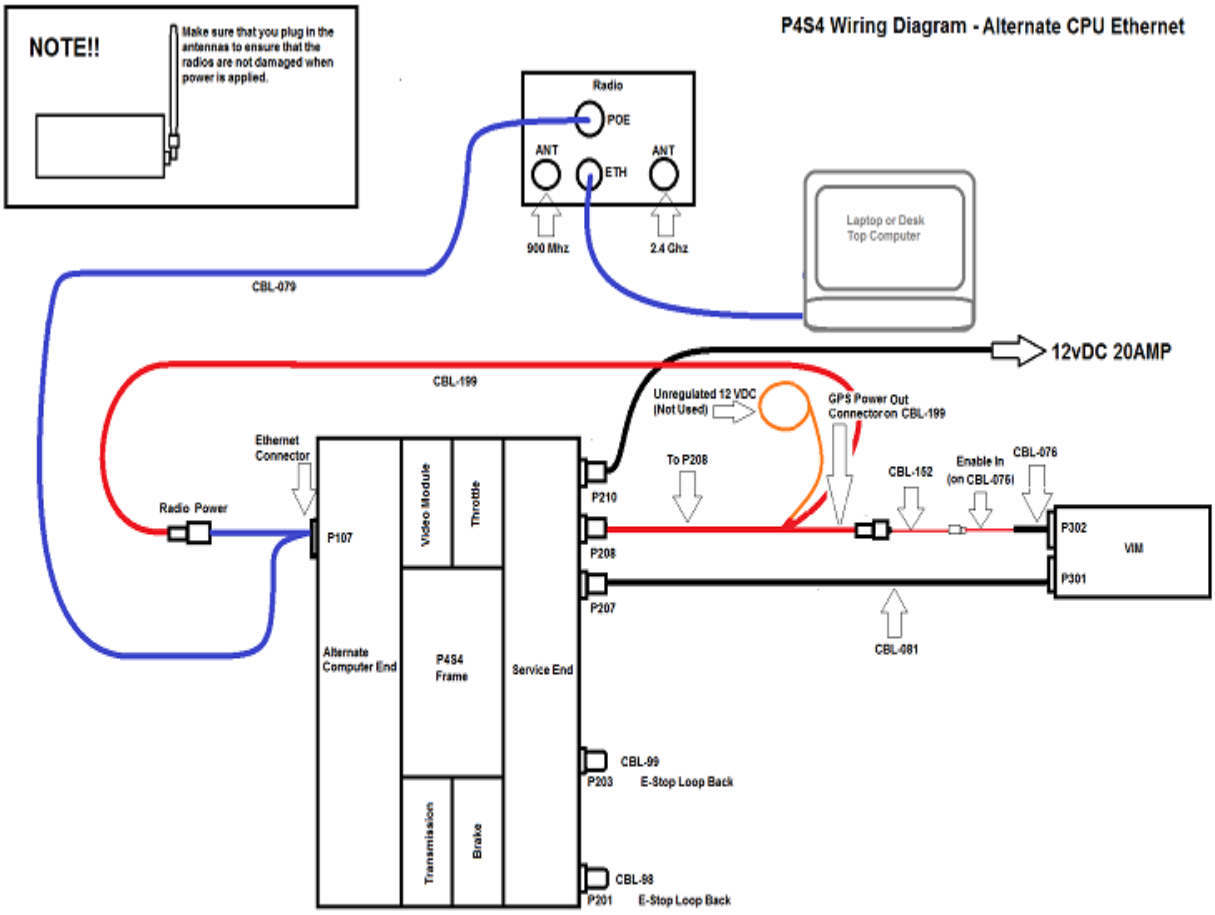

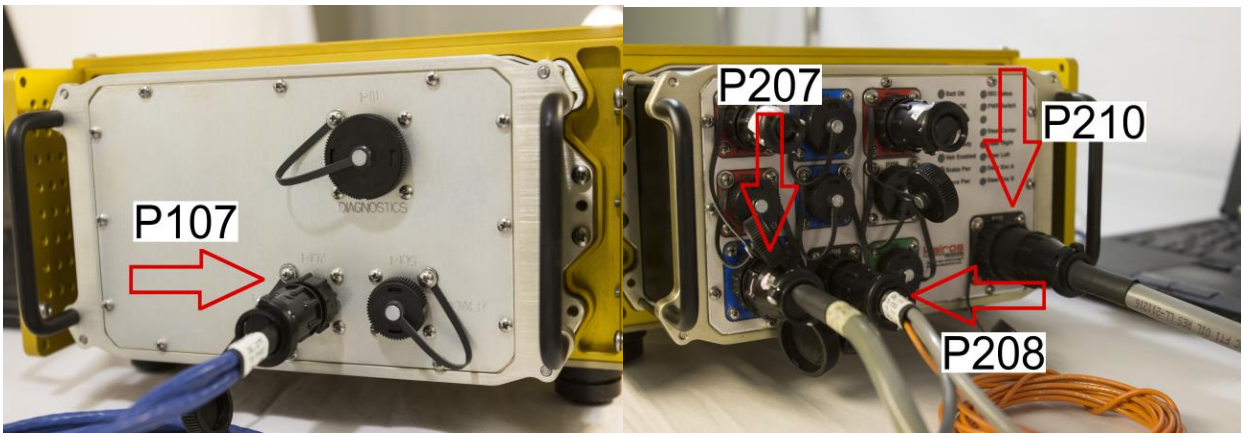
