

EAA Homebuilders Week



ADVANCED PANEL

January 2023

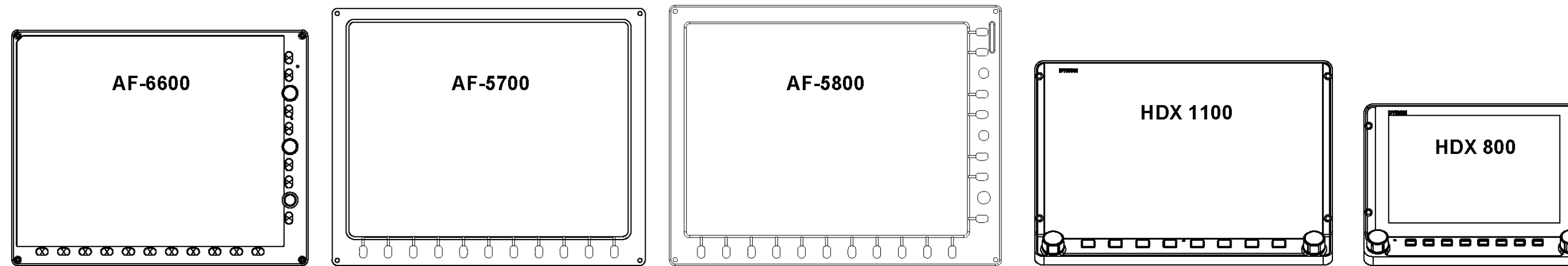
We supply everything you need for your experimental aircraft's avionics and panel wiring!

- From a simple single EFIS VFR configuration to a complex 3 EFIS IFR we have everything you need.
- We are an OEM dealer for Avidyne, PS Engineering, Uavionix, Rami Antennas, Aithre CO / O2 systems, ACK ELT's.
- We do everything from supplying all the components for you to wire to a complete ready-to-install and tested instrument panel.

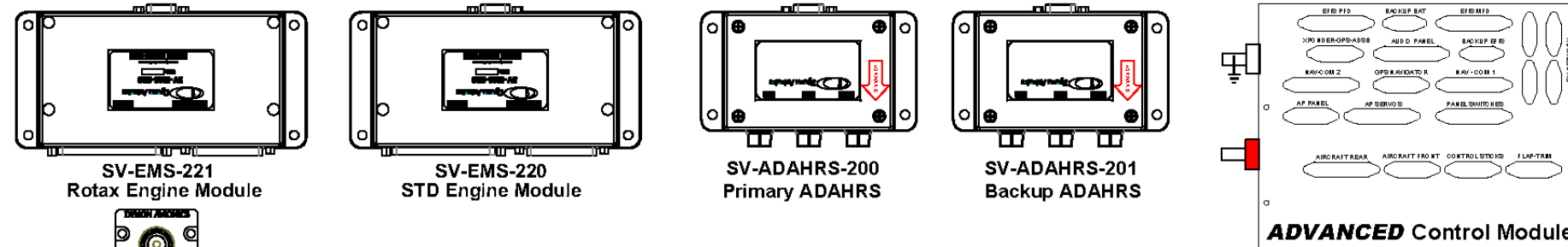


One place to call to purchase all your avionics and one place to call when you need support!

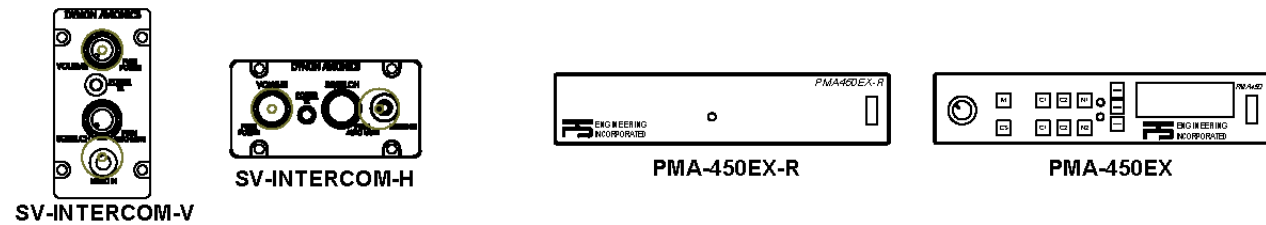
EFIS Screens



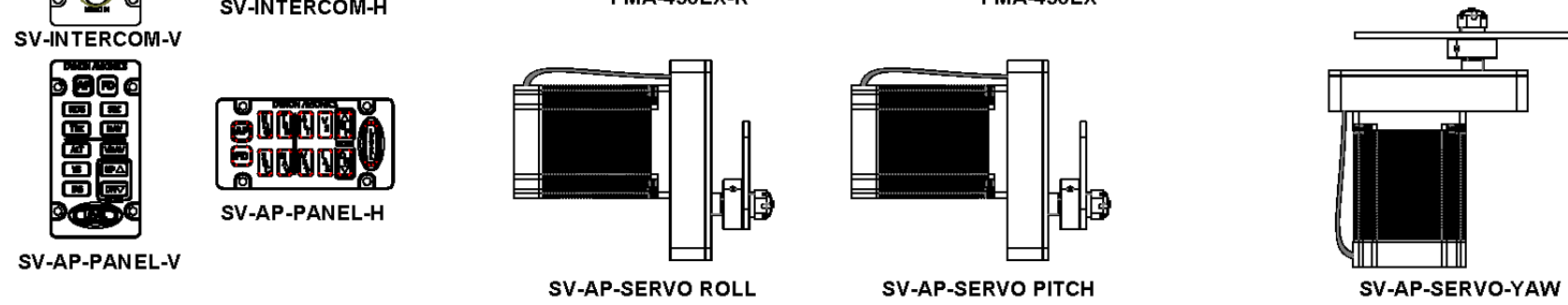
**Engine Monitoring
ADAHRS - GYRO
Electronic Circuit Breakers**



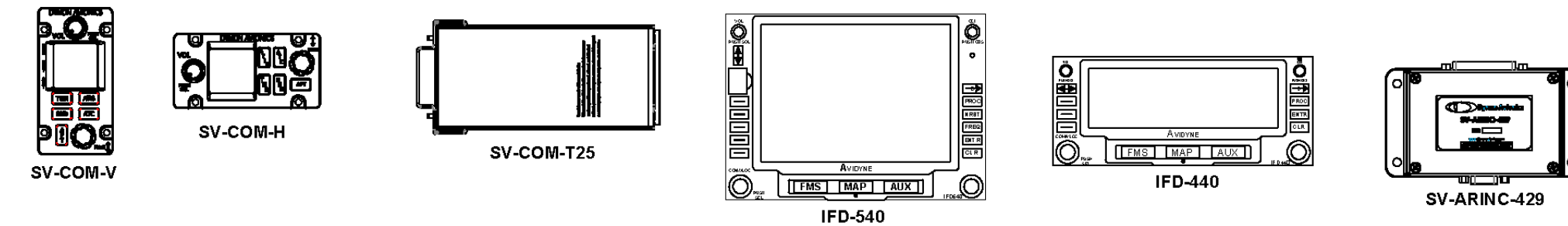
**Intercoms
Audio Panels**



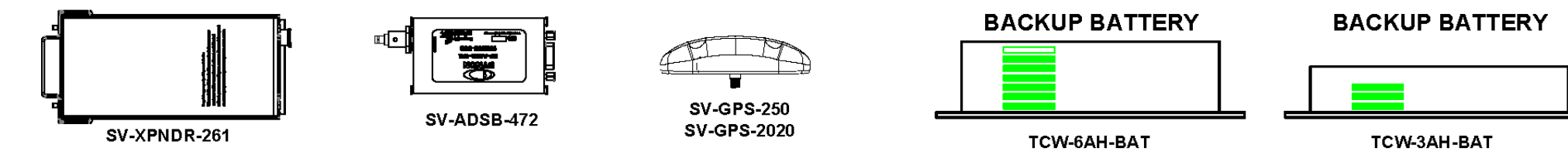
Autopilot



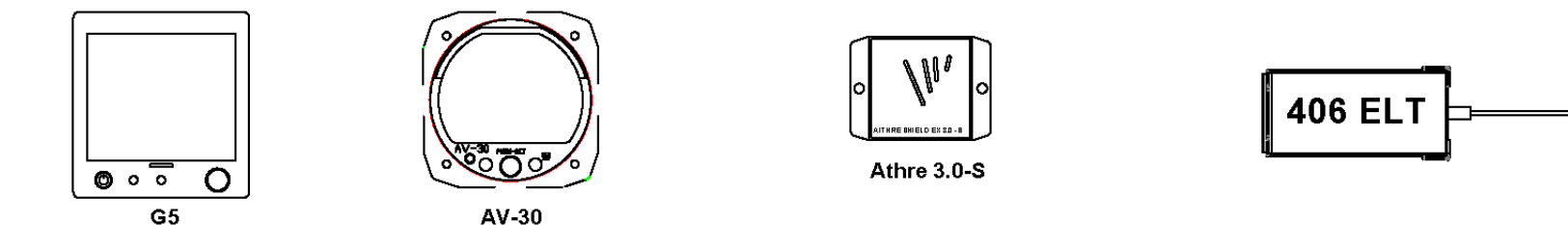
**Radios
NAV/COM/GPS
ARINC-429 Interface**



**Transponder
ADS-B Receiver
Backup Battery**



**Backup EFIS
CO Detectors
406 ELT**



AF-6600 EFIS

- The AF-6600 EFIS is a drop in replacement for an AF-5600
 - Same Mounting
 - Same Wiring
 - Fully compatible with any existing AF-5000 EFIS in your panel.



Product Features

- The AF-6600 EFIS uses a custom front mounted 10.4" LCD with under glass logo and white button lines like our HDX EFIS. The new LCD has more vivid colors and is brighter than our current AF-5600 LCD.



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- New advanced Intel i3 CPU enables EFIS and Moving Map display updates at 60 hz.
- Faster boot-time - approximately 20 seconds
- Dual concentric encoder for a more intuitive user interface.
- New encoder knobs



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- Dual concentric encoder for a more intuitive user interface.
- New encoder knobs
- Light sensor for automatic backlight adjustment
Will also dim AF-5000 units on the network



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- Faster boot time - approximately 20 seconds
- Dual concentric encoder for a more intuitive user interface.
- New encoder knobs
- Light sensor for automatic backlight adjustment
- New compact rear cover reduces panel depth requirements



New V16.10 Software Features

- Support for the new PDA-450EX-R Audio Panel
 - USB C Charging Port
 - 2 Bluetooth Inputs



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- New Airport Info Page with Buttons for:
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 - Altitude Bug set to TPS
 - Altimeter Baro set to ADS-XM
 - Sets best RWY in Flight Plan using Wind Data
 - Sets HDG Bug to Bearing to Airport



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- Interface for Aithre CO and Oxygen Systems
 - Cabin Carbon Monoxide
 - Oxygen Tank Pressure
 - Pulse Oximeter Display for Crew & Passengers

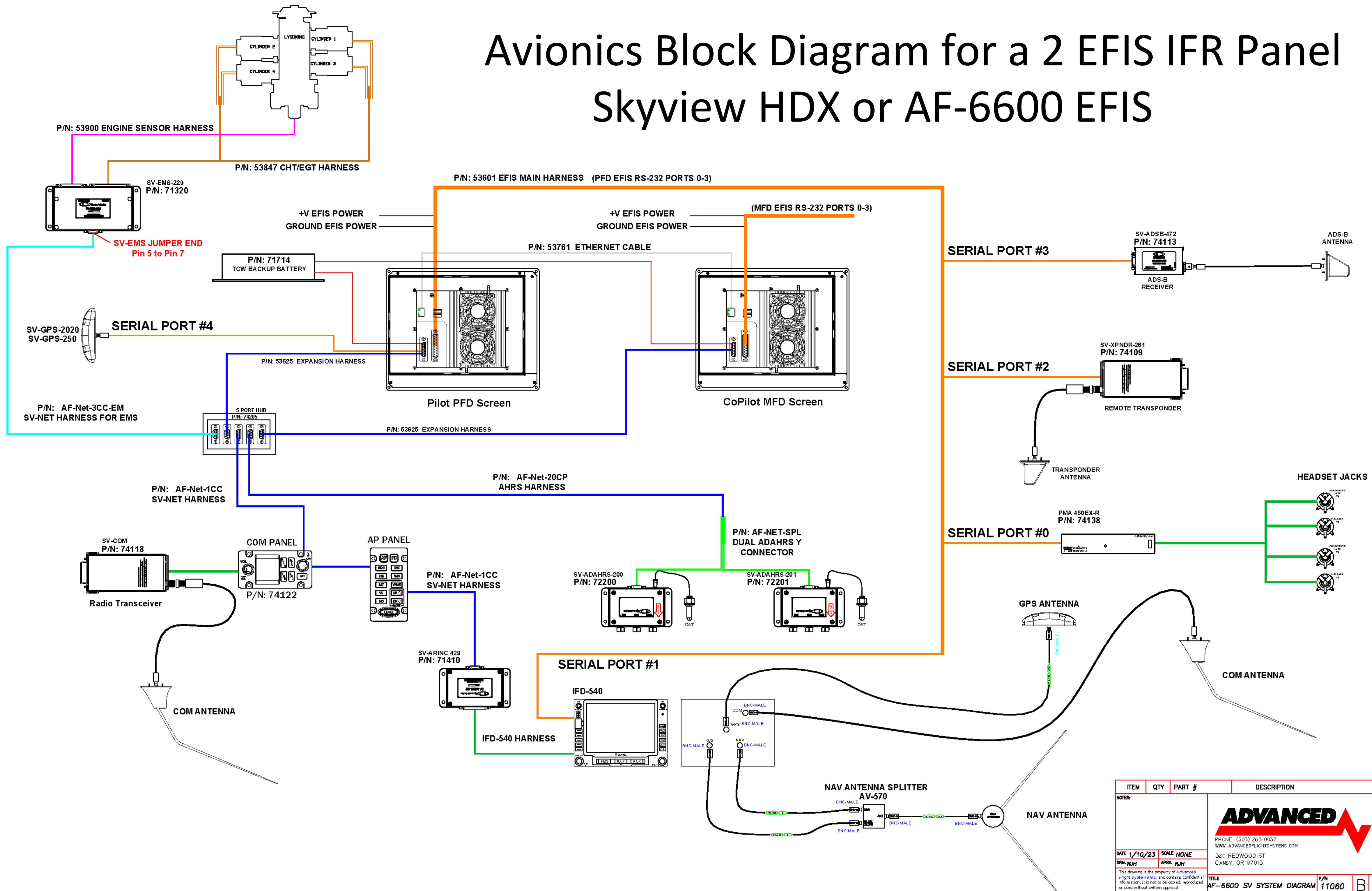


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- Interface for Aithre CO and Oxygen Systems
 - Cabin Carbon Monoxide
 - Oxygen Tank Pressure
 - Pulse Oximeter Display for Crew & Passengers
- Support for Dual Com Radios

