

Foveal FM3_2a Mount for Cognex In-Sight 5000 series cameras

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Foveal FM3_2a Fine-Adjustment 2-Axis Camera Mount



Click to enlarge pictures and drawings.

- Compatible with the **Cognex® In-Sight® 5100, 5400 and 5600** camera lines
- Pan and Tilt Axes are **aligned with the optical center** of the imaging element, making alignment easier.
- **Fine Adjustment** of Pan and Tilt axes.
- **Individual axis lock down** makes adjustment easier, more precise, and prevents accidental change.
- **Sturdy construction.**

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other cameras that fit
the FM3_2a

[Matrox GatorEye](#)



[Matrox Iris GT](#)

Motivation

The [Foveal 2-Axis Fine Adjustment Camera Mounts](#), models **FM1_2a** and **FM2_2a**, are designed to match common machine vision camera mounting configurations. But a customer expressed the need for something similar that could easily handle the unusual mounting screw holes in the Cognex In-Sight 5000 series cameras. (Other cameras in the Cognex line can be mounted on the **FM1_2a** and/or **FM2_2a** mounts. See also the [Cognex In-Sight 7000 Mount](#) ↓ below).

So we created the **FM3_2a** Fine-adjustment 2-Axis Mount. It shares the fine-adjustment features and mounting plate options of the other Foveal FMs (Fine-adjustment Mounts).





Because the **FM3_2a** is designed specifically for these make and model mounts, we optimized the placement of the Pan and Tilt Axes so they are centered on the imaging element inside the camera body.

The Cognex model series supported include the 5000, 5100, 5400, 5600, and 5700.

Note: the *stainless steel* versions of these cameras **are not compatible** with the **FM3_2a** mounts.

However, see the [CACognex5000 Camera Adapter](#) can be used with those camera bodies.

Also see our other mounts suitable for [fm3_2a_Cognex_DataMan_470.html](#) cameras:

- [Cognex cameras on Foveal Metric Mounts](#) 
- [Foveal Mounts for Cognex 7200 Cameras](#) 
- [Cognex cameras on Foveal Metric Mounts](#) 
- [Foveal Mounts for Cognex DataMan 470 Cameras](#) 

Features in common with all FM models

The 2-Axis Fine-Adjustment Camera Mounts may be supported with the base down or the base up. In either position, the plate the camera attaches to can be either below or above the camera.

When coarse adjustments are unlocked, there is sufficient friction to hold the camera in position. Coarse position can be set by hand.

Fine adjustments are made using a hex wrench, allowing for extremely fine positioning.

Independent adjustment of each axis means each adjustment does not affect the other.

All adjustments and locking are made with a single 3/32 inch hex wrench. Reconfiguration is done with a 9/64 inch hex wrench.

Once the mount is locked, the camera does not move.

While not as robust as the Rigid Mounts, the Fine-adjustment Mount will work very well in applications where the mount will not be subjected to extreme disturbances. They are also suitable for mounting other types of instruments and sensors.

For more robust, two- and three- axis mounts that feature fine adjustment and locking of the pan, tilt, and roll axes, see the [Foveal 2- and 3-Axis Rigid Camera Mounts](#).

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Specifications

Model FM3_2a 2-axis [↓ FM3 Drawings](#) [↓ Prices and Delivery](#)**Materials** black anodized 6061-T651 aluminum, stainless steel hardware, nylon**Weight** 16 ounces 454 grams**Dimensions**

Overall Height 5.375 inches 13.65 centimeters

Overall Width 4.18 inches 10.61 centimeters

Overall Depth 3.00 inches 7.62 centimeters

Maximum Camera Dimensions

Width at Base 2.00 inches 5.08 centimeters

Overall Width 2.75 inches 6.98 centimeters

Coarse Position Range

Pan 360 degrees

Tilt (from vertical) see illustration below
~ 120 degrees backward
~ 27 degrees forward, with lens cover
~ 42 degrees forward, without lens cover*Click to enlarge pictures and drawings.***Fine Position Range**Pan ± 5 degreesTilt ± 5 degrees*Custom Designs are available.*

Choose One:**Square Mounting Plate Dimensions**[↓ Drawing](#)

Height	0.25 inches	0.63 centimeters
Width	3.00 inches	7.62 centimeters
Depth	3.00 inches	7.62 centimeters

Rectangular Mounting Plate Dimensions[↓ Drawing](#)

Height	0.25 inches	0.63 centimeters
Width	5.00 inches	12.70 centimeters
Depth	2.00 inches	5.08 centimeters

L-bracket Mounting Plate Dimensions[↓ Drawing](#)

Height	1.25 inches	3.17 centimeters
Width	3.00 inches	6.72 centimeters
Depth	2.25 inches	5.71 centimeters

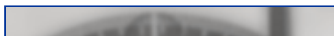
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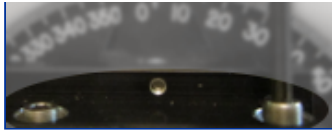
Options**Finger Adjustment Knobs (FAK) Option**[Prices and Delivery](#) ↓

When the need is not *set it and forget it* but instead the mount frequently needs to be finely adjusted, we offer knobs for the fine position adjustment screws.


