vaddio®

Section 1

milestone™

Choose Your Camera
Vaddio® Makes It Easy

Consider the Room Environment

• How large is the room? Where will you place the camera(s) to have an unobstructed view? Large auditoriums need higher magnification than classrooms or conference rooms. Small rooms may need a wide angle of view.

• How much light is in the room? Will the lighting be sufficient for the camera? Normal office lighting is 320 to 500 lux, while moonlight is 1 lux.

Consider Subject Matter & Zoom

• What is your subject matter? One person – head and shoulders view? Three people? A group of 20 people? How will you frame the subject matter? Will you need a zoom lens? For details, see Camera Distance & Angles of View on back.

Consider Video Output Connections

• Vaddio cameras connect to other equipment, so consider what kind of connections you'll need. What is your camera connected to? What video output format is required?

• Will you need camera cable extensions? Vaddio's extension systems include OneLINK digital extenders and Quick Connect HSDS (High speed differential signaling) extenders which extend video, power and control. For details, see Cables and Connections on back.

HDMI	USB	HD-SDI	RGBHV/Component	DVI	HDBT	RTSP

Consider Vaddio Cameras

• For best image quality, choose RoboSHOT® 20 UHD

• For best low light performance, choose RoboSHOT 30 HDBT™

• For widest field of view/PTZ (74°), choose RoboSHOT 12, ConferenceSHOT™ 10

• For widest field of view/fixed (82°), choose WideSHOT™

• IP streaming capable: RoboSHOT 12 USB/HD-SDI/HDBT Series
　　　　　　　　　　　　　　RoboSHOT 30 HD-SDI/HDBT Series
　　　　　　　　　　　　　　RoboSHOT 20 UHD
　　　　　　　　　　　　　　ConferenceSHOT Series

• All Vaddio cameras include: IR remote, wall mount, mounting hardware, power supply, AC cord set, and EZCamera Control Adapter RJ-45F to DE-9F.

