

KEY FEATURE

- ❖ Fully supports base Camera Link™ cameras/frame grabbers
- ❖ Provides 2.5Gb/s transport bandwidth – up to 24 bits and 85 MHz pixel clock
- ❖ Zero loss and transparent transport – no changes required for camera and/or frame grabber
- ❖ One LC duplex fiber interface
- ❖ 4 opto-isolated GPIO channels (2 inputs and 2 outputs) for external trigger and control
- ❖ Full duplex RS232 for remote instrument control
- ❖ Single 5V~24V DC power supply
- ❖ Locking AC/DC power adapter
- ❖ Transmission distance depending on your choice of fiber:
 - o Multi-mode fiber – up to 250m
 - o Single-mode fiber – up to 80km

APPLICATIONS

- ❖ High precision security surveillance (e.g. border control, airport)
- ❖ Bar code reading and sorting (e.g. postal center, packaging)
- ❖ Vehicle license plate reading/recording (e.g. toll booth)
- ❖ Product inspection (e.g. automated production line)
- ❖ Port/Harbor cargo container management
- ❖ Railroad measurement/inspection
- ❖ Traffic surveillance/control
- ❖ Cameras placed in harsh environment (e.g. nuclear plant)
- ❖ Long haul image transmissions (e.g. bridge inspection)
- ❖ Other Machine Vision Applications

