

ATC Cabinet Card user guide



Revision 00

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Revision history

Date	Revision	Changes
11/13/2020	Rev 00	Document creation

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1 Overview

This document is a user guide for the ATC Cabinet Card.

ATC Cabinet Card performances are documented in its cutsheet that is available in Trafficware website.

2 ATC Cabinet Card guide

The ATC Cabinet Card allows to run a Green Machine or a COMMANDER™ in an ATC cabinet and provides an additional synchronous or asynchronous port.



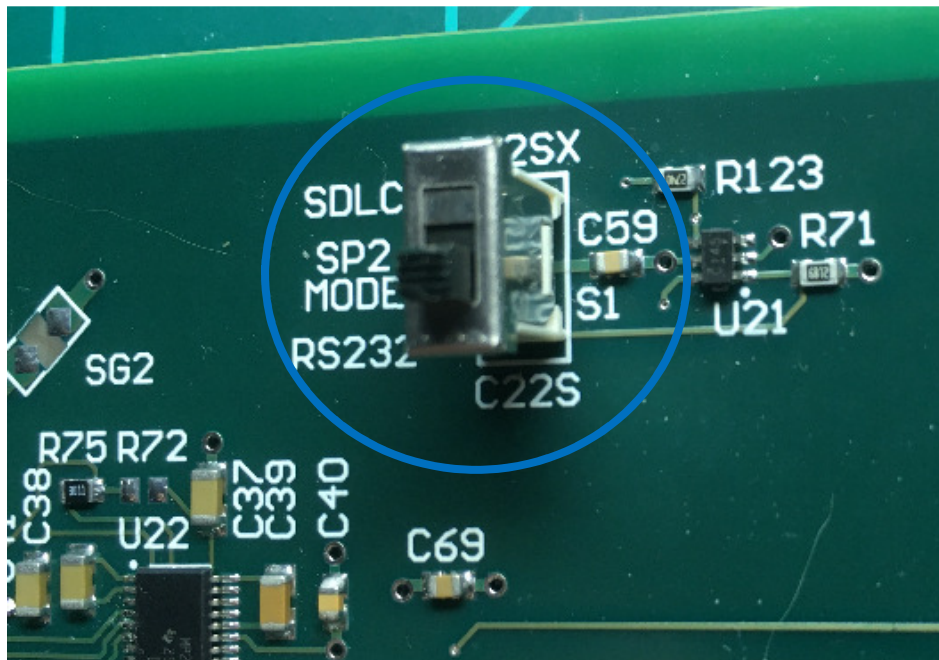
ATC Cabinet Card goes on the side of COMMANDER™, as shown in the picture below.



ATC Cabinet Card must be plugged in before COMMANDER is powered up.

Serial Port SP1S is routed to C12SX connector and shall be used to drive ATC cabinet (SB1).

Serial Port SP2 can be used either as a synchronous or asynchronous port.
A switch, S1, is provided on the board to select the operating mode of serial port SP2.

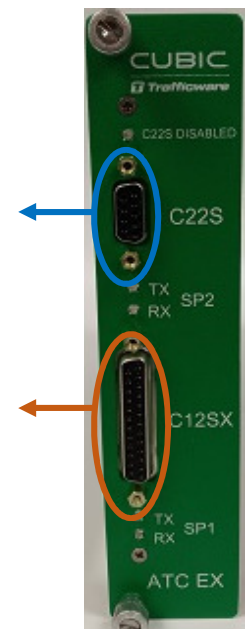


Switch is labeled “S1” as well as “SP2 MODE” on the silkscreen.
Also labeled on the silkscreen are the two switch positions, “SDLC” and “RS232”.
The switch is located near the top left of the card to the right of the LED5, the PORT DISABLE indicator for C22S.

Switch S1 should be selected before installing the 11333-2000 ATC Cabinet Card in the chassis as the there is no access to the switch once the card has been installed.

There are 2 positions for the switch:

- In the picture above, S1, SP2 MODE, is in the “RS232” position.
In this position the PORT DISABLE LED will be extinguished indicating both external ports on the ATX cabinet card are active.
In RS232 mode, SP2 is connected to the 9 pin C22S connector using asynchronous hardware.
The S1 switch setting only selects hardware on the ATC cabinet card – the proper mode for the SP2 port must be configured on the Controller as well.
- When switch S1 is placed in the SDLC mode, SP2 is connected to synchronous hardware and is routed to the C12SX connector, which corresponds to ATC cabinet Serial Bus 2 (SB2). It can be used for NEMA TS2 (non-ATC cabinet) SDLC protocol.
In this mode, the PORT DISABLE LED will glow red indicating that the 9 pin C22S port is disabled.
As before, the S1 switch setting only selects the hardware on the ATC cabinet card – the proper mode for the S2 port must be configured on the Controller as well.

