



DMX/SPI Master Lighting Controller

ACL-DMX/SPI-LC Wiring Diagram



ACL-DMX/SPI-LC

DMX/SPI Master Lighting Controller Wiring Diagram



Note: Wiring diagrams in the following scenarios are for reference only. They are not project specific, and they only show generic wirings scenarios. Components, cable types, and distance could vary depending on project size requirements.





Scenerios for DMX System

In a DMX system, the Master Controller sends commands to control the colors, or values, of RGB/RGBW components. The Sub-Controller manages a series of RGB/RGBW components that respond to a single command. There can be multiple Sub-Controllers connected to a Master Controller.

The Allanson ACL-SC-DMX Sub-Controller is UL approved, compatible with RGB and RGBW modules. The ACL-SC-DMX also has an IP65 ingress protection rating, making it ideal for a wide range of lighting applications.

When additional RGB/RGBW components need to be connected to a Sub-Controller, the Allanson ACL-PR-4CH-5A Power Repeater can be used.

The ACL-PR-4CH-5A duplicates and boosts the RGB/RGBW signal, allowing more module series to be connected to the same Sub-Controller. The new Power Repeater is also UL approved and IP65 rated.



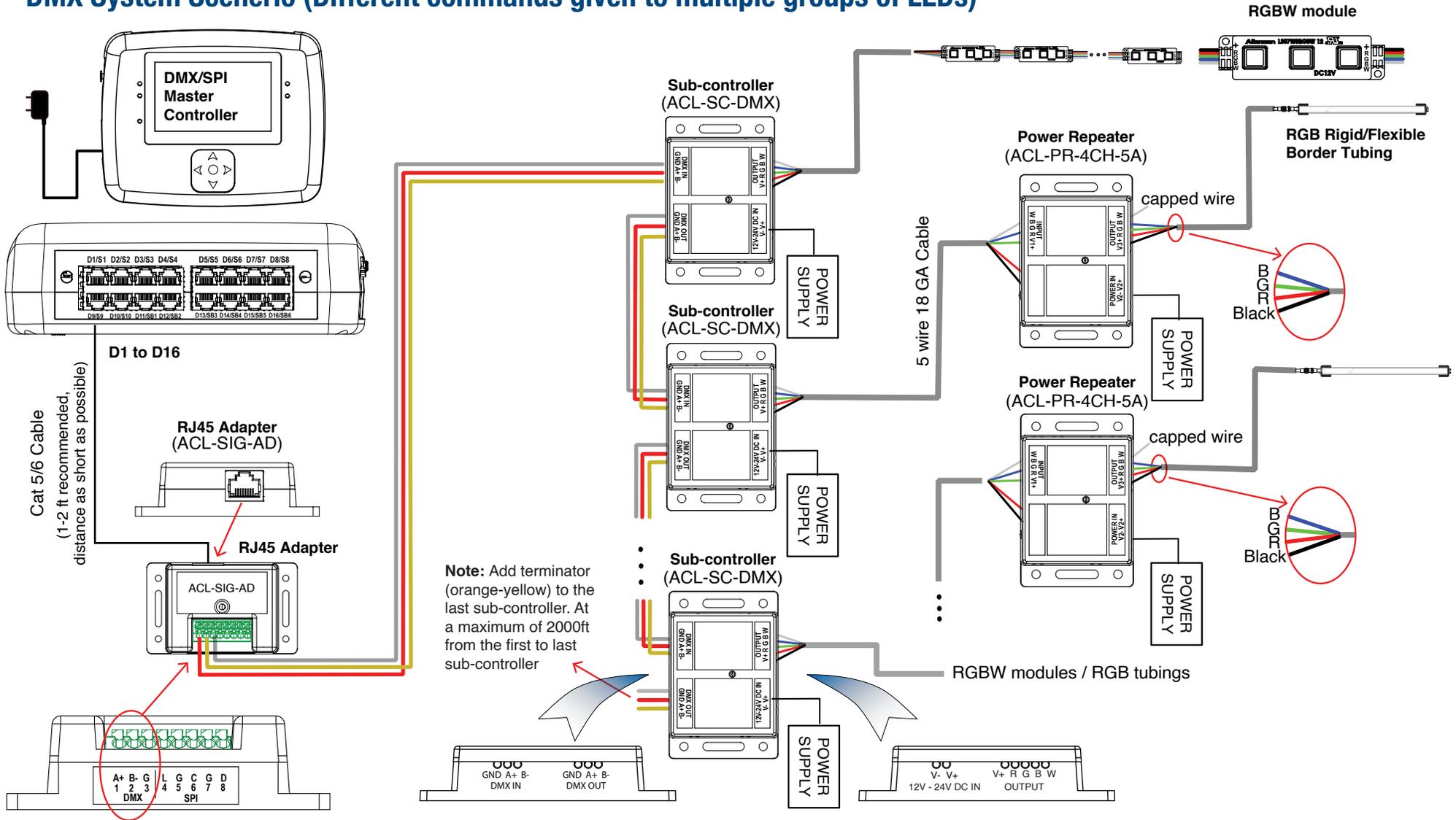


DMX/SPI Master Lighting Controller

ACL-DMX/SPI-LC Wiring Diagram



DMX System Scenerio (Different commands given to multiple groups of LEDs)





