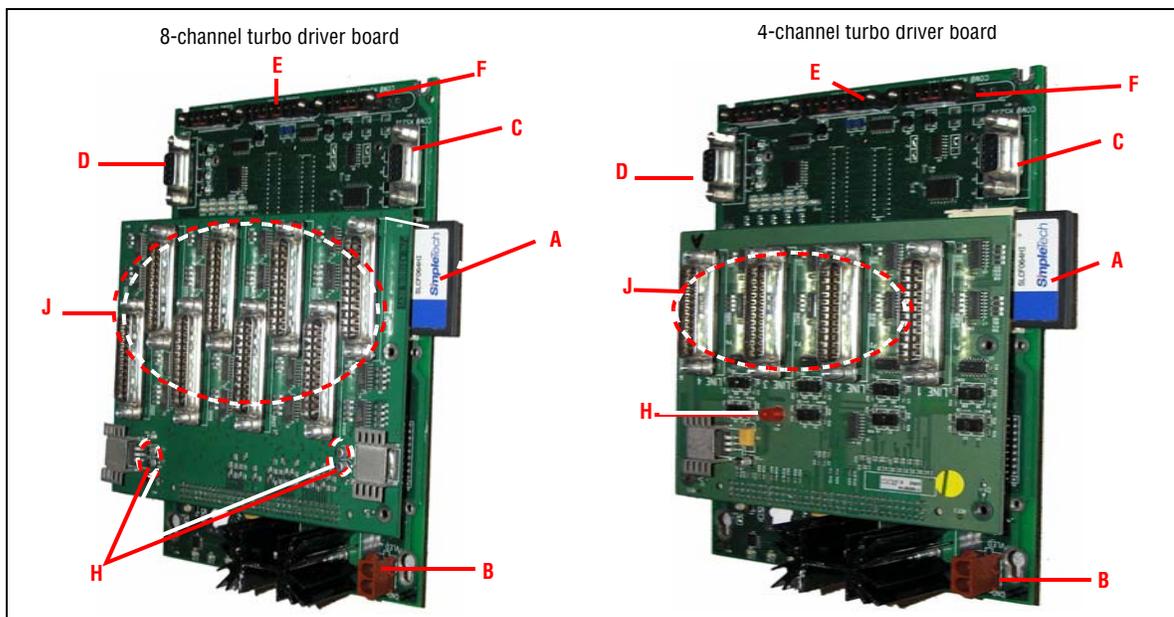


# Controller + 4 and 8-Channel Turbo Driver Board (pn 1180-9023SP, 1180-9014SP)

## 1.1 Description

The controller board translates incoming RS232 (modem, wireless, and so on) or RS485 data and relays this data to the entire sign using the turbo *adapter* boards in each cube of the sign. There is only one controller board in a sign. Depending on sign size, either a 4- or 8-channel turbo *driver* board is attached to the controller board. This controller and driver boards are used in both the AlphaEclipse 3600 sign and the AlphaEclipse StreetSmart 35M or 35V signs.



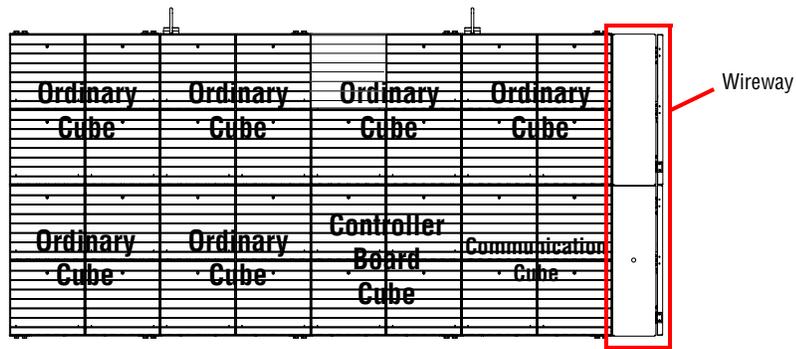
Item	PCB Label	Description
A	P5	FLASH card. Used to upload new firmware.
B	P1	Connects to power supply.
C	P7 COMØ RS232	
D	P16 COM3 RS485	
E	P15 COM2 RS485	
F	P14 COMØ RS485/422	
H	LD1, LD2	When lit, power is supplied to the turbo driver board (LD1 = LINE1 to 4, LD2 = LINE5 to 8).
I	P1 LINE 1 . . . P8 LINE 8	LINE 1 connects to the INPUT of the turbo adapter board in the first cube of row 1, LINE 2 connects to the INPUT of the turbo adapter board in the first cube of row 2, and so on.