**Lock Nuts and Lock Washers (LNLW) Option**[Prices and Delivery](#) ↓

If your mount will be subjected to high vibration, extra lock nuts and lock washers might help. [LNLW Installation Manual](#) 📄

**Extra Fine Adjustment (EFA) with lock nuts Option**



[Prices and Delivery](#) ↓

The normal change in the Pan or Tilt angle is bit more than 2 degrees per turn of the position screws. Should you need a finer adjustment, this option provides slightly less than 1 degree per turn. While shown here with the PTD option (below), EFA and PTD are separate options. [EFA Manual](#) 



Pan and Tilt Protractor Dials (PTD) Option

[Prices and Delivery](#) ↓

We offer mounts with Protractor Dials on both the Pan and Tilt Axes so the angles can be read out. See the complete description at [Foveal Mounts with Pan and Tilt Protractor Dials](#).

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Prices and Delivery

United State dollars

FOB New Jersey, United States

6.625% Sales Tax to customers in New Jersey

Call 973 822-2085

Calculate your **Order Number** and **Price**

Model	Options	Mounting Plate	Description	Price	Delivery
<input checked="" type="radio"/> FM3_2a			Fine-adjustment Mount, 2 axis, special camera support	\$335.00	In Stock
	<input checked="" type="radio"/>		<i>none in this group</i>		
	<input type="radio"/> _EFA		Extra Fine Adjustment with lock nuts	+ \$130.00	Limited Stock: Please Call
	<input type="radio"/> _FAK		Finger Adjustment Knobs	+ \$20.00	In Stock
	<input type="radio"/> _LNLW		Lock Nuts and Lock Washers	+ \$20.00	In Stock
	<input type="checkbox"/> _PTD3		Pan and Tilt protractor Dials, 3 inch	+ \$190.00	Limited Stock: Please Call
		<input type="radio"/> _nmp	<i>no mounting plate</i>		
		<input type="radio"/> _LMP	L-bracket Mounting Plate	+ \$35.00	In Stock

- | | | | |
|------------------------------------|-------------------------------|-----------|----------|
| <input type="radio"/> _RMP | Rectangular Mounting Plate | + \$15.00 | In Stock |
| <input type="radio"/> _SMP3 | Square Mounting Plate (3 x 3) | + \$15.00 | In Stock |

Order Number:

FM3_2a

Price:

\$ 335.00

Choose a Mounting Plate.

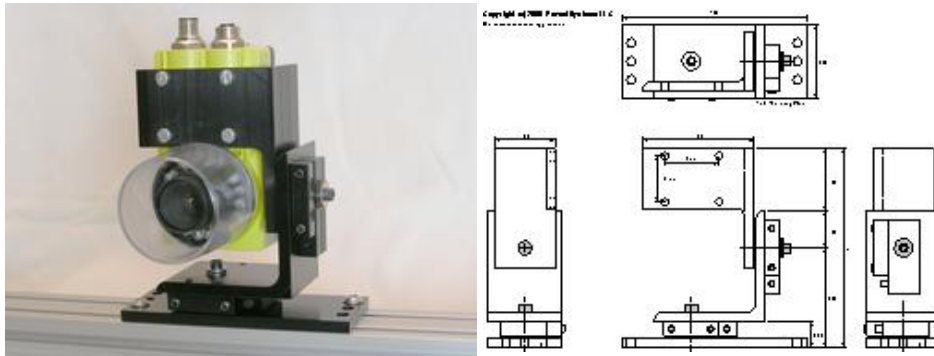
Price in United States Dollars. Call **973 822-2085** to discuss or place your order. Or [Contact Us](#)*Questions?* Call 973 822-2085

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Photos, Dimensional Drawings, CAD Files

Dimensions in inches.

Model FM3_2a-RMP (with Rectangular Mounting Plate)

*Click to enlarge pictures and drawings.*

CAD files STEP format

[FM3_2a-LMP.stp.zip](#)[FM3_2a-RMP.stp.zip](#)[FM3_2a-SMP3.stp.zip](#)

Mounting Plate Options

There are four mounting plate options for the FM mounts.

no mounting plate The pan pivot has two 8-32 threaded holes in it.

