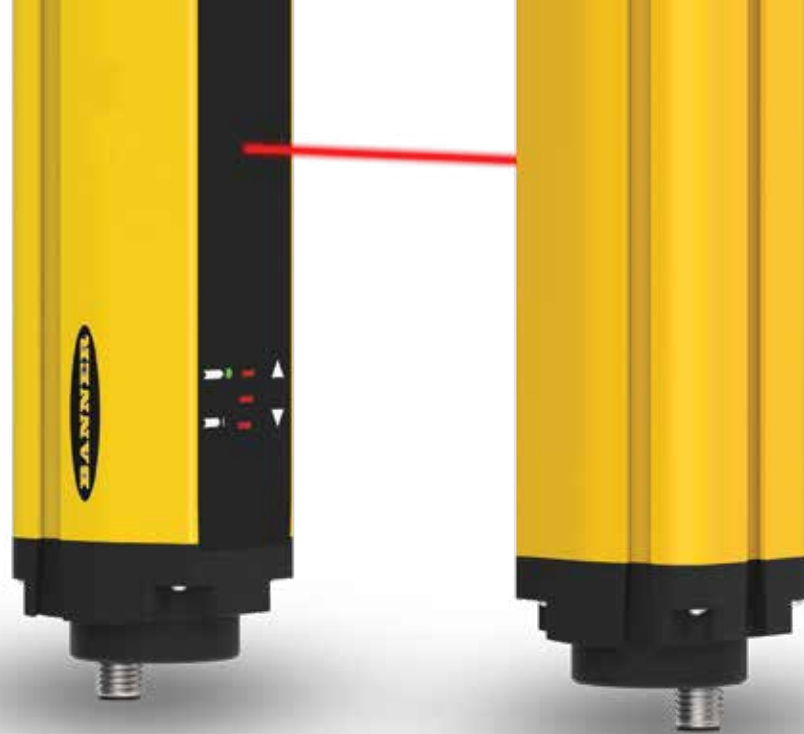


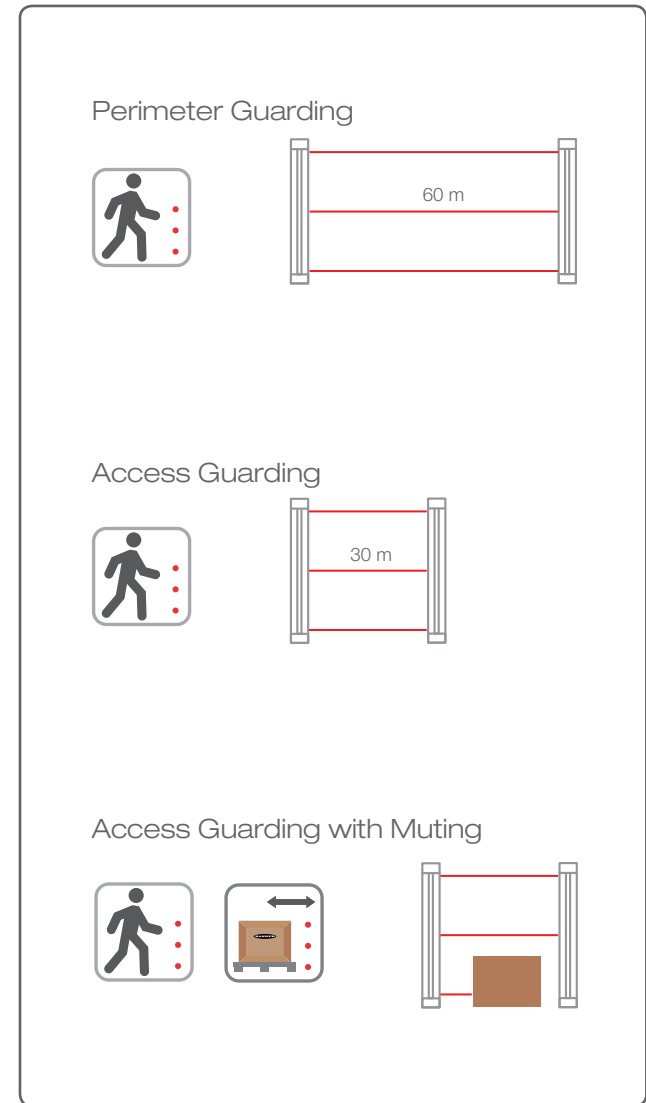