## 1.2 Sign identification

The 8- and 4-channel driver boards are used in both the AlphaEclipse 3600 sign and the AlphaEclipse StreetSmart 35M and 35V sign.

This is how to identify which type of sign you have:

- AlphaEclipse 3600 sign (see “AlphaEclipse 3600 sign replacement instructions” on page 2) has a wireway on either the left or right side of the sign.
- AlphaEclipse StreetSmart sign (see “AlphaEclipse StreetSmart 35M or 35V sign replacement instructions” on page 6) does NOT have a wireway.



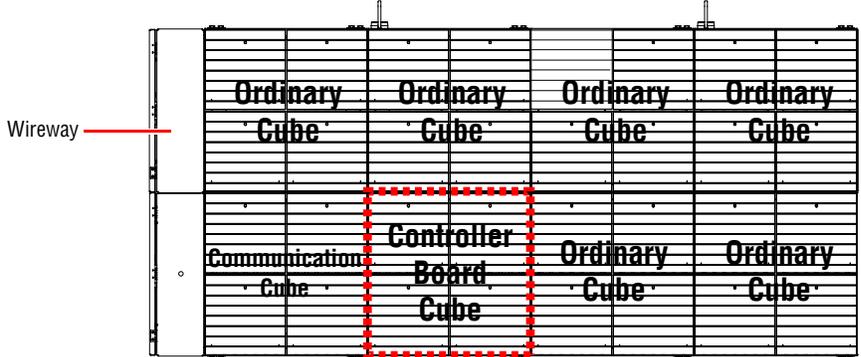
AlphaEclipse 3600 sign

## 1.3 AlphaEclipse 3600 sign replacement instructions

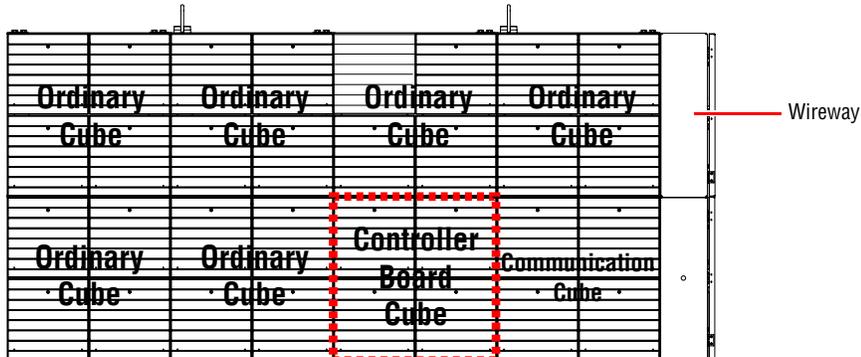
<b>1</b>	<p><b>Prevent electrostatic discharge (ESD) or “static” damage to the replacement part.</b></p> <p>For safe handling of ESD-sensitive parts, see TechMemo #00-0005.</p>	
<b>2</b>	<p><b>Remove power from the sign AT THE SOURCE.</b></p>	

**3** Locate the sign's controller board cube. This cube will always be on the sign's bottom row:

- Signs with a *left side wireway*:



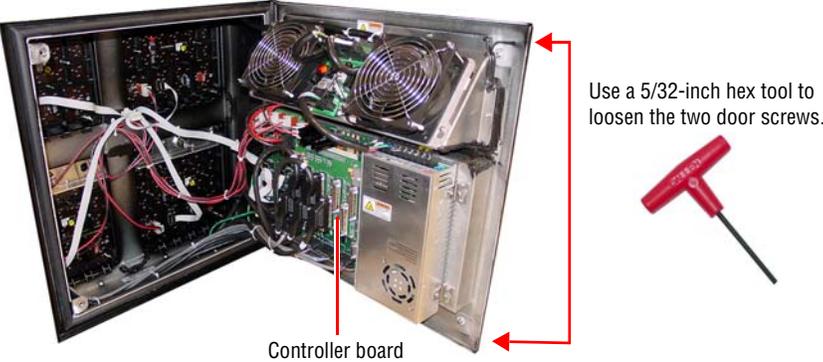
- Signs with a *right side wireway*:



**4** **Open either the back or the front of the controller board cube:**

- To open the back of the cube, loosen the two door screws and open the door slowly:

NOTE: Open the cube door slowly. If the door is opened too far and too fast, the cables connected to the door may detach.