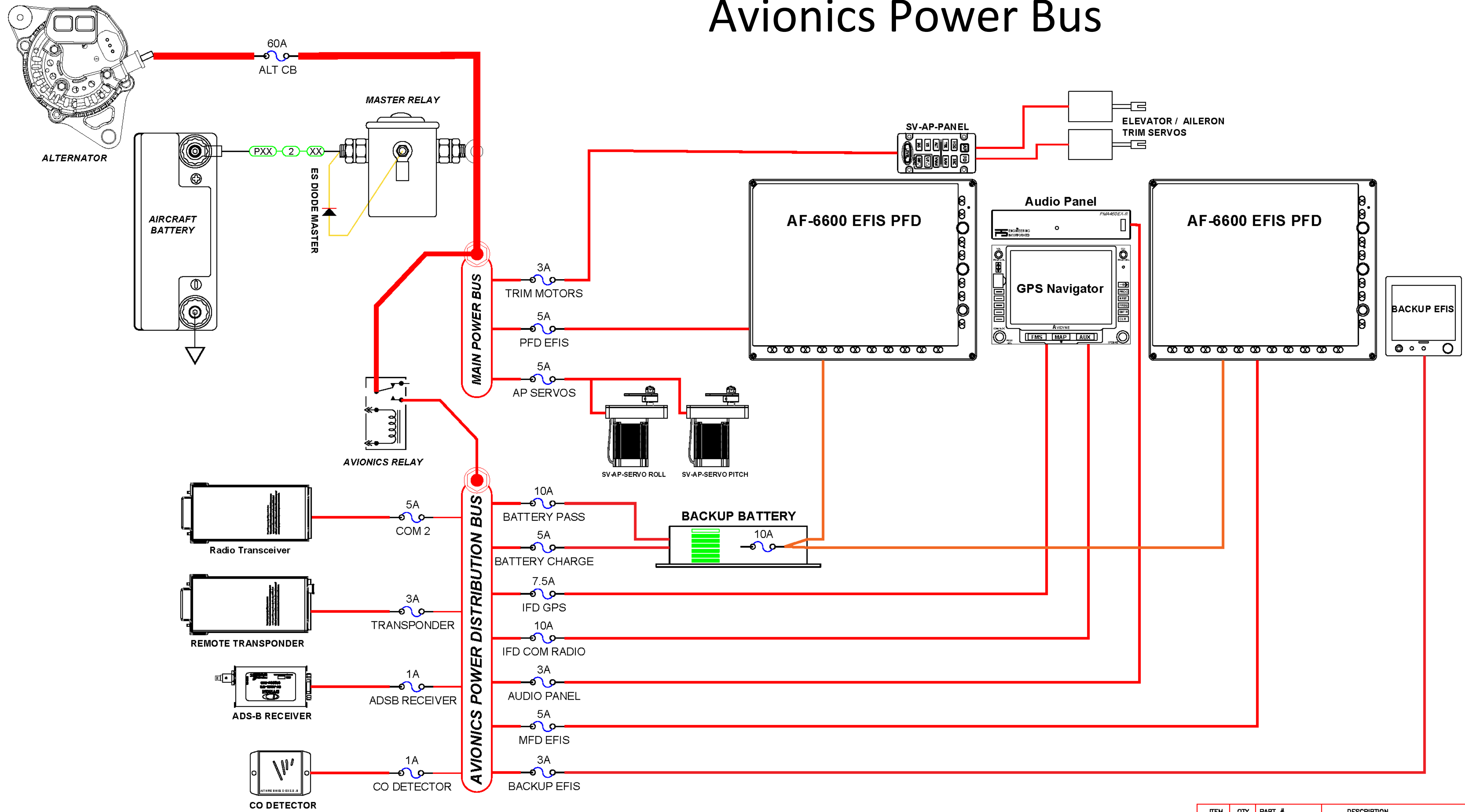


Avionics Block Diagram for a 2 EFIS IFR Panel Skyview HDX or AF-6600 EFIS



ITEM	QTY	PART #	DESCRIPTION
NOTES:			
ADVANCED			
PHONE: (503) 263-0037 WWW.ADVANCEDFLIGHTSYSTEMS.COM			
320 REDWOOD ST CANY, OR 97013			
DATE: 1/10/23	SCALE: NONE		
DRN: RJH	APRV: RJH		
This drawing is the property of Advanced Flight Systems Inc. and contains confidential information. It is not to be copied, reproduced or used without written approval.			
TITLE: AF-6600 SV SYSTEM DIAGRAM			P/N: 11060
			REV: B 1

Avionics Power Bus

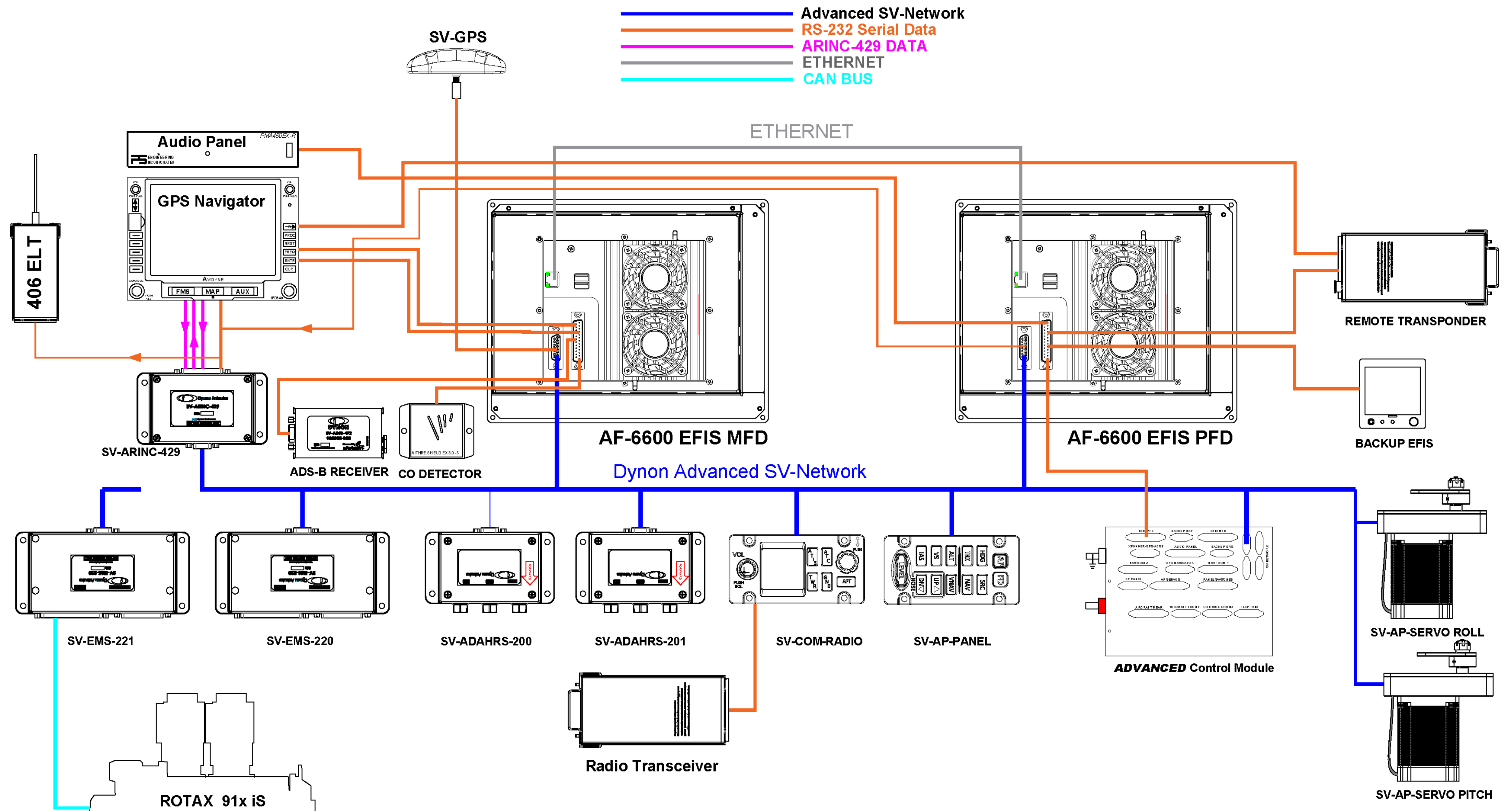


ITEM	QTY	PART #	DESCRIPTION
NOTES:			
ADVANCED			
PHONE: (503) 263-0037			
WWW.ADVANCEDFLIGHTSYSTEMS.COM			
320 REDWOOD ST			
CANY, OR 97013			
DATE: 1/10/23	SCALE: NONE		
DRN: RJH	APPV: RJH		
TITLE: AVIONICS POWER BUS			P/N: 11064
			REV: B 1

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Avionics Data Buses

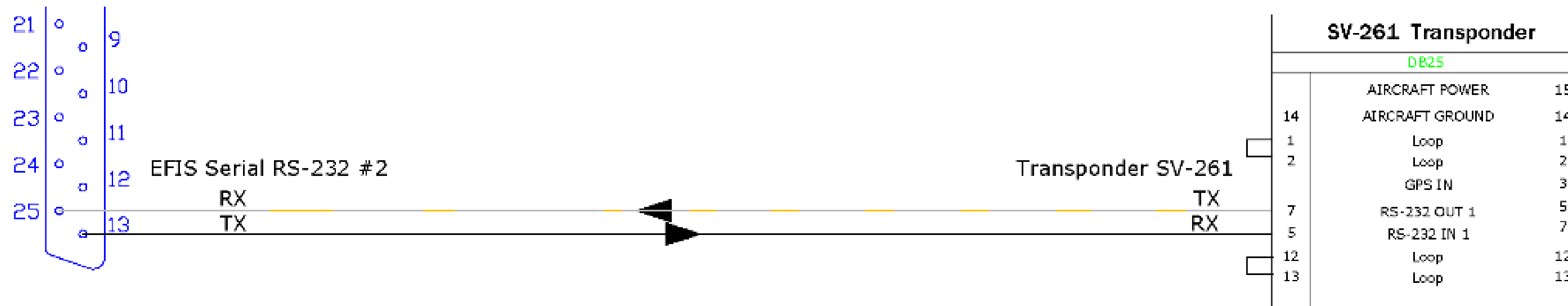
- Advanced SV-Network
- RS-232 Serial Data
- ARINC-429 DATA
- ETHERNET
- CAN BUS



ITEM	QTY	PART #	DESCRIPTION
NOTES:			
ADVANCED			
PHONE: (503) 263-0037 WWW.ADVANCEDLIGHTSYSTEMS.COM			
320 REDWOOD ST CANBY, OR 97013			
DATE: 1/10/23	SCALE: NONE	TITLE: AVIONICS DATA BUSES	
DRN: RJH	APPV: RJH	P/N: 11062	REV: B 1

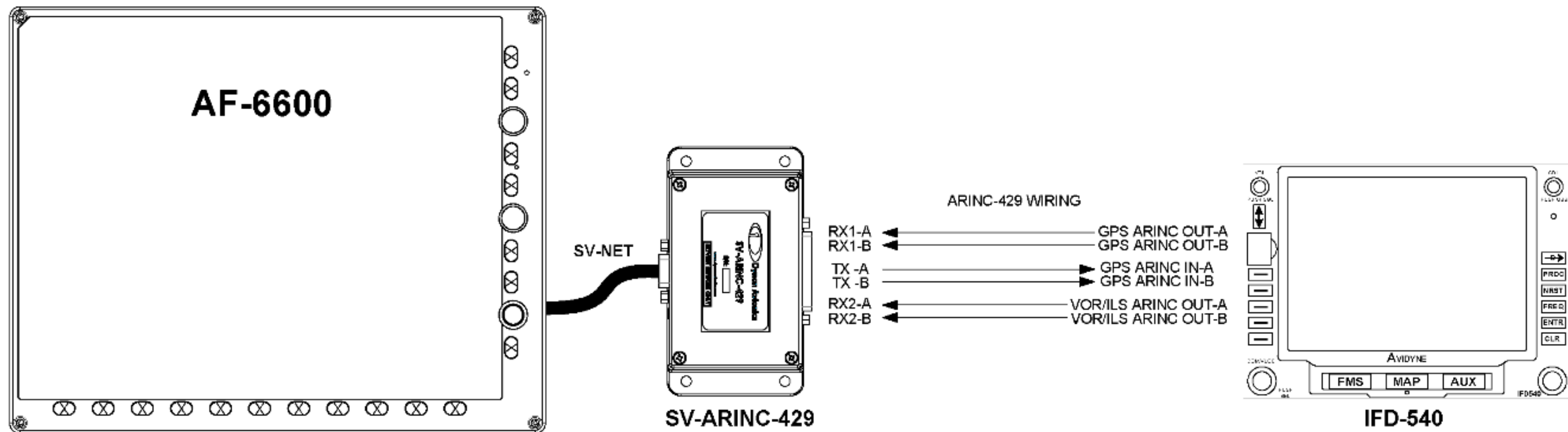
RS-232 Serial Data

Many aviation components use a RS-232 serial connection to share data. RS-232 connection has a single transmit wire (labeled TX or TXD) and a single receive wire (labeled RX or RXD). RS-232 was really designed for only two devices to share data between them. You can have a limited number of devices receive data from a single transmitter, but there should never be two transmitters on the same connection. One thing that seems to confuse people new to wiring is the need to connect the TX wire on one component to the RX wire on the other component.



