

# **Replacing a Dogmatix Board**

CSR Level:	CSR A
Part Number:	CX257-00112
Part Name:	DOGMATIX PCBA WITH PROGRAMMING FILES
Frequency:	as needed
Document ID:	c05942225
Revision:	Rev. B
Date:	08-Aug-19



Required personnel:	1
Required time:	20 minutes
Required tools:	none

### Important:

Make sure to comply with all relevant federal, state, and local regulations when disposing of replaced parts.



# Procedure

- 1. Shut down power to the Dogmatix boards:
  - **a.** In the C500 UI, switch to R&D mode.
  - **b.** Select **DataEngine** from the Device Tree.
  - c. Select Firmware Stop from the Operations list.
  - d. Tap Start Operation.

DEVICES	(Collapse All) OPERATIONS	MONITORS		
🕴 🖲 Tsabar System 🖊		Drop Count Black	0	UInt64
DataEngine	Servicing Manager Start		-	
Bar 1	Servicing Manager Stop	Drop Count Cyan	0	UInt64
Bar 2	O Dogmatix On/Off Test			
🛇 🖲 Bar 3	O Restart	Drop Count Fixer	0	UInt64
🎯 👁 Bar 4	🔾 Firmware Start			
🥝 👁 Bar 5	Firmware Stop	Drop Count Magenta	0	UInt64
🥝 🖲 Bar 6	Simulated TOF Policy	Drop Count Vallaur	0	Illot64
🕗 电 Bar 7	Run TOF Generator	Drop Count Yellow	0	UIIILO4
🛇 🖲 Dogmatix 1	O Produce Simulated TOF	HW Abort Status	False	Boolean
Pen CK 1	Clear HW Abort Latch	in Abort Status	ruise.	boolean
Dogmatix 2	<ul> <li>Set TOF state</li> </ul>	PecState	IDLE	String
S Pen CK 2	<ul> <li>Switch Pens Power Supply</li> </ul>			5
🛛 🖲 Dogmatix 3	O Get PEC Info	Pens Power Supply Status	False	Boolean
Pen CK 3	Execute PEC Shell Command			
Dogmatix 4	Execute PEC Icl Command	PensEnabled	False	Boolean
Pen CK 4	O Energize Pens			
Dogmatix 5	DeEnergize Pens     Decet DEC Alignment	Readiness Status [%]	100	Int32
Pen LK 5	Reset PEL Alignment     Dress DC see	Test Code March 22	0	1.122
Dogmatix 6	O Press KScan     O Set Missing Nemples	Test Cycle Number	U	Int32
Perick 0     Perick 0	Set V Origin	Current Operation Name		String
Dogmatix 7	Set X Origin	_current operation Name		Sunny
	Set Forigin	Current Operation Result		String
Pen CK 8	⊖ Set Led State			string
C R Dogmatix 9	⊖ Undate Alignment			
Pen CK 9	⊖ Simulate Pen Error			
Dogmatix 10	○ Simulate Dogmatix Error			
Pen CK 10	O Update FPGA Bitstream			
Dogmatix 11	○ Set Logging			
Pen CK 11	Clear Logging			
Dogmatix 12	Kill Parallel Running			
Pen CK 12	Messenger			
Ogmatix 13				
Pen CK 13				
Panacea 1				
Panacea 2				
Panacea 3				
🛇 🖲 Panacea 4				
September 2010 Septem				
Ogmatix Bar5 Pen	15			
Ø Dogmatix Bar5 Pen	14			
Dogmatix Bar5 Pen	13			
Dogmatix Bar5 Pen	12			
Se Fiber Channel 2				
🖉 Doomatix Bar6 Pen	i5			
START_OPERATION PARAMETERS	EDIT_MONITOR Show More Operations			RESET_PARAM

- **2.** Climb up to the gallery.
- 3. Open the floor panel above the faulty Dogmatix board.





- 4. Remove the print head to which the Dogmatix board is connected, as follows:
  - **a.** Open the securing clamp on the print head by lifting the handle.





**b.** Lift the handle for the print head and remove the print head from the ink beam.





### Caution:

Be sure to pull the print head straight up out of its pocket. Pulling the print head at an angle can damage the septums!





5. Use your fingers to pry open the two metal clips that secure the top of the board.



1	Clips
2	Dogmatix board freed from clips

6. Disconnect the Ethernet cables (and optic cable, if relevant) connected to the faulty board.



#### Caution:

Use caution when handling fiber optic cables to prevent damaging them.



**7.** Carefully lift the Dogmatix board from the ink beam. Make sure not to tear the electrical cables. Open the wire anchors, as required.



- 2Electrical cables3Wire anchor
- **8.** Disconnect the electrical cables (red and black) from the terminals on the ink beam. Take note of the terminal to which each cable was connected.



- **9.** Remove the Dogmatix board from the ink beam.
- **10.** Insert the new Dogmatix board in its slot next to the print head.
- **11.**Close the clips to lock the board in place.



**12.** Connect the red and black electrical cables to the terminals on the ink beam, and close the wire anchors.



#### Caution:

Make sure to connect the cables to the proper terminals! The cables are identical other than the color.

**13.**Connect the Ethernet cable (and optic cable, if relevant) to the Dogmatix board.





**14.**Reinsert the print head.



**15.** Close the securing clamp.



**16.** Close the floor panel.



**17.** Exit the gallery. Make sure to close the gate as you leave to engage the safety interlock.



18. Press the **Reset** button at the top of the stairs and return to the operator console.



**19.** Press the **Reset** button on the main operator console.



**20.** Restore power to the Dogmatix boards:

- a. Select DataEngine from the Device Tree.
- **b.** Select **Firmware Start** from the Operations list.
- c. Tap Start Operation.

## **Mixing Dogmatix Versions**

There is a known communications issue when different versions of the Dogmatix board (**4.3.0** and **4.7.0**) are installed together on the same press. Version 4.7.0 of the Dogmatix board cannot communicate if it is physically installed *after* version 4.3.0 in the same chain.

The error message that appears is "boot failed the engine is dead'.





In order to mix both versions of the Dogmatix board on the same ink beam, the version 4.3.0 boards must be located at the **end** of the chains, in positions **1**, **2**, **6**, or **10**.



Dogmatix 4.3.0 should must be last in chain to work properly



Additional configurations that work properly – Dogmatix 4.3.0 board are always the last in the chain