Panasonic

Surgical Image Recording System

AG-MDR25

Memory Card Portable Recorder Scheduled for release in May, 2017

AG-MDC20GJ

Compact Camera Head (Special Option for the AG-MDR25) Scheduled for release in May, 2017

Compact Portable Recorder System Suitable for Recording High-Quality Medical Video





A compact, lightweight, free-style shooting

Inheriting the features of the first-generation POVCAM plus the operating ease of a touch panel.

High-quality images suitable for surgical recording

Featuring an optical 20x zoom lens and surgical-light mode. Captures 4K (UHD)*/FHD progressive, high-resolution images.

Network operation for IP control and IP streaming

LAN connection enables zooming and real-time video monitoring from a PC or tablet.

Reliability for Medical Applications

Complies with medical standards. Lens protector, membrane sheet control section, etc., conform to medical specifications. * 4K acquisition is possible only when connected to the AG-MDC20GJ Compact Camera Head. 4K refers to UHD (3840 x 2160) resolution. The maximum resolution in 4K shooting mode via HDMI/SDI output is FHD (1920 x 1080) 59.94i/50i.



Touch Panel LCD (User Button Setting Example)

Lens Protector (Standard Equipment)

Angle of View Example for 20x Optical Zoom

Compact, Lightweight, Free-Style Shooting Inherited from First-Generation POVCAM

Compact Camera Head for Flexible Installation

• Free style: Compact, lightweight design and remote operation allow the camera to be installed in places and angles where it previously couldn't, for free-style operation.

- Optional cables (3 m (9.84 ft) /20 m (65.62 ft)): Identical to the firstgeneration POVCAM cables for easy system replacement.
- Built-in stereo microphone: For recording both video and sounds.
- Scan Reverse mode: Image inversion for shooting with a ceilingmounted Camera Head, NEW

• Scene files: Auto and three manual setting files allow scene settings to be switched and saved. NEW

Compact, Lightweight, Battery-Drive Recorder

• Light weight, handy size. Improved recorder operation with a touchpanel display and large buttons. **NEW**

• KEY LOCK function: Operation buttons can be temporarily disabled to prevent operating mistakes.

• Battery operation: Equipped with a battery socket on the rear panel. Large-capacity battery supported (11,800 mAh/8,850 mAh/5,900 mAh/ 5,800 mAh). NEW

- DC drive: Equipped with input terminal for DC12 V power supply. AC adaptor also included. NEW
- Power Supply Activation mode on the camera head linked to

centralized power supply ON/OFF. NEW

• Threaded sockets provided in two locations, left and right, for arm or rack mounting.

Touch-Panel LCD Monitor NEW

- High resolution: 16:9 screen, 3.5-inch, approx. 1.15-megadot panel
 LCD reverse display: The image displayed on the LCD monitor can be reversed vertically and horizontally. The camera head can be
- reversed vertically to match installation conditions. * When the image is reversed, the recorded image will remain in its original orientation.
- Touch panel: Compact size and multifunctional

• 13 User buttons: In addition to one hard key, 12 User buttons are displayed. Functions can be allocated to each. Four Scene File buttons

also allow easy switching of the scene setting.Focus Assist: Focusing is aided by a Peaking Display (emphasizing

in-focus areas by the use of coloring).

Reliably Designed Especially for Medical Applications

Complies with Medical Standards

Medical Electronic Device Safety Standards (IEC 60601-1) and EMC Standards (IEC60601-1-2). *In AC 240V/60Hz it does not comply with this standard.

Lens Protector

A lens protector (MC Protector/Accessory) for the front panel of the Compact Camera Head is included as standard equipment. Protects the lens from splashes.

Control Section Membrane Sheet

The control section of the Recorder uses switches covered by a membrane sheet. The surface has few bumps and indentations, so cleaning is easy with an ethanol disinfectant.

High-Quality, High-Resolution Images for Recording Surgical Images

29.5 mm*1 Wide-Angle Optical 20x Zoom Lens NEW

• 29.5 mm^{*1} Wide-Angle Optical 20x Zoom Lens: Achieves 29.5 mm^{*1} wide-angle in spite of its compact size.

- Optical 20x zoom: Covers a range from 29.5 mm*1 wide angle to 612 mm*1 close ups for various applications.
- Intelligent i.Zoom: Allows shooting up to 30x in HD format (22x in 4K) with high resolution. Zooms in seamlessly from the optical tele-end.
- Digital zoom: This digital zoom ($\times 1.4/\times 2/\times 4/\times 6/\times 8$) allows zooming without any change in brightness. Combining optical zoom + intelligent zoom enables zooming up to a maximum of $240x^{*2}$.

*1: 35 mm equivalent *2: When using optical 20x zoom + i.2

*2: When using optical 20x zoom + i.Zoom + digital zoom 8x in HD format. The image quality decreases as the digital zoom magnification increases.