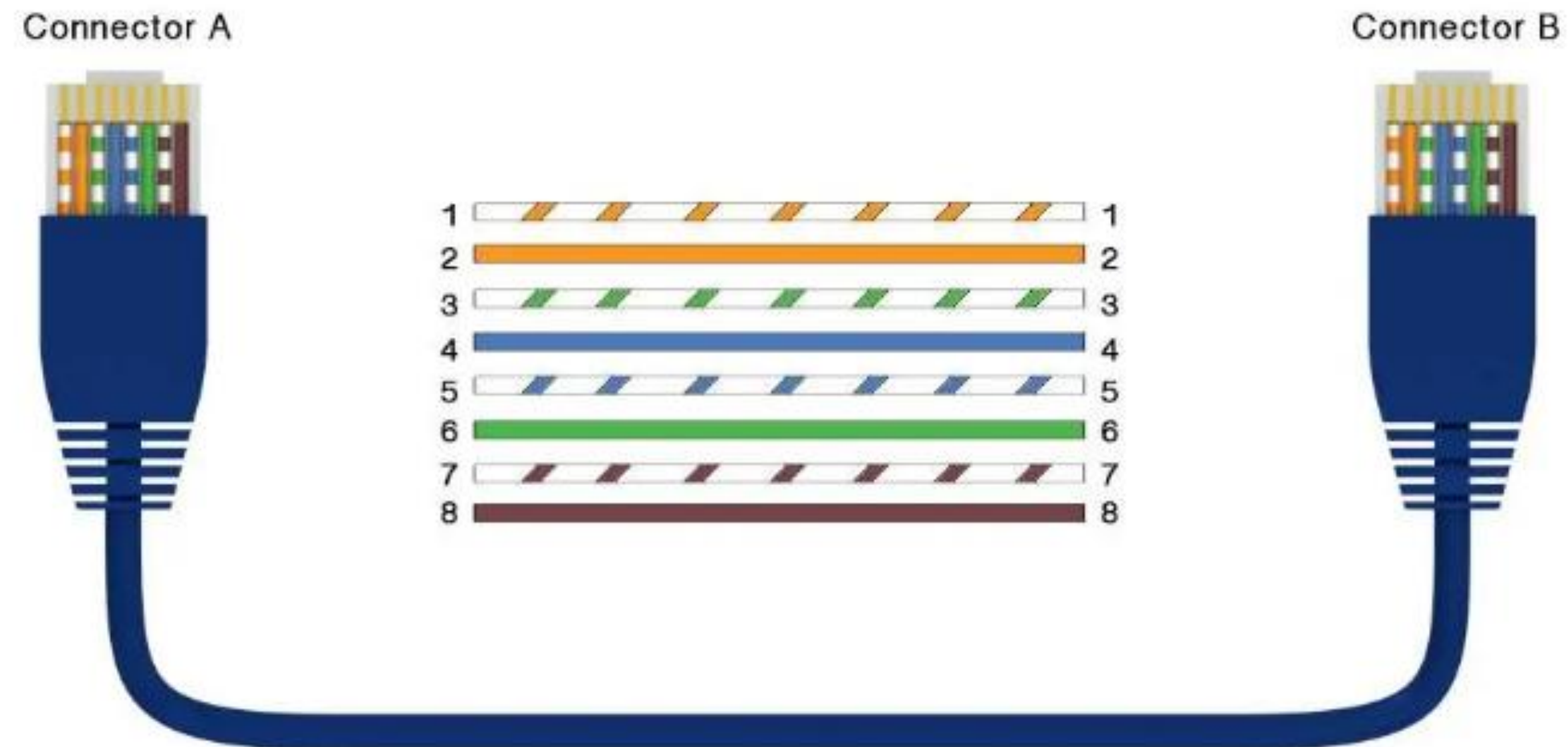
ARINC-429

ARINC-429 is a data transfer standard for aircraft avionics. The physical connection wires are on twisted pairs (Tx and Rx are on separate ports). A single wire pair is limited to one transmitter and no more than 20 receivers. If you are installing a certified NAV-COM-GPS (IFD-440, IFD540, IFD-550, GTN-650, GTN-750, GPS-175, GNS-430W) you will need to wire ARINC-429 data connections. Just like RS-232, you need to connect the TX wires on one component to the RX wires on the other component.



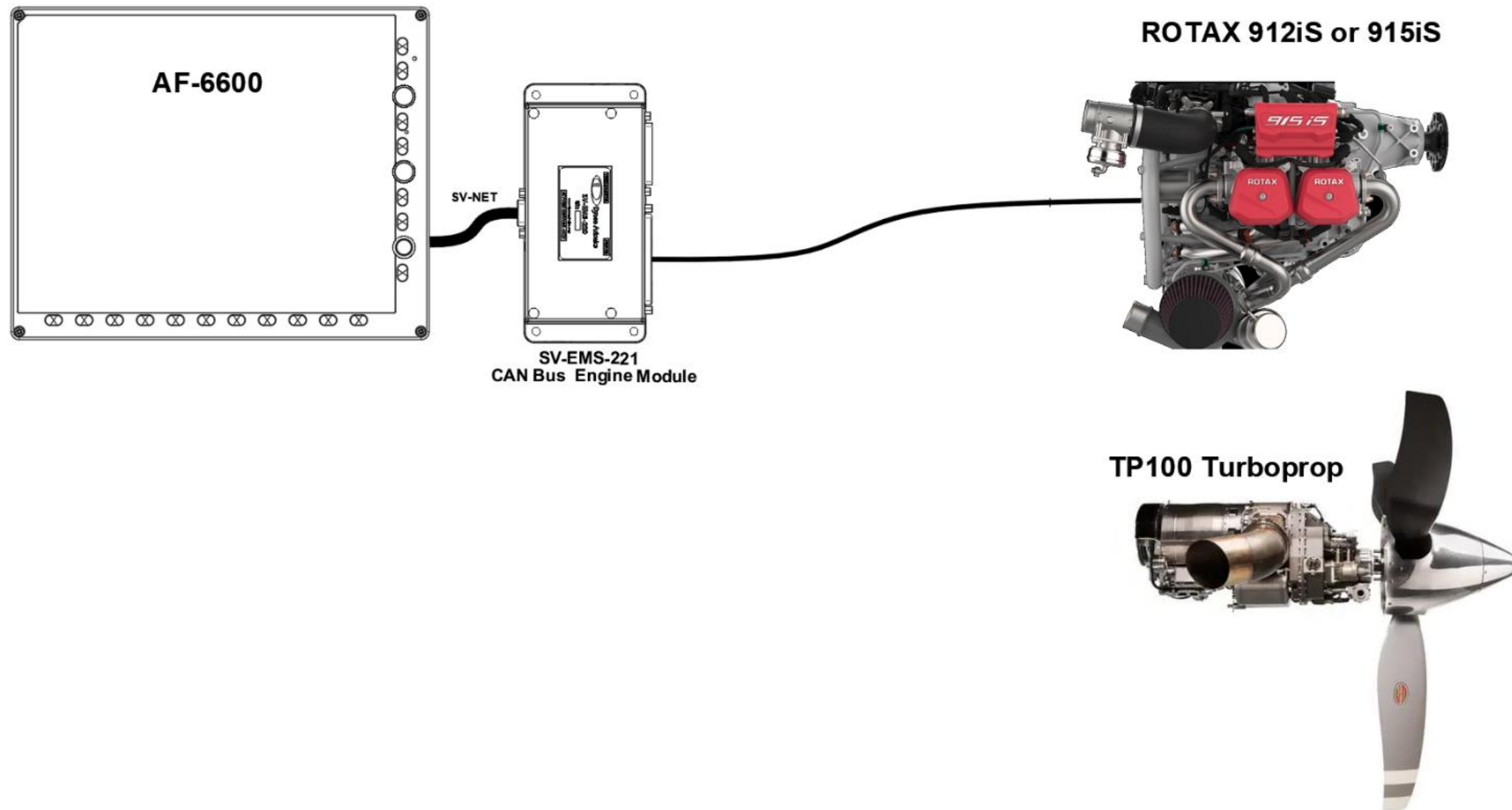
Ethernet

The AF-6600/AF-5000 EFIS screens have an 8-Pin RJ45 female Ethernet connector. The Ethernet network is used to share high-speed data between the EFIS screens and to get data from the optional XM weather module. The EFIS is designed to use a standard non-crossover Ethernet cable. If you only have two EFIS screens in the aircraft panel you can use a single Ethernet cable to connect the screens together. If you have a three EFIS screen panel or have the XM Weather module you will need to use an Ethernet Switch/Hub.

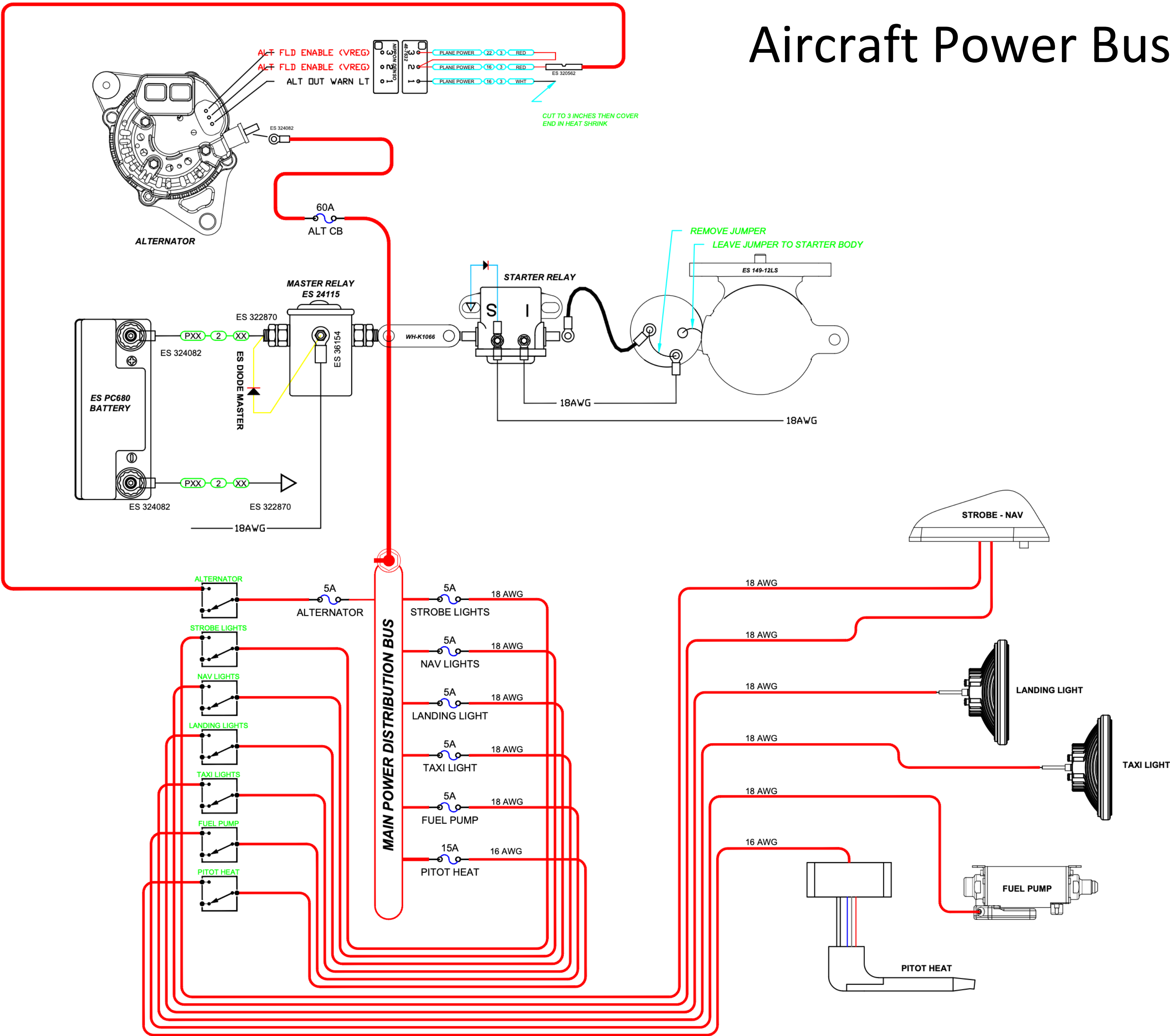


CAN Bus

The **Controller Area Network (CAN bus)** is designed to allow devices to communicate over a twisted pair of 120 ohm wires. The Dynon SV-EMS-221 engine module is designed to interface the AF-6600/AF-5000 EFIS to an engine FADEC controller that uses a CAN bus interface.



