

Mini CONVERTER

SINGLE CHANNEL VIDEO WITH AUDIO, DATA, PHONE OR CONTACT CLOSURE OVER FIBER

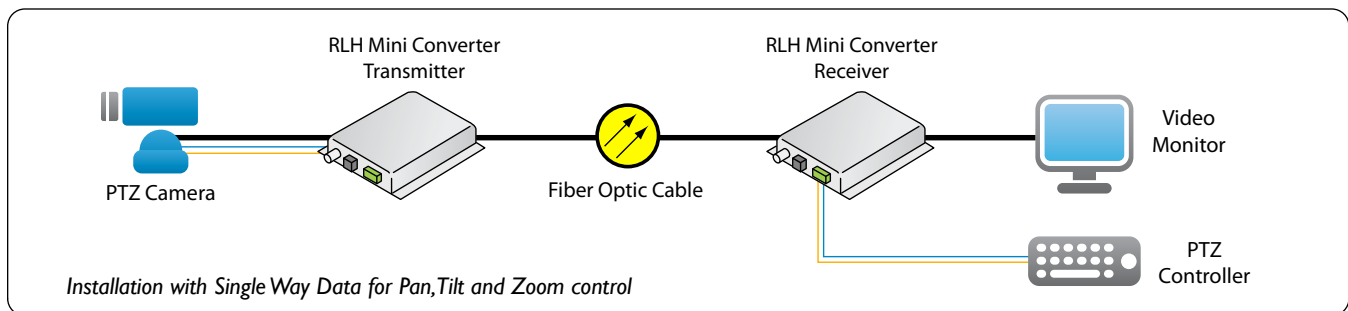
The RLH Mini Converter is a compact, single channel, standalone audio over fiber converter that is perfect for individual channel monitoring.

It comes standard with an auto configuring video port, fiber optic port, and one additional port with several different options including an auto sensing RS232/422/485 data port for remote Pan-Tilt-Zoom (PTZ) camera control using a PTZ controller.

Plug and Play design ensures trouble-free installation and operation. A typical installation utilizes a transmitter unit at the camera end of the link, connected via a single fiber optic cable, to a receiver unit at the monitoring end.



RLH Mini Converter



Standard Features

High quality 10-bit video transmission	Available with ST, SC or FC fiber connectors
Supports any high resolution signal	Available in Multi-mode (3km) or Single mode up to 74mi / 120km fiber range
Auto sensing NTSC/PAL/SECAM video compatibility	Ethernet, data, I/O switch, voice or analog telephone port options
Convenient LED Status monitoring	Large dynamic range, no video or fiber adjustments required
Powering options include 115VAC, 24VDC or 48VDC. 5VDC power adapter included.	PTZ data port is auto configuring RS232/422/485
Wide operating temperature range -40°F - 185°F (-40°C - 85°C)	Exclusive Unconditional Lifetime Warranty

