

# COGNEX

## **Xpand 350 Field of View Expander Quick Start Guide**



2021 February 24

# Precautions

To reduce the risk of injury or equipment damage, observe the following precautions when you install the Cognex product:

- This product is intended for industrial use in automated manufacturing or similar applications.
- The safety of any system incorporating this product is the responsibility of the assembler of the system.
- Do not install Cognex products where they are exposed to environmental hazards such as excessive heat, dust, moisture, humidity, impact, vibration, corrosive substances, flammable substances, or static electricity.
- Route cables and wires away from high-current wiring or high-voltage power sources to reduce the risk of damage or malfunction from the following causes: over-voltage, line noise, electrostatic discharge (ESD), power surges, or other irregularities in the power supply.
- This product does not contain user-serviceable parts. Do not make electrical or mechanical modifications to product components. Unauthorized modifications can void your warranty.
- Changes or modifications not expressly approved by the party responsible for regulatory compliance could void the user's authority to operate the equipment.
- Include service loops with cable connections.
- Ensure that the cable bend radius begins at least six inches from the connector. Cable shielding can be degraded or cables can be damaged or wear out faster if a service loop or bend radius is tighter than 10X the cable diameter.

- This device should be used in accordance with the instructions in this manual.
- All specifications are for reference purposes only and can change without notice.



**WARNING:** Do not detach Xpand 350 from the reader. Doing so results in the loss of warranty.

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# Symbols

The following symbols indicate safety precautions and supplemental information:



**WARNING:** This symbol indicates a hazard that could cause death, serious personal injury or electrical shock.

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**CAUTION:** This symbol indicates a hazard that could result in property damage.

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**Note:** This symbol indicates additional information about a subject.

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**Tip:** This symbol indicates suggestions and shortcuts that might not otherwise be apparent.

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# About Xpand 350

Xpand 350™ is a field of view expander (FOVE) accessory that can be used in front of a camera to increase the field of view in width direction. Xpand 350 splits the field of view in vertical direction and redirects the partial fields of view side by side.



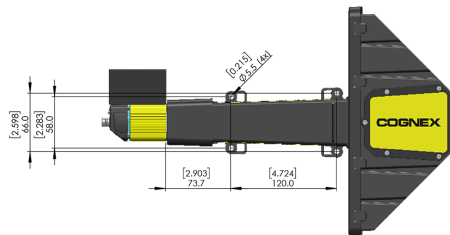
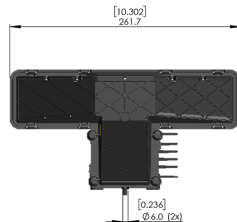
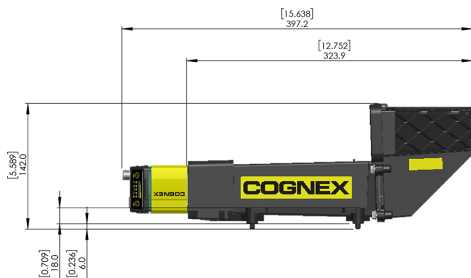
## Xpand 350 Accessories

Accessory	Product ID	Image
Mounting kit	DMBK-XP350-000	A small, grey, rectangular metal mounting kit with four screws on the top edge and two on the bottom edge.

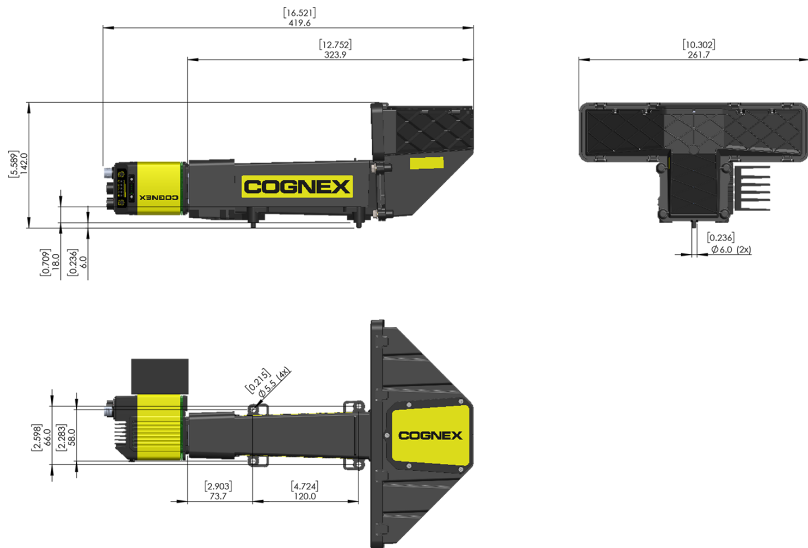
# Dimensions

Observe the following dimensions when mounting Xpand 350.

