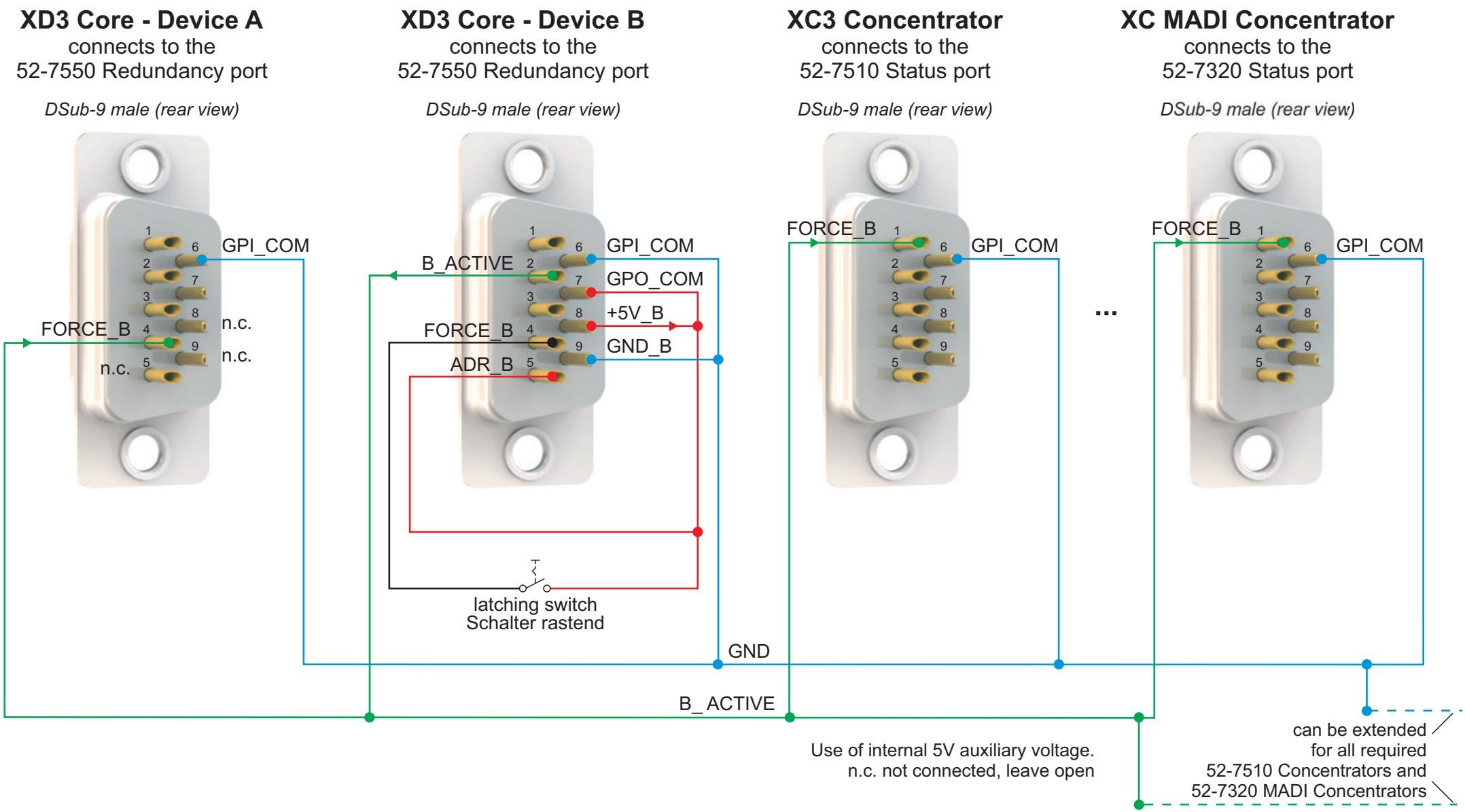
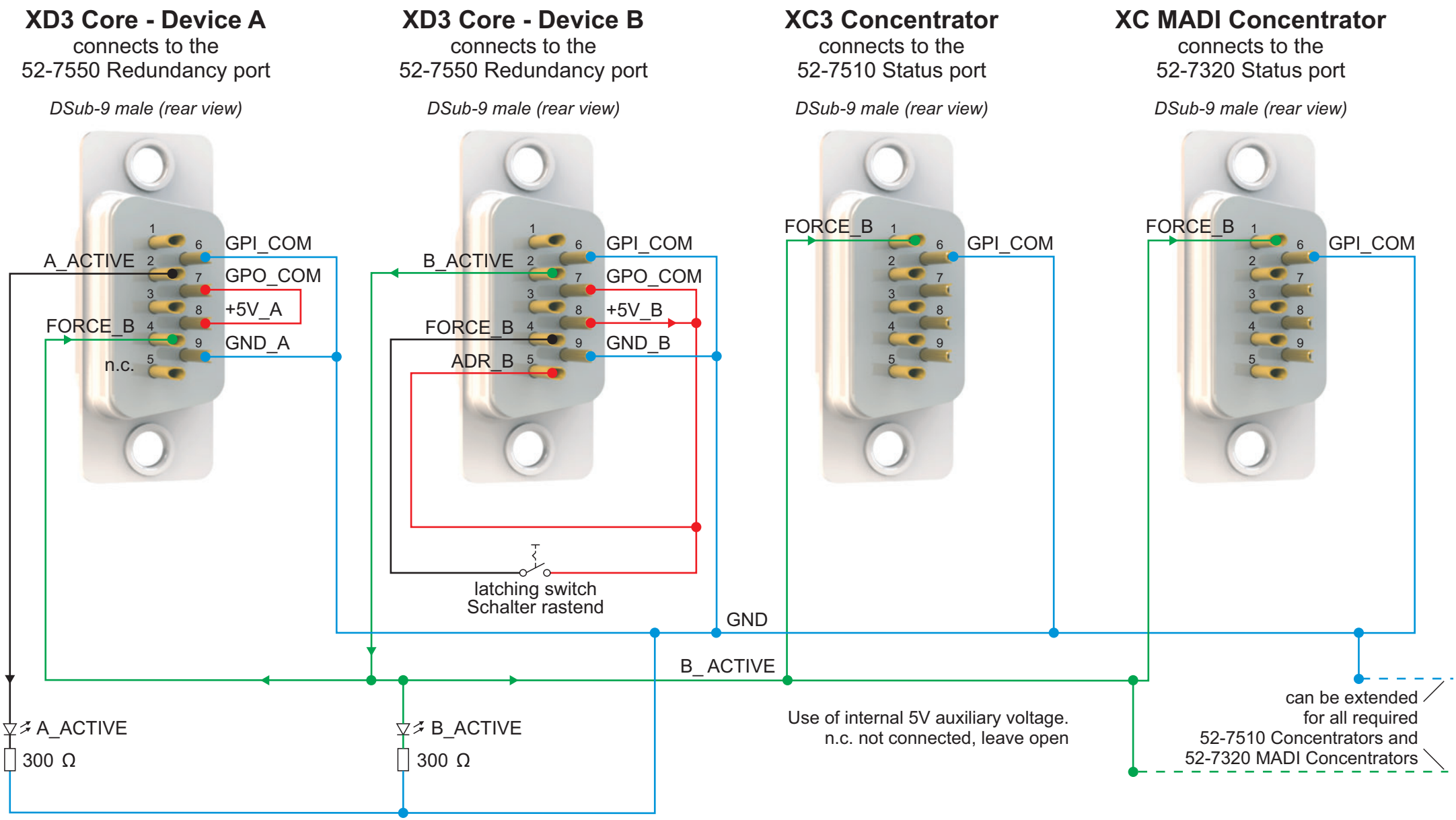
1. External wiring for a redundant XD3 Core system with Concentrators, internal voltage, minimum wiring