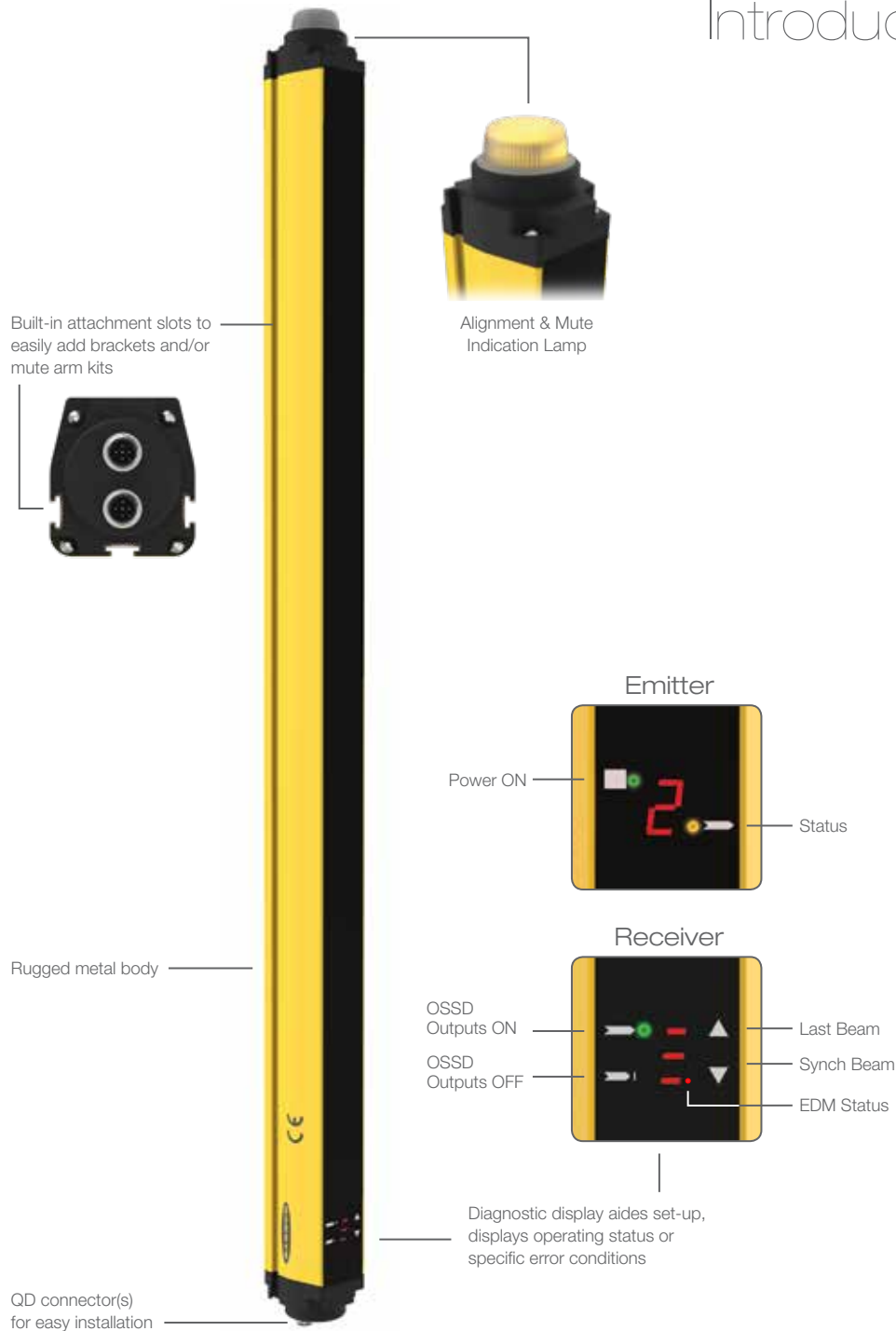
# SGS Safety Grid System



