



KY-PZ100/RM-LP100

Remote camera system Sales manual

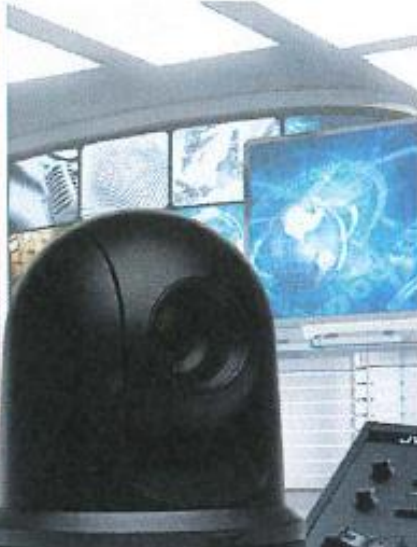


Infinite Possibilities

Infinite Possibilities



Camera shown with
optional Wi-Fi® adapter



JKUSA website

Worship

Demanded item of System

- Preach , Performance to Big Monitor , Contents delivery.
- Strong demand of PTZ camera
- Big screen → with Projector , SDI ,low latency IP connection

Worship market

- Approx. 40% of PTZ market in USA
- One or a few operator(camera crew)



Education

Demanded item of System

- Simple manual controllable Studio System
- Low cost
- Shooting lecture , Live streaming , Remote viewing
- Student of Studio crew (Camera man, Creator, Operator) 's Training
- Shooting events like sports ,concert shooting , content delivery, Streaming

Education market

Total cost is reducing



KY-PZ100/RM-IP100 Targeting Market(2)

Bridal

Demanded item of System

- Remote controlled shooting , Enables One man operation
- One or a few camera crew ,operator shooting
- Viewing Big screen → with Projector , SDI ,low latency IP connection



Parliament ,Conference

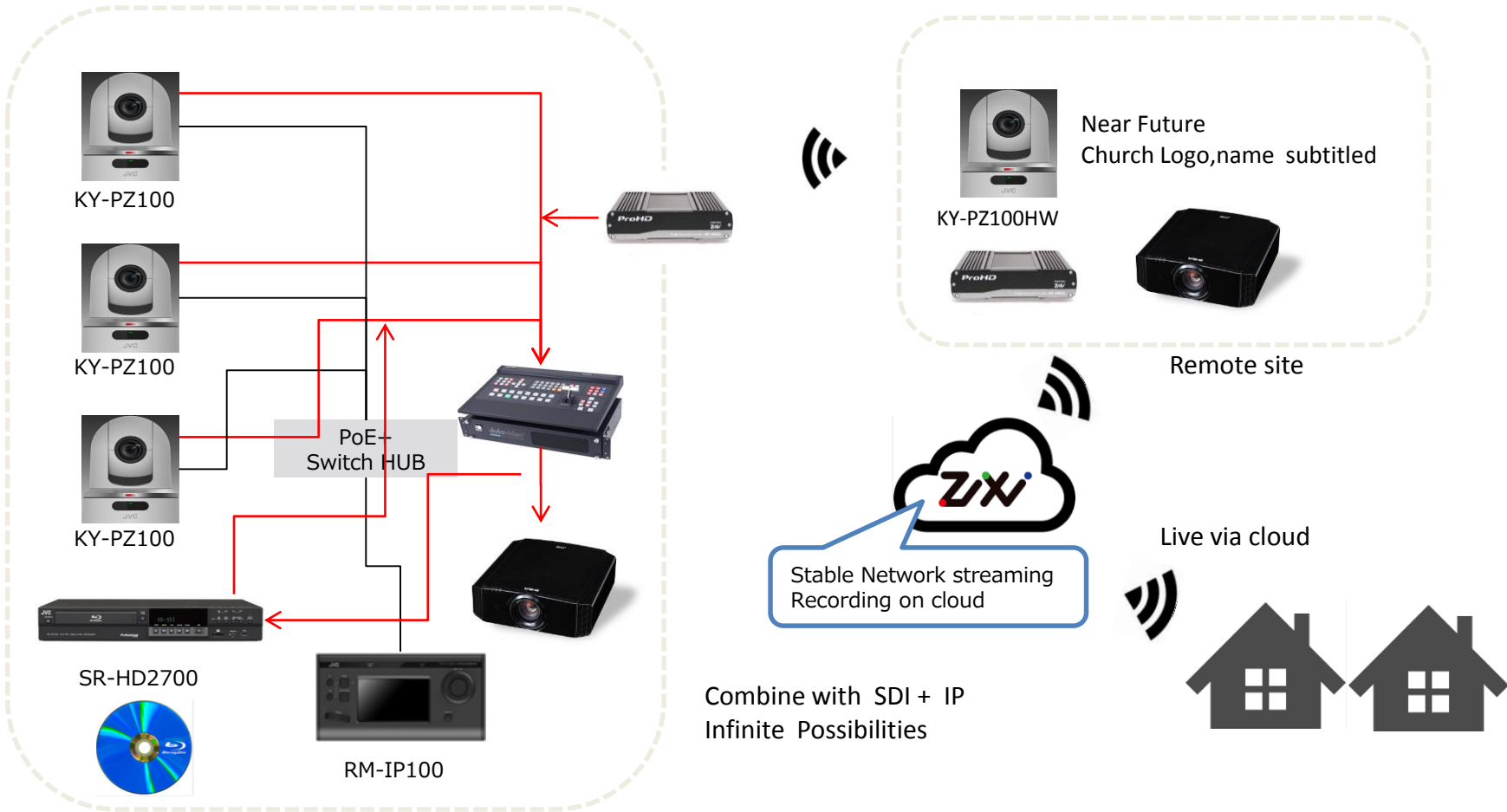
Demanded item of System

- Simple manual controllable Studio System
 - Shooting Parliament , Live streaming , Remote viewing
 - Training of studio crew (Camera man, Creator, Operator)
 - Shooting events like conference , press release etc
- Remote viewing ,Streaming