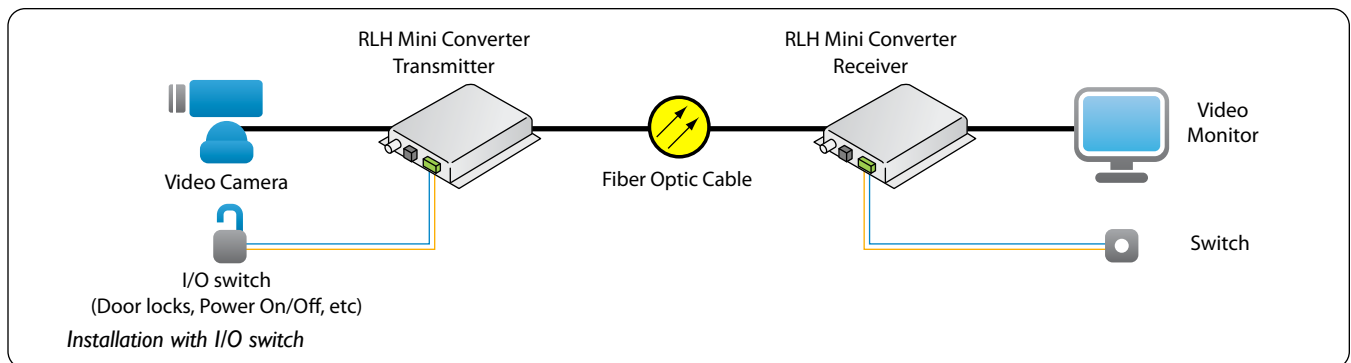
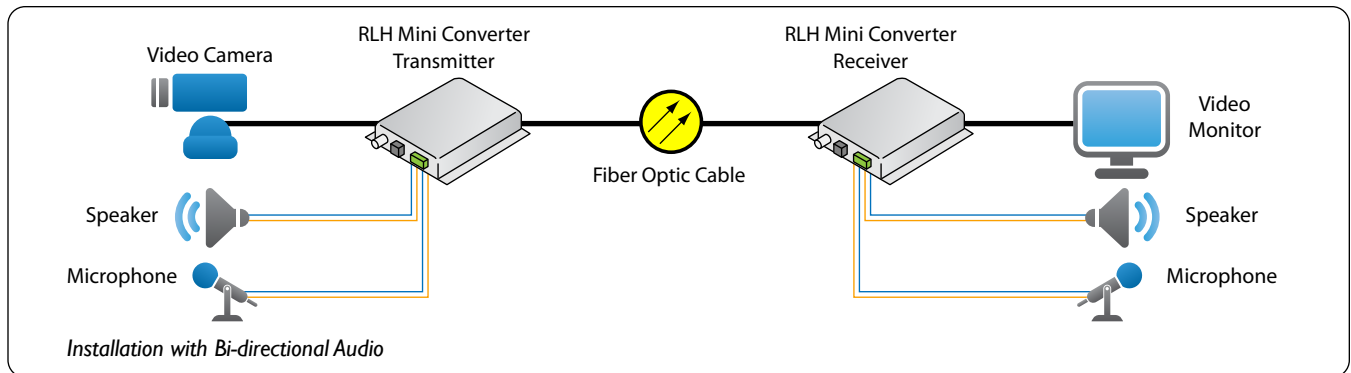
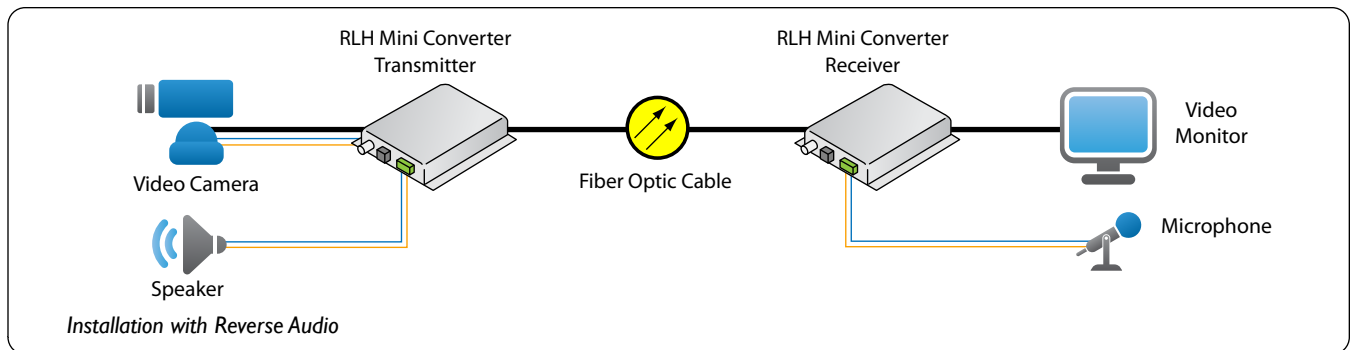
Each unit comes complete with an inline power adapter with a pigtail for incoming power, and a plug that connects to the converter. Optional heavy duty DIN rail mount power supplies are available for single or multiple unit powering.