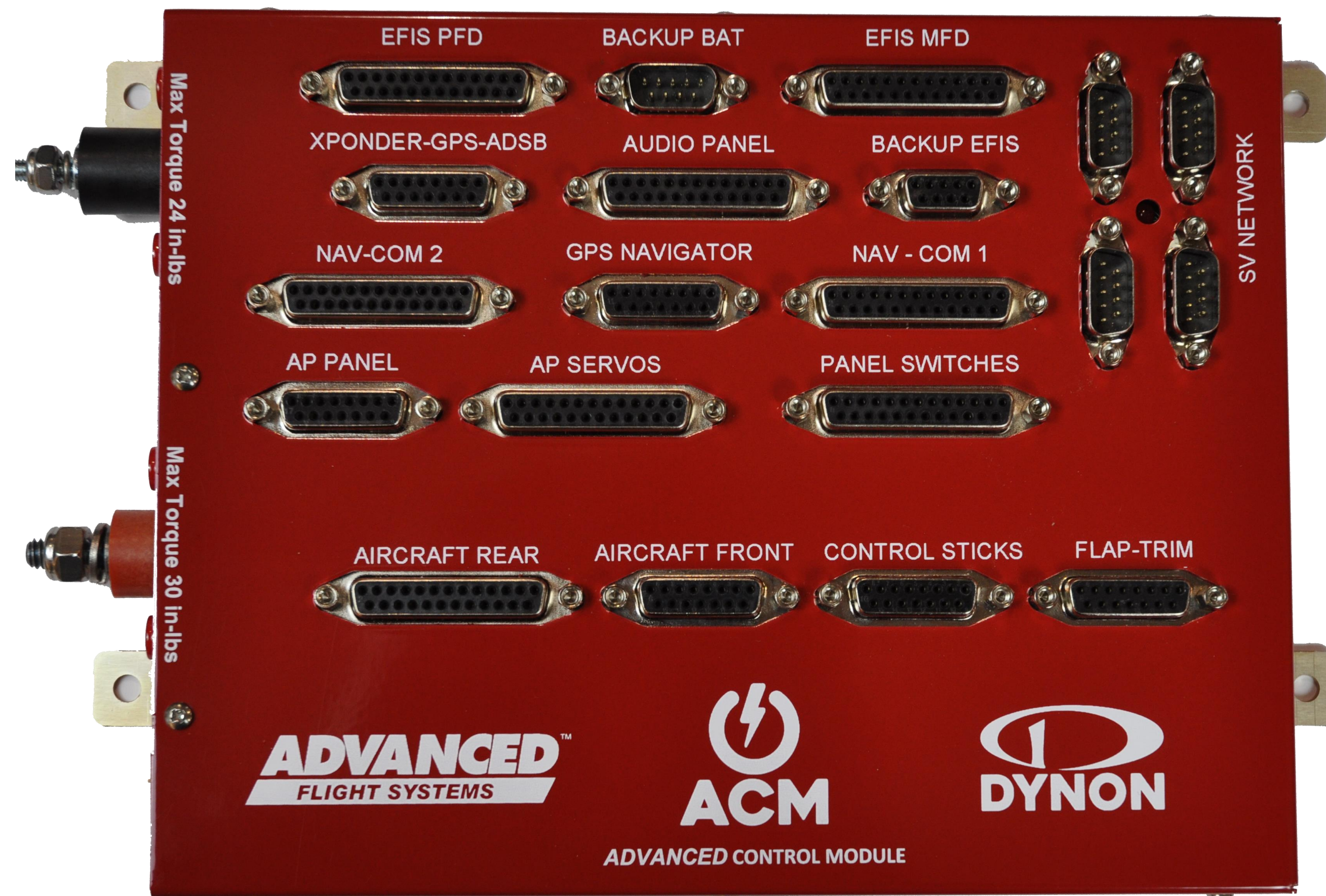
Aircraft Power Bus Wiring



ADVANCED Control Module with Electronic Circuit Breakers

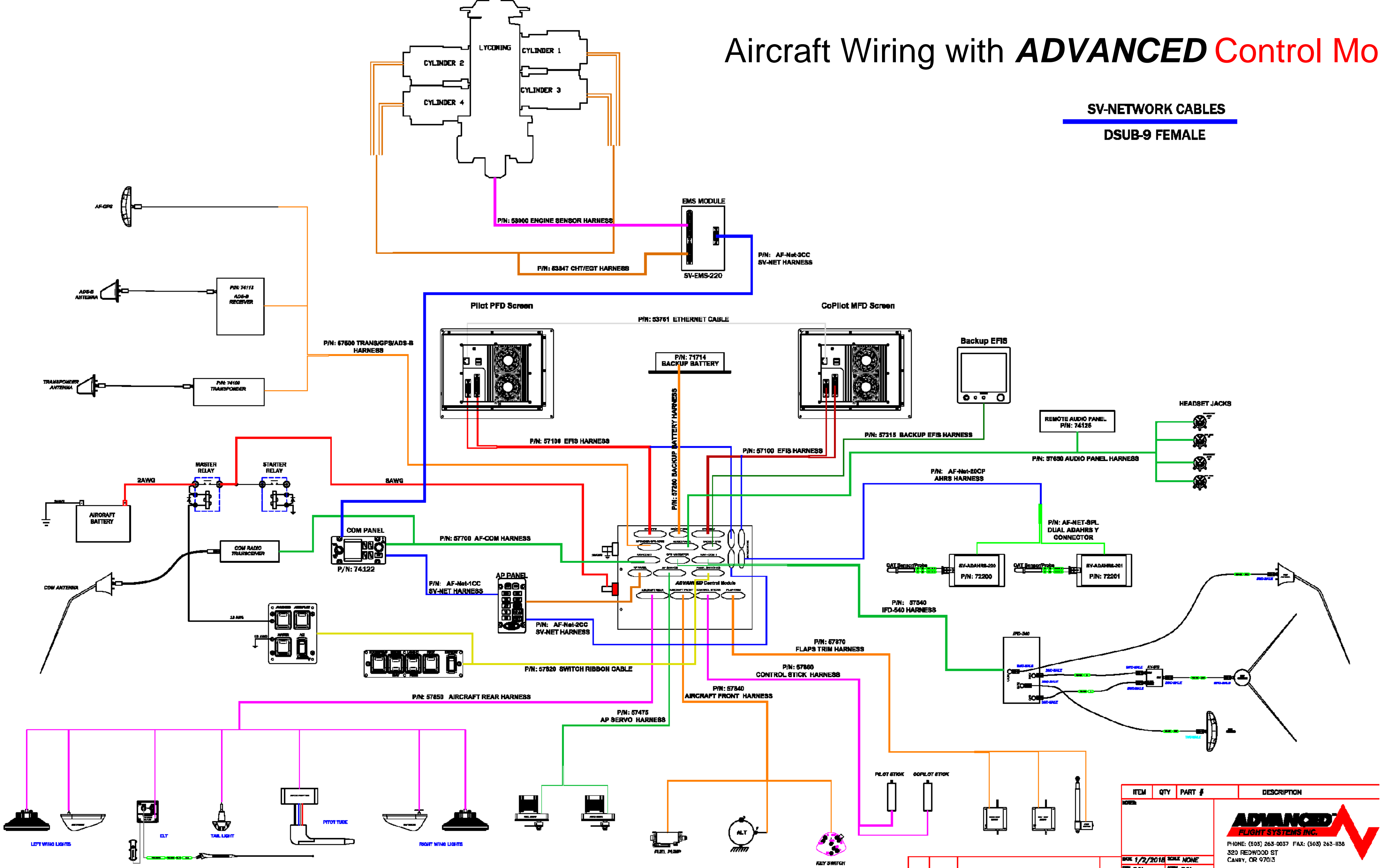
The Advanced Control Module “ACM” is the main power distribution center for the aircraft’s electrical system - avionics, headsets, aircraft lights, autopilot servos, trim servos, flap motor, control sticks and panel switches all get connected to the ACM.

- Using the ACM with its plug-and-play features vastly simplifies an aircraft’s wiring and troubleshooting.
- The ACM also makes future upgrades incredibly easy. Want to add an IFR Navigator in the future? No problem, just plug it into the ACM NAV-COM and GPS NAVIGATOR plugs. The complex and time consuming (Audio Panel, GPS RS-232 data, NAV ARINC data and GPS ARINC) wiring is already done.



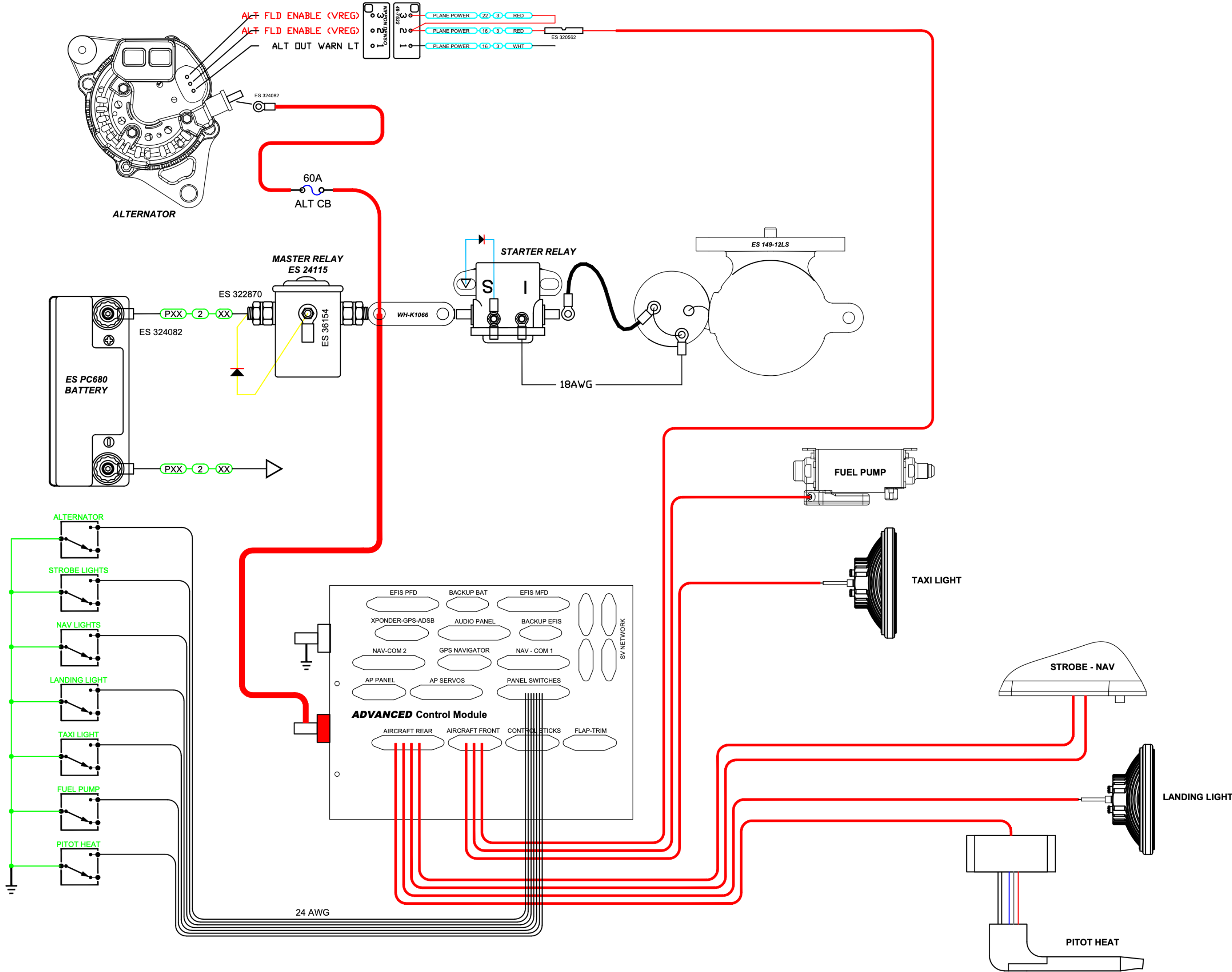
Aircraft Wiring with **ADVANCED** Control Module