- Heavy-duty aluminium housing for tough environments
- Easy alignment and installation with on-board alignment lamp and indicators
- Protected heights of 500, 800, 900 or 1200 mm available
- Up to 60 meter range available for perimeter guarding applications
- Muting solutions available for entry/exit conveyors or palletizing cells



# Introducing the SGS Safety Grid System



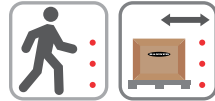
# Safety Made Simple

Choose the Solution for Your Application

Emitter & Receiver  
Long Range



Emitter & Receiver  
Standard Range



Active + Passive  
Standard Range



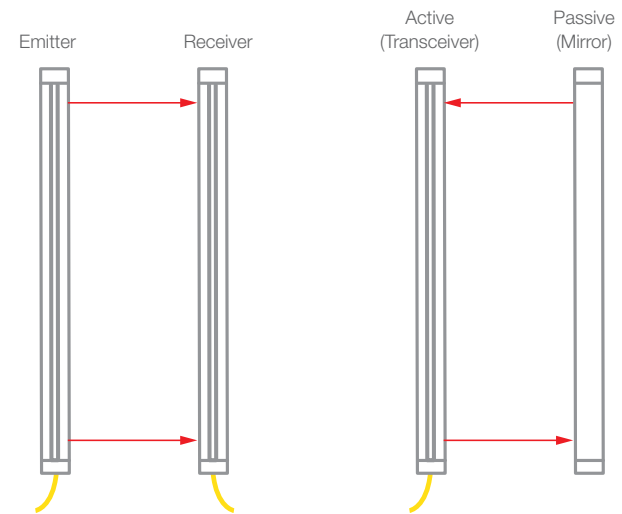
Available Models and Capabilities

SGSXP

SGSMP, SGSSP

SGSMA, SGSSA, SGSB

	SGSXP	SGSMP, SGSSP	SGSMA, SGSSA, SGSB	
Max Sensing Range (m)	6 to 60 m	0.5 to 30 m	0.5 to 8 m (6.5 m*)	
Type IEC 61496-1, -2	Type 4	Type 4	Type 4	
Unit Type	Emitter/Receiver	Emitter/Receiver	Active + passive	
Functions	Reset	✓	✓	
	EDM	✓	✓	
	Scan Code	✓	✓	
	Integral Muting	-	✓ (SGSMP)	✓ (SGSMA, SGSB)
	Override Input	-	✓ (SGSMP)	✓ (SGSMA, SGSB)



Emitter & Receiver

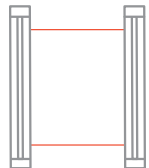
- When compared to higher resolution light screens, a lower cost option for body detection applications
- Available with integral muting
- Long range—up to 60 m

Active + Passive

- Active transceiver contains emitter and receiver
- Reduces overall wiring costs
- Available with integral muting
- Up to 8 m range

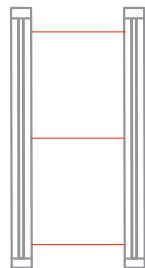
Available Protective Heights and Beam Spacings

2 beams



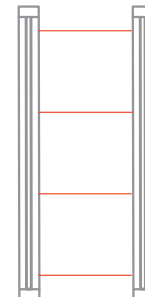
500 mm protected height  
(500 mm beam spacing)

3 beams

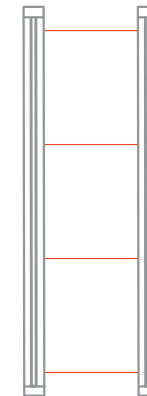


800 mm protected height  
(400 mm beam spacing)

4 beams



900 mm protected height  
(300 mm beam spacing)



1200 mm protected height  
(400 mm beam spacing)



## Benefits of Muting

Integral Muting allows monitoring of redundant mute device inputs and automatically suspends (mutes) the safeguarding function of a device during the non-hazardous portion of the machine cycle.

