

QuickSwitch® 6258
SC Duplex A/B Switch, Single Mode
with RS-232, Contact Closure Remote

Catalog# 306258



Electro Standards Laboratories
ADVANCED SYSTEMS DESIGN & SERVICES

INFORMATION



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INTRODUCTION

The QuickSwitch® 6258 Single Channel SC Duplex A/B Switch with RS-232 allows the user the capability of sharing a single port interface device connected to the “COMMON” port port between two other devices connected to the “A”, and “B” ports. The QuickSwitch® 6258 is packaged in a slim desktop style enclosure.

The switch may be controlled manually by a front panel pushbutton and remotely from the RJ45 port located on the rear of the unit. Switch position status may be attained via the front panel LED display, or the Remote RJ45 port located on the rear of the unit.



FEATURES:

- The switch ports are transparent to all data.
- All fiber signals are switched via break-before-make MEMS-based mirror/prism switch technology.
- Front panel pushbutton control.
- Remote RS-232 ASCII commands that allow the user to control switch position, lockout front panel operations, and obtain switch status.
- Front panel LED's display present position and power status.
- All A, B, and COMMON ports are SC duplex, Single mode, 9/125 micron, and support a wavelength of 1300nm.
- The fiber ports are configured per TIA/EIA-568-B.3, where the TX of the COM port is routed to the RX of the A/B ports and vice versa.

INSTALLATION

This section describes the physical connections required to start operating the *QuickSwitch*® 6258 switch.

QuickSwitch® 6258 Rear Panel

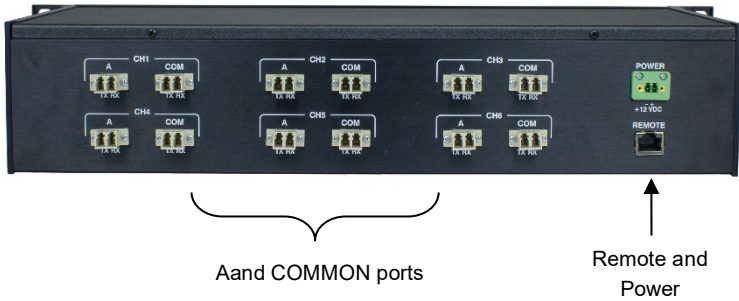


Figure 1: *QuickSwitch*® 6258 Rear Panel

The rear panel view of the switch is shown in the above figure. On the rear of the switch are the following ports:

- **POWER** – Phoenix (F), External Power Supply Input connector.
- **REMOTE** – RJ45 Port.
- **COMMON** – SC Duplex (F), the “COMMON” or shared device port of the switch.
- **A** – SC Duplex (F), the “A” device port of the switch.
- **B** – SC Duplex (F), the “B” device port of the switch.

Power Supply

After all the proper connections have been made, plug the *QuickSwitch*® 6258 into a 100VAC/240VAC, 50Hz/60Hz wall receptacle using the supplied 12VDC, 500mA, UL listed and LPS approved, 2-prong US non-polarized NEMA 1-15P plug wall mount power supply, P/N 516682.

Option: Wide Range Power Module, (Cat. No. 517277), 100VAC/240VAC, 50Hz/60Hz, IEC 60320 C14 inlet, can be ordered for use in place of the standard NEMA 1-15P plug power module that is included with the unit. Ideal for international applications.

Upon power up the *QuickSwitch*® 6258 will process its power up routine. When the routine is done the front panel LED's will indicate the present position of the unit. At this point the unit is ready for operation.

OPERATION

The *QuickSwitch*® 6258 can be operated either by the front panel or through its Remote ports.



Figure 2: QuickSwitch® 6258 Front Panel

Manual Control

The front panel view of the switch is shown in the above figure. On the front of the switch are the following controls and indicators:

- **ON, OFF INDICATORS** – Red LED's indicate the switch position as well as the power status.
 - The LED in the steady state indicates the position of the switch.
 - If the front panel pushbutton is locked and the button is pressed, all LED's will light until the button is released.
- **MANUAL PUSHBUTTON** – The front panel pushbutton allows the switch position to be changed.
 - Depressing and releasing the pushbutton allows the user to toggle the position of the switch.
 - Pushbutton control can be inhibited if locked out remotely.

REMOTE ETHERNET CONNECTIONS

Verify the Hardware

Verify that the switch is currently powered. If the user needs to directly connect to the switch rather than through a LAN, a 10/100BASE-T crossover cable will be necessary (ESL can provide this – p/n 984228-006). This cable allows direct connection of the switch’s Remote LAN port to a computer with a Network Interface Card (NIC).

If no LAN is available, use a Crossover Cable

If no LAN connection is available, the user can use a crossover cable. Plug one end of the cable into the RJ45 Remote port on the rear of the switch and the other end into the computer NIC as in Figure 3.