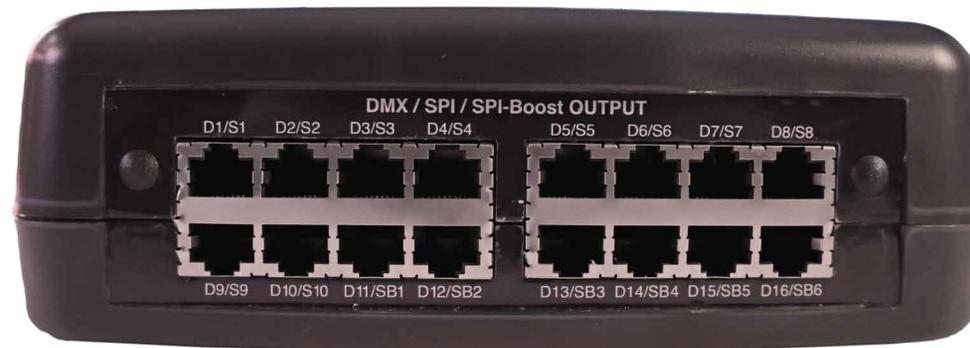
Scenerios for SPI System

In the SPI system, a few new components can be used to boost signal strength and extend the range to max 1000ft with cat5e or cat6 cable.

SPI range extntender (RX/TX) is a single channel which controls one group of addressable modules.

SPI splitter splits signal from one channel into multiple signals. The same command is being copied and sent to receivers.

4X SPI range extender has 4 channels that controls max 4 different groups of addressable modules in different commands. it also has booster function that can transmit signal over a long distance.





