Perform a Module Self Test

Note: Module firmware must be 18A0.0AA5 or later for the self test to run through all steps properly. Modules with firmware 18A0.0B72 or later have extra testing screens. Older revisions do not support the self-test explained here.

If a module is blank and has power supplied to it, you can perform a module self-test. To perform a self test, complete the following steps:

1. Attach a working SATA cable to Port A and B on the module. Refer to **Figure 1**.
2. Disconnect power to the power supply or, if the power supply is not mounted on the module, disconnect power to the module.

   Note: Wait 10 seconds before connecting power.
3. Reconnect power to start the self test.
4. Verify the module enters self-test mode.
   a. LEDs flash 4 times per second for 5 seconds.
   b. Display indicators on the back of the module flash alternatively 2 times per second.
5. If the module does not enter self-test mode, check the power indicator to verify the module is receiving the proper power.
   a. Perform the self test again with a different SATA cable.
   b. Replace the module if the problem persists.

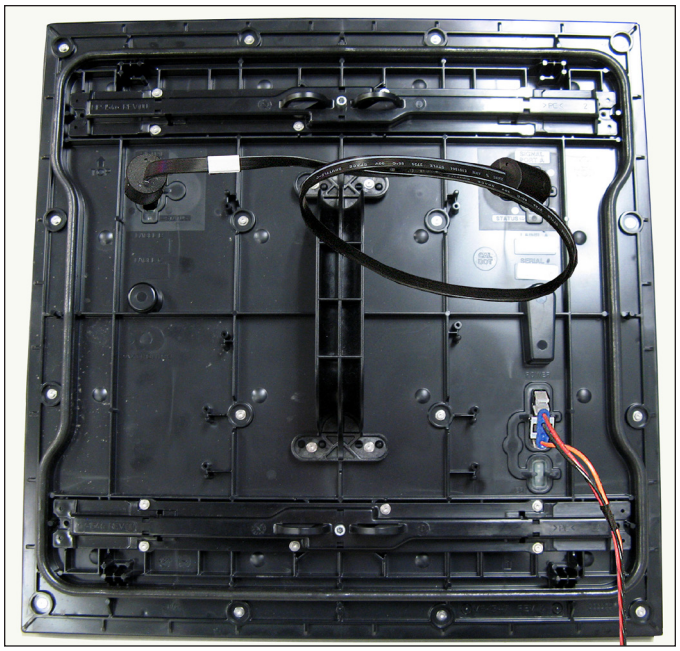
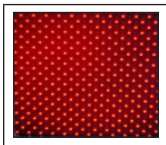
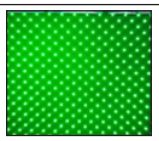
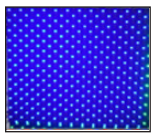
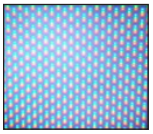
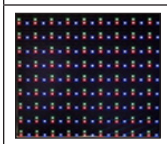
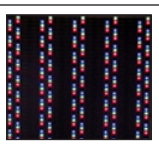


Figure 1: *Module Self Test Set Up*

Module Self Test Normal Conditions

Monitor the module during the self-test process. The module should show red, green, blue, white, and then a double-digit number. The module continues to cycle until module power is removed or the SATA cable is disconnected.

	All red LEDs mean no errors.		All green LEDs mean no errors.
	All blue LEDs mean no errors.		All LEDs showing white mean no errors.
	Colored rows, first even, then odd.		Colored columns, first even, then odd.

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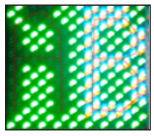
	Pa means no errors. Refer to **Understanding Error Flags and the Status Indicator (p.2)** if other letters/numbers appear.		
	Self Test Temperature in Celsius.		Temperature is displayed in Celsius for ten seconds. The color is based on temperature: Blue = 0°C - 84°C; Red = 85°C and above.
	**ProLink A/B Status** • The active port is white and the other is black. • The table on the right contains the meaning of the background color.	**Color**	**Meaning**
		Green	The link is healthy.
		Orange	There are dead frames (except in loop back mode).
		Yellow	Checksums – There is a data transmission error.
		Red	Loss of sync – One port is not receiving valid data.

Understand Error Flags and the Status Indicator

If there is an error, the module flashes 4 times, each time displaying a two-digit number. Each flash is one frame. Record the error numbers on each frame on the Daktronics Part Replacement Tag. Return the module with the tag.

There are two LEDs on the back of the module that act as status indicators. These LEDs blink at different intervals to indicate potential module issues. Check the following table for any errors.

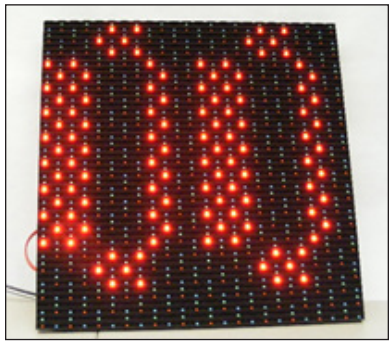


Figure 2: *Error Frame Example*

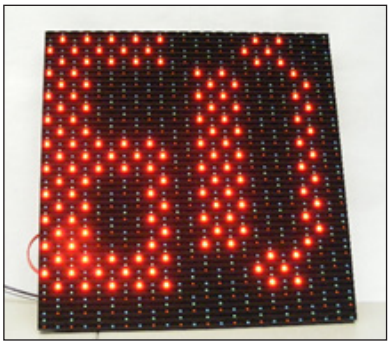


Figure 3: *Error Frame Example*

Status Indicators	Problem
Both status indicators are on continuously, not blinking	Critical hardware problem, input power good
Both status indicators are off	No power, power hardware problem, or micro will not program
Ten pulses per second	Bootstrap active and good signal being received by jack – both ports bad signal
Five pulses per second	Bootstrap active and good signal being received by jack – both ports good signal
One pulse per second	User program active and bad signal being received by jack – both ports bad signal
One pulse per four seconds	User program active and good signal being received by jack – both ports good signal
Are blinking alternatively	Module is in self test mode or is displaying a locally generated test pattern.

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