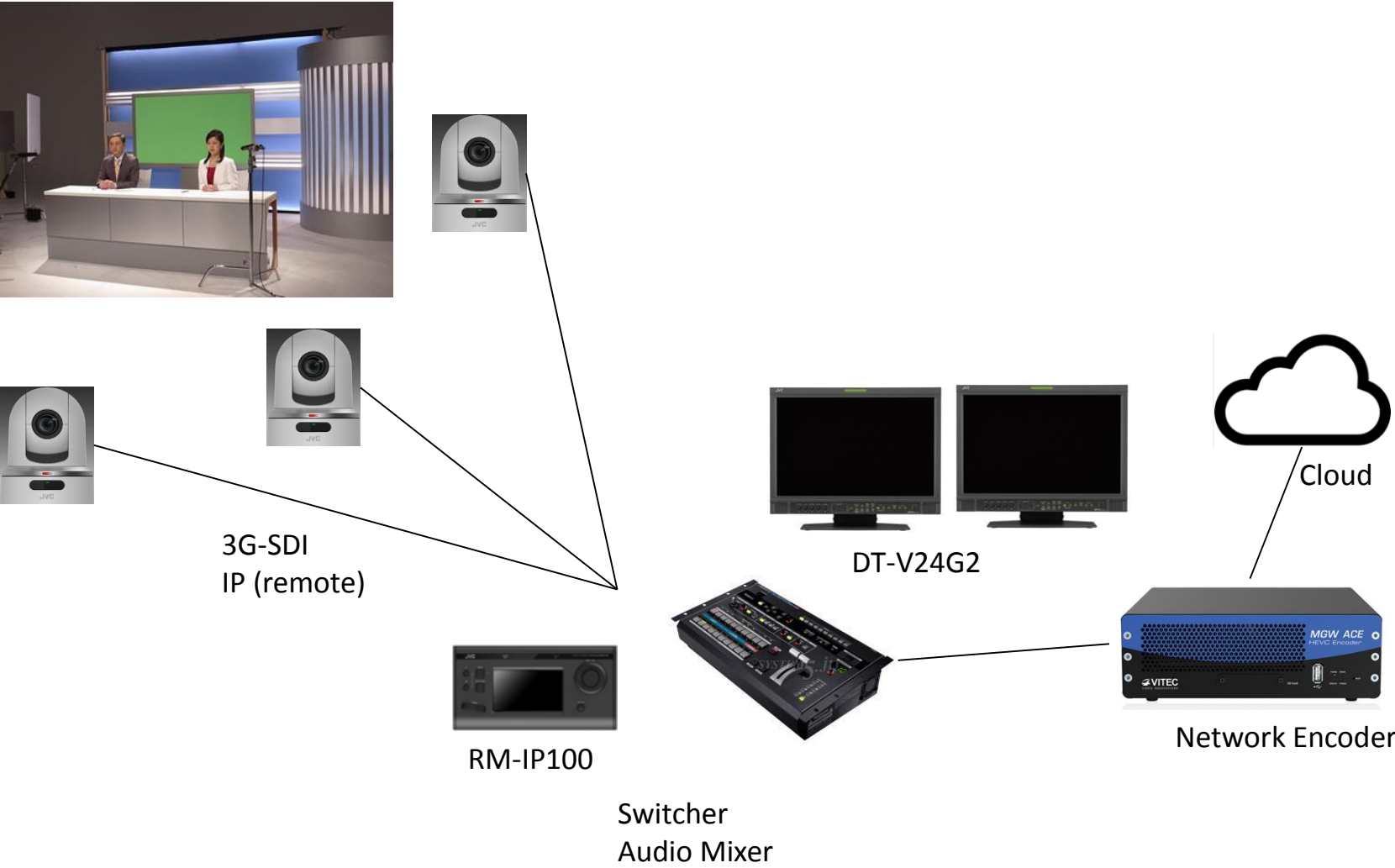


System1 : Multi site church

- 1. Church Zoom up image or Video display on big screen.
- 2. Remote site via IP
- 3. Interactive Streaming from remote sights
- 4. Delivery and viewing of streaming and Recorded contents



System 2 Middle class Broadcast or IP Broadcast



KY-PZ100 Highlights

- New 1/2.8-inch CMOS 2.1 M pixel
- Superior picture quality especially in dark environment
Sensitivity F5.6 (at 2000 lx , **1 or 2 stop brighter** than this class PTZ camera)
- **Minimum illumination 0.01 lx** (High sensitivity mode : ON)
- 30X Optical Zoom Lens , and 12x Digital Zoom (totally 360 X)
- **Simultaneous 3G-SDI (up to 60p) + HDMI + IP Output .**
- Super **smooth and quiet operation** , **Accuracy** of preset position within 0.03° , thanks to reliable **Direct drive Mechanism , brushless motor.**
- **Wireless Live streaming via Wifi , 3G/4G/LTE (including LAN cable)**
- **Wireless camera control via Wifi , 3G/4G/LTE (including LAN cable)**
- Versatile live streaming functions –including low latency
(Zixi ,USTREAM ,Youtube,SMPTE2022)
- **Recording** capability at broadcast quality at up to H.264 50Mbps to Micro SDHC/SDXC card
- **PoE+** equipped , LAN cable enables camera control and Power supply and IP connectivity with simple connection
- Flexible and facilitating mounting , enable to be Mounted Upside-down

Other items



IP Connectivity

- Streaming with SMPTE2022 forward error correction
- Zixi communication with ARQ, FEC and adaptive bitrate control
- RTMP streaming directly to content delivery network – JVCVIDEOCLOUD, YouTube, Ustream, Facebook, etc.