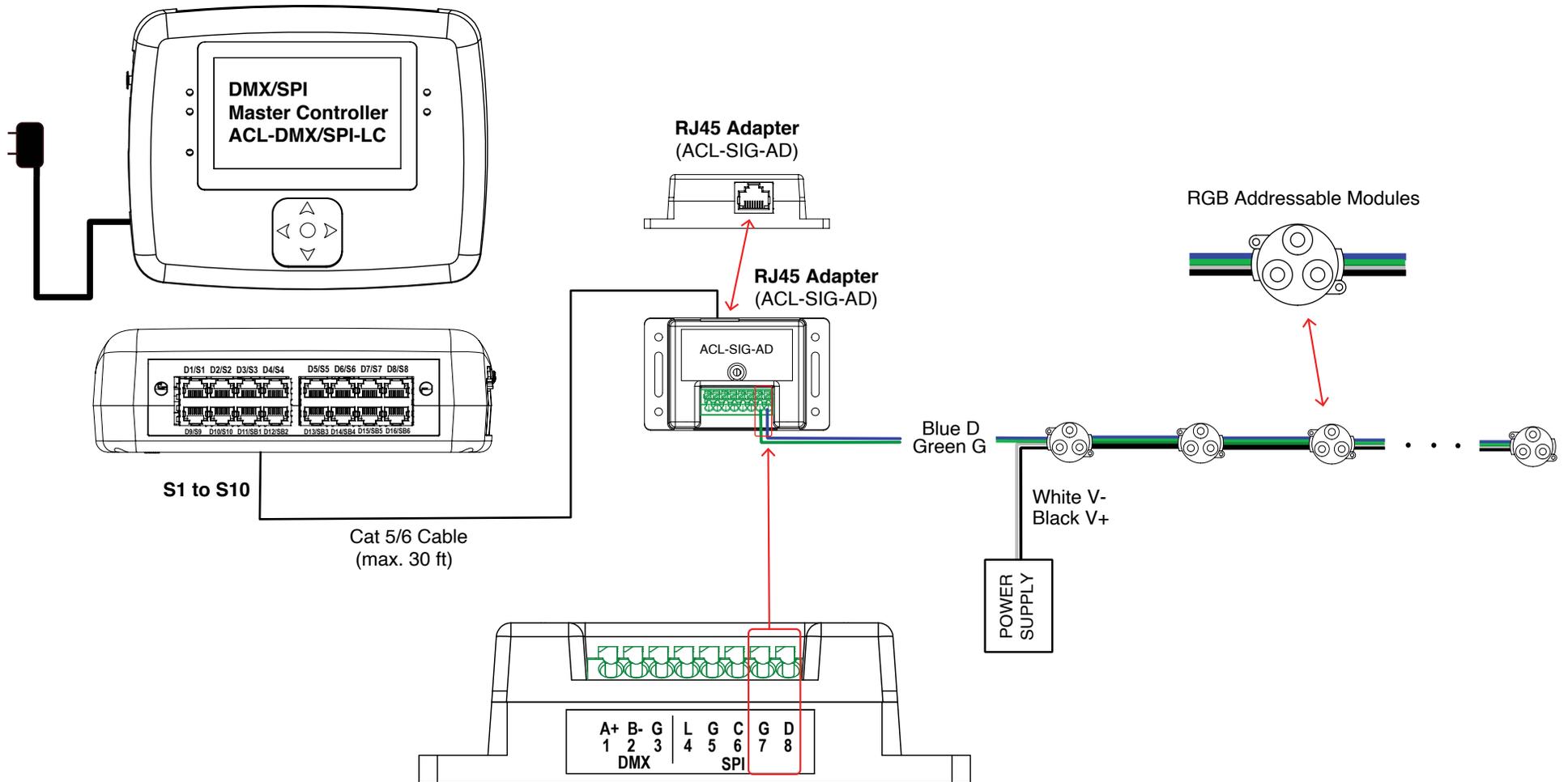
DMX/SPI Master Lighting Controller

ACL-DMX/SPI-LC Wiring Diagram



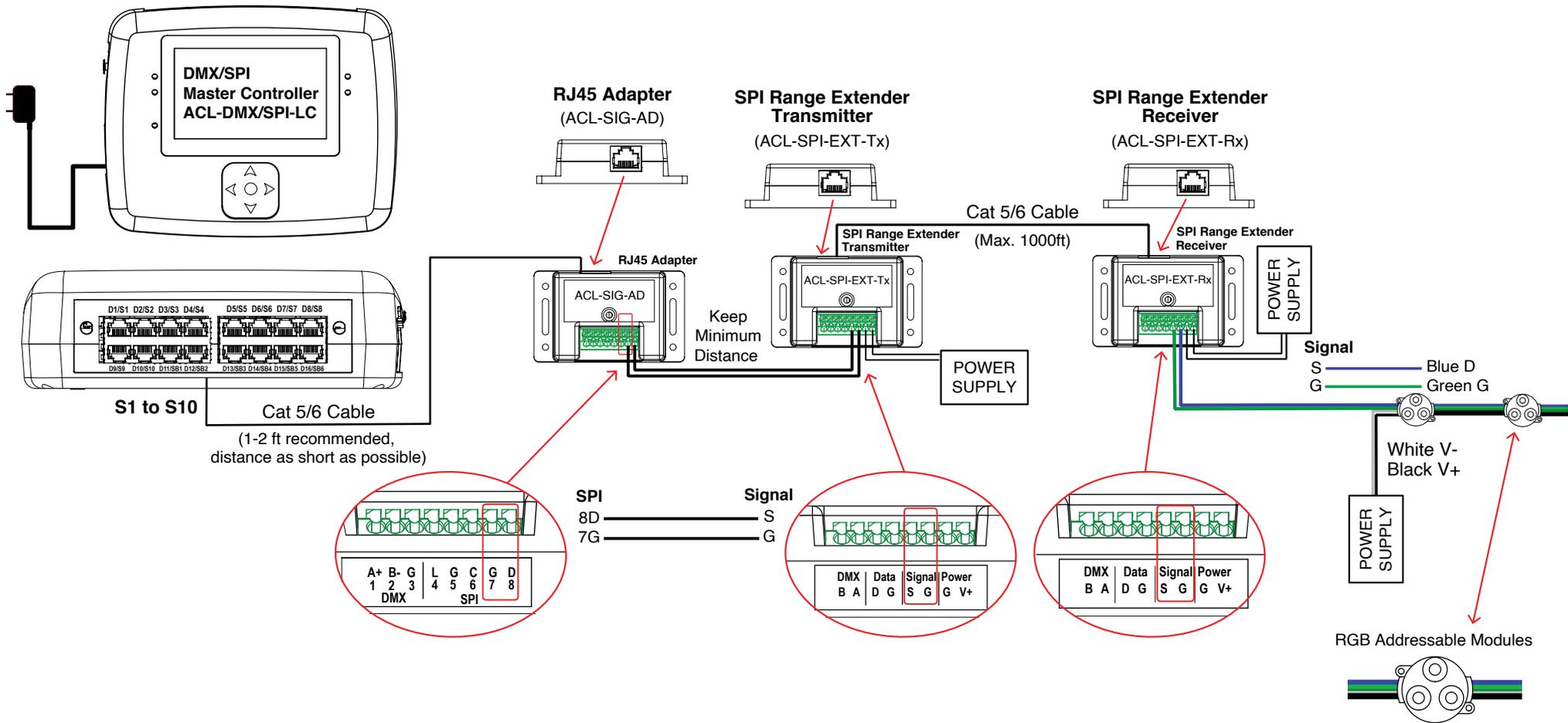
SPI system - Scenario #1

The Master Controller can be connected directly to modules if the distance is shorter than 30 ft, an adaptor is required.