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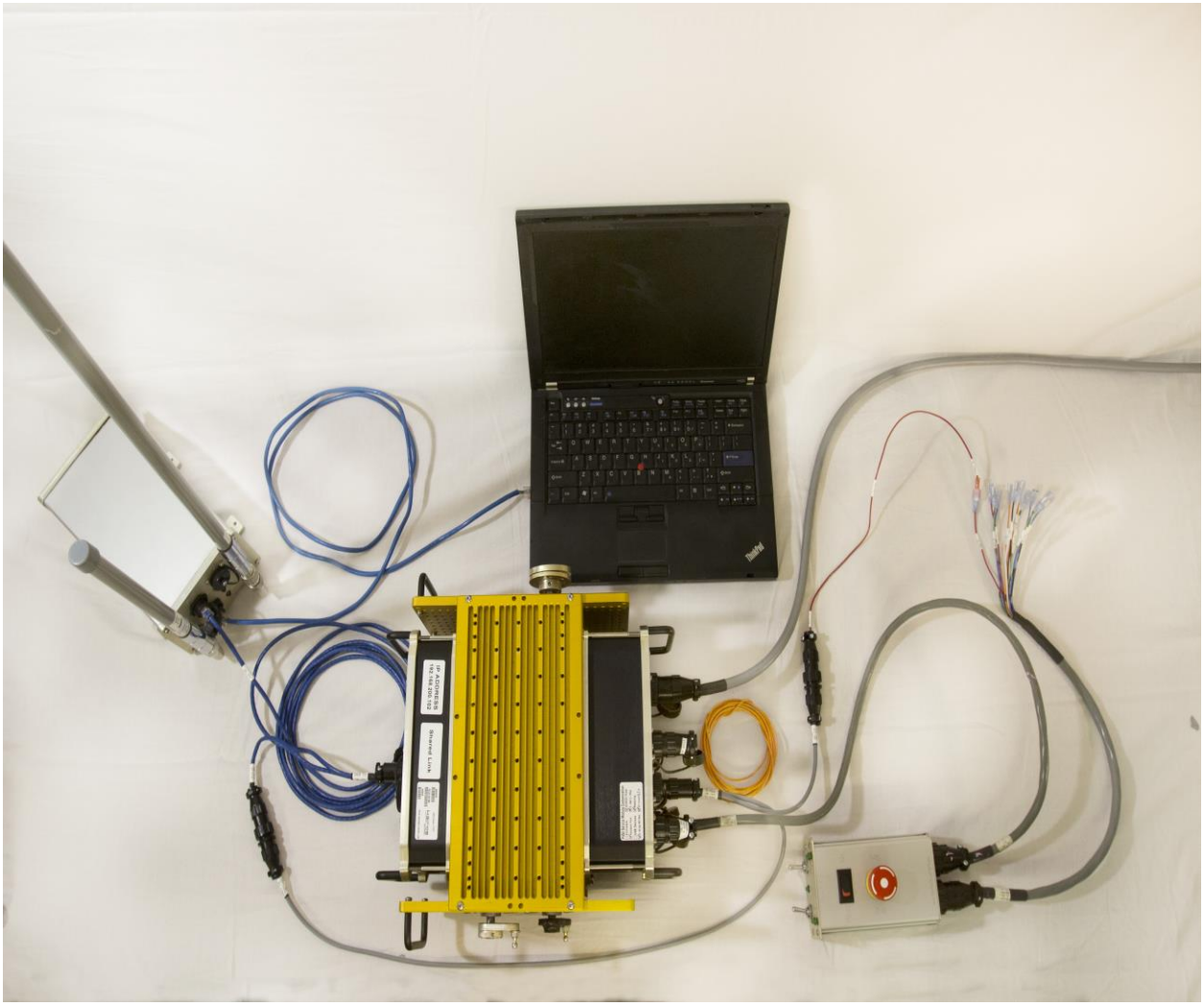

