Electro Standards Laboratories
ADVANCED SYSTEMS DESIGN & SERVICES

SPECIFICATIONS
Host, Desktop Unit... Model 4162 (Cat No. 304162)
4-Port Hub, Desktop Unit... Model 4169 (Cat No. 304169)

High Speed Fiber-to-USB Converter/Extender, Host & 4-Port Hub

Models 4162 and 4169 comprise a Host and a 4-Port Hub that extend USB connections via a high speed Fiber interface. The units convert USB 2.0 compliant data from a standard PC Host interface over fiber to a remote 4-Port powered Hub. The Models 4162 and 4169 are ideal for applications involving PC communications that require high speed, secure communications, and optical isolation. They are ideal for extending USB communications in environments that are subject to high EM or RF Interference that might corrupt communications over a copper interface. Typical applications include industrial control, KVM extension, remote desktop USB connections, remote USB device sharing (printer, scanner, storage, etc.). The units offer true plug and play operability with support for Windows ®, Mac OS®, Linux®, and support all USB device types: Control, Interrupt, Bulk and Isochronous at up to 480 Mbps.

Model 4169 (Cat No. 304169)
Model 4162 (Cat No. 304162)

The units are designed to operate from -0°C to +50°C and the set is a member of Electro Standards Laboratories' rugged community media converter family. The units feature ESD protection circuitry on all copper USB I/O interfaces. Both units' power inputs are protected from transients and the 4-Port Hub (Model 4169) provides the USB standard of 500mA per port. The units feature; Power, Link, Host (Model 4162) and Port Active (Model 4169) indicator LEDs. The converters are available in a desk top package with optional DIN rail mounting hardware.

Specifications:

USB Interface:
Connectors: Model 4162 - 1x USB Type B, High Retention
Model 4169 - 4x USB Type A,
(5V @500mA/port)

USB Data Format:
Type: USB 2.0 Compliant (Backwards compatible USB 1.1)
Rate: Supports Low Speed (1.5 Mbps),
Full Speed (12 Mbps), and High Speed
(480 Mbps) USB Data transfer rates.

Fiber Interface:
Connectors: Fiber Optic LC SFP Transceiver
TX Power: -6.5 dBm (Typical)
RX Sensitivity: -21.5 dB (Typical)
Optical Budget: 14.5 dB
Max. Link Distance with 62.5/125 µm fiber: 500 Meters.
Fiber Size: 50/125 µm, 62.5/125 µm, 100/140 µm
Wavelength: 820 nm, multimode

Indicators:
LEDs: Model 4162 - Power, Host, Link
Model 4169 - Power, Link, Port Active

Power:
Input Power: 5Vdc @ 2.5W (Model 4162)
5Vdc @ 15W (Model 4169)
Connectors: DC Power Jack
USB Powered (Optional for Model 4162)

Operating Environment:
0°C to +50°C

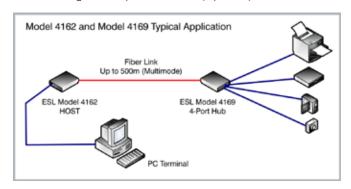### Model 4162 Mechanical (Desktop Unit):
Model / Cat No: 4162 / 304162
Size: 5.0" x 4.25" x 1.4"
Weight: Approx. 11.5 oz (327g)
Mounting: Desktop Std, DIN rail (Optional)

Model 4169 Mechanical (Desktop Unit):
Model / Cat No: 4169 / 304169
Size: 5.0" x 4.25" x 1.4"
Weight: Approx. 11.5 oz (317g)
Mounting: Desktop Std, DIN rail (Optional)

Model 4162 and Model 4169 Typical Application
Fiber Link Up to 500m (Multimode)
ESL Model 4162 HOST
ESL Model 4169 4-Port Hub
PC Terminal