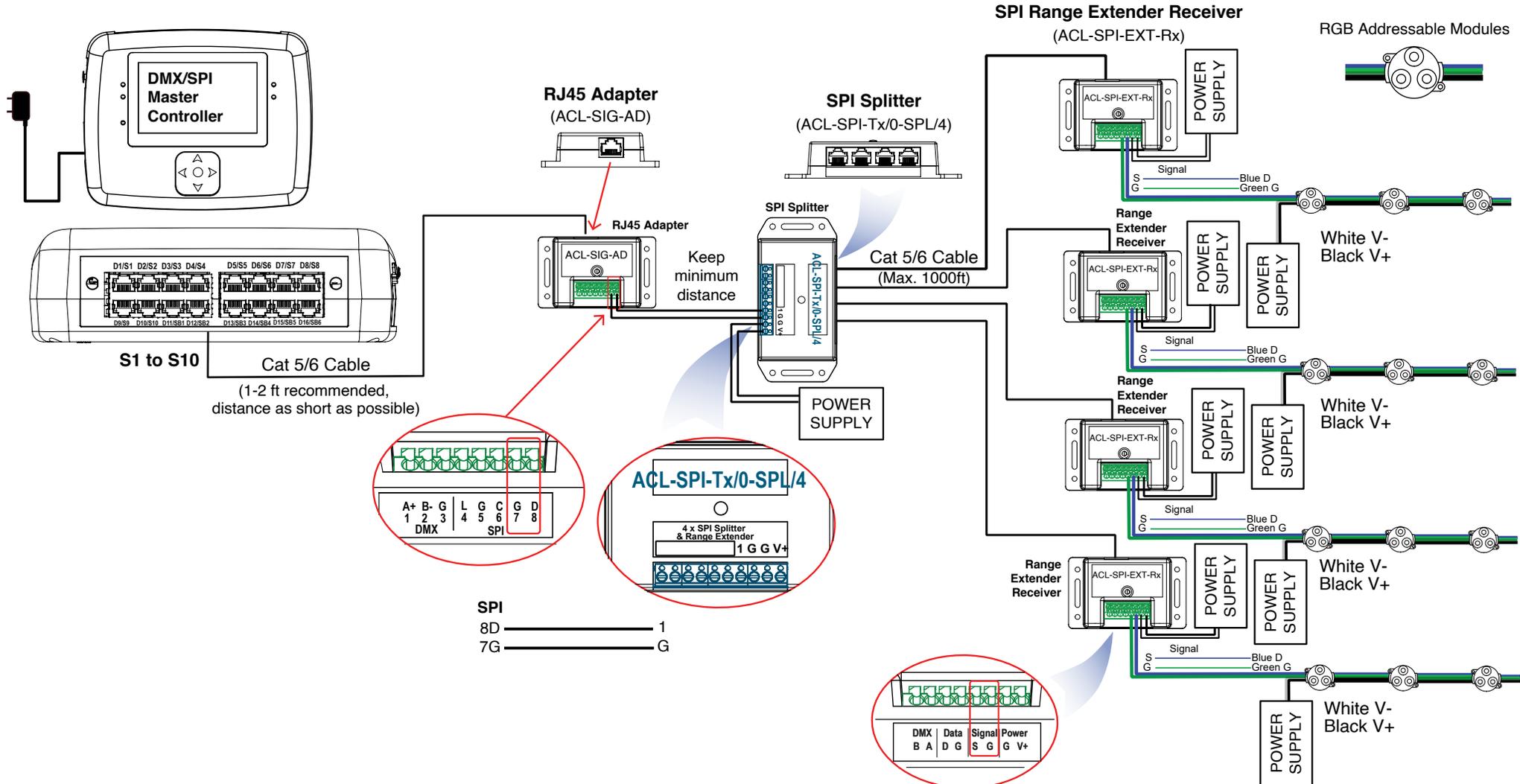
SPI system - Scenario #2

SPI range extenders (transmitter and receiver) are being used as a pair when addressable modules are more than 30ft away. Single channel only (one group of modules).



SPI system - Scenario #3

SPI Splitter is being used when sending the same command to several groups of RGB addressable modules.