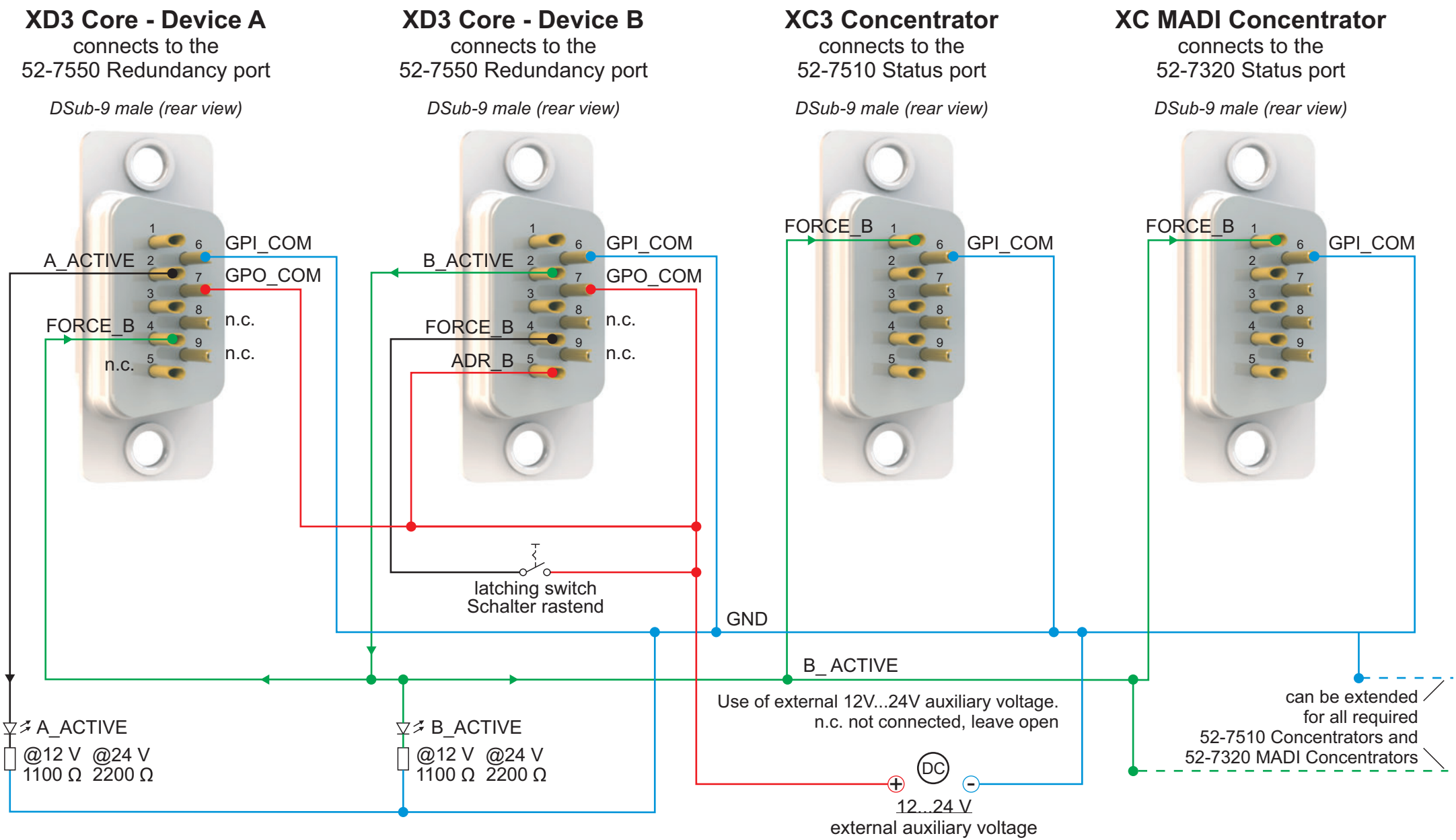


Note: additional status information available via GPO, these are not shown in this drawing