Camera

- Two channels audio w/plug in power (or 1 channel balanced audio)
- Micro SDHC/SDXC memory card recording
- 100 preset positions
- Remote control by IP or RS-232C / RS-422 controller
- Pelco D protocol support *Future update
- Simple remote controller and ceiling mount bracket included

Key features : Super color reproduction

KY-PZ100 high sensitivity mode provides superior color reproduction especially at low light, 0.01 lx

Sensitivity F5.6 The brightest camera in this class.

Normal color reproduction



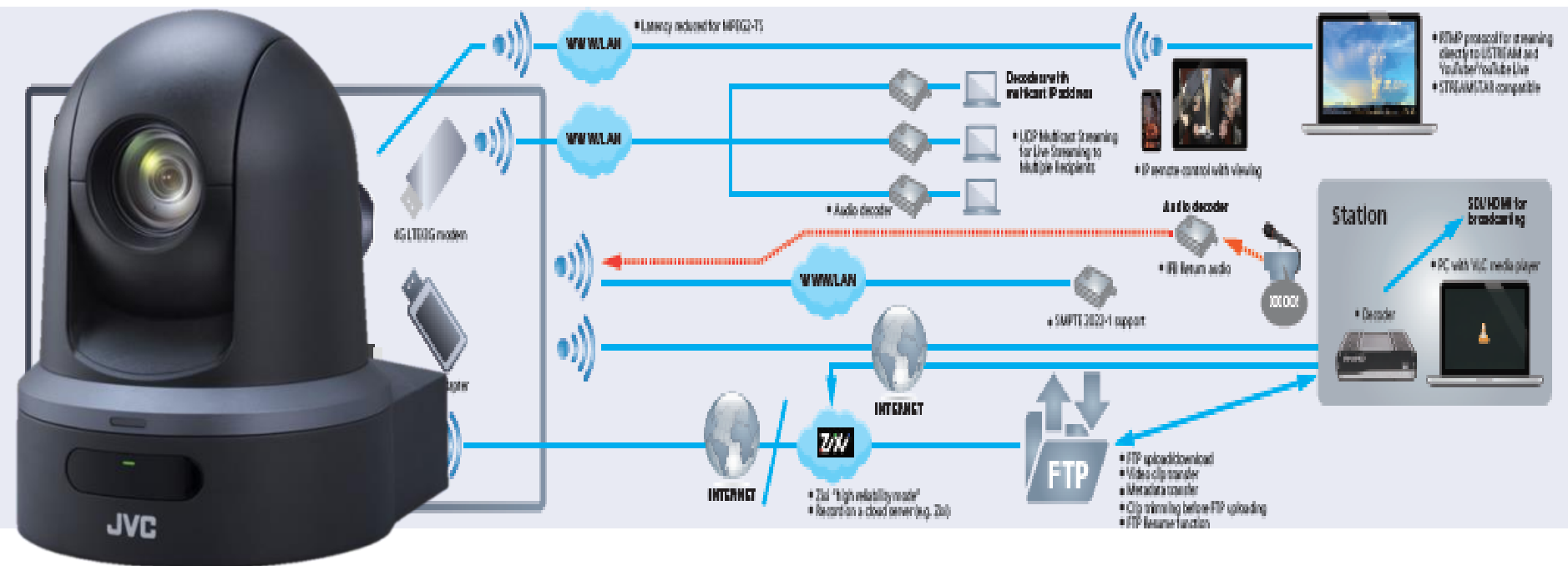
KY-PZ100 Color high sensitivity mode



* Images are explanatory purpose

Key features : Wireless IP supported , Of course via LAN cable

- Wide compatibility with IP including wireless IP, 4G/LTE and Wifi
- Ethernet connection enables up to 20Mbps Streaming
- Direct connectivity to internet , Streaming and Control to/from all over the world with PC
- Supported RTMP enable to streaming via Ustream /Youtube/Facetime



KY-PZ100 IP function **Live streaming**

Live streaming from shooting location

While KY-PZ100 can record high quality video/audio onto SDHC/SDXC cards, it is possible to transfer live streaming video/audio via IP . It enables real time delivery of live video.

Via Ethernet supporting up to 20Mbps streaming



Video: MPEG-4 AVC/H.264 Audio: AAC(128kbps(HD)/64kbps(SD))

- **Video MPEG-4 AVC/H.264**
 1920x1080/60p,50p : 20/16/12/8 Mbps
 1920x1080/60i,50i,30p,25p : 20/16/12/ 8 / 5 / 3 Mbps
 1280x 720/60p,50p : 20/16/12/8 / 5 / 3 Mbps
 30p,25p : 8 / 5 / 3 Mbps
 640x360/30p,576/25p : 3/ 1.5/ 0.8/ 0.3 Mbps
- **Audio AAC:**
 128kbps(HD/SD 5/3/1.5Mbps) , 64kbps(SD 0.8/0.3Mbps)

Supported protocol

TS /UDP,MPEG-2

TS / RTP , RTSP , Zixi , RTMP

Decoder



BR-DE800

Teradek CUBE etc



SDI/HDMI

Client : User Station

or

PC



PC application
(VLC. only UDP)

KY-PZ100 New Feature IP function (Live Streaming)

SMPTE2022-1/-2 protocol

SMPTE ST 2022-1/-2 Supported



※SMPTE FEC(**F**orward **E**rror **C**orrection) only N/A ARQ(**A**utomatic **R**epeat **r**e**Q**uest)