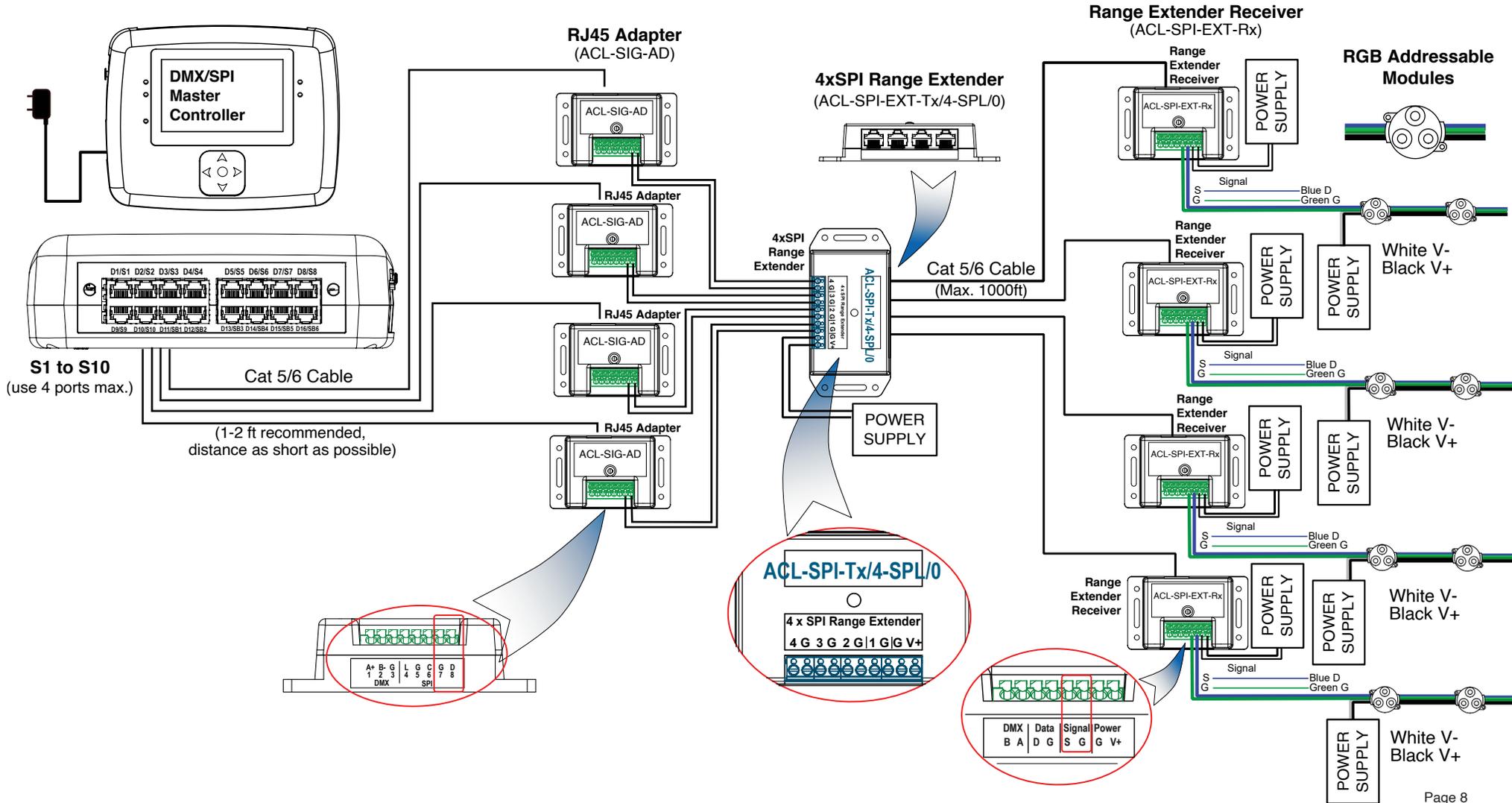
DMX/SPI Master Lighting Controller

ACL-DMX/SPI-LC Wiring Diagram



SPI system - Scenario #4

4x SPI Range Extender is being used for controlling various group of to several groups of RGB addressable modules that listen to different commands.