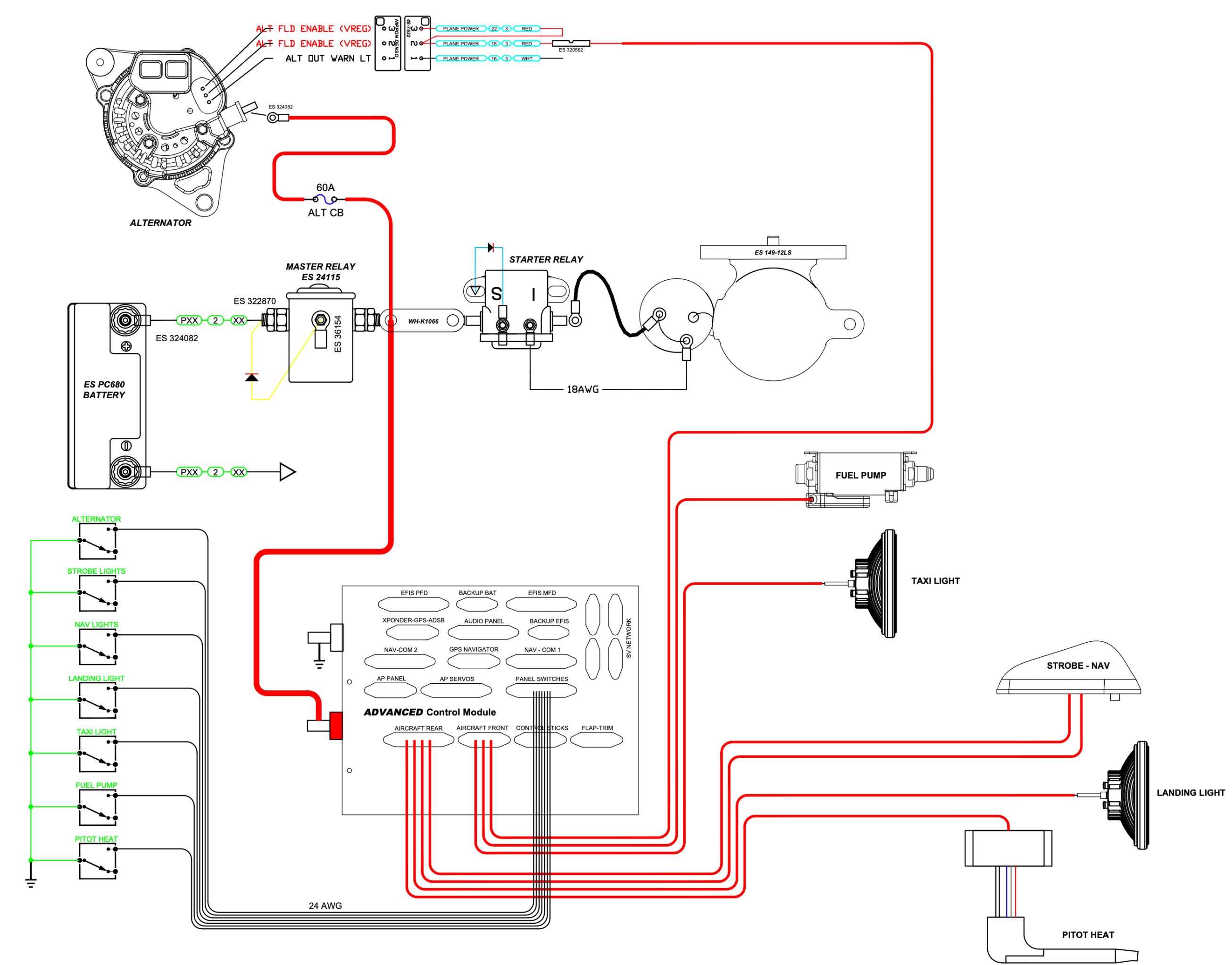
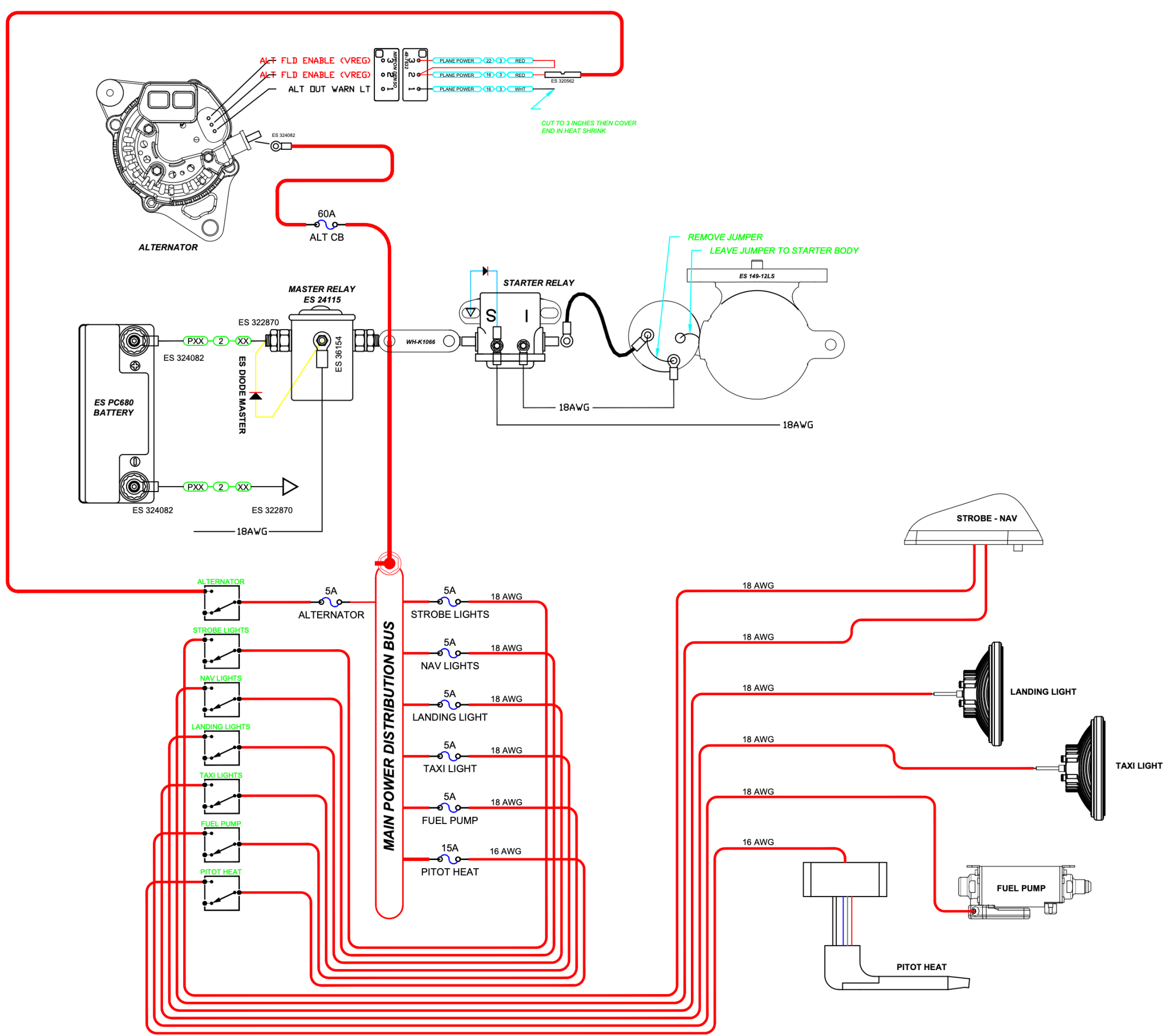
SV-NETWORK CABLES
DSUB-9 FEMALE

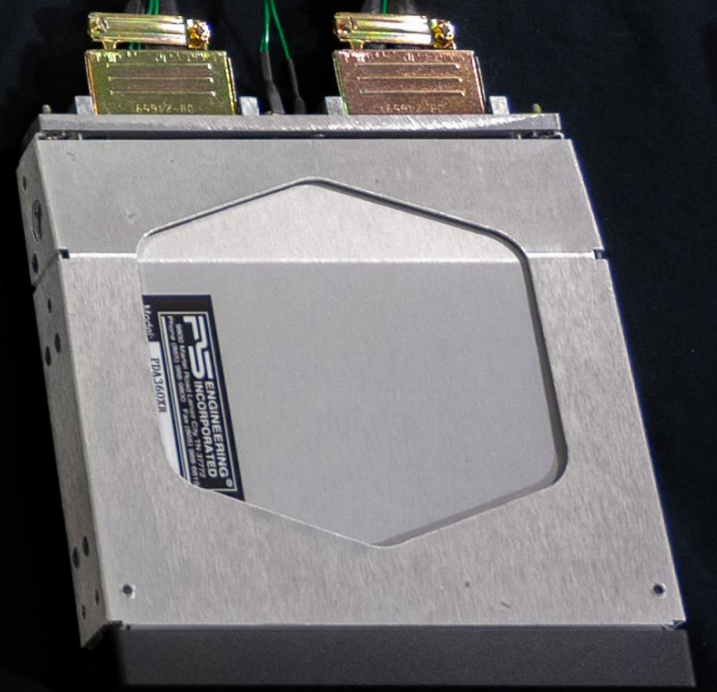
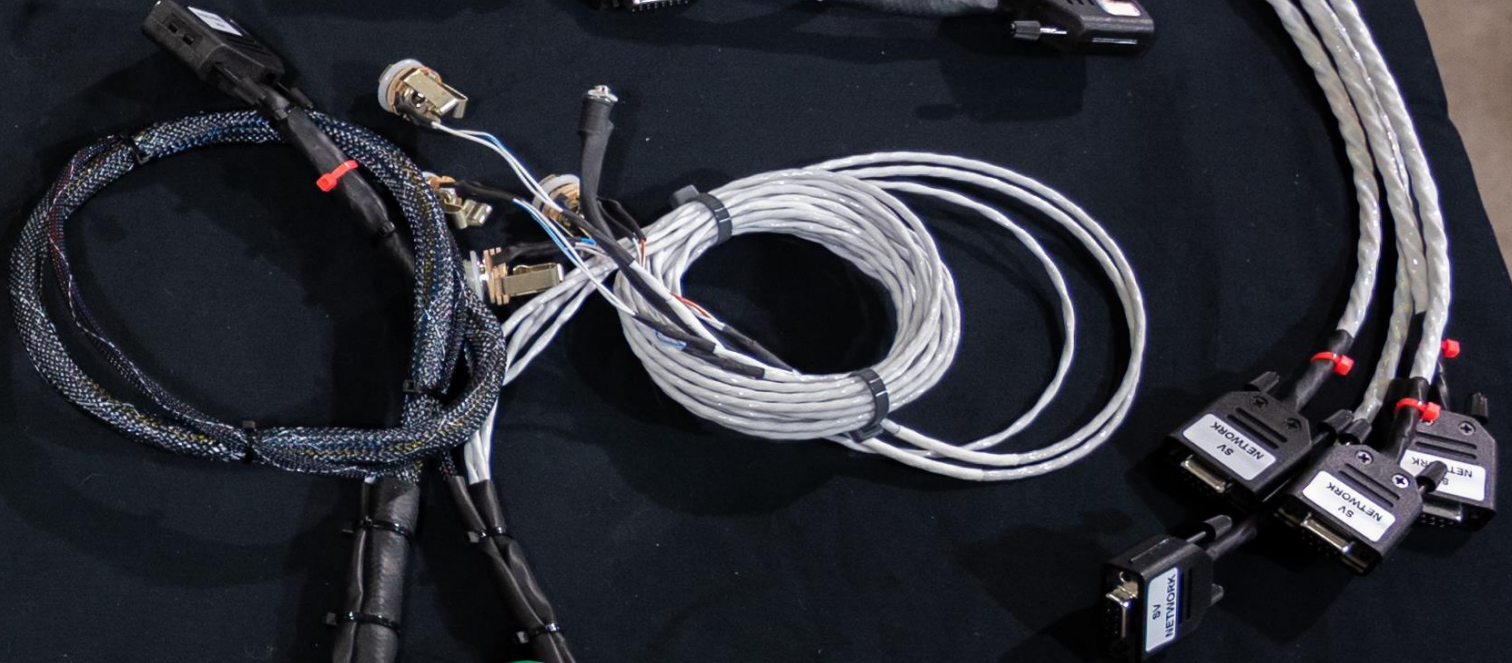


ITEM	QTY	PART #	DESCRIPTION
<p>ADVANCED FLIGHT SYSTEMS INC.</p> <p>PHONE: (503) 263-0037 FAX: (503) 263-1136 320 REDWOOD ST CANYON, OR 97013</p>			
<p>DATE: 1/2/2018 SCALE: NONE DWN: RLM APP: RLM</p>			
<p>REV: 3 2/9/2016 Revised ACM power, power, Control Stick Harness</p>			
<p>REV: 2/9/2016</p>			
<p>REV: 2/9/2016</p>			
<p>TITLE: ACM-ECB GENERIC AIRCRAFT WIRING SV-EMS</p>			<p>P/N: 70080-WB</p>