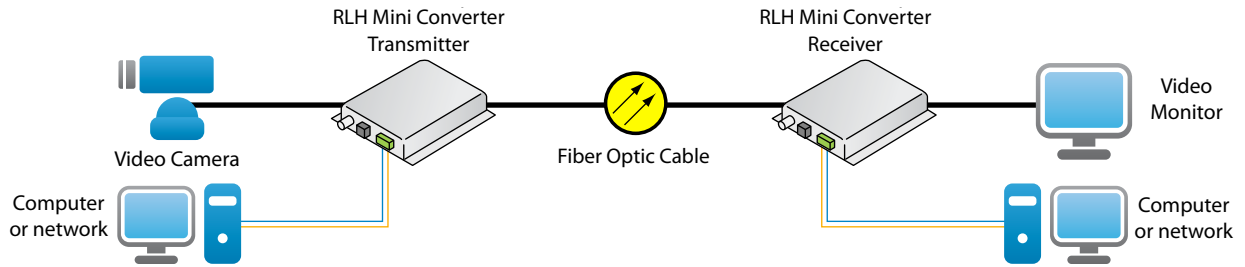
Port options

Port options include Reverse Audio, Bidirectional Audio, Single Way and Bi-directional Data, I/O Switch, Ethernet 10/100 and Analog Telephone.

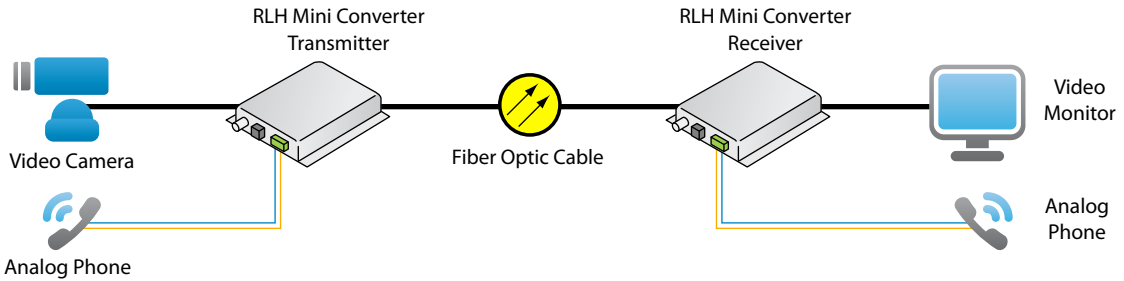
Applications

- ▶ Intelligent transportation systems
- ▶ Highway video monitoring and control systems
- ▶ Toll monitoring and control systems
- ▶ Closed circuit TV industry monitoring and control
- ▶ TV program switching channel transmission
- ▶ High-fidelity video conference systems
- ▶ Security monitoring and control systems