PHRONTIER™
TECHNOLOGIES

PHOX™ Camera Link Fiber Extender

Base Configuration

PHOX-BM-250
PHOX-BM-A250
PHOX-BL-10/20/40/80
PHOX-BL-A10/A20/A40/A80



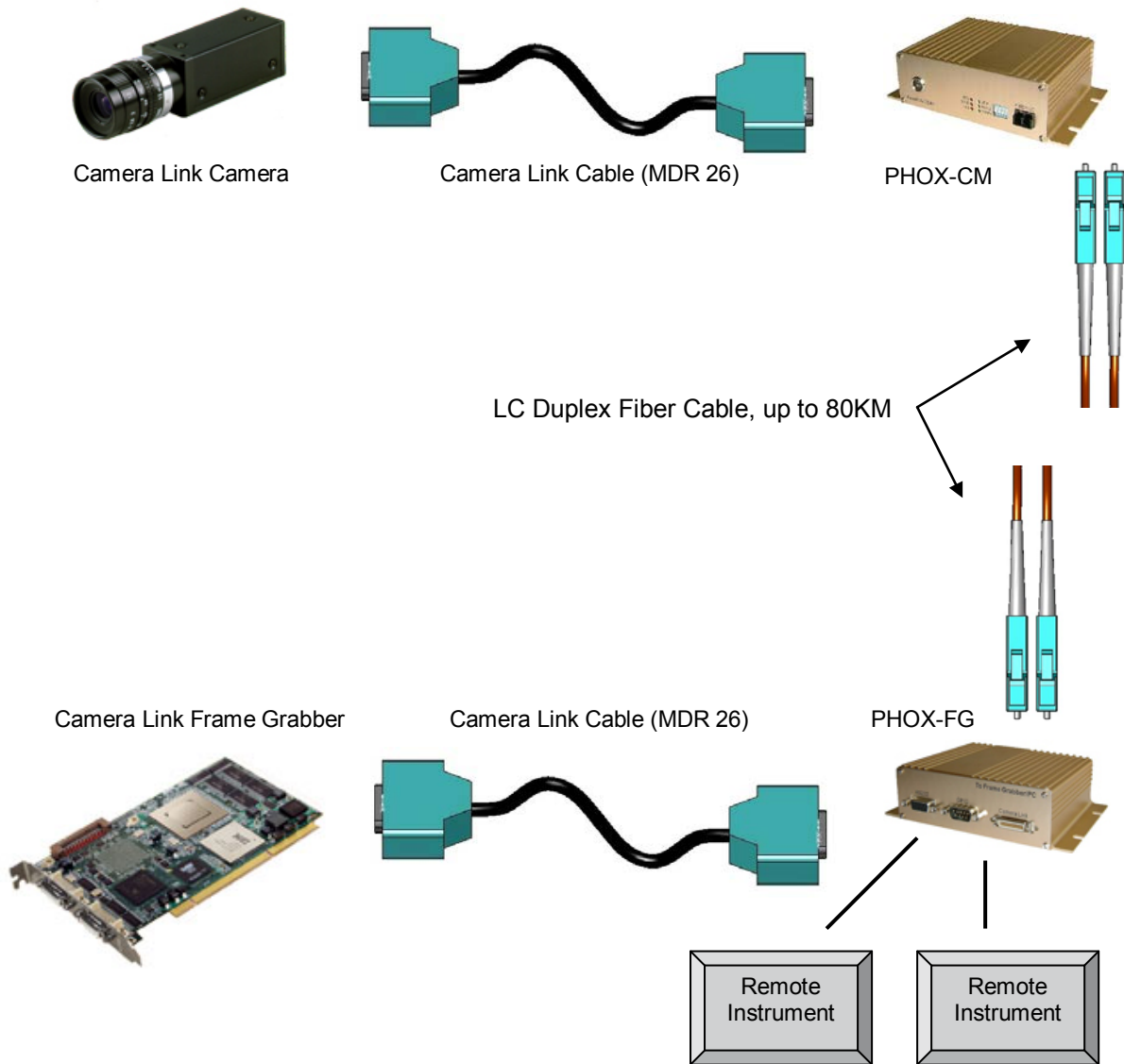
PHOX Front View



PHOX Back View



TYPICAL SET UP DIAGRAM



Fiber Guide

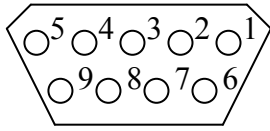
- Use 62.5/125 MM fiber for <150 m
- Use 50/125 MM fiber for <250 m
- Use 9/125 SM fiber for <80 km

TECHNICAL SPECIFICATIONS

Camera Link Interface				
Max Pixel Clock	PHOX-BM-00250	66 MHz	PHOX-BM-A250	85 MHz
Max Data Width per Pixel	24 bits			
Compatibility	Camera Link base mode			
Connector Type	MDR 26 pin			
Opto-isolated GPIO Interface				
Number of I/O Channels	2 input and 2 output (both are opto-isolated)			
Operating Voltage	0~3.3V (5V with external supply)			
Max. Data Rate	1 Mbps			
Connector Type	DB9 male			
RS232 Interface				
Number of Data Channels	4 – RxD TxD RTS CTS			
Operating Voltage	Input: +/- 25V, Output: +/- 6V			
Max Data Rate	250 Kbps			
Connector Type	DB9 female			
Optical Interface				
Model #	Operating Wavelength	Optical Tx Output Power	Min Optical Rx Power	Fiber Type
PHOX-BM-250	850 nm	-9 to -4 dBm	-15 dBm	OM1, OM2, OM3, OM4 multimode fiber
PHOX-BM-A250	850 nm	-9 to -2.5 dBm	-15 dBm	
PHOX-BL-10	1310 nm	-9.5 to -3 dBm	-18 dBm	9/125 μm single mode fiber
PHOX-BL-A10	1310 nm	-8 to -3 dBm	-18 dBm	
PHOX-BL-20	1310 nm	-5 to 0 dBm	-18 dBm	
PHOX-BL-A20	1310 nm	-5 to 0 dBm	-18 dBm	
PHOX-BL-40	1550 nm	-2 to +3 dBm	-20 dBm	
PHOX-BL-A40	1550 nm	0 to +4 dBm	-18 dBm	
PHOX-BL-80	1550 nm	-2 to +3 dBm	-28 dBm	
PHOX-BL-A80	1550 nm	0 to +4 dBm	-26 dBm	
Connector Type	LC duplex			
General Electrical Specification				
Input Voltage	DC 5 ~ 24 V			
Supply Current	300 mA @12V each module			
Typical Power Consumption	3.6 W each module			
Operating Temperature	0 ~ 60°C (non-condensing)			
Connector Type	Switchcraft TA3FX locking connector			
Approx. Weight (each module)	310 gram			