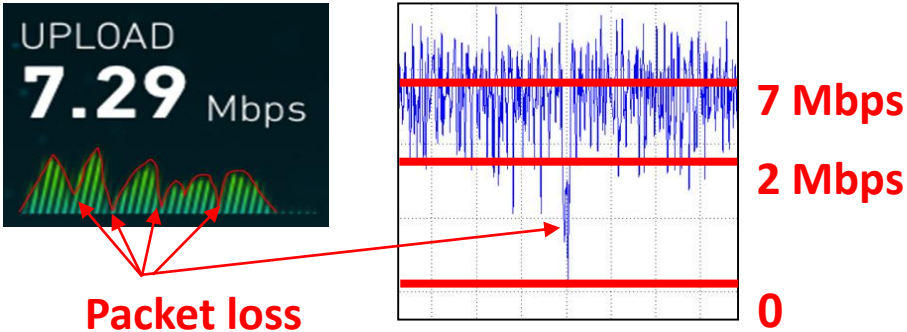
Zixi high reliability mode

Zixi High reliability setting added. This setting enables HQ live streaming with highly effective error correction under challenging condition (Latency set 'high' longer than 'medium')



Key features : Reliable and stable streaming via Zixi

Normal LTE Upload



Small packet loss causes crash the streaming

Zixi technology provides FEC (Forward Error Correction), Bitrate control (Adaptive bitrate), transcoding and so on by the cloud server to build the stable streaming. Monitoring the traffic condition all the times and protect the important information preferentially which is necessary for correct communication.

KY-PZ100 New Feature IP function (Live Streaming)

UDP Multicast

Not only 1 destination , to multiple destinations
KY-PZ100 can send live streaming with
UDP Multicast function.



Zixi adaptive bit rate

The KY-PZ100 has adaptive bit rate mode with Zixi broadcaster .
In accordance with network condition , GY-HM660 choose optimum
bitrate for HQ live streaming.

RTMP protocol Ustream / Youtube live



KY-PZ100 supports RTMP protocol ,which can
share programs with an audience anywhere in
the world via content delivery networks such as
USTREAM and YouTube.

KY-PZ100 Strong IP function (FTP)

- FTP Upload and Control from the station

Clips & Metadata

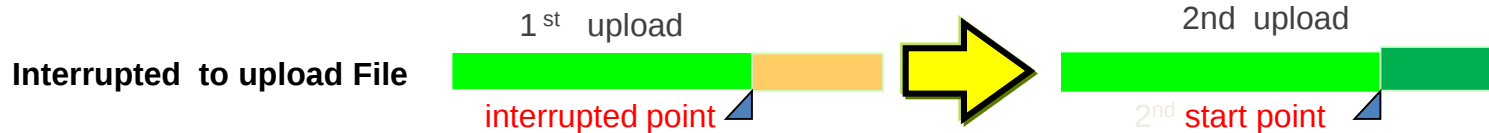
Transfer via IP



Upload Clips or Metadata
to the Server

KY-PZ100 Strong IP function (FTP)

FTP resume function



FTP resume function can save time for uploading. If uploading is interrupted at 1st upload, You can upload only rest of the clip not from the beginning of the file.

Zixi FTP upload

Zixi broadcaster can be used as Upload server. Zixi server can be used Both for FTP upload and HQ live streaming.

RM-LP100 Remote controller

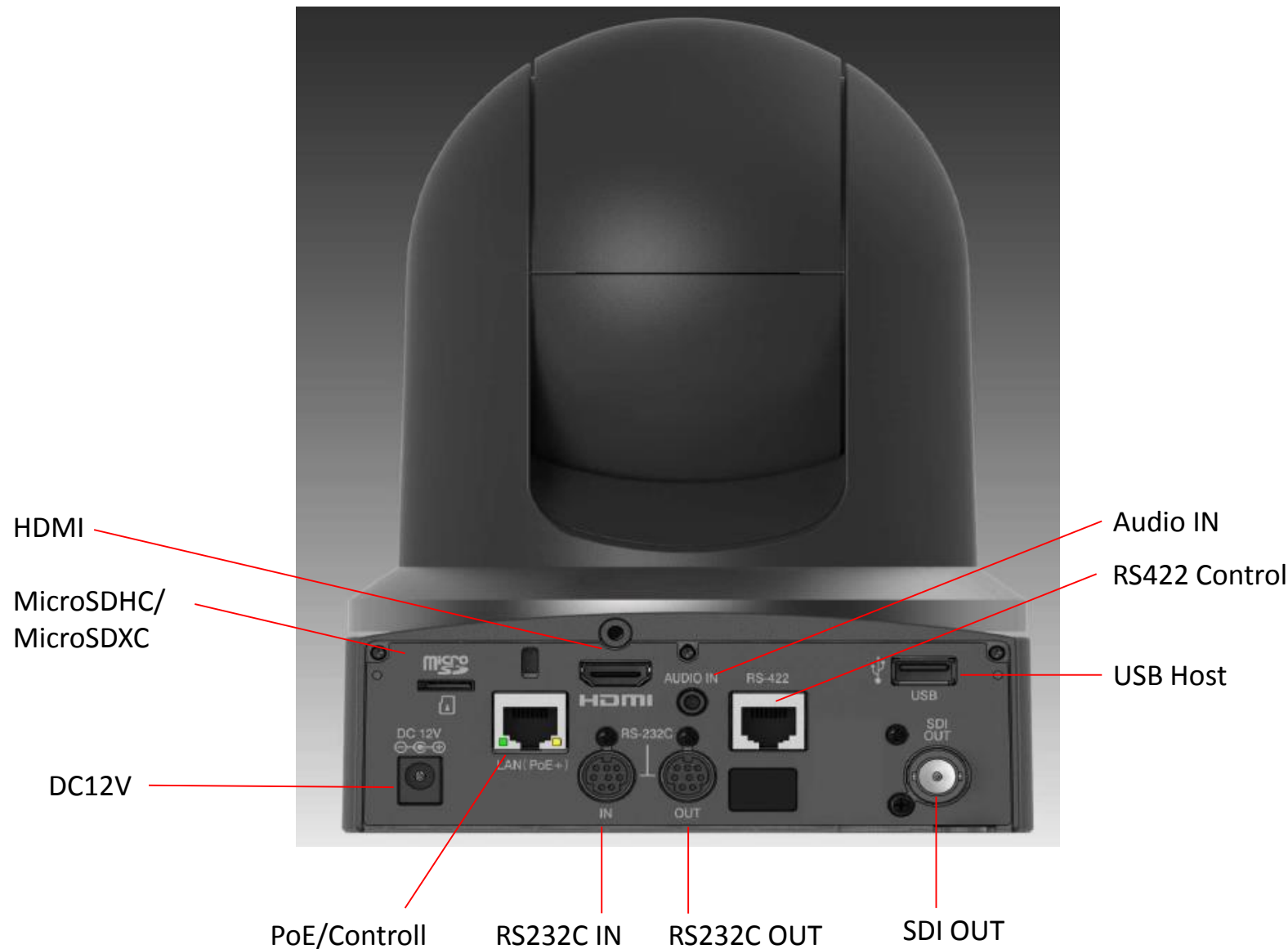
Multi camera control up to 100 cameras – JVC KY-PZ100