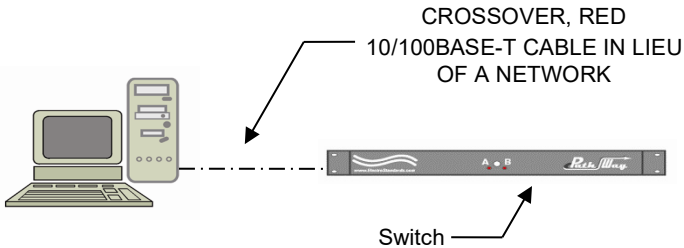


Figure 3: Crossover Cable connection for no LAN

If connecting to a LAN use a 10/100Base-T Cable

Use a straight through 10/100BASE-T patchcord from the switch’s LAN Remote port to a LAN connection, and likewise, reconnect the computer used to configure the system via a standard, straight through patchcord to the LAN as in Figure 4. ESL can provide this cable (p/n 984231-006).

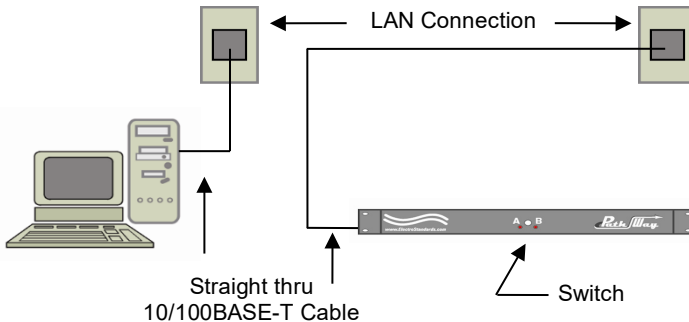


Figure 4: Connecting to a LAN with a 10/100Base-T cable.

10/100BASE-T LAN SETUP

Network Setup

The switch is configured from the factory to use DHCP to automatically get its IP address from a DHCP server on the local area network when connected to the network and powered up. Therefore, a DHCP server is needed on the local area network for the initial configuration. After that the switch can be configured to use a static IP address. To find the IP address of a switch that it has gotten from the DHCP server or to reconfigure the IP Address of the switch, use the Lantronix® Provisioning Manager application (LPM).

Getting LPM

The latest version of LPM can be downloaded from Lantronix's website.

<https://www.lantronix.com/products/lantronix-provisioning-manager/#product-resources>

Finding the IP Address of the Switch

After installing LPM and opening it, the software will automatically search for devices on the network. Once found, the devices will be listed in the right pane (see Figure 5). Match the MAC address on the rear of the unit to the MAC address shown in LPM to correctly identify the desired unit and find the associated IP address.

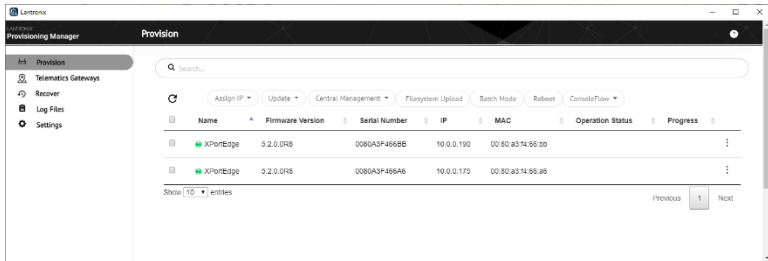


Figure 5: Finding the IP address in LPM

If the desired device is not found in the list at all, the unit may have been previously set with a static IP address that is not compatible with the current network's subnet and configuration.

If use of the LPM software is not something that can be done in a particular circumstance, please consult Electro Standards for specialized and tailored instructions on finding the unit on the network.

Remote Control Setup

Remote switching of the unit is accomplished through the RJ45 port located on the rear of the 6258. This port may be connected to the RJ45 ports on a computer or any other device capable of sending ASCII characters. (See "Installation" section for cable information.) Use a terminal emulation software program, such as Tera Term. To obtain the IP address of the unit, see the previous sections.

Remote Control Commands

All commands are ASCII Control commands or standard upper / lowercase commands ('A', 'a'). A CONTROL command is created by pressing and holding the [CTRL] key and the designated character key simultaneously. For example, to create the CTRL-A command, simply press the [CTRL] and [A] keys on the keyboard simultaneously then release both.

All commands must be terminated with carriage return ('\r') followed by a new line feed ('\n'). This should be a configurable setting in whichever terminal emulation software you are using. For example, in Tera Term if you select Setup -> Terminal, set Transmit to CR+LF.

All responses are terminated with a carriage return ('\r') followed by a new line feed ('\n').