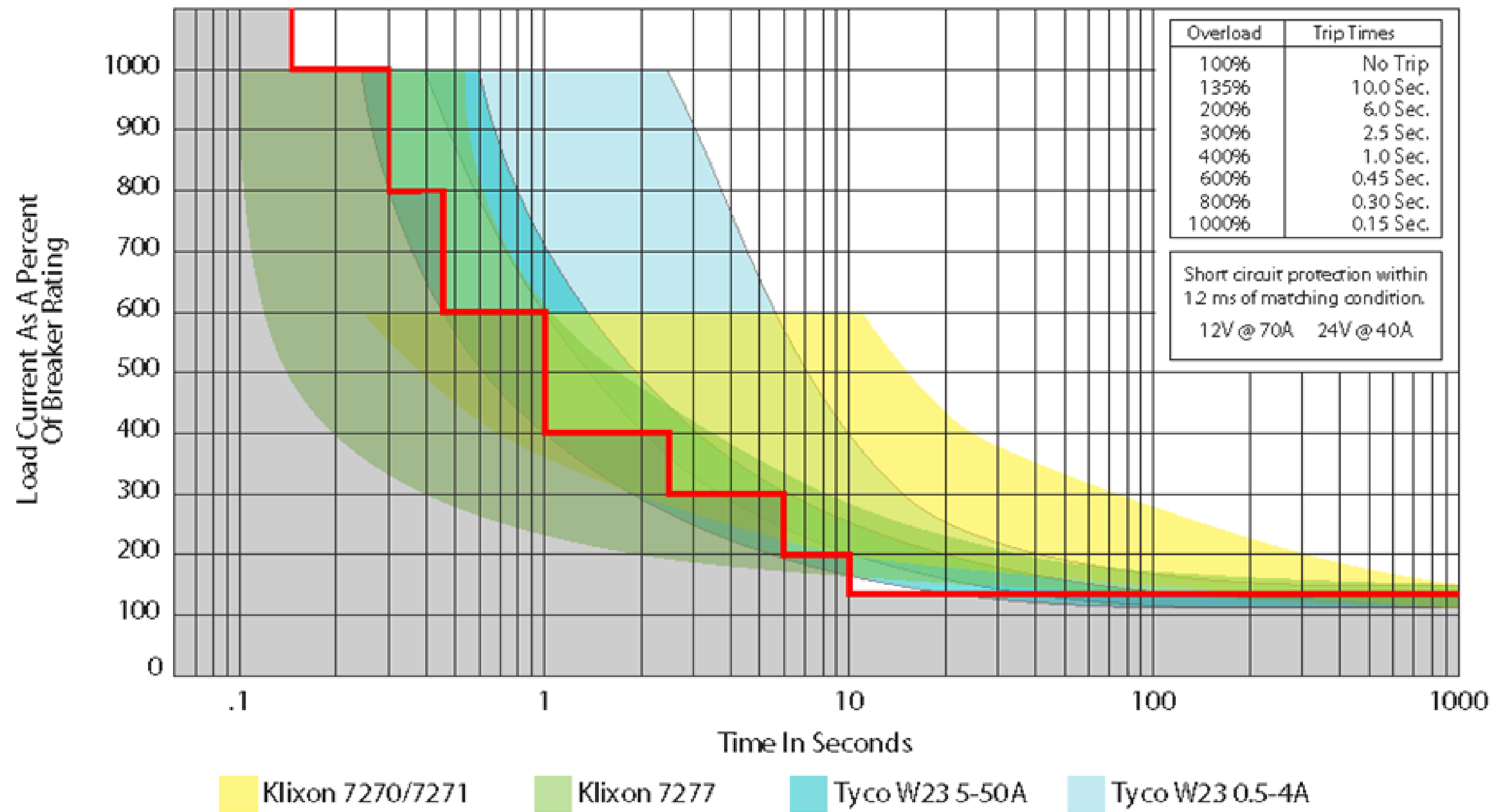
Aircraft Wiring with **ADVANCED** Control Module



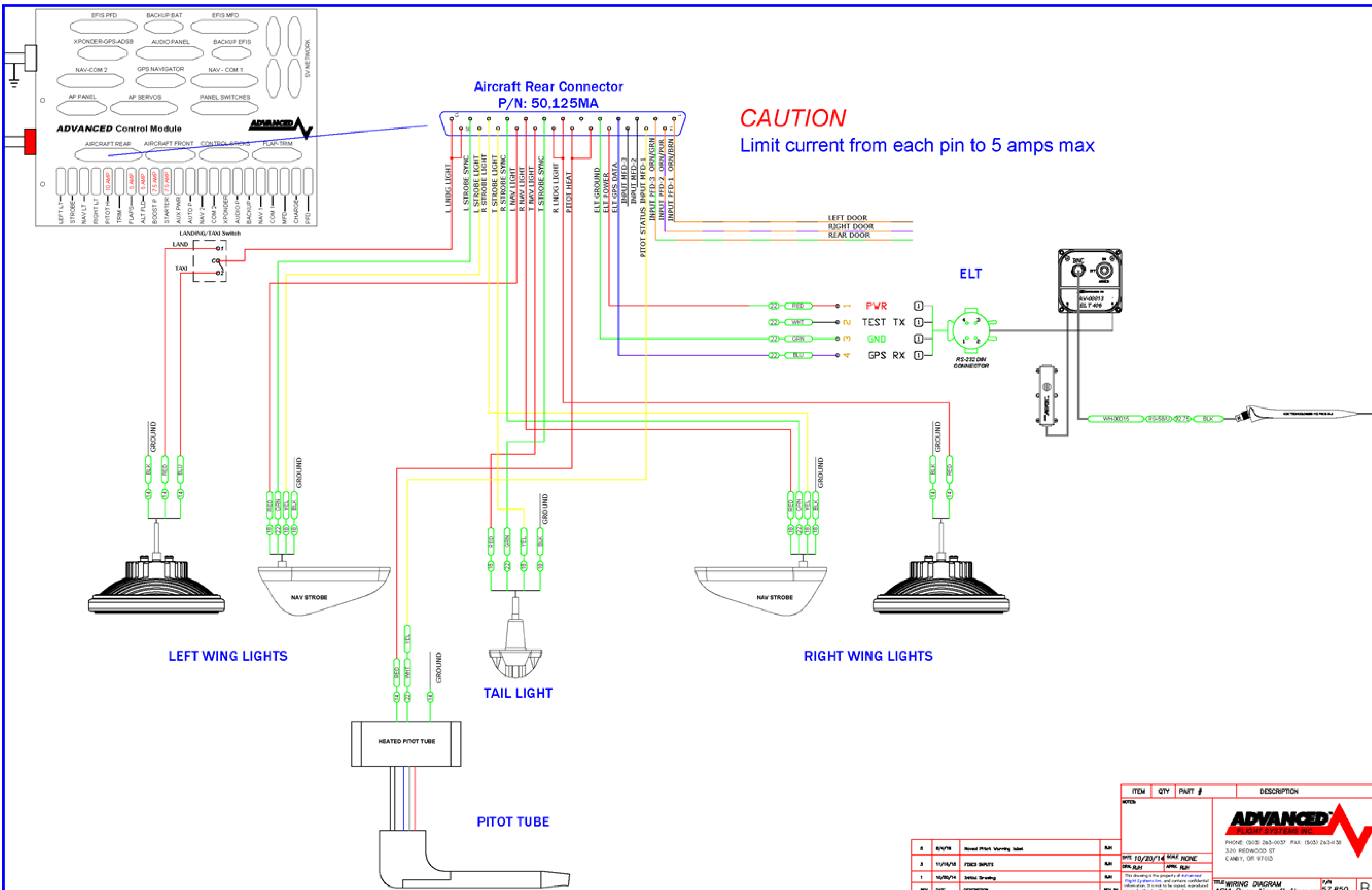




Operating Range of ACM Electronic Circuit Breakers





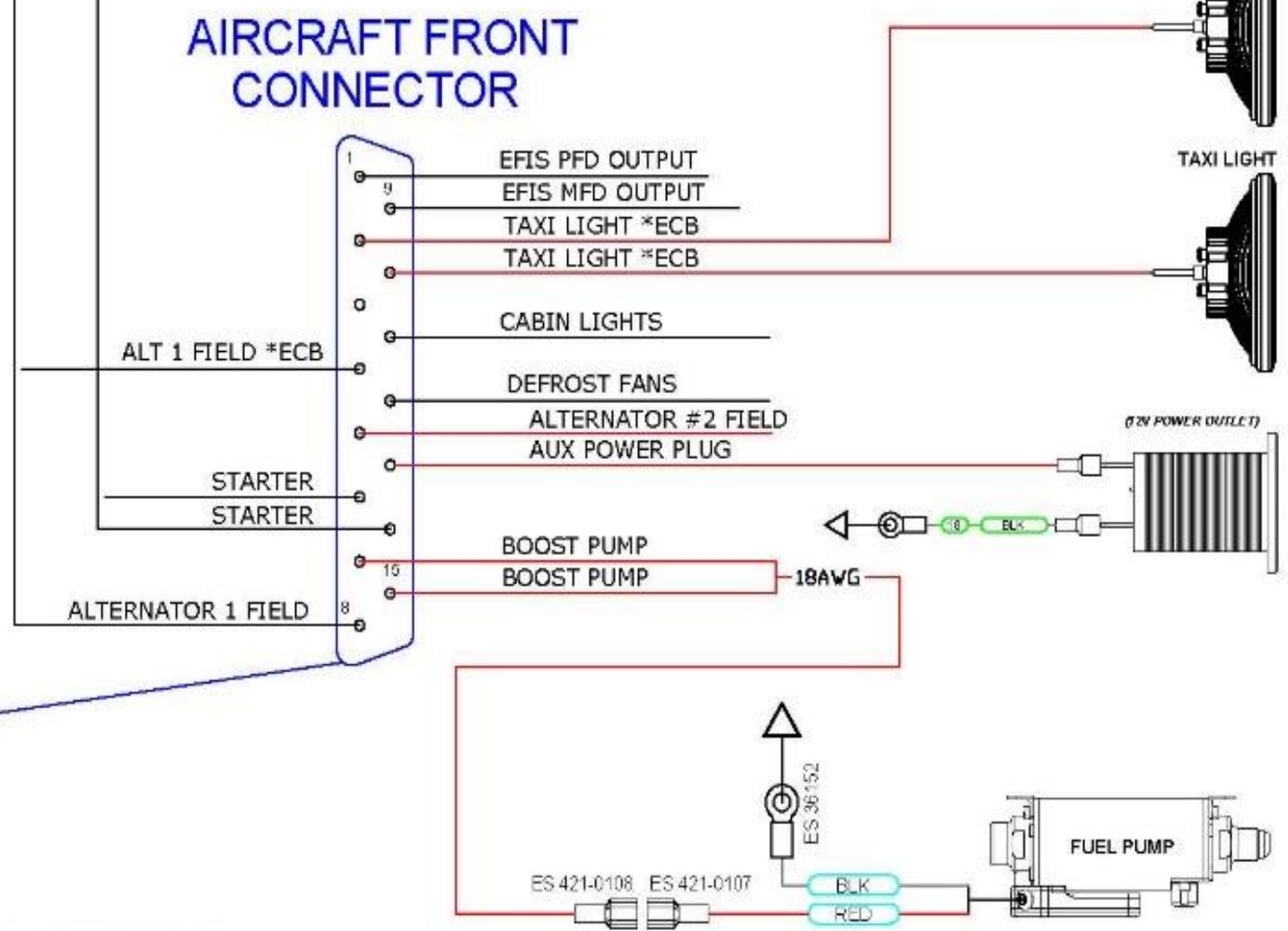
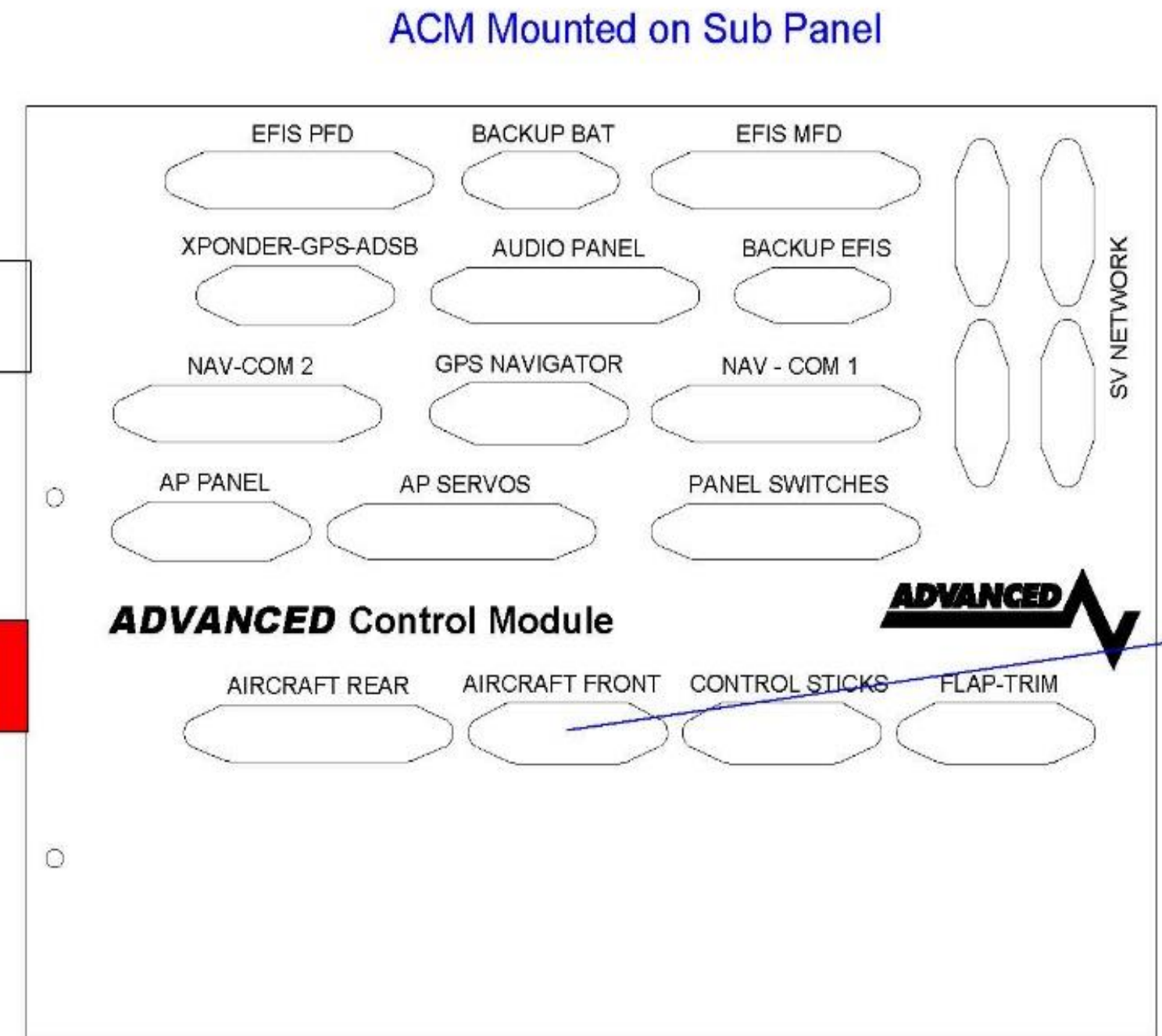
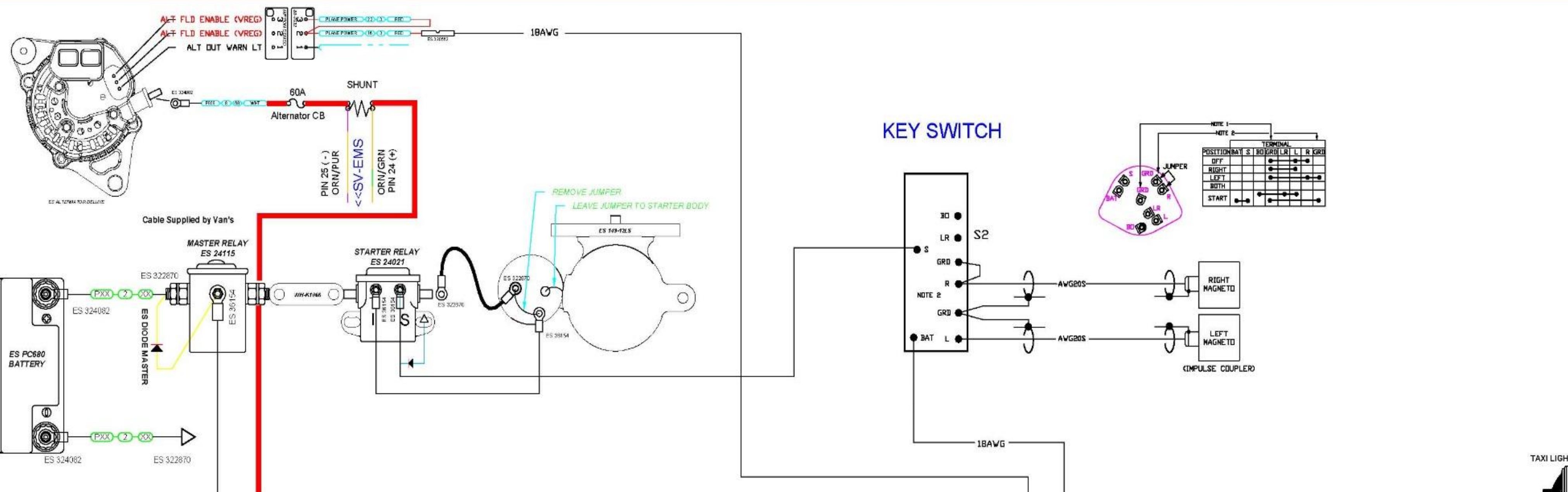