Easy operation by 7 inch Touch-Panel LCD

- Professional mechanical joystick, rocker lever for zoom control
- Rotary control for Focus and push operations
- 3 free function buttons to be assigned the control
- DC power (AC/DC adapter included)
- Switcher connection via D-Sub 9 pin (Tally IN/Out supported)

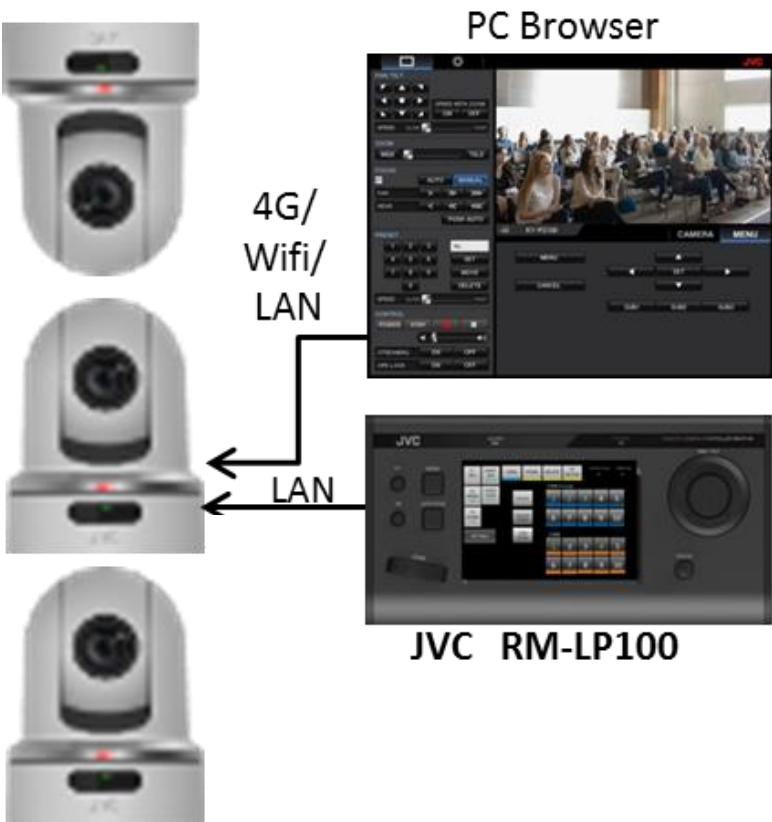


KY-PZ100 Connectors



Basic configuration

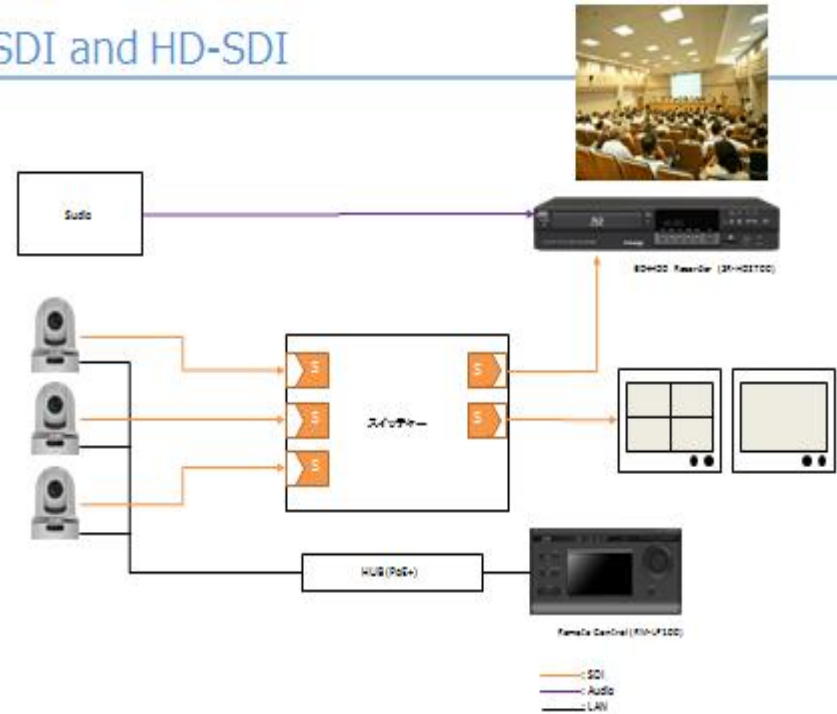
IP control



SDI/HDMI+control

IP+ SDI (+HDMI possible)
3 simultaneous output
wide flexibility

SDI and HD-SDI



KY-PZ100 WEB GUI (PC)