- Maintain high safety standards while allowing for a predetermined object to break a beam
- Limit downtime by not unnecessarily shutting down a conveyor or robot cell

## Applications:

- Palletizers
- Assembly and packaging machines
- Automated production equipment
- Robotic work cells
- Automated warehouses

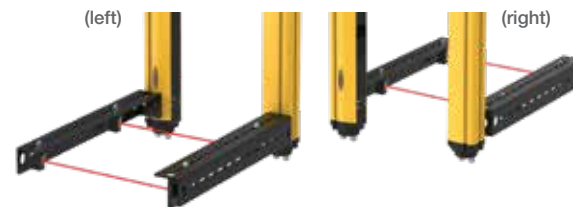
## SGS Mute Arm Kits

- Pre-assembled for plug-and-play connection to the SGS grid
- Wiring connection block or cable accessories available
- Adjusts easily for line changes

### Box or Pallet Muting

Mute Arm Kit	Enter/Exit Direction	Width & Shape	Position on Conveyor
L-Configuration	One-way (exit)	Varying	Varying
X- Configuration	Bi-Directional	Consistent	Consistent
T-Configuration	Bi-Directional	Varying	Varying

## L-Configuration



SGSA-ML-L-LPQ20

includes 2 mute arms, 2 SGSA-Q20PLPQ5 mute sensors, and 2 retroreflectors

SGSA-ML-R-LPQ20

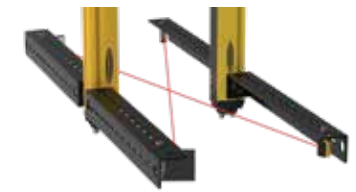
## T-Configuration



SGSA-MT-LPQ20

includes 4 mute arms, 4 SGSA-Q20PLPQ5 mute sensors, and 4 retroreflectors

## X-Configuration



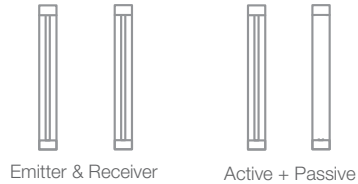
SGSA-MX-LPQ20

includes 4 mute arms, 2 SGSA-Q20PLPQ5 mute sensors, and 2 retroreflectors

# Build a Safety Solution

- Use Active + Passive for lower installed cost
- Integral muting models available for reduced wiring and cost

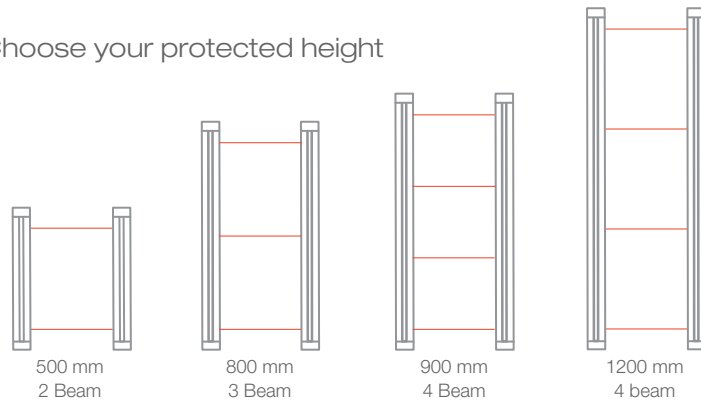
## 1. Choose one



**Long Range:**  
Emitter & Receiver Only: 6 to 60 m

**Standard Range:**  
Active + Passive: 0.5 to 6.5 or 8 m  
Emitter & Receiver: 0.5 to 30 m

## 2. Choose your protected height



## 3. Choose one



## Emitter & Receiver

Type	Protective Height (mm)	Range (m)	Integral Muting	Model
Emitter & Receiver	500 (2 beams)	6 to 60	No	SGSXP2-500Q88
	800 (3 beams)			SGSXP3-400Q88
	900 (4 beams)			SGSXP4-300Q88
	1200 (4 beams)			SGSXP4-400Q88
Emitter & Receiver	500 (2 beams)	0.5 to 30	No	SGSSP2-500Q88
	800 (3 beams)			SGSSP3-400Q88
	900 (4 beams)			SGSSP4-300Q88
	1200 (4 beams)			SGSSP4-400Q88
Emitter & Receiver	500 (2 beams)	0.5 to 30	Yes	SGSMP2-500Q128
	800 (3 beams)			SGSMP3-400Q128
	900 (4 beams)			SGSMP4-300Q128
	1200 (4 beams)			SGSMP4-400Q128