Use a 5/32-inch hex tool to loosen the two door screws.

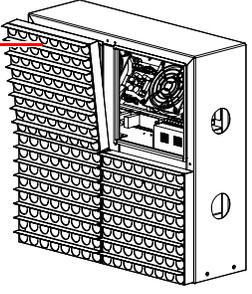
Controller board

- To open the front of the cube, remove all four LED driver boards:

To remove an LED driver board:

- Insert a 5/32-inch hex tool into the latch at the upper center of each board.
- Turn the hex tool counterclockwise.
- Lift the board up and then pull it back.
- Remove the data and power connectors from the back of the LED driver board.

NOTE: Each LED driver board must be put back in its *original* location. *LED driver boards are not interchangeable.*

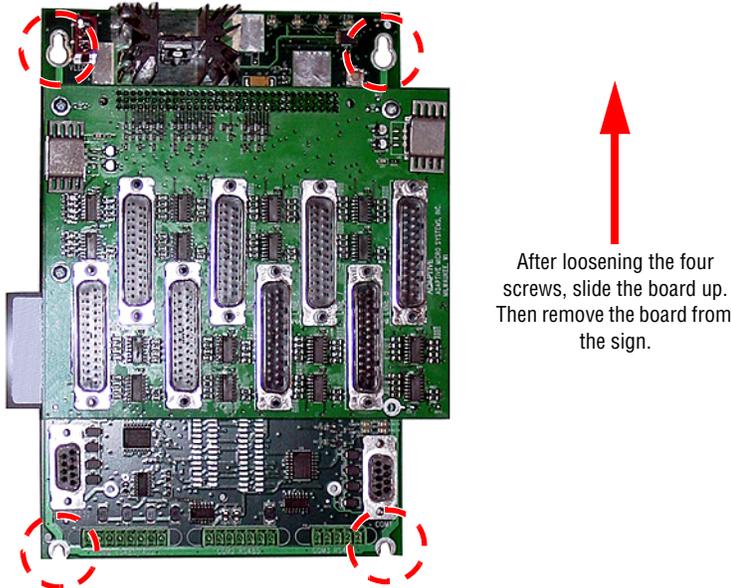



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**5** **Remove all connectors from the controller and turbo driver boards.**

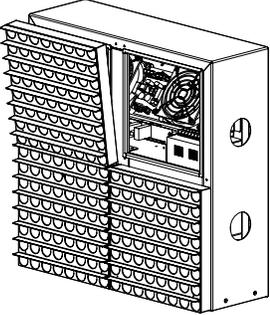
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**6** **Loosen, but do *not* remove, the four screws (circled below) on the controller board. Push the board up and lift up to remove it.**