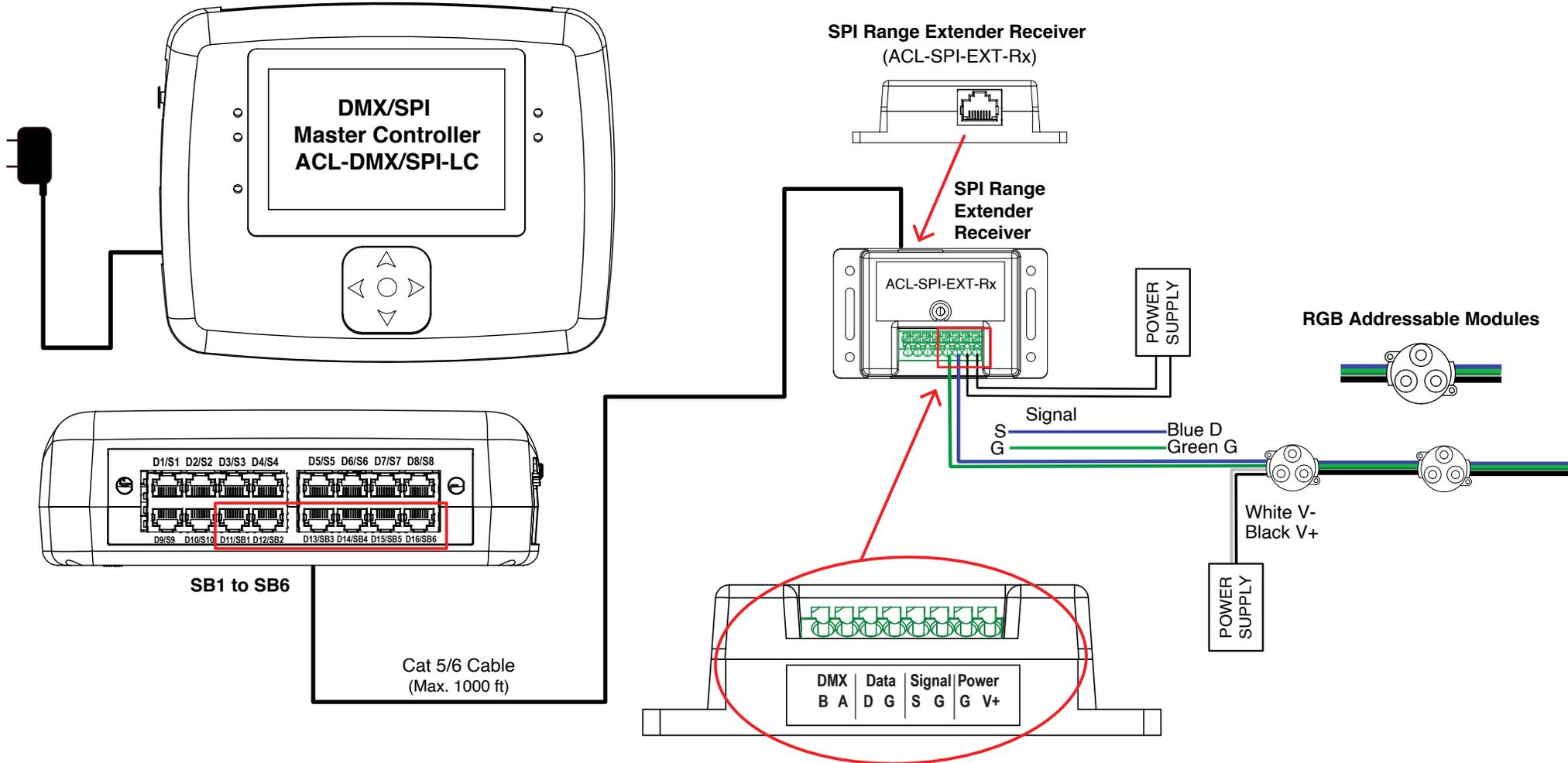
DMX/SPI Master Lighting Controller

ACL-DMX/SPI-LC Wiring Diagram



SPI system - Scenario #5

The Master Controller can be connected directly to modules from 1000ft away via the Boosted SPI ports. A receiver is required.