Alternate Computer End Diagnostics w/o Radio

This configuration is used to talk to the Alternate CPU directly over Com Port C.
The Alternate Computer End houses P111 (Diagnostics), P109 (Power), and P107 (Ethernet) ports. With cable (CBL-152), to tie in +12V DC to the Vehicle Integration Module (VIM), use cable (CBL-076) and the VIM to fully test the system on the bench. To allow the Enable circuit to function properly and operation of the servos, the Enable In line of CBL-76 needs a +12vdc signal. Normally, this would come from the vehicle's ignition circuit. The easiest way to simulate this on the bench is to connect the 4 pin CPC connector of cable (CBL-152) (optional equipment) to P208 and the push-on connector of cable (CBL-152) to the Enable IN connector of cable (CBL-76). Connect cable (CBL-98) to P201 and cable (CBL-99) to P203.
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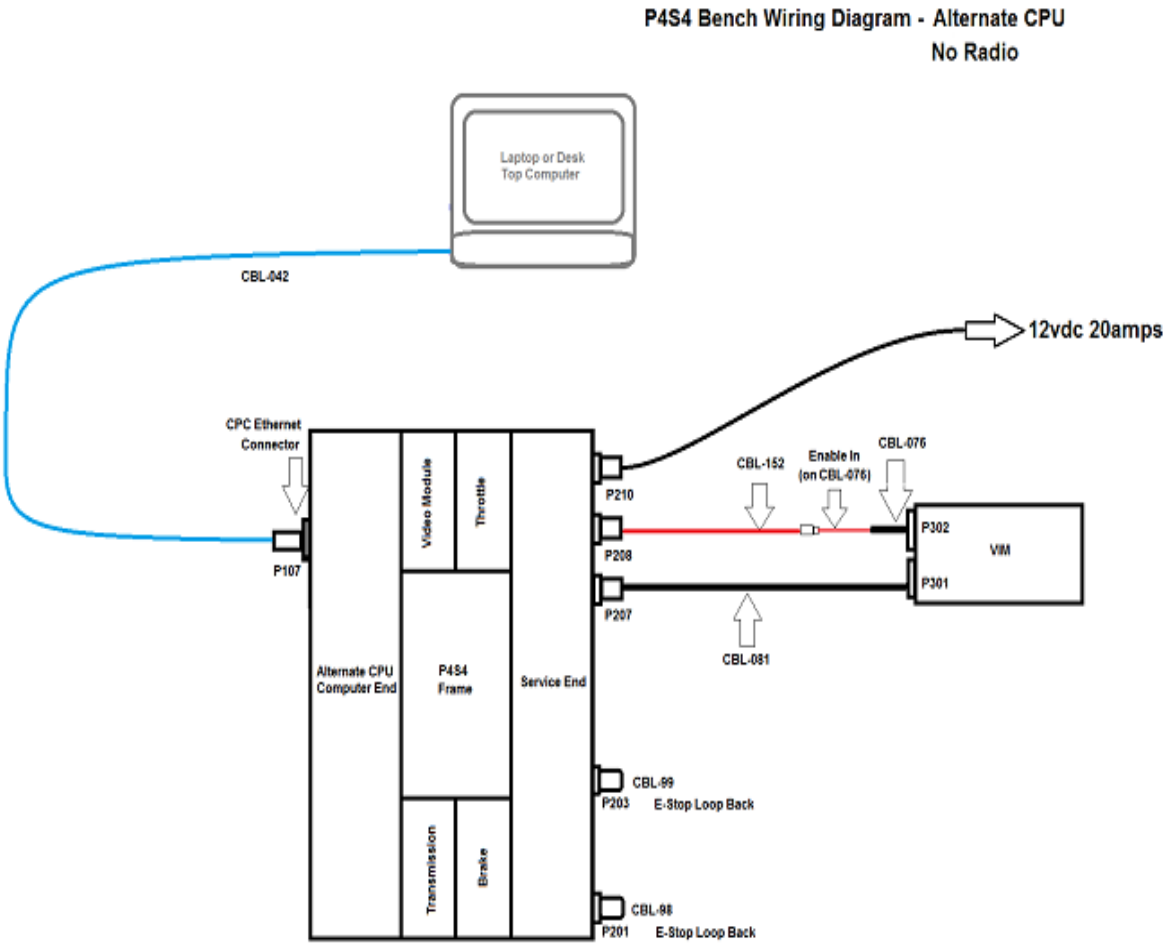