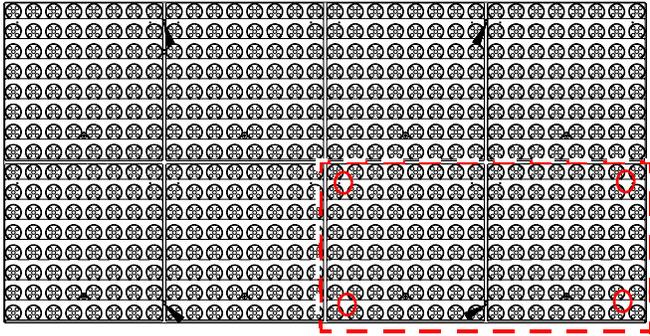
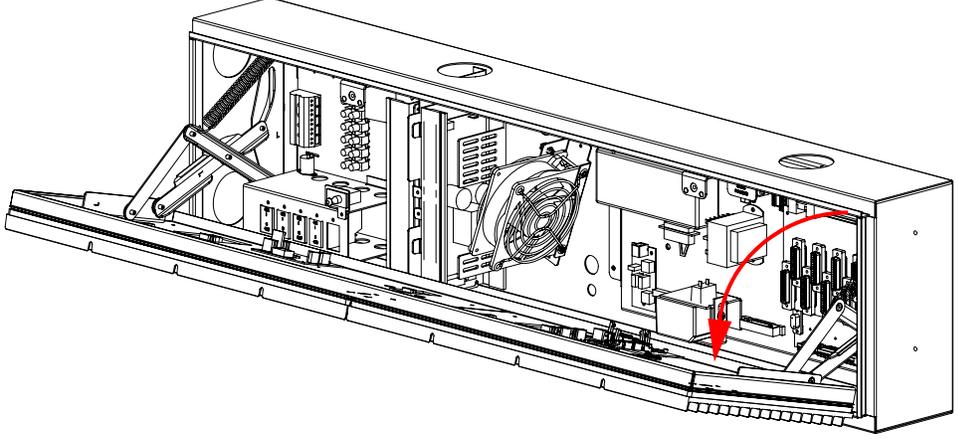


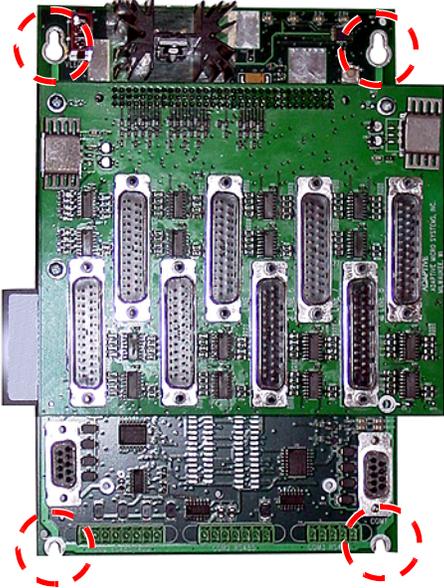
After loosening the four screws, slide the board up. Then remove the board from the sign.

<b>7</b>	<b>Place the new controller board over the four screws and pull the board down. Then tighten each screw.</b>
<b>8</b>	<b>Reattach all connectors to the new controller and turbo driver boards.</b>
<b>9</b>	<b>If the back of the controller cube was opened, close the door and tighten each latch.</b> <b>If the four LED driver boards were removed, reattach each driver board:</b>  To reattach an LED driver board:  NOTE: <i>Remember to put each LED driver board back where it originally was.</i> <ul style="list-style-type: none"><li>• Place the bottom of the LED driver board in the cube opening so that the board can swing freely.</li><li>• Reattach the data and power cables.</li><li>• Press down on the LED driver board and swing the board up into the cube until it snaps in place.</li><li>• Insert a 5/32-inch hex tool into the latch at the upper center of the board.</li><li>• Turn the hex tool clockwise.</li></ul>



## 1.4 AlphaEclipse StreetSmart 35M or 35V sign replacement instructions

<b>1</b>	<b>Prevent electrostatic discharge (ESD) or “static” damage to the replacement part.</b> For safe handling of ESD-sensitive parts, see TechMemo #00-0005.	
<b>2</b>	<b>Remove power from the sign AT THE SOURCE.</b>	
<b>3</b>	<b>Locate and remove the hex screws (circled below). When viewed from the front, the controller is located in the lower rightmost section of the sign.</b>	 <p>Use a 5/32-inch hex tool to loosen the door screws.</p>  <p>Controller</p>
<b>4</b>	<b>Open the door.</b>	
<b>5</b>	<b>Remove all connectors from the controller and turbo driver boards.</b>	

<b>6</b>	<b>Loosen, but do <i>not</i> remove, the four screws (circled below) on the controller board. Push the board up and lift up to remove it.</b>
	
<b>7</b>	<b>Place the new controller board over the four screws and pull the board down. Then tighten each screw.</b>
<b>8</b>	<b>Reattach all connectors to the new controller and turbo driver boards.</b>

After loosening the four screws, slide the board up. Then remove the board from the sign.



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