	Direct Output Pan Tilt Zoom (PTZ) Cameras									Cameras with Extension Systems					
	UHD Cameras	HD-SDI Cameras	HD-SDI Cameras	HDMI Cameras	HDMI Cameras	HDBT PTZ Cameras	HDBT PTZ Cameras	USB PTZ Cameras	USB PTZ Cameras	RoboSHOT OneLINK Systems	RoboSHOT OneLINK Systems	Cat-5 PTZ Cameras	Cat-5 PTZ Cameras	Cat-5 Fixed Cameras	Cat-5 Fixed Cameras
Model	RoboSHOT 20 UHD	RoboSHOT 30 HD-SDI	RoboSHOT 12 HD-SDI	RoboSHOT 30 HDMI	RoboSHOT 12 HDMI	RoboSHOT 30 HDBT	RoboSHOT 12 HDBT	RoboSHOT 12 USB	ConferenceSHOT 10	RoboSHOT 30 OneLINK HDMI	RoboSHOT 12 OneLINK HDMI	RoboSHOT 30 Q-Series (Quick-Connects)	RoboSHOT 12 Q-Series (Quick-Connects)	ZoomSHOT 20	WideSHOT
Colors	Black/Silver or White	Black or White	Black/Silver	Black or White	Black/Silver	Black or White	Black/Silver	Black/Silver	Black/Silver or White	Black or White	Black/Silver	Black or White	Black/Silver	Black/Silver	Black/Silver
Room Size	Medium to large rooms	Medium to large rooms	Small to medium conference rooms, training rooms or classrooms that require a wide angle of view	Medium to large rooms	Small to medium conference rooms, training rooms or classrooms that require a wide angle of view	Medium to large rooms	Small to medium conference rooms, training rooms or classrooms that require a wide angle of view	Small to medium conference rooms, training rooms or classrooms that require a wide angle of view	Small to medium conference rooms, training rooms, classrooms	Medium to large rooms	Small to medium conference rooms, training rooms or classrooms that require a wide angle of view	Medium to large rooms	Small to medium conference rooms, training rooms or classrooms that require a wide angle of view	Medium to large rooms	Small huddle rooms that require high def video and a very wide angle of view
Optical Zoom	12x with 1.67 CVZ for 20x total useable	30x Optical Zoom	12x Optical Zoom (Super-Wide Mode)	30x Optical Zoom	12x Optical Zoom (Super-Wide Mode)	30x Optical Zoom	12x Optical Zoom (Super-Wide Mode)	12x Optical Zoom (Super-Wide Mode)	11X Optical Zoom (Super-Wide Mode)	30x Optical Zoom	12x Optical Zoom (Super-Wide Mode)	30x Optical Zoom	12x Optical Zoom (Super-Wide Mode)	20x Optical Zoom	3X Manual Varifocal Optical Zoom
Horiz. Angle of View	74.0° Wide End to 3.7° Tele End	65.0° Wide End to 2.3° Tele End	73.0° Wide End to 6.6° Tele End	65.0° Wide End to 2.3° Tele End	73.0° Wide End to 6.6° Tele End	65.0° Wide End to 2.3° Tele End	73.0° Wide End to 6.6° Tele End	73.0° Wide End to 6.6° Tele End	74.0° Wide End to 7.6°Tele End	65.0° Wide End to 2.3° Tele End	73.0° Wide End to 6.6° Tele End	65.0° Wide End to 2.3° Tele End	73.0° Wide End to 6.6° Tele End	63.0° Wide End to 3.1° Tele End	82° Wide End to 27.4° Tele End, and 94.3° Diagonal
Minimum Illumination	0.75 Lux (F1.8, 50IRE, 1/30 sec (High sensitivity mode on)	1.4 Lux (F1.6, 50IRE, 1/30 sec)	1.0 Lux (F1.8, 50IRE, 1/30 sec)	1.4 Lux (F1.6, 50IRE, 1/30 sec)	1.0 Lux (F1.8, 50IRE, 1/30 sec)	0.1 Lux (F1.6, 50IRE, 1/30 sec,)	1.0 Lux (F1.8, 50IRE, 1/30 sec)	1.0 Lux (F1.8, 50IRE, 1/30 sec)	1.0 Lux (F1.8, 50IRE, 1/30 sec)	0.1 Lux (F1.6, 50IRE, 1/30 sec, color)	1.0 Lux (F1.8, 50IRE, 1/30 sec)	1.4 Lux (F1.6, 50IRE, 1/30 sec)	1.0 Lux (F1.8, 50IRE, 1/30 sec)	0.3 Lux (F1.6, 1/30 sec, 50 IRE)	0.1 Lux (1/30 Shutter Speed)
Video Outputs	Simultaneous -3Gb/s HD-SDI -HDMI -IP Streaming -HDBT	Simultaneous, -3Gb/s HD-SDI -HDMI -IP Streaming	Simultaneous, -3Gb/s HD-SDI -HDMI -IP Streaming	HDMI	HDMI	Simultaneous -HDMI -HDBT -IP Streaming	Simultaneous -HDMI -HDBT -IP Streaming	Simultaneous -USB 3.0 -HDMI -IP Streaming	Simultaneous -USB 3.0 -IP Streaming	Simultaneous -HDMI -HDBT -IP Streaming	Simultaneous -HDMI -HDBT -IP Streaming	Depends on choice of Quick-Connect	Depends on choice of Quick-Connect	Depends on choice of Quick-Connect	Depends on choice of Quick-Connect