PAN/TILT

SPEED WITH ZOOM

ON

OFF

SPEED

SLOW

FAST

ZOOM

WIDE

TELE

FOCUS

MF

AUTO

MANUAL

FAR

>

>>

>>>

NEAR

<

<<

<<<

PUSH AUTO

KY-PZ100

CAMERA

MENU

MENU

CANCEL

SET

SUB1

SUB2

SUB3

PRESET

1

2

3

No.

4

5

6

SET

7

8

9

MOVE

0

DELETE

SPEED

SLOW

FAST

CONTROL

POWER

STBY

STREAMING

ON

OFF

OPE LOCK

ON

OFF

KY-PZ100

CAMERA

MENU

No.

SET

MOVE

DELETE

FAST

N

OFF

N

OFF

KY-PZ100

CAMERA

MENU

EXPOSURE

AUTO

SHUTTER

IRIS

MANUAL

AE LEVEL

XXX

IRIS

F3.2

GAIN

0dB

SHUTTER

XXX

WHITE BALANCE

FAW

One Push

3200K

5800K

MANUAL

WHITE PAINT

R:000

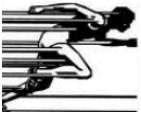
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R

B

Key feature : Direct Drive Mechanism

Direct Drive Motor – Developed mechanism to offer precise, highly responsive pan/tilt and silent movement compare to the normal stepping motor mechanism.



Super Fast 400 deg/sec.

With maximum 400 deg./sec. movement offers the scene transition sharply



Super Slow 0.1 deg/sec. (0.2→0.1)

Extremely slow movement of 0.2 deg/sec. offers a good look at the scene even at high zoom rate.



Super Silent Even for Classic concert use

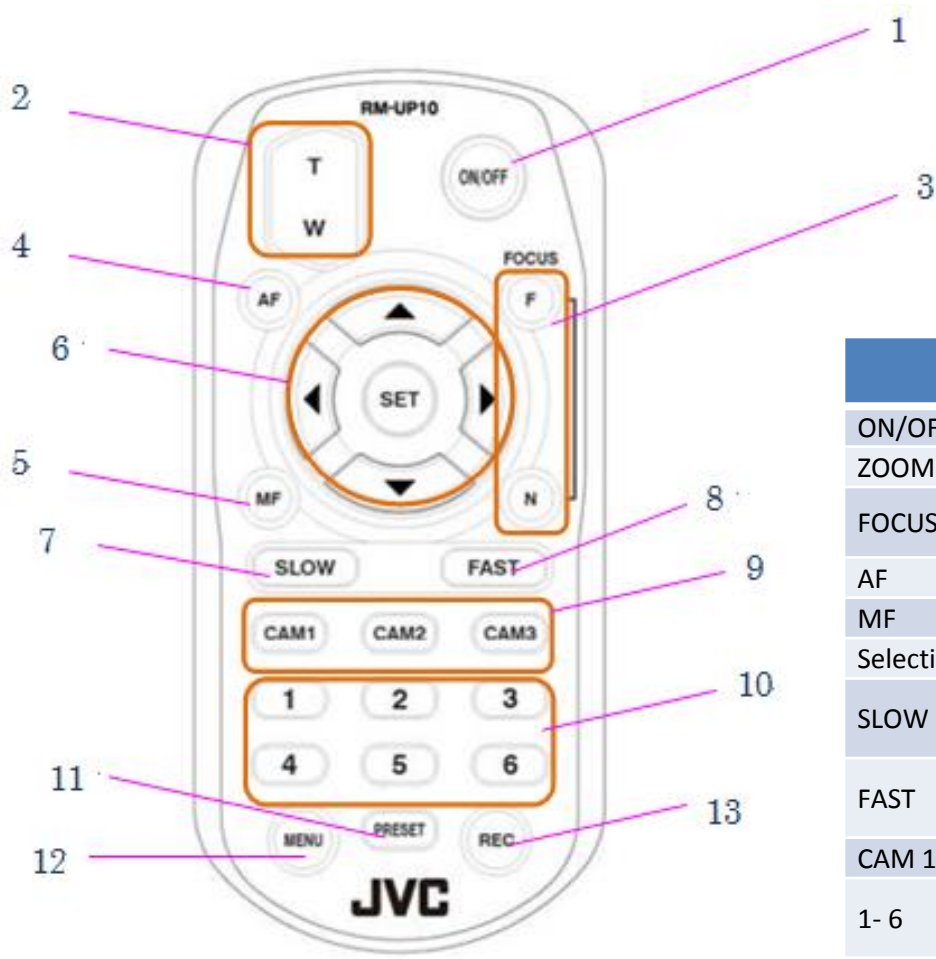
Operating noise of Direct Drive is approx. 20 % lower than normal stepping motor system, which is especially suitable for the usage of theater, church and so on.



Super Accurate +/- 0.03 deg.

GY-PZ100 takes the preset position within +/- 0.03 degrees gap to maintain the accurate position even at high zoom magnifications instead of normal stepping motor accuracy of 0.1 degrees level.