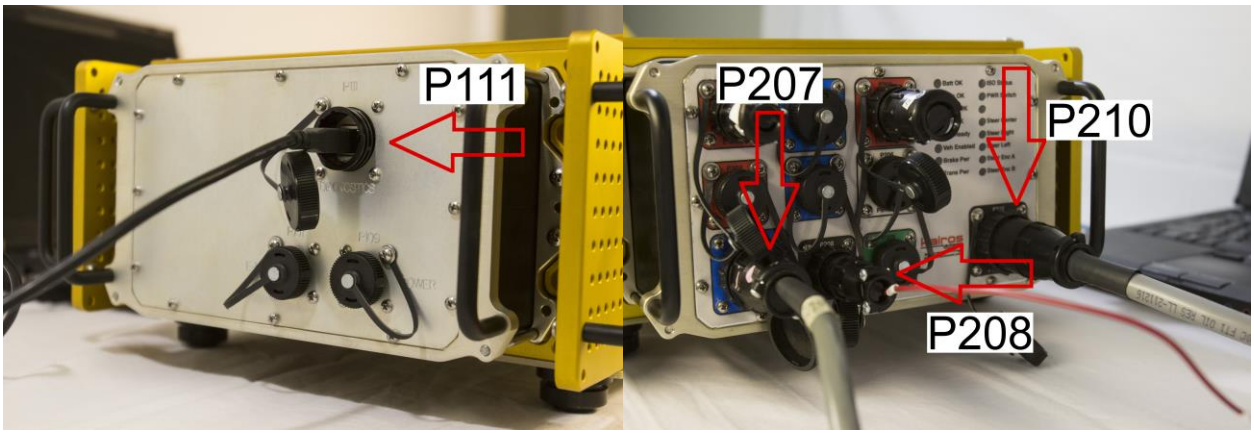
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