Quick-Connect Compatibility	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes
OneLINK Compatibility	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
PoE Compatibility	PoE++	PoE+	PoE+			PoE+	PoE+	PoE+	PoE+	PoE+	PoE+				
Image Sensor	1/2.3 - Type Exmor-R, Backside illuminated image sensor	1/2.8 - Type Exmor CMOS	1/2.8 - Type Exmor CMOS	1/2.8 - Type Exmor CMOS	1/2.8 - Type Exmor CMOS	1/2.8 - Type Exmor-R Backside illuminated image sensor	1/2.8 - Type Exmor CMOS	1/2.8 - Type Exmor CMOS	1/2.8 - Type Exmor CMOS	1/2.8 - Type Exmor-R Backside illuminated image sensor	1/2.8 - Type Exmor CMOS	1/2.8 - Type Exmor CMOS	1/2.8 - Type Exmor CMOS	1/2.8 - Type Exmor CMOS	1/3 - Type Exmor CMOS
Pixels	8.93 Megapixel (9.03 Total Megapixel)	2.14 Megapixel (2.38 Total Megapixel)	2.14 Megapixel (2.38 Total Megapixel)	2.14 Megapixel (2.38 Total Megapixel)	2.14 Megapixel (2.38 Total Megapixel)	2.14 Megapixel (2.38 Total Megapixel)	2.14 Megapixel (2.38 Total Megapixel)	2.14 Megapixel (2.38 Total Megapixel)	2.14 Megapixel	2.14 Megapixel (2.38 Total Megapixel)	2.14 Megapixel (2.38 Total Megapixel)	2.14 Megapixel (2.38 Total Megapixel)	2.14 Megapixel (2.38 Total Megapixel)	2.14 Megapixel (2.38 Total Megapixel)	1.3 Megapixel
Top Resolution	UHD - 2160p/29.97	HD - 1080p/60	HD - 1080p/60	HD - 1080p/60	HD - 1080p/60	HD - 1080p/60	HD - 1080p/60	HD - 1080p/60	HD - 1080p/60	HD - 1080p/60	HD - 1080p/60	HD - 1080p/60	1080p/60	1080p/60	720p Native, 1080p Scaled
PTZ Motors	Silent BLDC Direct Drive Motors	Silent BLDC Direct Drive Motors	Silent BLDC Direct Drive Motor	Silent BLDC Direct Drive Motor	Silent BLDC Direct Drive Motors	Silent BLDC Direct Drive Motors	Silent BLDC Direct Drive Motors	Silent BLDC Direct Drive Motors	Stepper Motors	Silent BLDC Direct Drive Motors	Silent BLDC Direct Drive Motors	Silent BLDC Direct Drive Motors	Silent BLDC Direct Drive Motors	No Motors - Manual	No Motors - Manual
Tri-Sync Motion	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
Pan/Tilt Range	Pan: ±160°, Tilt: +90° to -30°	Pan: ±160°, Tilt: +90° to -30°	Pan: ±160°, Tilt: +90° to -30°	Pan: ±160°, Tilt: +90° to -30°	Pan: ±160°, Tilt: +90° to -30°	Pan: ±160°, Tilt: +90° to -30°	Pan: ±160°, Tilt: +90° to -30°	Pan: ±160°, Tilt: +90° to -30°	Pan: ±160°, Tilt: +90° to -30°	Pan: ±170°, Tilt: +90° to -30°	Pan: ±160°, Tilt: +90° to -30°	Pan: ±160°, Tilt: +90° to -30°	Pan: ±160°, Tilt: +90° to -30°	Fixed: Pan(Manual): ± 180° Tilt(Manual): ± 30°	Fixed: Pan(Manual): ± 180° Tilt(Manual): ± 30°
Web Server for Remote Control	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in		
Control Methods	Web Server via Browser, Telnet, RS-232 and IR Remote	Web Server via Browser, Telnet, RS-232 and IR Remote	Web Server via Browser, Telnet, RS-232 and IR Remote	Web Server via Browser, Telnet, RS-232 and IR Remote	Web Server via Browser, Telnet, RS-232 and IR Remote	Web Server via Browser, Telnet, RS-232 and IR Remote	Web Server via Browser, Telnet, RS-232 and IR Remote	Web Server via Browser, Telnet, RS-232 and IR Remote	Web Server via Browser, Telnet, RS-232 and IR Remote	Web Server via Browser, Telnet, RS-232 and IR Remote	Web Server via Browser, Telnet, RS-232 and IR Remote	Web Server via Browser, Telnet, RS-232 and IR Remote	Web Server via Browser, Telnet, RS-232 and IR Remote	RS-232 and IR Remote	RS-232 and IR Remote
Invertible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Video SN Ratio	>50 dB	>50 dB	>50 dB	>50 dB	>50 dB	>50 dB	>50 dB	>50 dB	>50 dB	>50 dB	>50 dB	>50 dB	>50 dB	>50 dB	>50 dB
Camera Origin	USA / MN made	USA / MN made	USA / MN made	USA / MN made	USA / MN made	USA / MN made	USA / MN made	USA / MN made	USA / MN made	USA / MN made	USA / MN made	USA / MN made	USA / MN made	USA / MN made	USA / MN made
Warranty	2 years	2 years	2 years	2 years	2 years	2 years	2 years	2 years	2 years	2 years	2 years	2 years	2 years	2 years	2 years