CAUTION
Limit current from each pin to 5 amps max

- 21 RED PWR
- 22 WHT TEST TX
- 23 GRN GND
- 24 BLU GPS RX

REV	DATE	DESCRIPTION	REV BY
2	8/1/18	Revised Pinout Wiring Label	RAJ
3	11/16/18	FDIC3 UPDATE	RAJ
1	10/20/14	Initial Drawing	RAJ

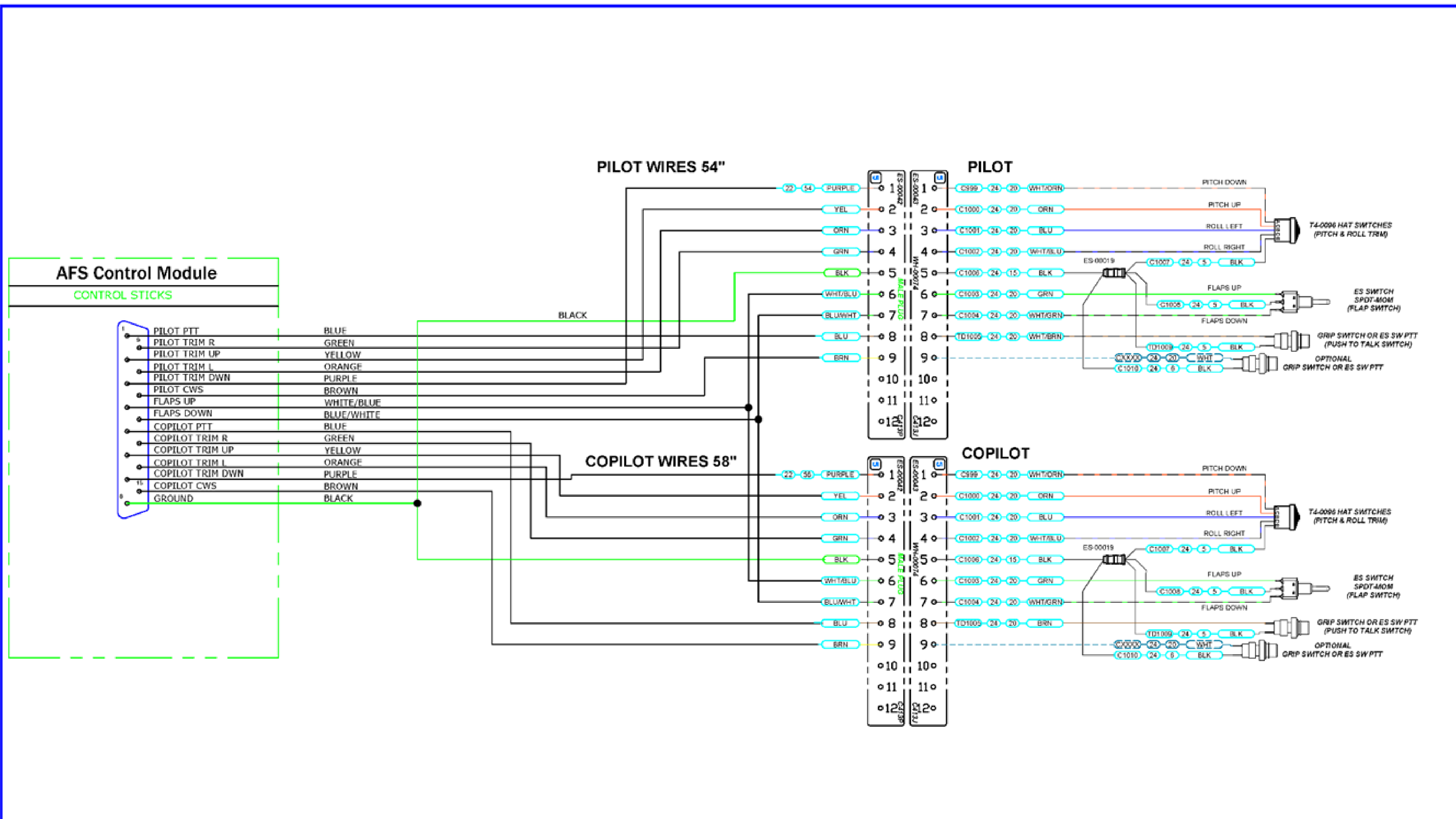
ITEM	QTY	PART #	DESCRIPTION
<p>ADVANCED FLIGHT SYSTEMS INC. PHONE: (503) 263-0037 FAX: (503) 263-1138 320 REDWOOD ST CANY, OR 97103</p>			
<p>DATE: 10/20/14 SCALE: NONE DRN: RAJ APPR: RAJ</p>			<p>REV: 57,850 B 5</p>



CAUTION
Limit current from each pin to 5 amps max

ITEM	QTY	PART #	DESCRIPTION
NOTES:			
ADVANCED FLIGHT SYSTEMS INC.			
PHONE: (503) 263-0037 FAX: (503) 263-1130 320 REDWOOD ST CANBY, OR 97013			
DATE: 10/20/14		SCALE: NONE	
DRAWN: RJH		APPROVED: RJH	
This drawing is the property of Advanced Flight Systems Inc. and contains confidential information. It is not to be copied, reproduced, or disclosed without written approval.			
TITLE: WIRING DIAGRAM ACM Front Aircraft Harness			P/N: 57B40
			REV: 5

REV	DATE	DESCRIPTION	REV BY
3	3/14/19	Initial Drawing	RJH
1	10/20/14	Initial Drawing	RJH



ITEM	QTY	PART #	DESCRIPTION
1	1/2/15	57860	Control Stick Harness

ADVANCED FLIGHT SYSTEMS INC.

TEL: (803) 265-0037 FAX: (803) 265-0038
 310 REDWOOD ST
 CABEL, OR 97035

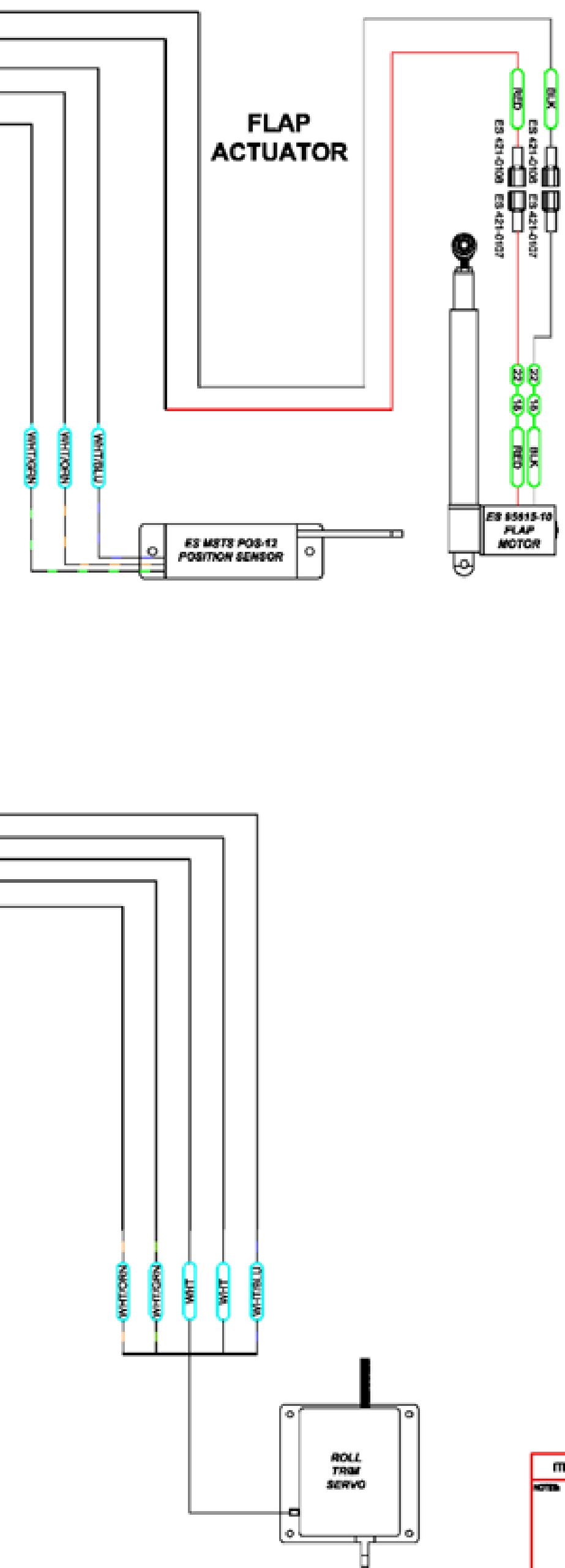
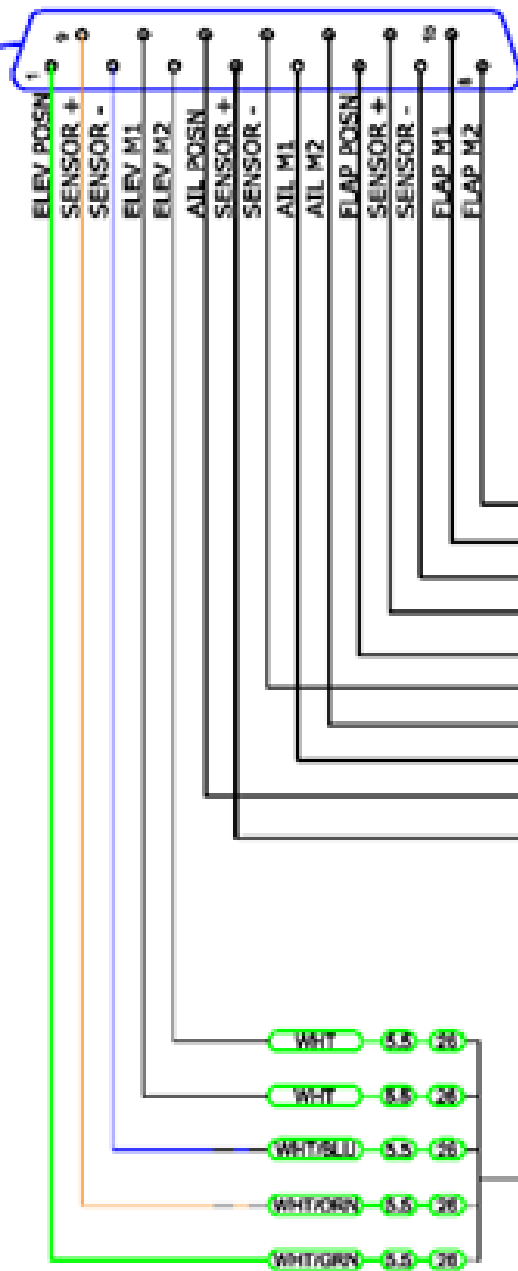
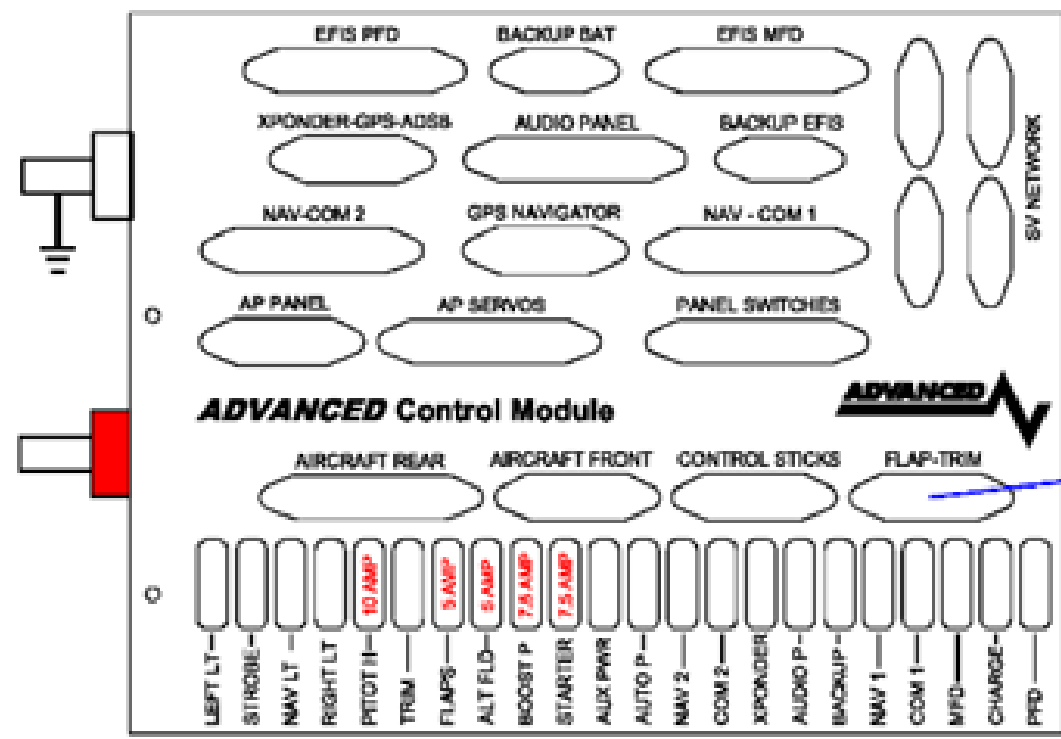
REV: 2/6/15 WORK NONE
 DATE: 2/6/15 PPN: BLK