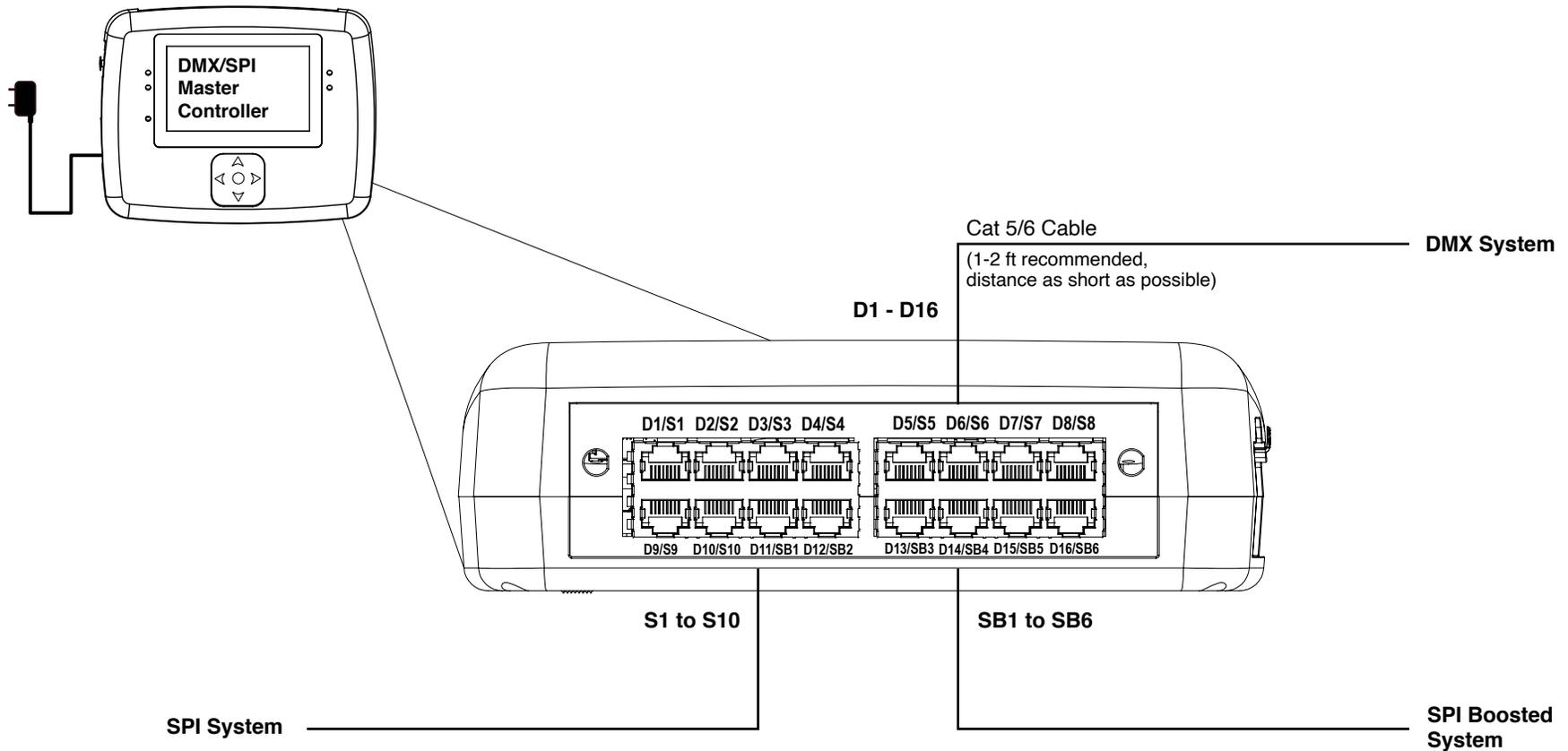
DMX/SPI Master Lighting Controller

ACL-DMX/SPI-LC Wiring Diagram



Multi-protocols

For large-scale signage applications, DMX, SPI, and Boosted SPI Systems could co-exist. The system diagram is distributed across three pages for clarity.