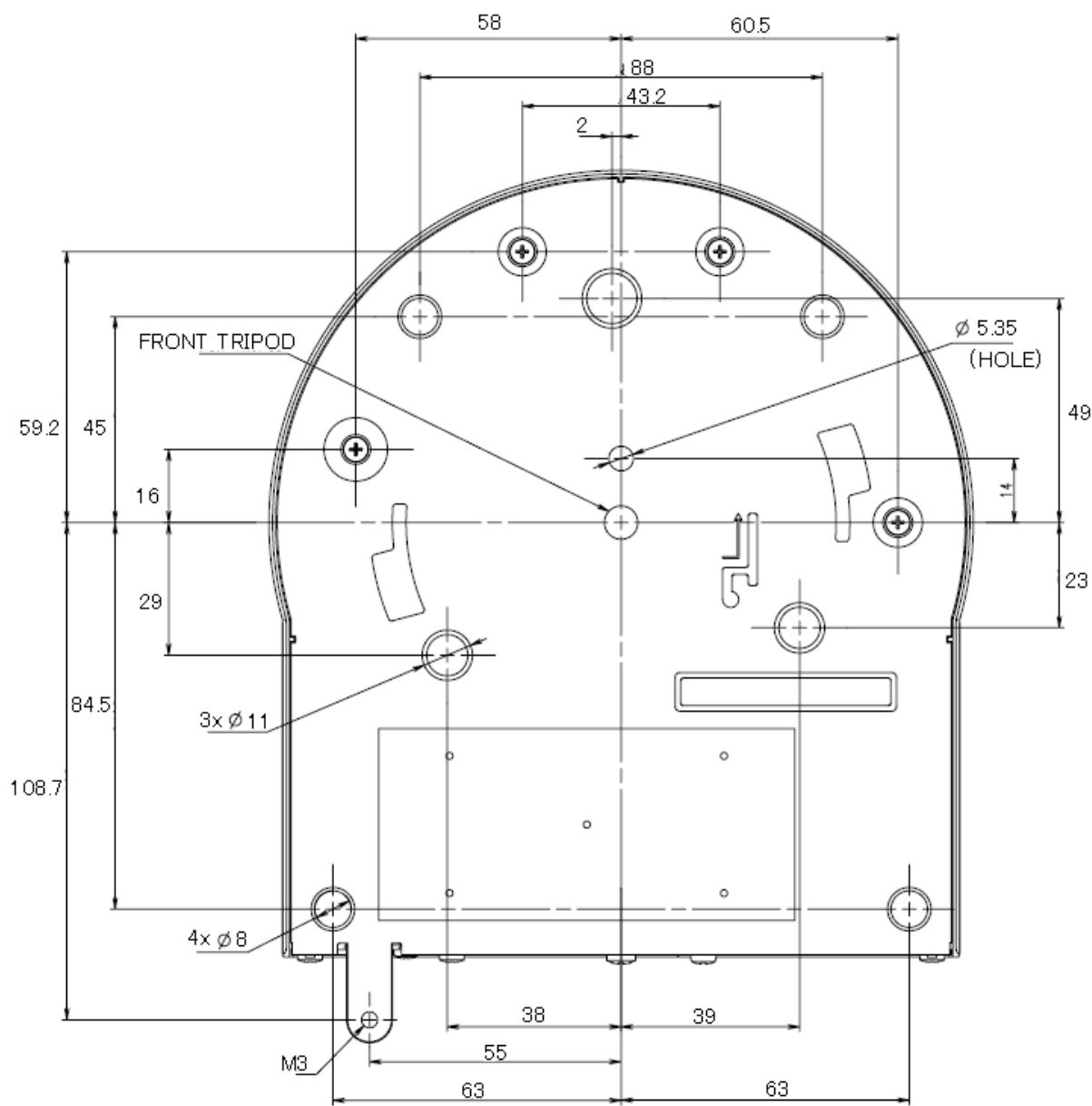
Remote controller (Included)



Name	No.	Function
ON/OFF	1	
ZOOM	2	Tele/Wide
FOCUS	3	Far/Near (Manual focus control)
AF	4	Auto focus adjustment
MF	5	Manual focus control
Selection / SET	6	Menu selection, set
SLOW	7	Control the speed of PAN/TILT
FAST	8	Control the speed of PAN/TILT
CAM 1-3	9	Select camera number
1- 6	10	Preset memory number
PRESET	11	Set the preset position (1 - 6)
MENU	12	Display camera menu
REC	13	REC start / stop

Ceiling mount bracket (Included)

