

Mini-PHIRE™

KEY FEATURES

- ❖ Fully supports base Camera Link™ cameras/frame grabbers
- ❖ Direct plug – no electrical cable needed
- ❖ Broad bandwidth – supporting 24 bits image data at 85 MHz pixel clock
- ❖ Transparent operation – plug and play with no changes required for camera and/or frame grabber
- ❖ Standard LC duplex fiber interface
- ❖ Accept wide DC input 5V~24V DC
- ❖ Transmission distance - up to 10 km (standard), longer distance available
- ❖ **PoCL compatible**
- ❖ **Power connector with locking mechanism**
- ❖ **Compact size – 47L x 39W x 20H mm (1.85L x 1.54W x 0.78H inch)**

TARGET APPLICATIONS

- ❖ Solar panel or glass panel inspection
- ❖ Semiconductor wafer inspection
- ❖ High speed printing inspection
- ❖ High precision surface inspection (e.g. airplane surface or automobile painting)
- ❖ Automated product inspection (e.g. food, drinking or pharmaceutical products)
- ❖ High resolution and real-time analysis for science, sports, automobile tests, and 3-D animation.
- ❖ High precision security surveillance (e.g. border control, airport)
- ❖ Traffic surveillance/control and vehicle license plate reading/recording (e.g. toll booth)
- ❖ Cameras placed in harsh environment (e.g. nuclear plant, steel mill or undersea monitoring)
- ❖ Other Machine Vision Applications

PHRONTIER™
TECHNOLOGIES

Mini-PHIRE™ Camera Link Fiber Adapter

Base Configuration

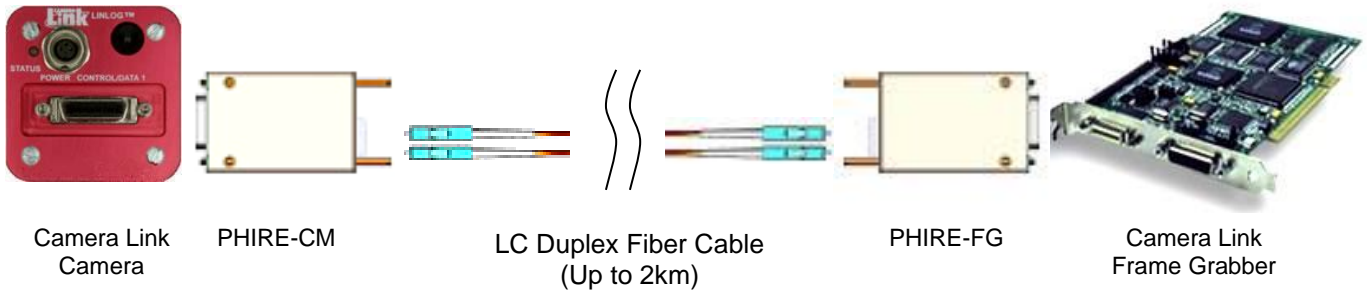
PHM-85-M30
PHM-85-S10



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Mini-PHIRE Series

TYPICAL SET UP DIAGRAM



Camera Link
Camera

PHIRE-CM

LC Duplex Fiber Cable
(Up to 2km)

PHIRE-FG

Camera Link
Frame Grabber

TECHNICAL SPECIFICATIONS

General Specification

Operating Temperature	Ambient	0 ~ 50 °C
	Case	0 ~ 70 °C
Storage Temperature		-40 ~ 85 °C
Operating Humidity		20 ~ 80% (non-condensing)
Input Voltage		DC 5 ~ 24 V
Supply Current @25 °C	CM	0.14 A @12V
	FG	0.16 A @12V
Typical Power Consumption	CM	1.7 W
	FG	1.9 W
Connector Type		Switchcraft 722A
Approx. Weight (each module)		61 gram

Camera Link Interface

	PHM-85-M30 PHM-85-S10
Pixel Clock	20 ~ 85 MHz
Max Image Data Width	24 bits
Transport Bandwidth	2.5 Gb/s

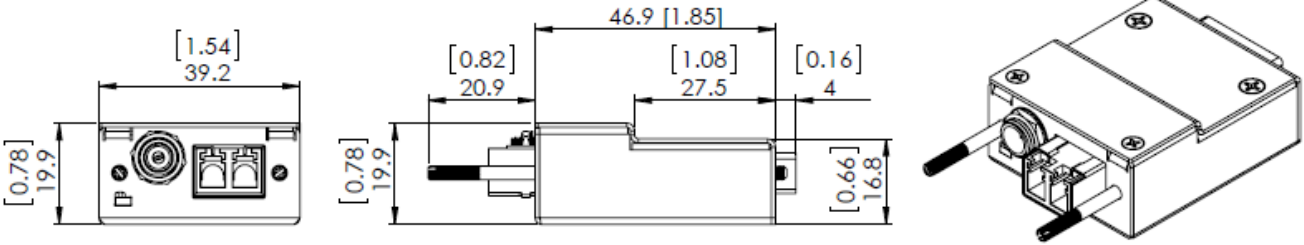
Optical Interface

	PHM-85-M30	PHM-85-S10
Operating Wavelength	850 nm	1310 nm
Min Optical Tx Output Power	-6 dBm	-6 dBm
Min Optical Rx Power	-11 dBm	-14 dBm
Connector Type	LC duplex	LC duplex
Fiber Type	50/125 μm or 62.5/125 μm MM fibers	9/125 μm SM fibers