2. External wiring for a redundant XD3 Core system with Concentrators, internal voltage, status LEDs



3. External wiring for a redundant XD3 Core system with Concentrators, external voltage, status LEDs



XD3 Core Device A (52-7550)				
Pin	**Type**	**Name**	**Description**	**Remark**
1	GPI	RESET_IN	resets firmware if activated (falling endge of >1ms pulse) to +5V...24V, signal is internally deglitched, may be connected to push button	
6	GPI	GPI_COM	common reference of all GPIs, isolated from GPO section, connect to GND of Core B or negative reference voltage	minimum wirin
2	GPO	A_ACTIVE	activated if this core is the active one, may be connected to LED	
7	GPO	GPO_COM	common voltage for all GPOs, isolated from GPI section, connect to internal +5V or positive reference voltage +5V ... +24V	
3	GPO	reserved	unused GPO	
8	int. Power	+5V_A	internal auxiliary voltage to power GPIs and status LEDs, reverse voltage protected via diode and limited to 200mA	
4	GPI	FORCE_B	B_ACTIVE signal from Core B, deactivates Core A if activated using +5V...24V	minimum wirin
9	int. GND	GND_A	internal auxiliary voltage GND, this is also connected to chassis housing	
5	GPI	ADR	n.c. - not connected, do not connect, leave open to select Core A operationg mode	

XD3 Core Device B (52-7550)				
Pin	**Type**	**Name**	**Description**	
1	GPI	RESET_IN	resets firmware if activated (falling endge of >1ms pulse) to +5V...24V, signal is internally deglitched, may be connected to push button	
6	GPI	GPI_COM	common reference of all GPIs, isolated from GPO section, connect to GND of Core B or negative reference voltage	minimum wirin
2	GPO	B_ACTIVE	activated if this core is the active one, connect B_ACTIVE to concentrators FORCE_B GPIs, may be connected to LED	
7	GPO	GPO_COM	common voltage for all GPOs, isolated from GPI section, connect to internal +5V or positive reference voltage +5V ... +24V	minimum wirin
3	GPO	reserved	unused GPO	
8	int. Power	+5V_B	internal auxiliary voltage to power GPIs and status LEDs, reverse voltage protected via diode and limited to 200mA	minimum wirin
4	GPI	FORCE_B	connect to to +5V...24V via latched push button to force Core B as Master	minimum wirin
9	int. GND	GND_B	internal auxiliary voltage GND, this is also connected to chassis housing	minimum wirin
5	GPI	ADR	connect to +5V...24V permanently to select Core B operating mode	minimum wirin

XC3 Concentrator (52-7510)				
Pin	**Type**	**Name**	**Description**	
1	GPI	FORCE_B	B_ACTIVE signal from Core B to force switching to GA connection from core B if activated using +5V...24V	minimum wirin
6	GPI	GPI_COM	common reference of all GPIs, isolated from GPO section, connect to GND of Core B or negative reference voltage	minimum wirin
2	GPO	A_OK	status showing that activated GA connection from core A is ok, may be connected to LED	
7	GPO	GPO_COM	common voltage for all GPOs, isolated from GPI section, connect to internal +5V or positive reference voltage +5V ... +24V	
3	GPO	B_OK	status showing that activated GA connection from core B is ok, may be connected to LED	
8	int. Power	+5V	internal auxiliary voltage to power GPIs and status LEDs, reverse voltage protected via diode and limited to 200mA	
4	GPO	B_ACTIVE	status activated if core B is the active one, may be connected to LED	
9	int. GND	GND	internal auxiliary voltage GND, this is also connected to chassis housing	
5		n.c.	internally not connected	

Note all GPI and GPO sections are isolated from each other and from the internal GND or Power (when not wired to internal GND and internal +5V)!
Use +5V and GND of Core B be to operate FORCE_B GPIs of Core A and the Concentrators. In case of long cables check voltage when activated should be > 4V or use a +12V or +24V external voltage source.
Except for Core B use each internal +5V for the local status LEDs only. Do not "parallel" or shortcut the +5V internal voltages!
Max. GPO current is limited to 200mA using resetable fuse. GPO uses isolated semiconductor relay.
Max. GPI current is limited to 4mA using optocoupler via LM317 with 300 Ohm current adjustment.