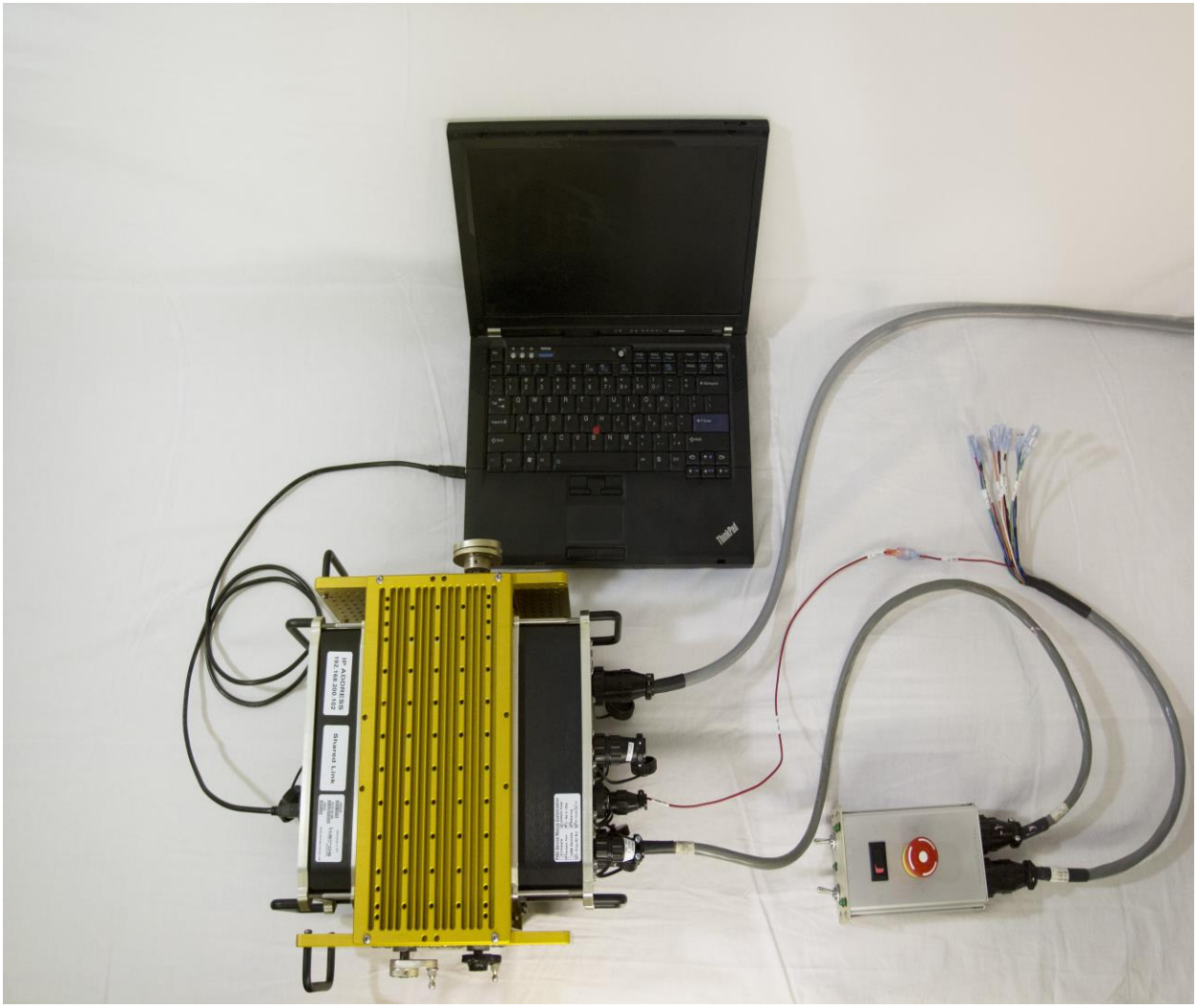