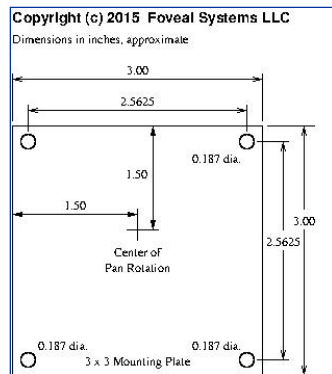
-SMP3 Square Mounting Plate suitable for general mounting to flat surfaces.

-RMP Rectangular Mounting Plate for general mounting or T-Slot framing systems. †

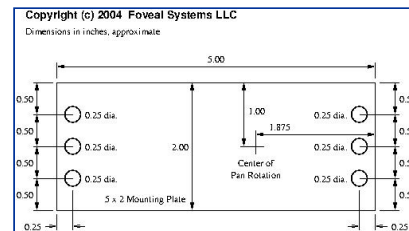
-LMP L-bracket Mounting Plate specifically for T-Slot framing systems. †

† For more information, see [Foveal Mounts - T-Slot Mounting Plates](#).

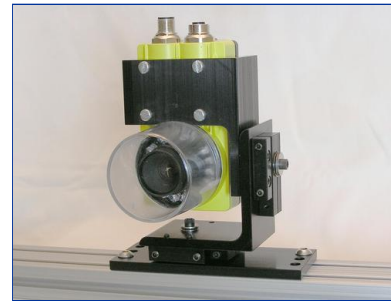
3 x 3 inch Square Mounting Plate -SMP3



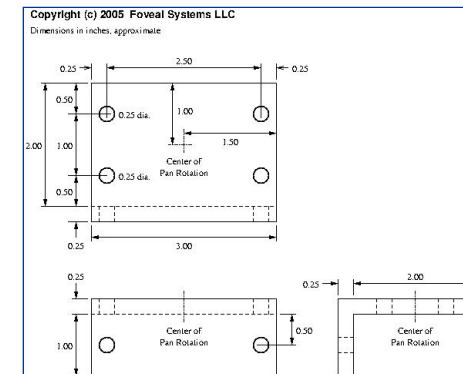
5 x 2 inch Rectangular Mounting Plate -RMP



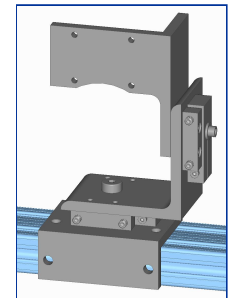
FM3_2a-RMP mounted on T-Slot frame



L-bracket Mounting Plate -LMP



FM3_2a-LMP mounted on T- Slot frame



Click to enlarge pictures and drawings.

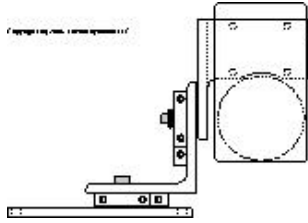
[See CAD files Above](#) ↑

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Camera Mounting Alternatives

Adjusting camera mounts can become tedious in tight or inconvenient spaces. We have made the Fine Mounts customer-configurable, so alternative placements of the adjustment screws and the Tilt table are possible.



For example, it may be more convenient to have the camera mounted away from the Pan axis. In particular, this allows the camera to look over around a corner or down over an edge.

Note that in this configuration the Pan axis *does not* go through the optical center of the camera, although the Tilt axis still does.

*Click to enlarge pictures
and drawings.*

If you need to verify a particular configuration, please contact us.

Cognex In-Sight 7200 Mount

FM1_2a and **FM2_2a** mounts work well with the **Cognex In-Site 7200 series** cameras

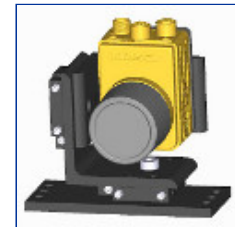
FM1_2a

These two mounts work well with these cameras.

FM2_2a

Both Pan and Tilt axes rotate *near* the optical center of the imaging element.

[Full Description](#)



For more robust, two- and three- axis mounts that feature fine adjustment and locking of the pan, tilt, and roll axes, see the [Foveal 2- and 3-Axis Rigid Camera Mounts](#).

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For information on purchasing **Foveal 2-Axis Fine Camera Mounts** please contact us ...

By e-mail at
info@foveal.com

Or call

[Foveal Systems](#)

+1 973 822-2085

[B & B Model Shop Services, Inc.](#) is a partner in the design and construction of the Foveal Fine Camera Mounts.

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