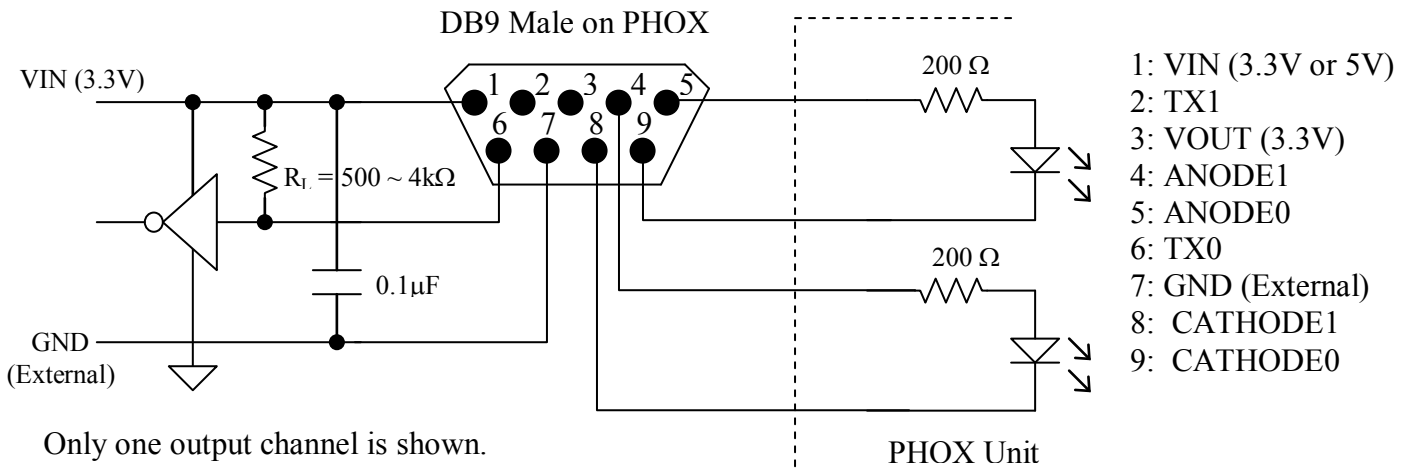
RS232 PIN ASSIGNMENT (FEMALE DB9)

DB9 Female on PHOX

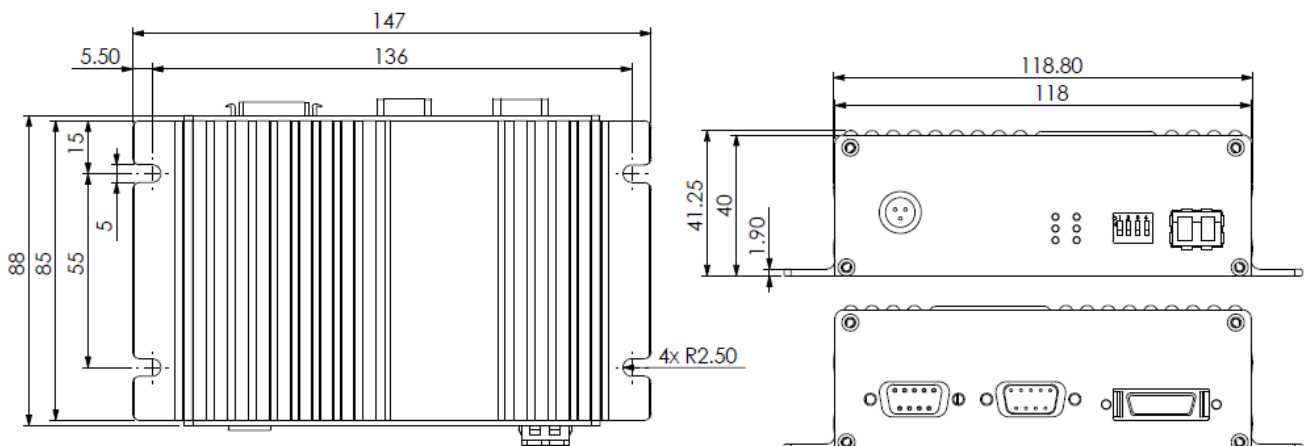


- 1: N/C
- 2: Data Tx
- 3: Data Rx
- 4: N/C
- 5: GND
- 6: N/C
- 7: CTS (Clear To Send)
- 8: RTS (Request To Send)
- 9: N/C

GPIO PIN ASSIGNMENT (MALE DB9)



MECHANICAL INFORMATION (mm)



ORDERING INFORMATION

Model #	Pixel Clock	Transport Distance	Check List
PHOX-BM-250	66 MHz max.	Up to 250 meters*	1x PHOX-CM 1x PHOX-FG 2x 12DC international wall mount AC/DC power adapters with locking plug (LC duplex fiber cable not included)
PHOX-BM-A250	85 MHz max.	Up to 250 meters*	
PHOX-BL-xx	66 MHz max.	Up to 80 kilometers*	
PHOX-BL-Axx	85 MHz max.	Up to 80 kilometers*	

- Note: xx = Maximum transporting distance in kilometers. Available in 10KM, 20KM, 40KM, and 80KM.
- * Distance depending on fiber type and system design. 250 m transmission distance for PHOX-BM is based on 50/125 MM fiber. Extra optical losses in the system will reduce the maximum transmission distance.