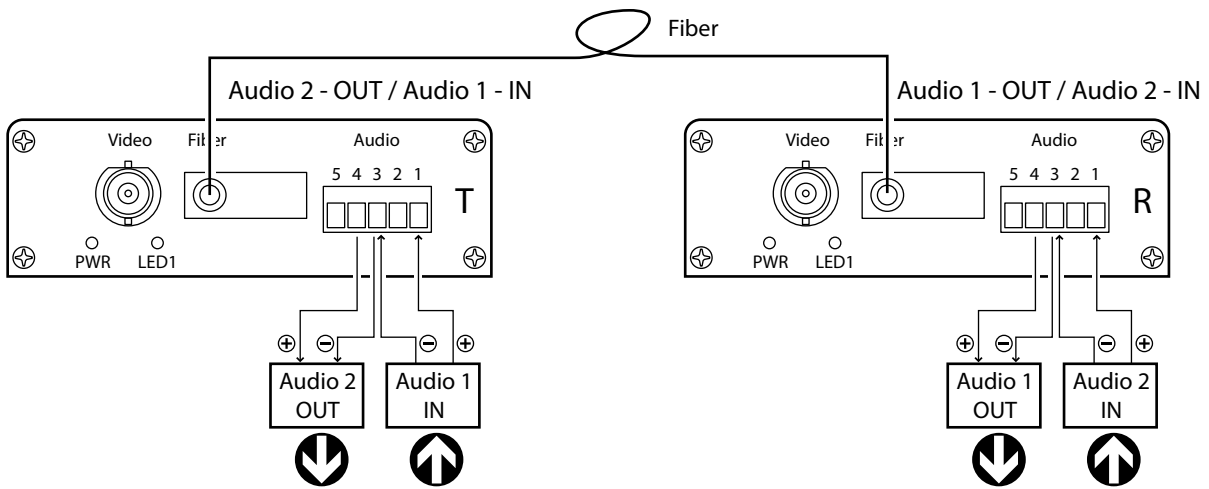




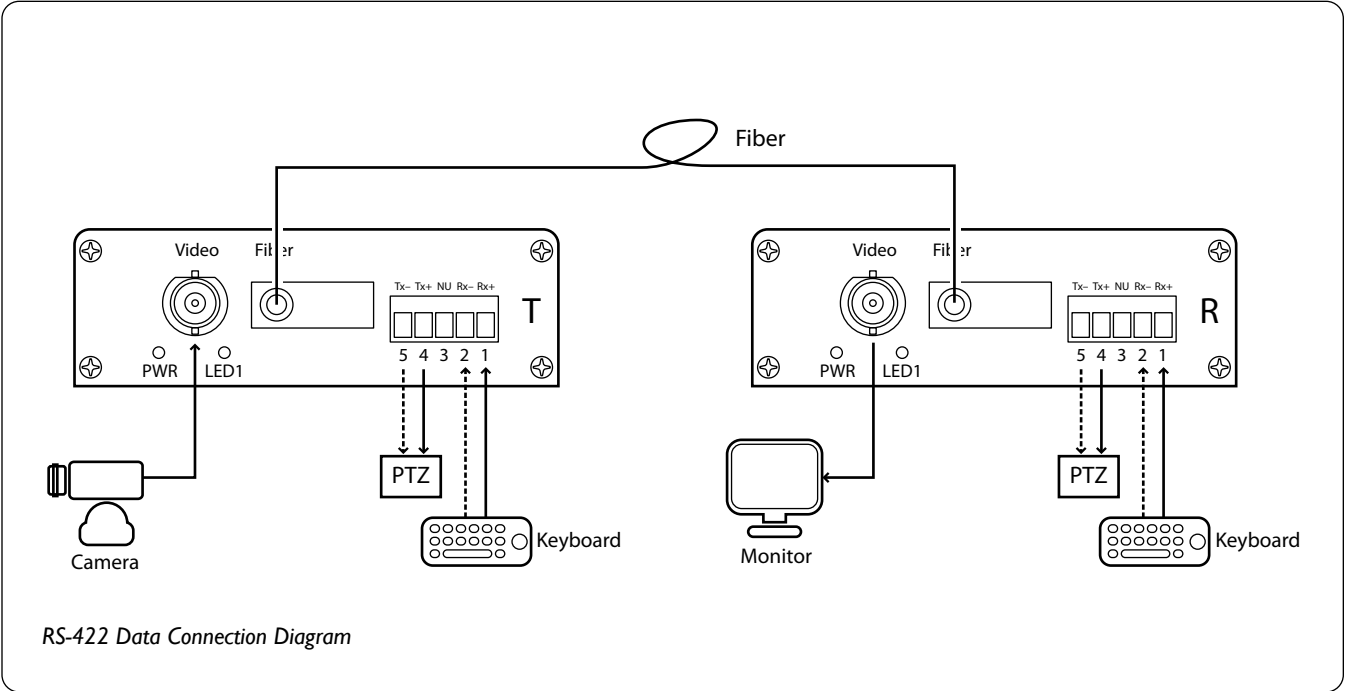
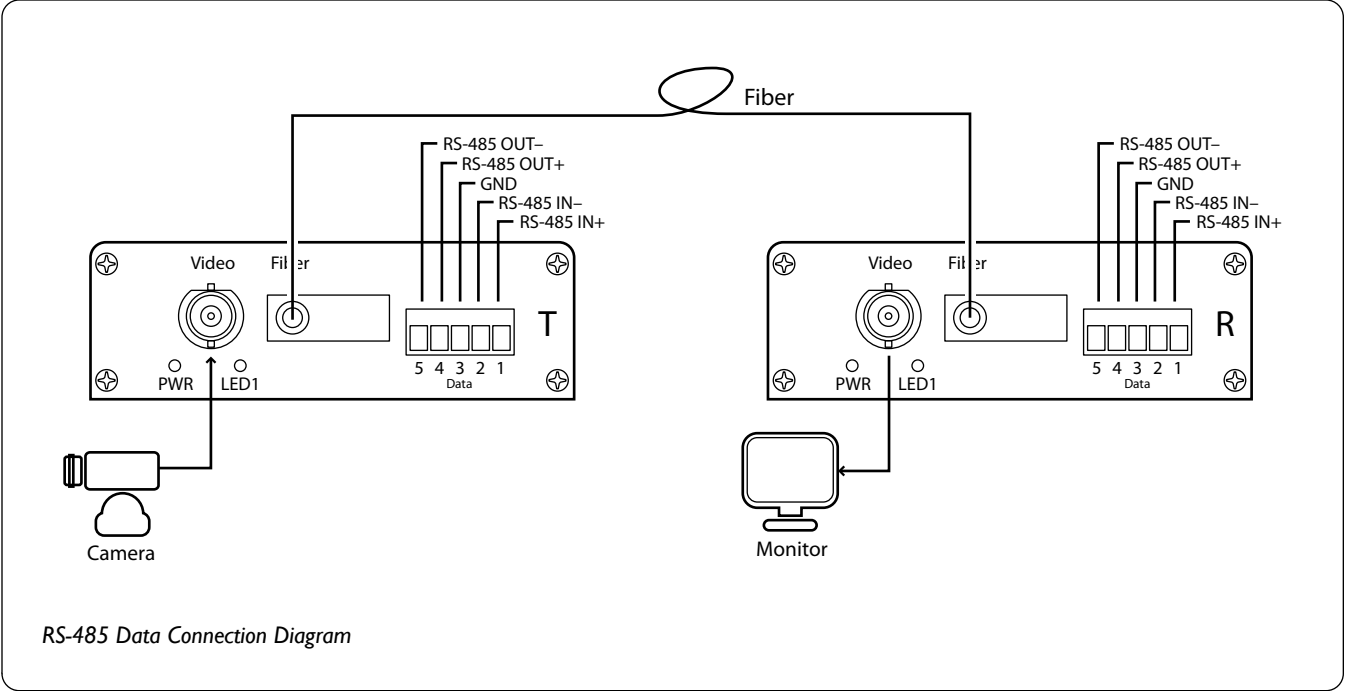
Installation with 10/100 Ethernet