Consider the following to help you choose your Camera.

Row group labels: **Room Environments** (Room Size, Optical Zoom, Horiz. Angle of View, Minimum Illumination) | **Connections** (Video Outputs, Quick-Connect Compatibility, OneLINK Compatibility, PoE Compatibility) | **Additional Features & Specifications** (Image Sensor, Pixels, Top Resolution, PTZ Motors, Tri-Sync Motion, Pan/Tilt Range, Web Server for Remote Control, Control Methods, Invertible, Video SN Ratio, Camera Origin, Warranty)

Camera Distance & Angles of View

Room size, shot requirements and a camera's zoom capabilities are three factors that you'll need to consider when choosing a video camera. Here are three examples that explain how room size, shot requirements and zoom are tied together. NOTE: All of the viewing cones, measurements and distances were created by using the Vaddio camera distance calculator **support.vaddio.com.**
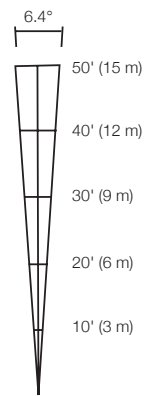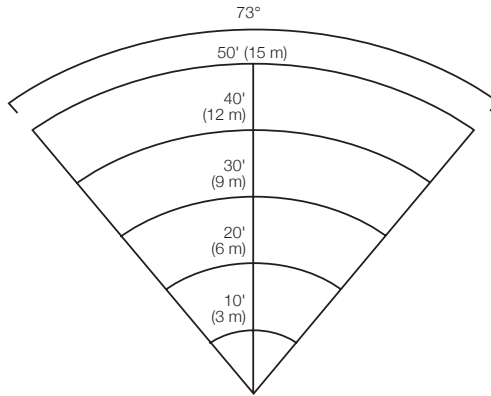
RoboSHOT 12

The RoboSHOT 12 is an excellent pick for a variety of room sizes. As the tables indicate at 40' (12 m), full tele, the shot is 4.6' (140 cm) Horizontal x 2.6' (86 cm) Vertical or about the size of a presenter at a lectern from the waist up. On the wide end the RoboSHOT 12 is superb wide-angle camera producing an image size of 14.8' (451 cm) wide x 8.3' (253 cm) tall, which will work in virtually every small to medium conference room.

RoboSHOT 12 Image Size (Wide End)	
Distance	Image Size H & V
10' (3 m)	14.8' H x 8.3' V (4.5 x 2.5 m)
20' (6 m)	29.6' H x 16.65' V (9 x 5.1 m)
30' (9 m)	44.4' H x 25' V (13.5 x 7.6 m)
40' (12 m)	59.2' H x 33.3' V (18 x 10.1 m)
50' (15 m)	74' H x 41.6' V (22.5 x 12.7 m)

RoboSHOT 12 Image Size (Tele End)	
Distance	Image Size H & V
10' (3 m)	1.1' H x 0.65' V (33 x 19 cm)
20' (6 m)	2.3' H x 1.3' V (70 x 39 cm)
30' (9 m)	3.5' H x 2' V (107 x 61 cm)
40' (12 m)	4.6' H x 2.6' V (140 x 79 cm)
50' (15 m)	5.76' H x 3.24' V (175 x 99 cm)

RoboSHOT 30

The RoboSHOT 30 is an exceptional pick for a large to medium sized room, but with 65° wide angle lens and a 2.3° telephoto lens, this camera is both powerful and versatile. At 70' (21 m) the impressive lens produces an image of only 2.9' (88 cm) wide by 1.63' (50 cm) tall, which is about the size of a head and shoulder shot. Whether it is a large House of Worship, auditorium, lecture theatre or even a medium sized conference/ training room, the RoboSHOT 30 is an ideal fit.

RoboSHOT 30 Image Size (Wide End)	
Distance	Image Size H & V
10' (3 m)	12.74' H x 7.17' V (3.9 x 2.2 m)
20' (6 m)	25.5' H x 14.34' V (7.8 x 4.4 m)
30' (9 m)	38.2' H x 21.5' V (11.6 x 6.5 m)
40' (12 m)	50.1' H x 28.7' V (15.3 x 8.7 m)
50' (15 m)	53.7' H x 35.84' V (16.4 x 10.9 m)