External Computer End

Use this configuration to communicate directly to ServoPod.
The External Computer End houses P105 (Com 1), P106 (Com 2), and P109 (Power) ports. With cable (CBL-152), to tie in +12V DC to the Vehicle Integration Module (VIM), use cable (CBL-076) and the VIM to fully test the system on the bench. To allow the Enable circuit to function properly and operation of the servos, the Enable In line of CBL-76 needs a +12vdc signal. Normally, this would come from the vehicle's ignition circuit. The easiest way to simulate this on the bench is to connect the 4 pin CPC connector of cable (CBL-152) (optional equipment) to P208 and the push-on connector of cable (CBL-152) to the Enable IN connector of cable (CBL-76). Connect cable (CBL-98) to P201 and cable (CBL-99) to P203.
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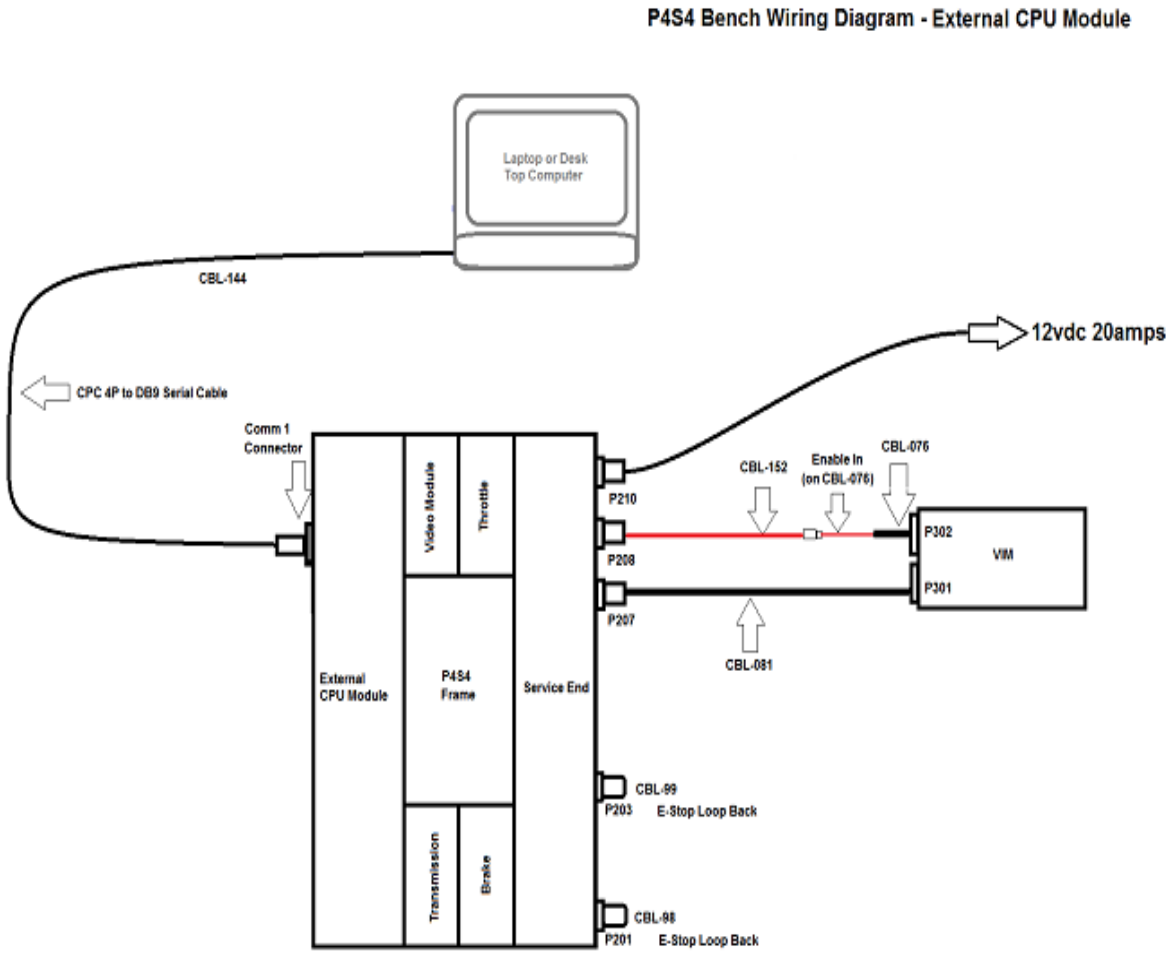

