Axon handling precautions
Handling procedures for installing Axon hardware modules

The Axon product family is made up of AXN and ADAU products. AXN products are colored orange and black while ADAU products are colored gray. Products in this guide are shown in gray and are representative of both product types.

The greatest risk of damage to hardware modules is when inserting or removing a module from a chassis. To reduce this risk, follow all precautions in this document.

Electrostatic considerations

ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES	Always ensure that proper ElectroStatic Discharge (ESD) precautions are in place before handling or storing Curtiss-Wright equipment.

Modules outside a chassis are vulnerable to electrostatic damage. Specifically the pins that connect to the backplane and top block connector pins are at risk.

- When transporting or storing modules, ensure that they are placed in antistatic bags.
- Handle the module only by its electrically-isolated top block.
- In a laboratory environment, use antistatic mats and wrist straps.
- When antistatic equipment is not available, touch some metal frame (on an aircraft for example) to discharge static from your body before removing the module from the antistatic bag.
- Do not touch any pins on the module.

Module screw torque settings

The following are the recommended torque settings for module screws.

Screw type	Location	Recommended torque setting
4-40 UNC stainless steel jack post screw	On all modules except BCU/Overhead modules	0.7 Nm (0.52 foot pound-force)
4-40 UNC stainless steel screw	Mating connector: CON/KAD/0xx/ or CON-AUSR-X	0.4 Nm (0.295 foot pound-force) Hand tighten screws and then finish tightening by turning each side alternately to the specified torque.
M3 screws	On BCU/Overhead modules	0.6 Nm (0.44 foot pound-force) when using a nut-locking solution; 0.7 Nm (0.59 foot pound-force) when not using a nut-locking solution

WARNING: Do not overtighten the UNC screws. If you are using a torque nut driver, apply the correct torque. If not, tighten the screws firmly, but do not overtighten them.

NOTE: A 2-mm Allen key (ACC/TOL/004) and a 5-mm nut driver (ACC/TOL/041) are included in each order that includes an Axon chassis. The ACC/TOL/004 is used to insert/remove the M3 screws and the ACC/TOL/041 is used to tighten/loosen the jack post screws.

WARNING: The ACC/TOL/041 and ACC/TOL/004 are not torque-calibrated tools; you must use adjustable torque tools if precise torque is required.

Inserting or removing a BCU/Overhead module

Unlike standard modules which are secured in a chassis using the jack post screws, the controller or BCU/Overhead module is

secured using three M3 screws at the front-edge of the module. The jack post screws on the BCU module are not adjustable; their function is only to enable a mating connector to be attached to the module.

NOTE: When a chassis is ordered, a BCU/Overhead module is already preinstalled in it. The installation procedures below should be followed when a replacement module is required.

Inserting a BCU/Overhead module

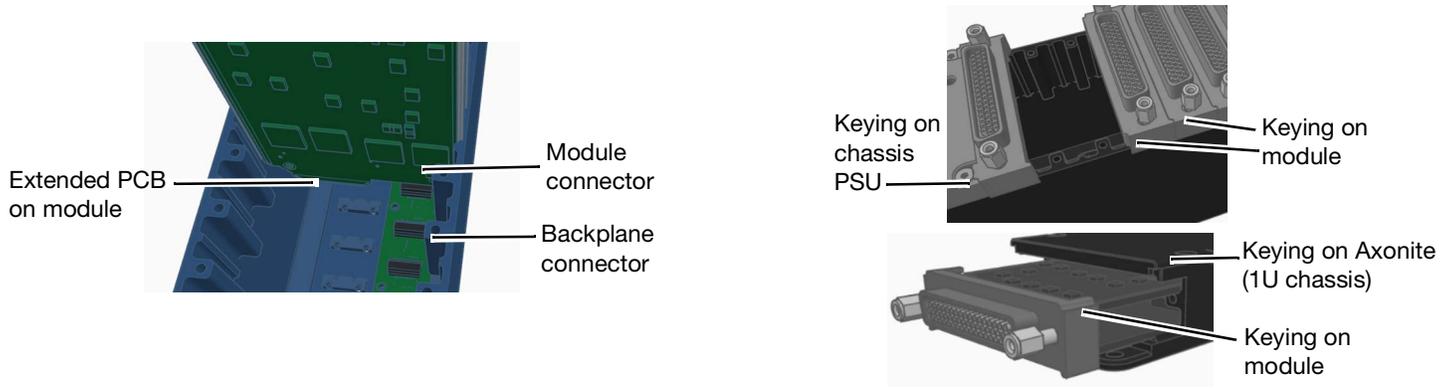|		
1.	Disconnect the power cable from the chassis.	
2.	Position the module so that the three screw holes on the module are aligned with the screw holes in the chassis.	
3.	Insert the module and then press it firmly into the connector on the backplane until it is flush with the housing of the chassis.	DO NOT tighten jack post screws
4.	Insert the three M3 screws and tighten them to a torque of: • Using nut-locking solution - 0.6 Nm (0.44 foot pound-force) • Not using nut-locking solution - 0.7 Nm (0.59 foot pound-force) WARNING: Do not attempt to tighten or loosen the two jack post screws; doing so can damage the jack posts.	

Removing a BCU/Overhead module

1.	Disconnect the power cable from the chassis.	DO NOT loosen jack post screws
2.	Remove the three M3 screws. WARNING: Do not attempt to tighten or loosen the two jack post screws; doing so can damage the jack posts.	
3.	Grip the top-block of the module firmly at the sides and remove the module.	

Inserting or removing standard modules in a chassis or Axonite

Unlike BCU/Overhead modules, standard Axon modules have an extended PCB on one side of the module and the connector on the other.

Ensuring modules are oriented correctly for insertion

To ensure the module is oriented correctly, confirm the module connector is aligned with the backplane connector in the chassis or Axonite (1U chassis) as shown in the following figure. All module top blocks (including BCU/Overhead) and the PSU are keyed to prevent incorrect insertion of the module. See the following figure.
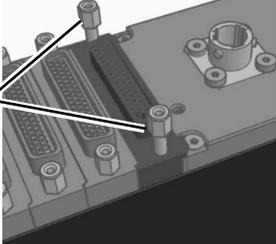
Extended PCB on module — Module connector — Backplane connector

Keying on chassis PSU — Keying on module — Keying on Axonite (1U chassis) — Keying on module

Inserting a module

Refer to the following when inserting a standard module into a chassis or into an Axonite (1U chassis).

1. Do one of the following: • Disconnect the power cable from the chassis. • Disconnect the Axonite from the Axon chassis.	
2. Align the module and backplane connectors.	
3. Align the module guide rails so they are either side of the module-screw bore holes and then insert the module into the chassis or Axonite.	Guide rails Module-screw bore hole
4. Press the module firmly into the connector on the backplane until it is flush with the face of the chassis or the Axonite.	Chassis — Jack post screws — Axonite
5. Hand tighten the jack post screws and then finish tightening to the recommended torque.	

Removing a module

Refer to the following when removing a module from a chassis or from an Axonite.

1. Do one of the following:
 	
   • Disconnect the power cable from the chassis.
 	
   • Disconnect the Axonite from the Axon chassis.	

2. Remove any cables/mating connectors from the module you are removing.	
3. Loosen the jack post screws.	
4. Holding the loosened screws, firmly pull the module to remove it.	