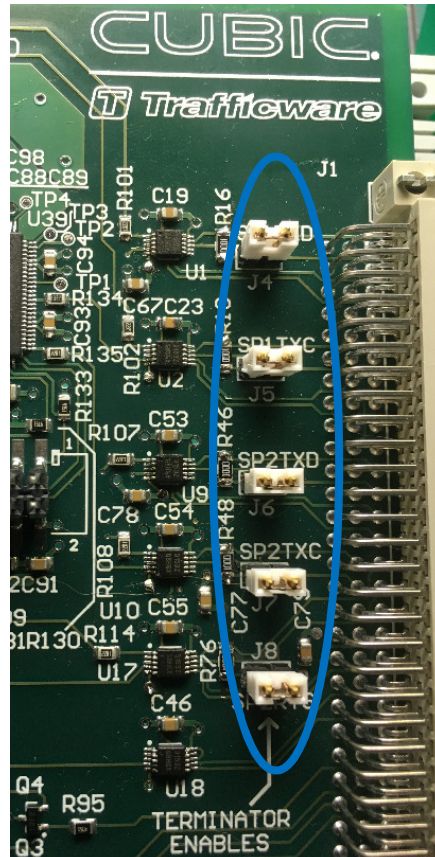


Activity LEDs are provided for both SP1 and SP2 ports and indicate transitions on the TX and RX data signals for the respective port.

When S1 is in "RS232" mode, the SP2 TX/RX LEDs indicate data activity on the C22S connector.

When S1 is in the "SDLC" mode, the SP2 TX/RX LEDs indicate SP2S activity on the C12SX connector. The SP1 TX/RX LEDs always indicate activity for SP1 on the C12SX connector.

Additionally, a set of "TERMINATOR ENABLE" jumpers are provided J4, J5, J6, J7, and J8 as shown below:



The jumpers should remain populated.

3 Bindings configuration change

For the Controller to drive the ATC cabinet using ATC Cabinet Card, the bindings must be modified compared to a regular ATC configuration (MM -> 6 -> 6):

- Sync1 channel has to be set to SP1S,
- SP1 has to be removed from any Async channel.

4 Pinout

Pinout of output connectors is following:

C12SX			
Pin #	Signal	Pin #	Signal
1	SP1TXD+	14	SP1TXD-
2	SP1RXD+	15	SP1RXD-
3	SP1TXC+	16	SP1TXC-
4	SP1RXC+	17	SP1RXC-
5	SP2TXD+	18	SP2TXD-
6	SP2RXD+	19	SP2RXD-
7	SP2TXC+	20	SP2TXC-
8	SP2RXC+	21	SP2RXC-
9	LINE SYNC+	22	LINE SYNC-
10	NRESET+	23	NRESET-
11	POWERDOWN+	24	POWERDOWN-
12	BIAS +5 VDC	25	EG
13	DCG #2		

C22S	
Pin #	Signal
1	SP2DCD
2	SP2RXD
3	SP2TXD
4	RESERVED
5	GND
6	NC
7	SP2RTS
8	SP2CTS
9	NC

Pinout of edge connector is following:

INPUT CONNECTOR			
Pin #	Row A	Row B	Row C
1	SP1TXD+	NA	NA
2	SP1TXD-	NA	NA
3	SP1RXD+	NA	NA
4	SP1RXD-	NA	NA
5	NA	SP1TXC+	NA
6	NA	SP1TXC-	NA
7	NA	NA	NA
8	NA	NA	NA
9	SP1RXC+	NA	NA
10	SP1RXC-	NA	NA
11	SP2TXD+	NA	NA
12	SP2TXD-	NA	NA
13	SP2RXD+	NA	NA
14	SP2RXD-	NA	NA
15	SP2RTS+	SP2TXC+	NA
16	SP2RTS-	SP2TXC-	NA
17	SP2CTS+	NA	NA
18	SP2CTS-	NA	NA
19	SP2DCD+	SP2RXC+	NA
20	SP2DCD-	SP2RXC-	NA
21	DCGND1	NA	NA
22	NA	NA	NA
23	NA	INSTALLED	NA
24	NA	LINESYNC	NA
25	NA	POWERUP	CPU_RESET
26	NA	POWERDOWN	NA
27	DCGND1	DCGND1	DCGND1
28	+12 VDC	-12 VDC	NA
29	+5 VDC	+5 VDC	+5 VDC
30	DCGND1	DCGND1	DCGND1
31	NA	NA	NA
32	NA	NA	NA