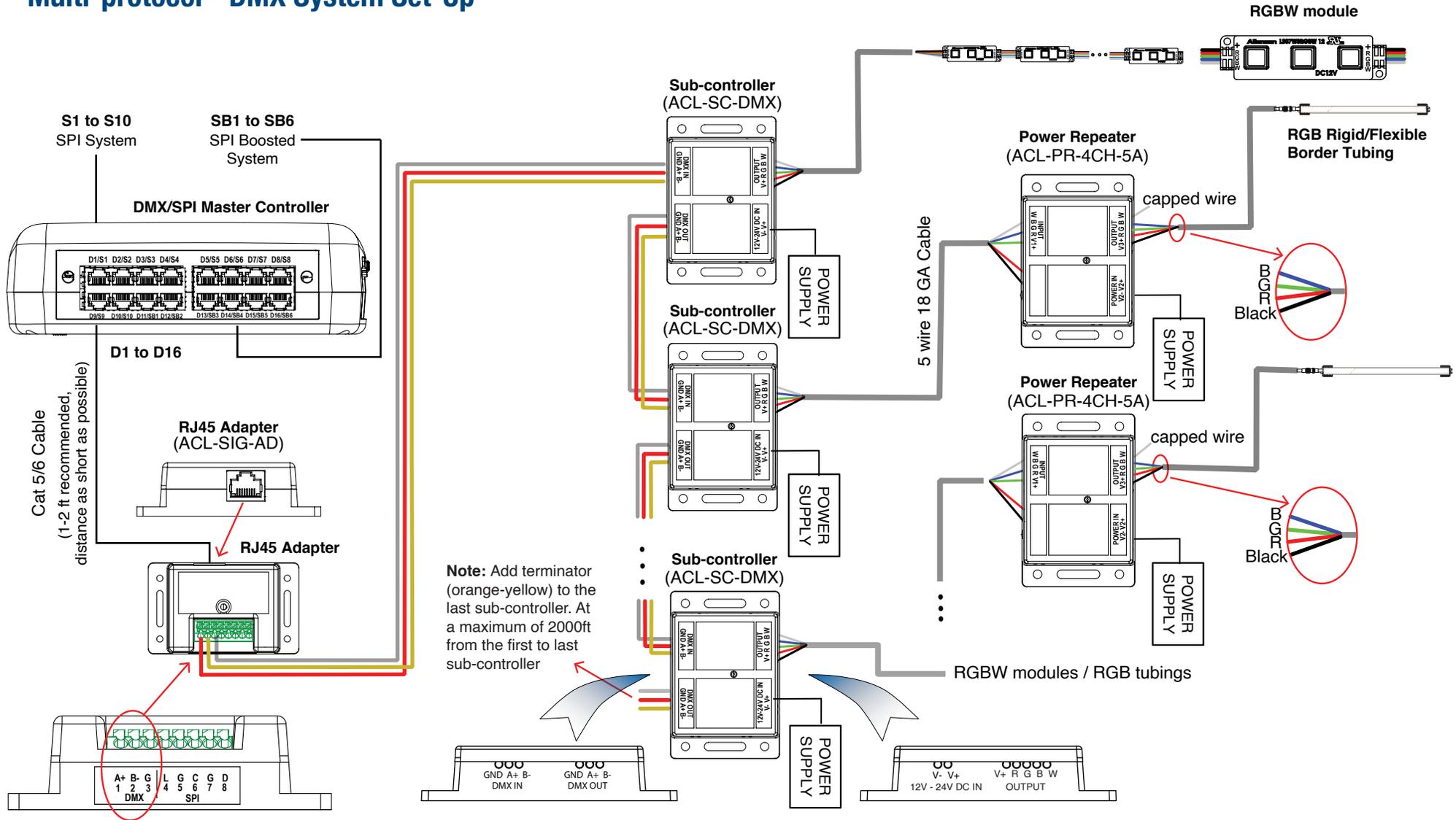


DMX/SPI Master Lighting Controller

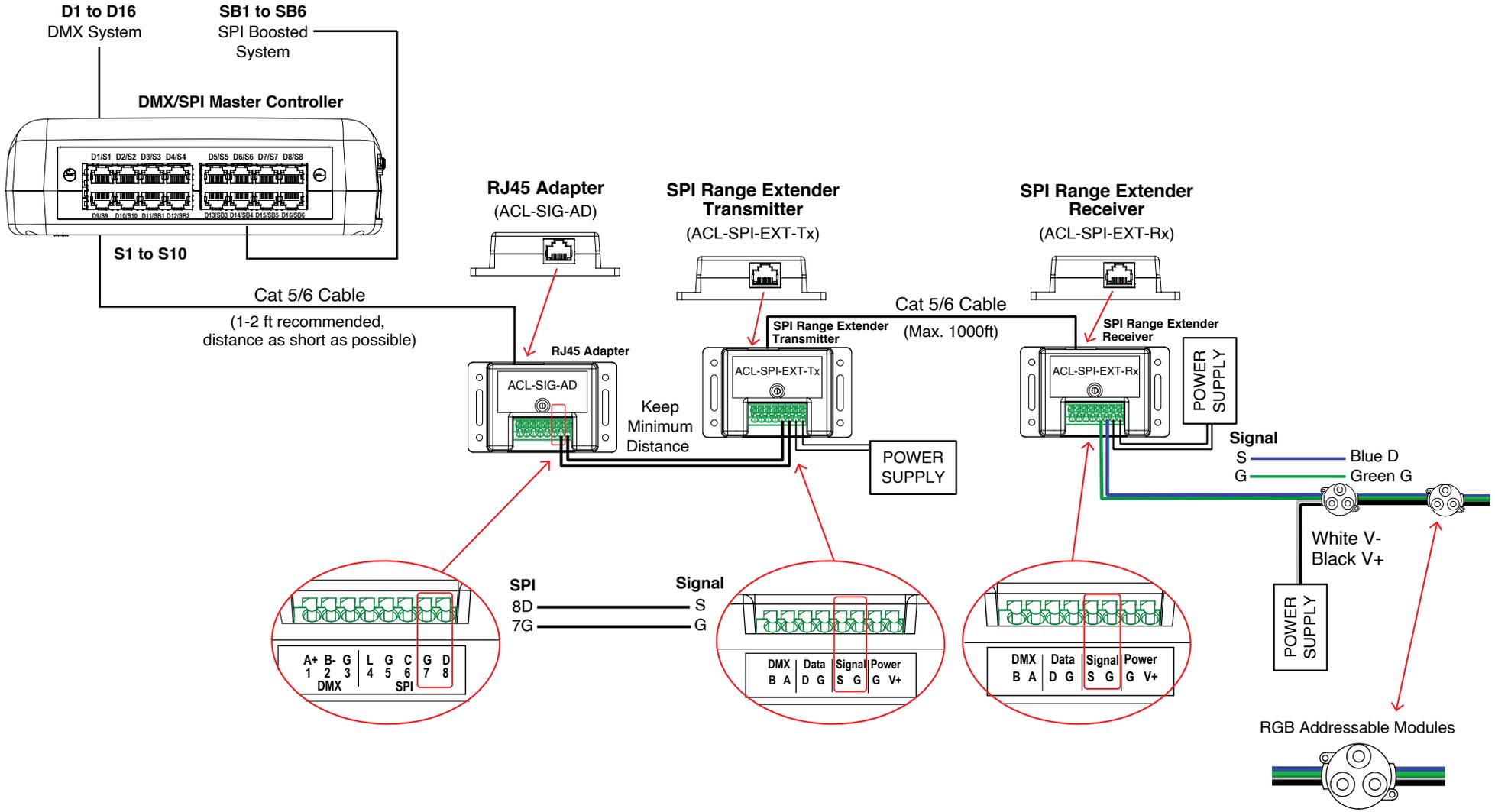
ACL-DMX/SPI-LC Wiring Diagram



Multi-protocol - DMX System Set-Up



Multi-protocol - SPI System Set-Up





DMX/SPI Master Lighting Controller

ACL-DMX/SPI-LC Wiring Diagram



Multi-protocol - SPI Boosted System Set-Up