Installation with Analog Phone



Audio Connection Diagram



General Specifications

Transmission method	Amplitude modulated light via optical fiber
Fiber Type	Multimode: 850nm Single-mode: 1310/1550nm
Fiber Type / Distance	Multimode (62.5/125 μ m): 1.8 miles/3km Single-Mode (9/125 μ m): up to 74mi /120km (specify distance when ordering)
Fiber Connector Types	ST, SC or FC
Operating Temperature	-40°F to +185°F (-40°C to +85°C)
Operating Humidity	95% non-condensing
Operating Voltage	5VDC 2A via 115VAC, 24VDC or 48VDC power converter
Physical Dimensions	L4.4in. x W4.3in. x H1.12in. (112mm x 109mm x 28mm) (Wall mountable)
Video Bandwidth	5MHz - 7.5MHz
Video Input/output Impedance	75 Ω , uses BNC connector
Differential Gain	(10% - 90% APL) DG<1% typical
Differential Phase	(10% - 90% APL) DG<0.7% typical
Automatic System Compatibility	NTSC, PAL SECAM
Weighted Signal to Noise Ratio	S/N \geq 95dB (weighted)
Audio Interface Port	Plug-in screw down terminal
Audio Input/Output Impedance	600 Ω (Balanced/Unbalanced)
Audio Input/Output Voltage	2Vpp (typical value)
Audio Bandwidth	10Hz - 20kHz
Audio Signal to Noise Ratio	S/N \geq 95dB (weighted)
Data Interface Port	Plug-in screw down terminal
Interface Signal Type	RS485 / RS422 / RS232 / Manchester (auto detecting). May be used for PTZ control or standard Data transmission
Data Rate	0 - 440Kbps
BER	\leq 10 ⁻⁹
Ethernet Interface Port	RJ45
Ethernet Duplex	Full duplex / half duplex
Supporting standards	IEEE 802.3, 10M, 10/100M auto negotiating
Phone Interface Port	RJ11
Phone Bandwidth	8kHz
Phone Functions	Supports caller I.D. and call forwarding
I/O Port (supports ON/OFF switching)	Plug-in screw down terminal

Ordering Information

Check with your camera and PTZ manufacturer's requirements for the type of RS232/422/485 required (Single way or bi-directional) for use with their products prior to ordering.