## Xpand 350 with DataMan 370 Reader



# Xpand 350 with DataMan 470 Reader

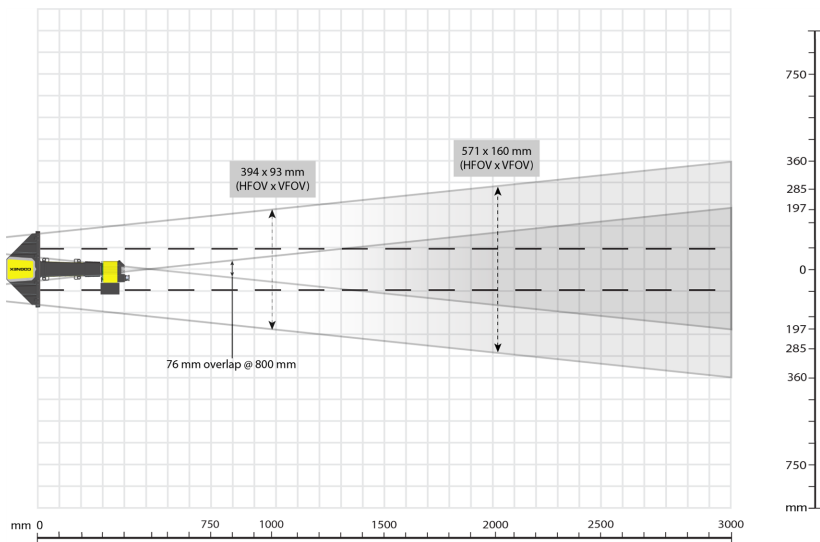


# Field of View

**i Note:** Do not change the focus to avoid breaking system alignment.

DM474 with 40 mm lens on Xpand 350:

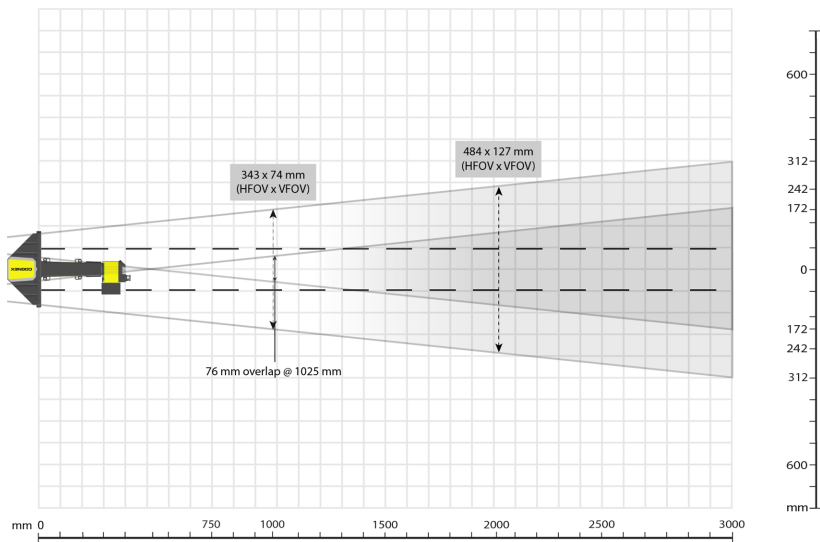
1D module size	1.2 ppm distance measured from front window	2D module size	2 ppm distance measured from front window
6 MIL	1020 mm	6 MIL	430 mm
8 MIL	1510 mm	8 MIL	730 mm
10 MIL	2000 mm	10 MIL	1020 mm
13 MIL	2740 mm	13 MIL	1460 mm
15 MIL	3230 mm	15 MIL	1760 mm
20 MIL	4460 mm	20 MIL	2490 mm



Distance from front window	HFOV	VFOV	Overlap Data
1000 mm	394 mm	93 mm	104 mm
2000 mm	571 mm	160 mm	281 mm
3000 mm	719 mm	236 mm	429 mm

DM474 with 50 mm lens on Xpand 350:

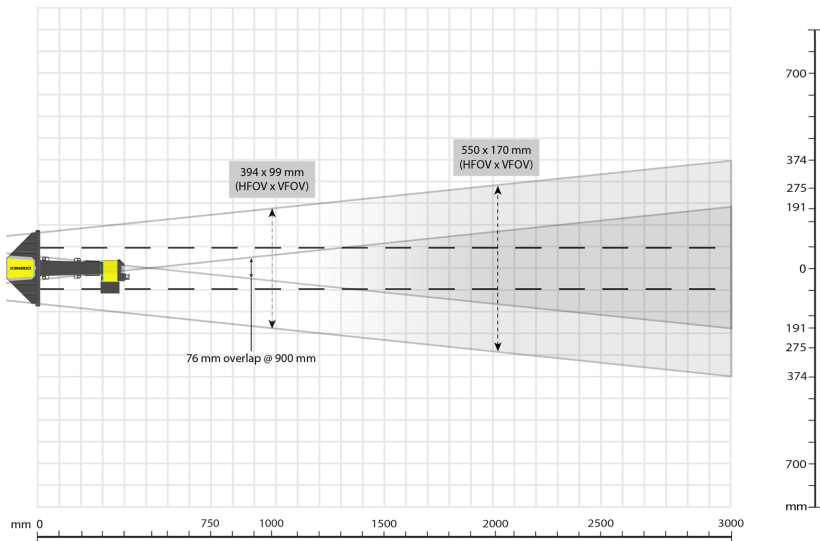
1D module size	1.2 ppm distance measured from front window	2D module size	2 ppm distance measured from front window
6 MIL	1390 mm	6 MIL	650 mm
8 MIL	2000 mm	8 MIL	1020 mm
10 MIL	2620 mm	10 MIL	1390 mm
13 MIL	3540 mm	13 MIL	1940 mm
15 MIL	4150 mm	15 MIL	2310 mm
20 MIL	5680 mm	20 MIL	3230 mm



Distance from front window	HFOV	VFOV	Overlap Data
1000 mm	343 mm	74 mm	53 mm
2000 mm	484 mm	127 mm	194 mm
3000 mm	625 mm	179 mm	335 mm

DM475 with 50 mm lens on Xpand 350:

1D module size	1.2 ppm distance measured from front window	2D module size	2 ppm distance measured from front window
6 MIL	1390 mm	6 MIL	650 mm
8 MIL	2000 mm	8 MIL	1020 mm
10 MIL	2620 mm	10 MIL	1390 mm
13 MIL	3540 mm	13 MIL	1940 mm
15 MIL	4150 mm	15 MIL	2310 mm
20 MIL	5680 mm	20 MIL	3230 mm

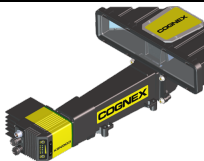


Distance from front window	HFOV	VFOV	Overlap Data
1000 mm	381 mm	99 mm	91 mm
2000 mm	550 mm	170 mm	260 mm
3000 mm	747 mm	225 mm	457 mm

# Compatible Readers

Xpand 350 is compatible with the following DataMan 370/470 systems and lenses:

Kit	Product ID
DM474QL-M + 40 mm XP350	DM474QL-M500015000000
DM374QL-M + 40 mm XP350	DM374QL-M-500011000000
DM474QL-M + 50 mm XP350	DM474QL-M500028000000
DM374QL-M + 50 mm XP350	DM374QL-M-500026000000
DM475QL-M + 50 mm XP350	DM475QL-M-100015000000
DM375QL-M + 50 mm XP350	DM375QL-M-100015000000
DM474X-M + 40 mm XP350	DM474X-M500015000000
DM374X-M + 40 mm XP350	DM374X-M-500011000000
DM474X-M + 50 mm XP350	DM474X-M500028000000
DM374X-M + 50 mm XP350	DM374X-M-500026000000
DM475X-M + 50 mm XP350	DM475X-M-100015000000
DM375X-M + 50 mm XP350	DM375X-M-100015000000



Reader	DataMan 374	DataMan 474	DataMan 375	DataMan 475
Image				
Supported lens	40 mm, 50 mm	40 mm, 50 mm	50 mm	50 mm

# For European Community Users

Cognex complies with Directive 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on waste electrical and electronic equipment (WEEE).

This product has required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment, if not properly disposed.

In order to avoid the dissemination of those substances in our environment and to diminish the pressure on the natural resources, we encourage you to use the appropriate take-back systems for product disposal. Those systems will reuse or recycle most of the materials of the product you are disposing in a sound way.



The crossed out wheeled bin symbol informs you that the product should not be disposed of along with municipal waste and invites you to use the appropriate separate take-back systems for product disposal.

If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You may also contact your supplier for more information on the environmental performance of this product.

# China RoHS



Hazardous Substances 有害物质						
Part Name 部件名称	Lead (Pb) 铅	Mercury (Hg) 汞	Cadmium (Cd) 镉	Hexavalent Chromium (Cr (VI)) 六价铬	Polybrominated biphenyls (PBB) 多溴联苯	Polybrominated diphenyl ethers (PBDE) 多溴二苯醚
Regulatory Model xxxxx	X	O	O	O	O	O
<p>This table is prepared in accordance with the provisions of SJ/T 11364. 这个标签是根据SJ/T 11364 的规定准备的。</p> <p>O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB / T26572 - 2011. 表示本部件所有均质材料中含有的有害物质低于GB / T26572 - 2011 的限量要求。</p> <p>X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB / T26572 - 2011. 表示用于本部件的至少一种均质材料中所含的危害物质超过GB / T26572 - 2011 的限制要求。</p>						

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