* Fall prevention wire attached



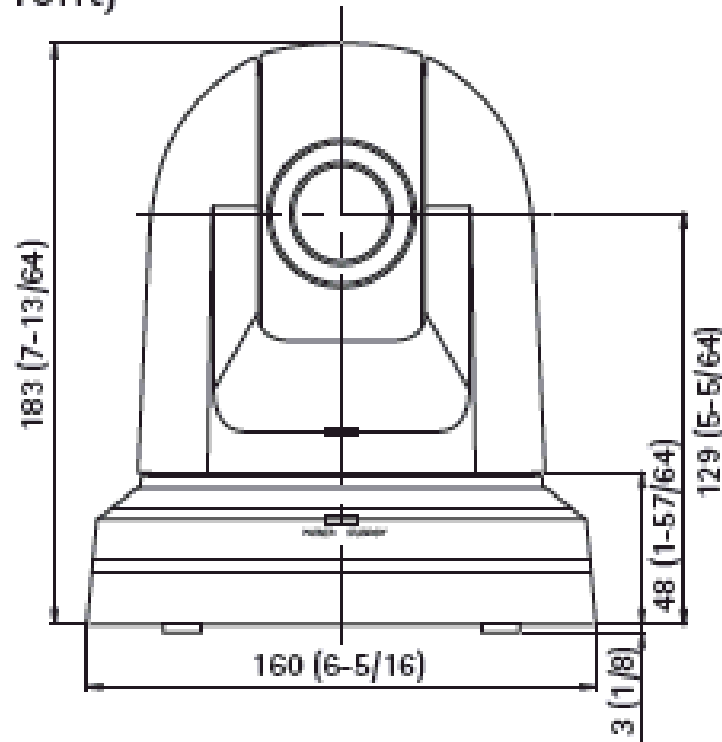
KY-PZ100 Specifications

GENERAL	
Power	DC12V(AC adapter), DC42V to 57V(PoE+ power supply)
Power Consumption	TBA 1.2A (AC adapter), 0.4A (PoE+ power supply)
Dimensions	148(W) x 199.5(H) x 172(D) mm
Weight	Approx. 1.9 kg
Operation temperature	0 to 40 deg/C (32 to 104 deg/F)
Storage Temperature	-20 to 50 deg/C (14 to 122 deg/F)
Operating humidity	30% to 80%
Storage humidity	85% or lower
Finish	[KY-PZ100B] Black [KY-PZ100W] White
Supported Remote controller	RM-LP100 (TBD for third party controller)
CAMERA	
Image Sensor	1/2.8" CMOS 2.1M pixel
Lens	F1.6(wide) to F4.7(Tele) f=4.3mm to 129mm 30.5mm to 915mm (35mm equivalent) 30x Optical Zoom
Digital Zoom	12x
Horizontal FOV	63.7 to 2.3 deg
Shutter speed	1/60 to 1/10000 (U model), 1/50 to 1/10000 (E model)
Gain	0, 3, 6, 9, 12, 15, 18, 21, 24, 30, 36, 42, 48 dB
Minimum Illumination	High sensitive mode OFF :0.1 lx High sensitive mode ON :0.01 lx
White Balance	FAW, AWB, 3200K,5600K, MANUAL
S/N ratio	50dB
Pan/Tilt Angle	Pan: +/- 175 deg. Tilt: -30 deg / 90 deg
Preset Position	100 positions
INTERFACE	
HD Video output	SDI output (3G support : BNC x1), HDMI output x1
Audio input	φ3.5mm mini jack x1 (Balanced Mono/Line / MIC with power)
LAN terminal	RJ-45
RS-422	Serial Control (RJ-45)
RS-232C	Mini DIN 8pin (IN), Mini DIN 8pin (OUT)
USB	HOST x 1 (Network Connection)

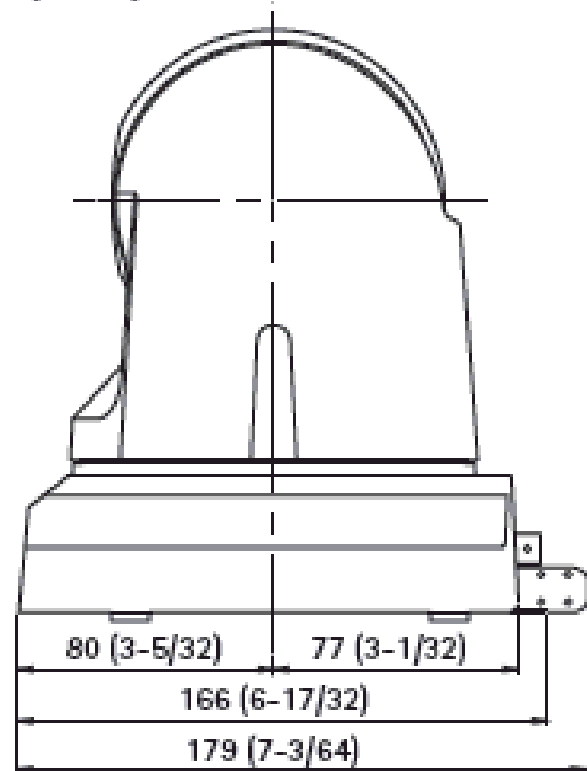
Network	
Live streaming protocol	MPEG-2-TS/UDP, MPEG2-TS/RTP, RTSP/RTP, Zixi, RTMP
VIDEO/AUDIO RECORDING	
Recording media	Micro SDHC/SDXC memory card (Class 6/10)
Video recording	Video codec : MPEG-4 AVC/H.264
	File format : QuickTime
	HD (H.264)
	NTSC setting
	1920x1080/59.94p,59.94i,29.97p (50Mbps)
	1920x1080/59.94i,29.97p (35Mbps) ,
	1280x720/59.94p (35Mbps)
	1920x1080/59.94p (28Mbps)
	1920x1080/59.94i,29.97p (18Mbps) , 1280x720/59.94p,29.97p (18Mbps)
	1920x1080/59.94i (5Mbps), 1280x720/29.97p (5Mbps)
	PAL setting:
	1920x1080/50p,50i,25p (50Mbps)
	1920x1080/50i,25p (35Mbps) , 1280x720/50p (35Mbps)
	1920x1080/50p (28Mbps)
	1920x1080/50i,25p (18Mbps), 1280x720/50p,25p (18Mbps)
	1920x1080/50i (5Mbps), 1280x720/25p (5Mbps)
Audio recording	LPCM 2ch, 48kHz/16-bit(MOV), μ-law 2ch(5Mbps)
SUPPLIED ACCESSORIES	
Direct ceiling Mount bracket x1, Screws, Wireless Remote Control x 1, AC Adapter x1, Instruction Manual	

KY-PZ100 Dimensions

(Front)



(Side)



The background consists of several overlapping triangles in shades of blue and white. A large, medium-blue triangle dominates the center. It is bordered by darker blue triangles on the left and bottom-left, and by lighter blue and white triangles on the top and bottom-right.

JVCKENWOOD