REV: 1/2/15 WORK NONE
 DATE: 1/2/15 PPN: BLK

REV: 1/2/15 WORK NONE
 DATE: 1/2/15 PPN: BLK

REV: 1/2/15 WORK NONE
 DATE: 1/2/15 PPN: BLK

ACM Mounted on Sub Panel



CAUTION

Limit current from each pin to 5 amps max

REV	DATE	DESCRIPTION	BY	CHKD
1	10/20/14	Initial Drawing		
REV	DATE	DESCRIPTION	BY	CHKD

ITEM	QTY	PART #	DESCRIPTION
NOTES			
PHONE: (503) 263-0037 FAX: (503) 263-1128 320 REDWOOD ST CANBY, OR 97015			
DATE: 2/3/15 DRAWN: RJA CHECKED: RJA			NONE
TITLE: WIRING DIAGRAM Flap and Trim Harness			P/N: 57.870 REV: B 2

ACM JUMP START KIT

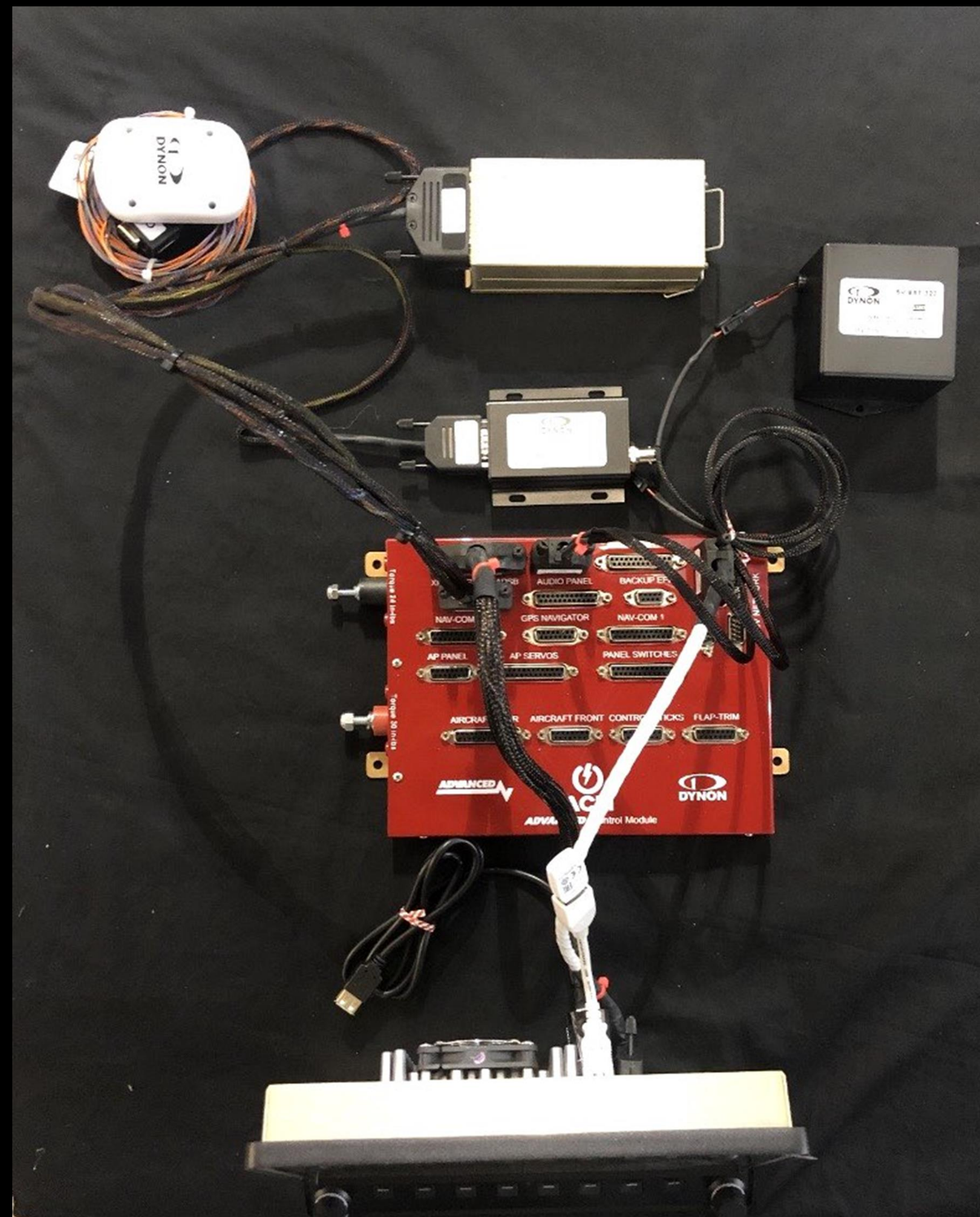


The Advanced Control Module “ACM” Jump Start Kit will provide you with a solid well-engineered foundation for your aircraft’s electrical system and panel wiring.

Jump Start Kit includes:

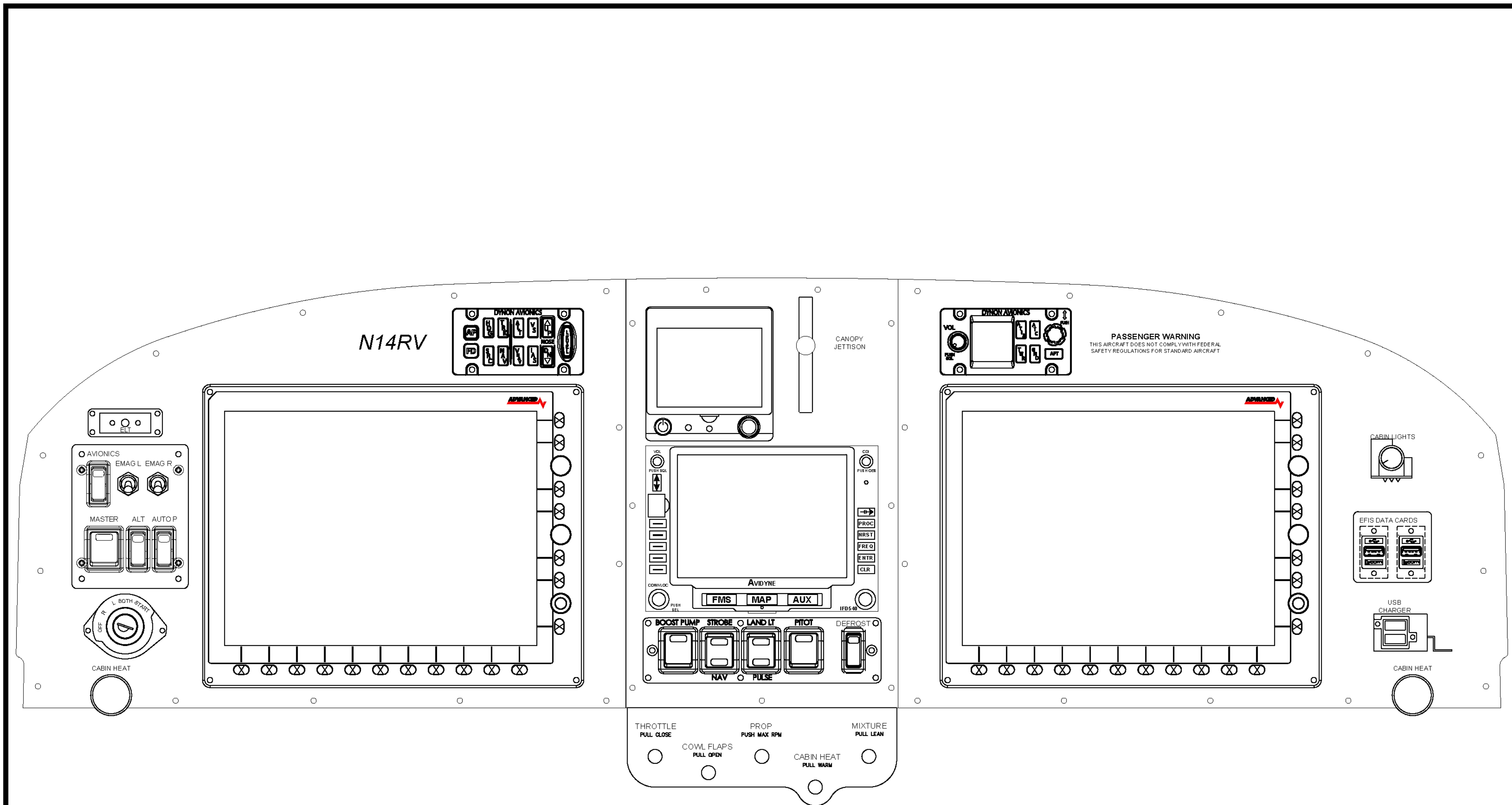
Item	Qty	Part Number	Description
1	1	78000	Advanced Control Module with Electronic Circuit Breakers
2	1	57200-24	ACM to EFIS Main Harness 24”
3	1	57500	ACM to Transponder, ADS-b, GPS Harness
4	1	57265	ACM EFIS Dual Backup Battery Harness
5	1	AF-NET-2CC	SV-NET Cable for ACM to EFIS 24”


Package Price \$3,250



ADVANCEDPANEL Options





ITEM	QTY	PART #	DESCRIPTION
NOTES:			
 PHONE: (503) 263-0037 FAX: (503) 263-1138 320 REDWOOD ST CANBY, OR 97013			
DATE	1/25/23	SCALE	NONE
DRW	RLM	APPV	RLM
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REV	DATE	DESCRIPTION	REV BY
TITLE		P/N	REV
Van's RV-14 PANEL		N14RV	B 1

VFR

Single Com Radio
Intercom
EFIS GPS



IFR Light

+ \$4500

Single Com Radio
Intercom
EFIS GPS
Approach Certified GPS



IFR

+ \$12,500

Single Com Radio
Audio Panel
EFIS GPS
Second Com Radio
GPS Navigator (GPS+NAV)



N194MM

PASSENGER WARNING
THIS AIRCRAFT DOES NOT COMPLY WITH FEDERAL
SAFETY REGULATIONS FOR STANDARD AIRCRAFT



\$20,995

N194MM

PASSENGER WARNING
THIS AIRCRAFT DOES NOT COMPLY WITH FEDERAL
SAFETY REGULATIONS FOR STANDARD AIRCRAFT



\$25,995

N194MM

PASSENGER WARNING
THIS AIRCRAFT DOES NOT COMPLY WITH FEDERAL
SAFETY REGULATIONS FOR STANDARD AIRCRAFT



\$33,195

N194MM

PASSENGER WARNING
THIS AIRCRAFT DOES NOT COMPLY WITH FEDERAL
SAFETY REGULATIONS FOR STANDARD AIRCRAFT



\$33,895

CUBCRAFTERS

Sling AIRCRAFT



KITFOX AIRCRAFT



Experimental Super Cub



GLASAIR

AVIATION





RV-14







RV-10





RV-4



RV-6

Thank You !

www.advanced-flight-systems.com

www.dynon.com