## Active (requires Passive Mirror)

Type	Protective Height (mm)	Range (m)	Integral Muting	Model
Active Transceiver	500 (2 beams)	0.5 to 8	No	SGSSA2-500Q8
	800 (3 beams)	0.5 to 8		SGSSA3-400Q8
	900 (4 beams)	0.5 to 6.5		SGSSA4-300Q8
	1200 (4 beams)	0.5 to 8		SGSSA4-400Q8
Active Transceiver	500 (2 beams)	0.5 to 8	Yes	SGSMA2-500Q12
	800 (3 beams)	0.5 to 8		SGSMA3-400Q12
	900 (4 beams)	0.5 to 6.5		SGSMA4-300Q12
	1200 (4 beams)	0.5 to 8		SGSMA4-400Q12

## Passive Mirror

Type	Protective Height (mm)	Range (m)	Model
Passive Mirror Assembly	500 (2 beams)	Pair with Active Transceivers with matching beams and protective heights	SGSB2-500
	800 (3 beams)		SGSB3-400
	900 (4 beams)		SGSB4-300
	1200 (4 beams)		SGSB4-400

# Connection Options

## 8-Pin

### 8-Pin M12/ Euro-Style



<b>QDEG-815D</b> 4.5 m (15')	<b>QDEG-875D</b> 22.8 m (75')
<b>QDEG-825D</b> 7.6 m (25')	<b>QDEG-8100D</b> 30.4 m (100')
<b>QDEG-850D</b> 15.2 m (50')	

### 8-Pin Male M12 to Dual 8-Pin Female M12 Euro-Style Splitter

<b>CSB-M1280M1280</b> No trunk/ no branches	
<b>CSB-M1281M1281</b> 0.3 m (1') trunk/2 x 0.3 m (1') branches	
<b>CSB-M1288M1281</b> 2.44 m (8') trunk/2 x 0.3 m (1') branches	
<b>CSB-M12815M1281</b> 4.57 m (15') trunk/2 x 0.3 m (1') branches	
<b>CSB-M12825M1281</b> 7.62 m (25') trunk/2 x 0.3 m (1') branches	

## 12-Pin

### 12-Pin M12/ Euro-Style



<b>QDEG-1215E</b> 4.5 m (15')	<b>QDEG-1275E</b> 22.8 m (75')
<b>QDEG-1225E</b> 7.6 m (25')	<b>QDEG-12100E</b> 30.4 m (100')
<b>QDEG-1250E</b> 15.2 m (50')	

### 8-Pin M12/Euro-Style Double-Ended

<b>DEE2R-81D</b> 0.3 m (1')	<b>DEE2R-825D</b> 7.6 m (25')	
<b>DEE2R-83D</b> 0.9 m (3')	<b>DEE2R-830D</b> 9.1 m (30')	
<b>DEE2R-88D</b> 2.5 m (8')	<b>DEE2R-850D</b> 15.2 m (50')	
<b>DEE2R-812D</b> 3.6 m (12')	<b>DEE2R-875D</b> 22.9 m (75')	
<b>DEE2R-815D</b> 4.6 m (15')	<b>DEE2R-8100D</b> 30.5 m (100')	

# Mute Connect

Model	Description
<b>SGSA-MCB</b>	Connection box for X, L or T mute arm kits
<b>SGSA-MCS-2</b>	Connection cable for X and L mute arm kits
<b>SGSA-MCS-4</b>	Connection cable for T mute arm kits
<b>SGSA-MCB-HW</b>	Optional hardware kit for mounting mute connection box, or mute connection cable to the t-slot of SGS Receiver or Active Unit



# Mirrors and Stands

## SSM Series Corner Mirrors



Mirror Model	Fits SGS Models	Reflective Area (Y)	Mounting Area (L1)	Mirror Height (L2)
<b>SSM-550</b>	SGS..2-500..	550	661	628
<b>SSM-825</b>	SGS..3-400..	825	936	903
<b>SSM-975</b>	SGS..4-300..	975	1086	1053
<b>SSM-1275</b>	SGS..4-400..	1275	1386	1353