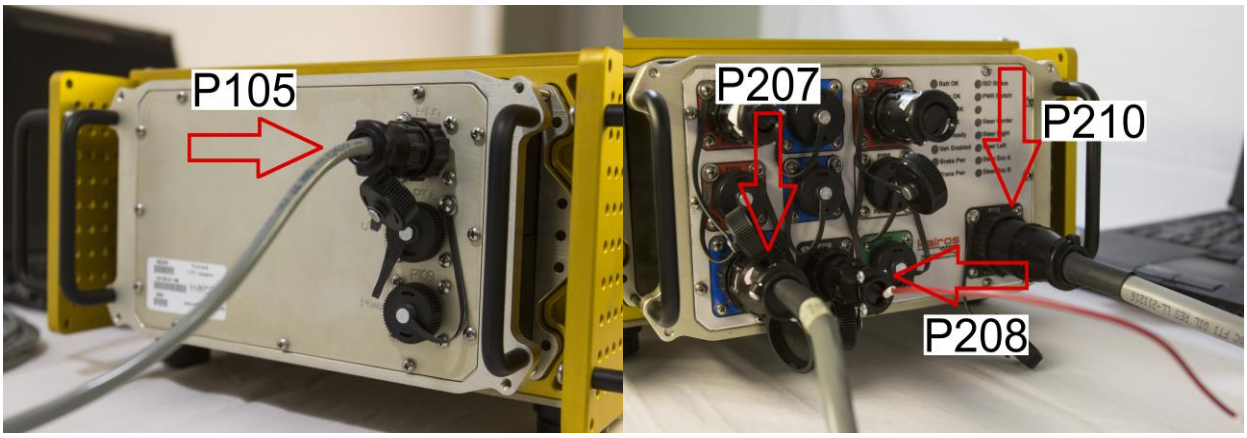
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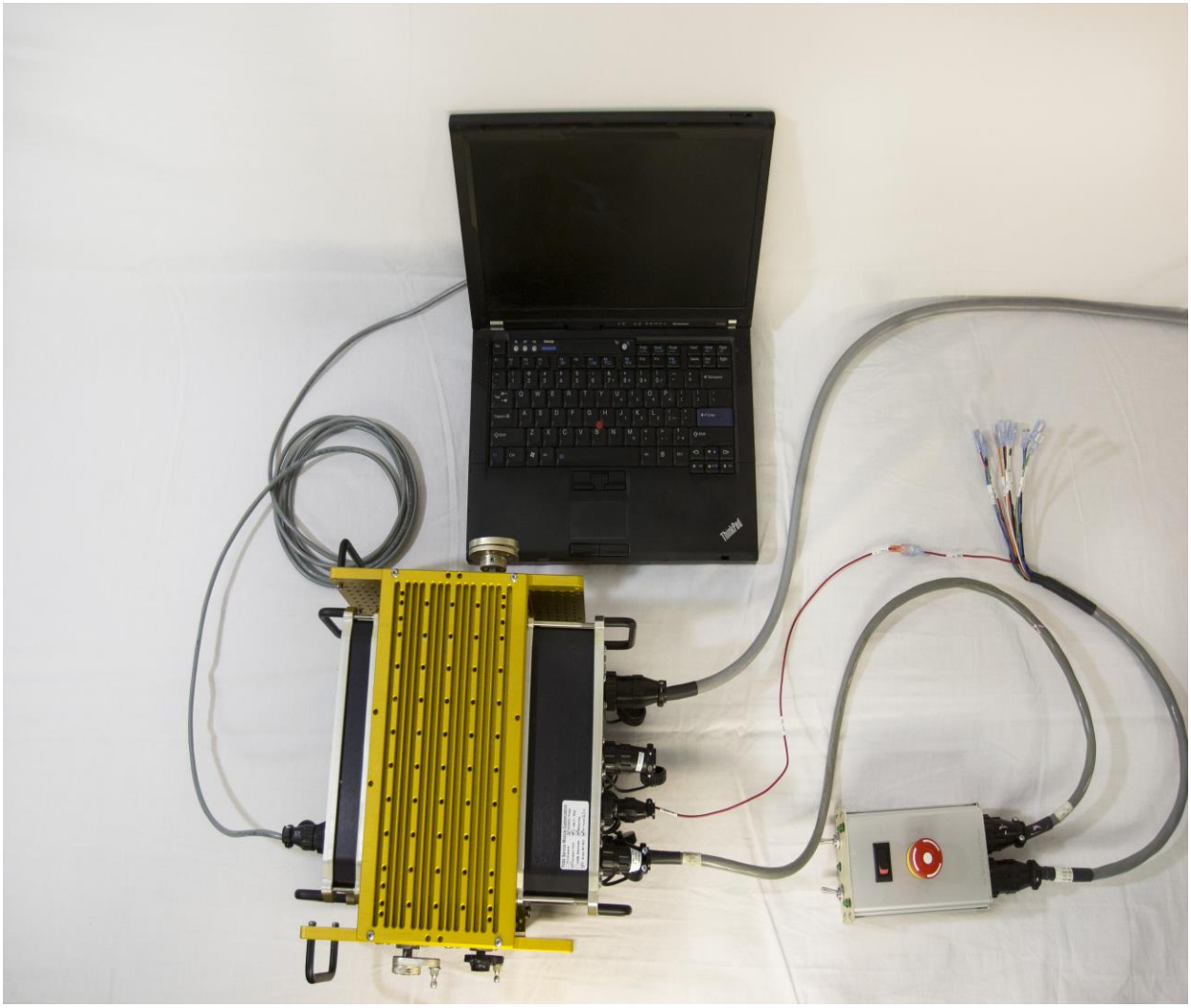