Mini Converter Part Number Matrix

RLH - MA - XX XX - X X X - 01

Fiber Type

- MM = Multimode, 2km range, Dual Fiber
- MB = Multimode, 2km range, Bi-Di (SC Only)
- S1 = Single Mode, 20km range, Dual Fiber
- S2 = Single Mode, 20km range, Bi-Di
- S3 = Single Mode, 40km range, Bi-Di
- S4 = Single Mode, 60km range, Dual Fiber
- S5 = Single Mode, 60km range, Bi-Di
- S6 = Single Mode, 120km range, Dual Fiber

Fiber Connector Style

- ST = ST Connector
- SC = SC Connector
- FC = FC Connector

TX/RX

- T = Transmitter
- R = Receiver

Powering Option

- A = 115VAC power adapter
- U = 24VDC power adapter
- V = 48VDC power adapter

Port Option

- N = None
- B = Bi-directional Data RS232
- C = Bi-directional Data RS422
- F = Bi-directional Data RS485
- D = Single Way Data RS232
- G = Single Way Data RS422
- H = Single Way Data RS485
- A = Bi-directional Audio
- R = Reverse Audio
- E = Ethernet 10/100
- T = Analog Telephone
- S = I/O Switch (Contact Closure)

Example: RLH-MA-S1ST-BAT-01
 Mini Audio Converter with Video, single mode, 20km range, ST connector, bi-directional RS-232 data port, 115VAC, transmitter module.

Technical Support

Normal technical support: (Mon - Fri 6am - 6pm PST)	Local (714) 532-1672 Toll Free (800) 877-1672 Toll Free (866) DO-FIBER
24/7 Technical support:	(714) 366-2503 (714) 396-8982 (714) 457-5740

Contact Information

Corporate Headquarters:	RLH Industries, Inc. 936 N. Main Street Orange, CA 92867 USA
Phone:	Local (714) 532-1672 Toll Free (800) 877-1672 Toll Free (866) DO-FIBER
Fax:	(714) 532-1885
Email:	info@fiberopticlink.com
Web site:	www.fiberopticlink.com

Warranty

RLH is recognized throughout the U.S. and offers the only **UNCONDITIONAL LIFETIME WARRANTY** in the telecommunications industry. We are very proud of our warranty which simply states that our Fiber Optic Link Assemblies are warranted to be free of defects in material and workmanship for the **LIFE OF THE PRODUCT**.

We can offer this warranty because:

- We believe our customers shouldn't have to incur additional costs due to failure or damage
- We engineer and manufacture our Fiber Optic Links in the USA, with total confidence in our quality
- We understand how safety and reliability impact the total cost of ownership
- We know that customer support extends beyond the initial sale, so **we stand behind our products**

RLH will replace any product, or part thereof, that fails **FOR ANY REASON**, provided the defective part is returned to RLH Freight prepaid. This warranty is **UNCONDITIONAL** and valid even when RLH Fiber Optic Link Assemblies have been abused or mishandled, where unauthorized repairs have been attempted or performed, or product has been damaged as a result of a natural disaster. Compare this warranty to our competitors and see how our warranty will reduce your costs and simplify your maintenance activities.

To make a warranty claim, or schedule repair or replacement of your RLH product, please contact us for an RMA number. You will be promptly assisted by one of our warranty specialists. All returns must have an RMA number before we can receive any items.

RLH FIBER OPTIC LINK

RLH Industries, Inc. The Leader in Fiber Optic Telecom Isolation Technology

LIFETIME

UNCONDITIONAL WARRANTY

RLH INDUSTRIES, INC. FIBER OPTIC LINK assemblies are warranted to be free of defects in materials and workmanship for the life of the product. This lifetime warranty is effective for RLH products sold from February 2, 1988, to the present, with the exception of fiber optic cable assemblies which are warranted only to be free of defects in manufacturing and batteries, which carry a 5-year unconditional replacement warranty.

RLH Industries, Inc. will repair or replace any product, or part thereof, that fails for any reason, provided the defective part is returned to RLH, freight prepaid.

This warranty is UNCONDITIONAL and is valid even when RLH Fiber Optic Link assemblies have been abused or mishandled, where unauthorized repairs have been attempted or performed, or product has been damaged as a result of a natural disaster.

Authorized by:



J. RANDALL MEARS, Vice President, Engineering



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Please contact your RLH sales representative
for pricing and delivery information.

Specifications subject to change without notice.