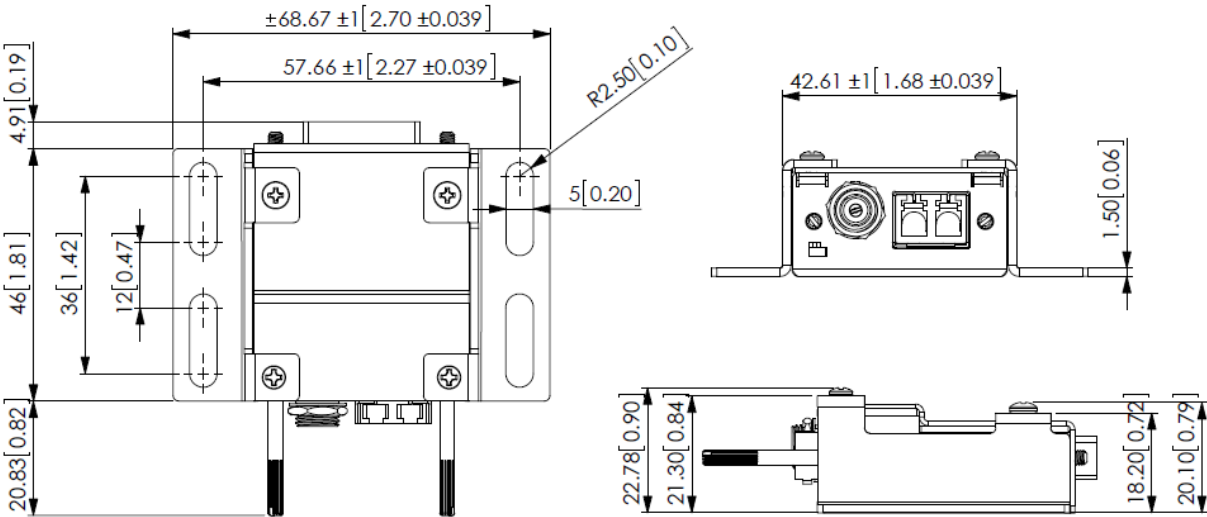
Mini-PHIRE Series

MECHANICAL INFORMATION (mm [inch])

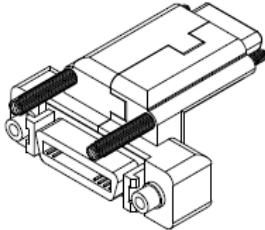
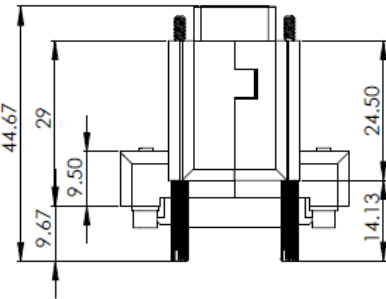
Module dimensions



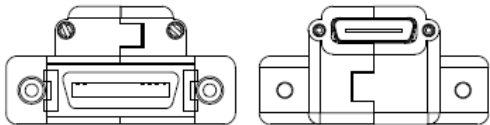
With Mounting Flange Options



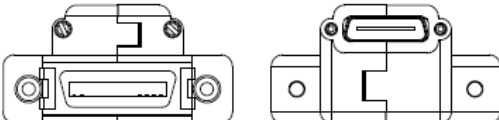
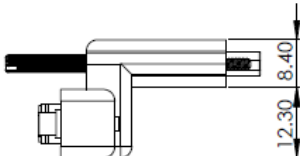
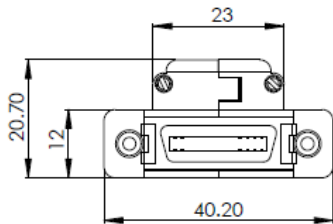
SDR plug to MDR receptacle adapter



Down angle configuration



Up angle configuration



Mini-PHIRE Series

ORDERING INFORMATION

Standard models

Model #	Data Width	Max. Pixel Clock Rate	Fiber Type & Estimated Link Distance *		Items Provided
PHM-85-M30	24 bits	85MHz	OM3 MM	300 m (1000 ft)	1x Mini-PHIRE-CM 1x Mini-PHIRE-FG 2x 12V DC output
PHM-85-S10	24 bits	85MHz	SM	10 km (6.25 mile)	international wall mount AC/DC adapters (fiber cable not included)

* Distance depending on fiber type and system design. Extra optical losses in the system will reduce the transmission distance.

Accessory

Part #	Description
618-TRG10R-SW	12V DC international wall mount AC/DC adapter with Switchcraft plug
LC-LC-MD-xxM2	LC to LC duplex 50/125 μ m OM2 MM fiber. xx = desired length in meters.
LC-LC-MD-xxM3	LC to LC duplex 50/125 μ m OM3 MM fiber. xx = desired length in meters.
PHM-W	1 pair of mounting flanges including PHM-W-L and PHM-W-R
SDR-MDR-D	SDR plug to MDR receptacle adapter – DOWN configuration
SDR-MDR-U	SDR plug to MDR receptacle adapter – UP configuration



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