Additional Accessories

Kairos offers a variety of products to assist engineers and developers in their work. Our CPC Test Kit (P/N: KA251-01) provides assisted troubleshooting capabilities. Our CPC Development Kit (P/N: KA251-04) reduces engineering time by providing tools that the user would need to engineer prior to development work.

CPC Test Board Set

CPC Test Board Set

Includes:
CPC Utility Breakout, CPC Antenna, CPC DB-9 & USB Dev Boards, CPC Video Test, CPC Safety Panel Radio, Motor Bench Test, CPC Ethernet Dev Board, CPC USB Serial Loopback, CPC USB Serial Loopback Plug-In, CPC Single Power Test, CPC USB Surge Protector, CPC WDO Test Board, CPC VIM Simulator 28-Pin, CPC Alert Test, CPC USB Serial Loopback Board, CPC Wired E-Stop Test, CPC VIM Test P4S4 Simulator, CPC Vehicle Sim Board, CPC Vehicle Spade Test, and CPC Steering Test

Development and Maintenance Kit

Development and Maintenance Kit

Includes:
USB Type B Cable, VIM Simulator, Vehicle Simulator, Utility Module Breakout, Utility Module Indicators, CPU (3) USB Adapter, CPC (3) Serial Adapter, CPC Ethernet Adapter, Radio E-Stop Loopback, Wire E-Stop Loopback, P4S4 Bench Power Supply 12V 7 Amp, Exchange Cartridge, Vehicle Simulator Power Cable, 3-Pin CPC Power Adapter, and Utility Module Development Kit Design Data CD

Contact Information

Kairos Autonomi
498 West 8360 South
Sandy, Utah 84070 USA
801-255-2950 (office)
801-907-7870 (fax)
www.kairosautonomi.com