RoboSHOT 30 Image Size (Tele End)	
Distance	Image Size H & V
20' (6 m)	0.83' H x 0.47 V (25 x 14 cm)
30' (9 m)	1.24' H x 0.7' V (38 x 21 cm)
40' (12 m)	38.2' H x 21.5' V (51 x 28 cm)
50' (15 m)	50.1' H x 28.7' V (64 x 35 cm)
60' (21 m)	53.7' H x 35.84' V (88 x 49 cm)
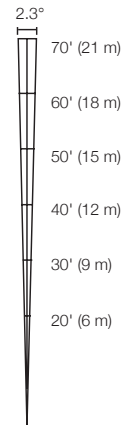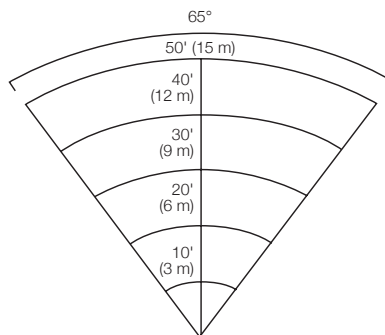
RoboSHOT 20 UHD

The RoboSHOT 20 UHD is a 4k (2160p/30) camera that has pristine clarity and color reproduction. When used as a 1080p/60 camera the camera is simply the best Vaddio PTZ camera available to date. The camera has a 12x optical zoom with a 1.67 ClearVIEW zoom on an 8.93 Megapixel sensor that make this camera useable up to a full 20x.

RoboSHOT 20 UHD Image Size (Wide End)	
Distance	Image Size H & V
10' (3 m)	12.74' H x 7.17' V (3.9 x 2.2 m)
20' (6 m)	25.5' H x 14.34' V (7.8 x 4.4 m)
30' (9 m)	38.2' H x 21.5' V (11.6 x 6.5 m)
40' (12 m)	50.1' H x 28.7' V (15.3 x 8.7 m)
50' (15 m)	53.7' H x 35.84' V (16.4 x 10.9 m)

RoboSHOT 20 UHD Image Size (Tele End)	
Distance	Image Size H & V
20' (6 m)	1.3' H x 0.73' V (40 x 22 cm)
30' (9 m)	1.94' H x 1.1' V (59 x 34 cm)
40' (12 m)	2.6' H x 1.45' V (79 x 44 cm)
50' (15 m)	3.23' H x 1.82' V (98 x 55 cm)
60' (21 m)	3.88' H x 2.18' V (118 x 66 cm)
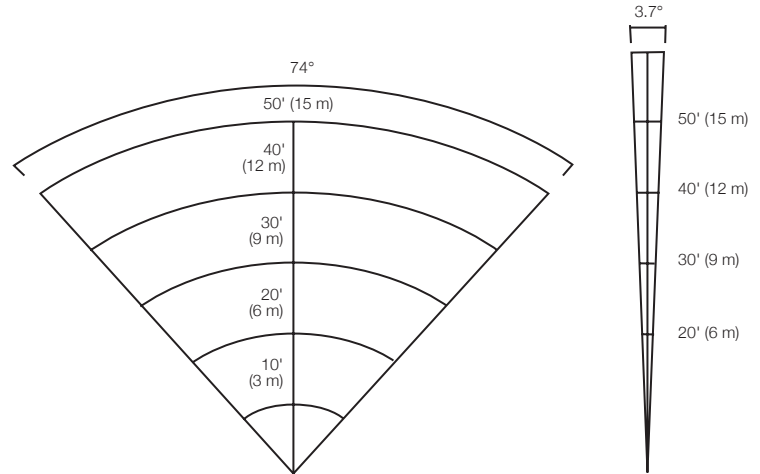
Extension Systems

Extend your reach and simplify installation with Vaddio's cable extension systems.

Cable Extension Systems for Video, Power and Control				
Product	Outputs	Distance	# Cat-5 Cables	Transport Type
OneLINK HDMI	HDMI, IP Streaming with capable camera	328' (100 m)	One	HDBaseT

Cable Extension Systems for Video, Power and Control				
Product	Outputs	Distance	# Cat-5 Cables	Transport Type
Quick-Connect QMini	USB 2.0	100' (30 m)	Two	HSDS, High Speed Differential
Quick-Connect QDVI	DVI/HDMI and Analog YPbPr	100' (30 m)	Two	HSDS, High Speed Differential
Quick-Connect QUSB	HDMI, YPbPr and USB 2.0, IP streaming	100' (30 m)	Two	HSDS, High Speed Differential
Quick-Connect QCCU	HDMI, YPbPr and HD-SDI	500' (152 m)	Three	HSDS, High Speed Differential

BRANDS OF MILESTONE AV TECHNOLOGIES
Chief | Da-Lite | Projecta | Sanus | Vaddio