A note to those programming their own systems to control this switch automatically: The ASCII Control commands are represented as the decimal equivalent of the numerical position of that letter in the alphabet, which can then be translated to hex. For example, CTRL-A translates to '1' in decimal or 0x01 in hex, since A is the 1st letter of the alphabet. CTRL-V, on the other hand, translates to '22' in decimal, and 0x16 in hex, since it is the 22nd letter of the alphabet.

Command	Parameter	Function	Response
CTRL-A, 'A', 'a'	Channel 1-6 (0 for gang)	Switch to the online position	1X12 Channel __ is Locked/Unlocked in the On position Or 2212 All channels have been turned on
CTRL-B, 'B', 'b'	Channel 1-6 (0 for gang)	Switch to the offline position	1X02 Channel __ is Locked/Unlocked in the Off position 2202 All channels have been turned off
CTRL-L, 'L', 'l'	Channel 1-6 (0 for gang)	Lock the front panel	11X2 Channel __ is Locked/Unlocked in the On/off position Or

			2122 All channels have been Locked
CTRL-U*, 'U', 'u'	Channel 1-6 (0 for gang)	Unlock the front panel	10X2 Channel __ is Unlocked in the On/off position
CTRL-P, 'P', 'p'	Channel 1-6 (0 for gang)	Query position/status	1XX3 Channel __ is Locked/Unlocked in the On/Off position
CTRL-I, 'I', 'i'	None	Enable / Disable Autosend	8050 Autosend has been enabled Or 8040 Autosend has been disabled
CTRL-V, 'V', 'v'	CTRL-VNone	Query firmware version number	9010 M6258, Firmware Version: X.X
CTRL-N, 'N', 'n'	None	Query serial number	9020 M6258, Serial Number: XXXXX
'M', 'm'	None	Query MAC address	9030 M6258, MAC Address: XXXXXXXXXXXX

Table 1: Remote Control Commands

Error conditions not covered in Table 3:

- CTRL-U does not work on certain emulation programs, such as Tera Term. We recommend using 'U' or 'u'.
- When running commands with parameters, type the parameter immediately after the command without a space and without sending the initial command first. For example, a command to switch channel 1 to the online position could be 'a1'.
- Issuing a command not in Table 3 or with the incorrect number of parameters, will respond with the code 5010 and an appropriate message. No action will occur.

Switch Position on Power Down

If power to the *QuickSwitch*® 6258 is lost, the switch will maintain its present position and continue to pass data. When power is restored, the unit will remain in the same position it was in at power down.

TROUBLESHOOTING

Described below are some common troubleshooting steps and solutions. If following the troubleshooting guide does not solve the problem, please contact Technical Support for further assistance.

Switching Issues

Pressing and releasing the front panel pushbutton does not cause the unit to switch.

- Check that the unit is properly powered and that the front panel LED's indicate the present position.
- If all LED's light up while the pushbutton is held, front panel operation is locked out and must be unlocked through the Remote ports.

Commanding the unit remotely to switch does not cause the unit to switch.

- Check that the Remote Connection is still active. Check if any response to commands is received. If no response is received, troubleshoot the Remote Connection.

Remote Telnet Issues

The switch does not accept Remote Commands.

- Check that the physical connections and pinouts are correct.
- Check that the unit is powered on and ready to operate.
- Ensure that the terminal software is configured with the correct parameters.

The switch does not operate correctly by Remote and responds with garbled text.

- If using Tera Term, make you are transmitting with CR+LF. The switch is expected messages to be terminated like this.

SPECIFICATIONS

Size

Width: 18.5" [47.0 cm]

Height: 1.75" [4.5 cm]

Depth: 8.80" [22.4 cm]

Weight: 5.1 lbs. [2.3 kg]

Environment

Operation Temperature: 0°C to 50°C

Storage Temperature: -40°C to 85°C

Humidity: 10% to 90% without condensation

Power Requirements

DC Voltage: 12VDC

DC Current: 180mA (peak), 40mA (nominal)

AC Power: 2W (peak), 1W (nominal)

Signal Port Interfaces

(3) SC Duplex (F), Single Mode, 9/125 micron, 1300nm signal ports

Signal Port Channels

(1) Channel of SC Duplex A/B/COM ports

Remote Port Interface

RJ45 Port with RS232 capabilities.

Front Panel Control and Indicators

(2) Red LED's

(1) Pushbutton

Power Supply 516682

Input: 100-240VAC, 50/60Hz, 0.2A

Output: 12VDC (regulated), 0.5A

CUSTOMER & TECHNICAL SUPPORT

Customer Support

For customer assistance, ordering assistance, or communications cables of any length or configuration, please contact Electro Standards Laboratories, (877) 943-1164 and ask for sales/customer support.

Technical Support

For technical support with unit operation, cable configuration, etc., please contact Electro Standards Laboratories, (877) 943-1164 and ask for technical support. Please have the unit model number and serial number available when you call.