## MSA Series Stands



Stand Model	Pole Height	Usable Stand Height
<b>MSA-S66-1</b>	1676 mm (66")	1550 mm (61")
<b>MSA-A84-1</b>	2134 mm (84")	2007 mm (79")
<b>MSA-S105-1</b>	2667 mm (105")	2667 mm (100")

## Alignment Aids



Model	Description
<b>LAT-1-SGS</b>	Self-contained visible-beam laser tool for aligning the SGS system components. Includes laser alignment tool, retroreflective target material and mounting clip.
<b>SGSA-LAT-1</b>	Clip-on reflective target for use with LAT-1-SGS
<b>SGSA-LAT-2</b>	Replacement clip for attaching LAT and Reflector to SGS Grid
<b>BRT-THG-2-100</b>	2 inch retroreflective tape, 100 ft
<b>BT-1</b>	Beam Tracker

# Interface Options

## Safety Controllers



XS26-2

XS26-2d

XS26-2e

XS26-2de

Expandable safety controller supports up to eight I/O modules and programs easily using icon-based software



SC26-2

SC26-2d

SC26-2e

SC26-2de

Flexible, efficient safety controller has small footprint and programs easily using icon-based software\* to match XS description

## Safety Modules



UM-FA-9A

UM-FA-11A



IM-T-9A

IM-T-11A

Monitors solid-state PNP OSSD safety outputs and provides latching (manual reset) function for applications requiring a reset

Interface Modules provide isolated safety output contacts for a solid-state output (OSSD) device. It requires monitoring with the External Device Monitoring (EDM) function

## Contactors



11-BG00-31-D-024

BF1801L024

Two contactors are required for higher levels of safety performance and requires monitoring by External Device Monitoring (EDM) function.



## Bracket



SGSA-MBK-10-4  
end-mount bracket (4 included)

## EZ-LIGHTs for SGS Models without Integral Muting

Provides clear, 360° indication of the SGS receiver's output status and receiver lockouts. EZ-LIGHTs or other means of indication must draw less than 100 mA at 24 V dc.

Model	Model	Model
 M18RGX8PQ8	 K30LRGX8PQ8	 K50LRGX8PQ8
 T18RGX8PQ8	 T30RGX8PQ8	 K80LRGX8PQ8

# Specifications



Emitter and Receiver


## Electrical

<b>Supply Voltage</b>	24 V dc $\pm$ 20% (At a minimum, use a SELV-rated power supply according to EN IEC 60950. Depending on the installation, a Class 2 low-voltage power supply and circuit as described by NFPA 70 may be required.)
<b>Power Consumption</b>	Emitter: 2.5 W maximum Receiver: 4 W maximum (without load)
<b>Electrical Protection</b>	Class III (per IEC 61140)
<b>Outputs Signal Switching Devices (OSSDs)</b>	2 PNP Short-circuit protection (1.4 A at 55 °C) Maximum output current: 0.5 A maximum per output On-state voltage: Power supply value less 1 V dc Off-state voltage: 0.2 V dc maximum (no load) Maximum load capacitance: 2.2 $\mu$ F at 24 V dc
<b>Response Time</b>	11 to 24 ms (varies by model)

## Optical

<b>Light Source</b>	Infrared LED (950 nm wavelength)
<b>Operating Distance (Range)</b>	0.5 m to 60 m (depending on model)

## Mechanical and Environmental

<b>Construction</b>	Housing: Painted aluminium (yellow RAL 1003) Caps: PBT Valox 508 (pantone 072-CVC) Front glass: PMMA
<b>Environmental Rating</b>	IEC IP65 (EN 60529)
<b>Vibration and Shock</b>	0.35 mm width, 10...55 Hz frequency, 20 sweep for each axis, 1 octave/min (EN 60068-2-6) 16 ms (10g) 1.000 shock for each axis (EN 60068-2-29)
<b>Environmental Conditions</b>	Operating: 0 °C to +55 °C (+32 °F to +131 °F) Storage: -25 °C to +70 °C (-13 °F to +158 °F) Temperature Class: T6 15% to 95% (non-condensing) relative
<b>Certifications</b>	



Active + Passive



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