High-Resolution 4K (UHD) /FHD Progressive Image Recording NEW

Compact Camera Head features a progressive MOS sensor with a total of 1.276-megapixels. The Recorder supports, in addition to 4K (UHD: 3840 x 2160) 29.97p/23.98p/25p* and FHD (1920 x 1080) 59.94p* images, multi-format image acquisition. (See page 3 "Recording Format")

The high-resolution, progressive sensor also provides a dramatic improvement over the HD image quality of the previous POVCAM model. FHD image acquisition uses the AVCHD format for high image quality and a low data rate.

4K acquisition is possible only when connected to the AG-MDC20GJ Compact Camera Head. 4K refers to UHD (3840 x 2160) resolution. The maximum resolution in 4K shooting mode via HDMI/SDI output is FHD (1920 x 1080) 59.94i/50i.

Stable Images with a Five-Axis Hybrid Image Stabilizer NEW

• Optical image stabilizer (HD/4K): Equipped with a powerful optical image stabilizer (OIS) system. Images are strongly corrected even in situations where the camera is unstable, such as when mounted onto an arm.

• Five-Axis Hybrid Image Stabilizer (HD): In HD mode, electronic image stabilization is added to the optical image stabilizer (OIS) system to detect and correct motions on five axes, including rolling motion. This is effective when shooting while walking.

• Custom O.I.S: Set to optimize vibration control (switchable) when the camera is fixed to the ceiling or a universal head.

Adjustable Image Quality Under a Surgical Light

• Surgical Light mode: Equipped with a Color Reproduction Matrix mode for use under a surgical light. NEW

• 16-Axis independent color correction: Special surgical colors can be adjusted. NEW

• Optical ND filter: The optical ND filter can be manually switched (CLEAR, 1/4, 1/16, 1/64). Resolution degradation from closing down the iris is prevented even in the bright lighting of a surgical light. NEW

• Dynamic Range Stretch (DRS): This function suppresses blocked shadows and blown highlights to produce excellent gradation for each shade when dark, bright and intermediate shades are all contained in the same scene.

Gain/iris: A maximum gain increase of 36 dB is possible. Iris

adjustment can also be adjusted independently from the gain.

• Shutter: The Slow Shutter function with Synchro Scan functions are supported.



Five-Axis Hybrid Image Stabilizer Diagram

IP Control (Tablet Screen Example)

IP Control (Web Browser Screen Example)

Other image adjustments: Detail, V-detail, Detail coring, Skin tone detail, White balance, Color temperature, Chroma level, Chroma phase, Master pedestal, Gamma, Black gamma, Knee, and NR control
 Auto Focus + Custom AF: Auto focus stability can be adjusted to match surgical conditions.

Double SD Memory Card Slots (SDXC Memory Card) and Relay Recording

Double SD Memory Card Slots (SDXC Memory Card) NEW

Large-capacity SDXC/SDHC Memory Cards supported. Double SD Memory Card Slots and a Relay Recording function enable two memory cards to be consecutively used. Hot Swapping also makes it possible to exchange cards while recording. Combined with the high data compression efficiency of the AVCHD format, this enables a maximum of 22 hours* of recording in the high-quality PS mode and a maximum of 112 hours* of recording in the extended (HE) mode. *1: When using two 128-GB SDXC Memory Cards. Extended clips are automatically split every 10 hours, causing the recording to stop for several seconds.

Versatile Recording/Playback Functions

• Producing photos from video: Single-frame image files can be converted from recorded video images. These can be used for high-quality photos. NEW

• Pre Rec: Constantly records images and sounds from approximately 3 seconds before ordinary recording starts, to prevent missing decisive moments.

• Time stamp: Date and time information can be superimposed onto images. Usable for extended research activities and nature observations.

• Resume playback: When the Stop key is pressed during playback, the stop position is stored in memory. Simply press the Play key to start playing again from the stop position.

* Turning off the power resets the memory. This function is disabled in the factory default setting.

• Clip operation: This function allows fast forward, rewind, clip forward, clip reverse, and frame by frame playback operation.

Recording Format					QuickTime		
Rec. M	/lode	Image Size	Bit Rate	Frame Ra 59.94 Hz		Audio	Recording Time (approx.)
MP4*	4K (UHD)	3840×2160	50 Mbps (VBR)	29.97p 23.98p	25р	LPCM 1.5Mbps	5 hour 20 minutes
	PS	1920×1080	25 Mbps (VBR)	59.94p	50p	Doiby Audio 384kbps	11 hours
	PH		21 Mbps (VBR)	59.94i 23.98p	50i		12 hour 30 minutes
AVCHD	HA		17 Mbps (VBR)	59.94i	50i	Doiby Audio	17 hours
AVOID	HE	1440×1080	5 Mbps (VBR)	59.94i	50i	256kbps	56 hours
	PH	1280×720	21 Mbps (VBR)	59.94p	50p	Doiby Audio 384kbps	12 hour 30 minutes
	PM	1200×720	8 Mbps (VBR)	59.94p	50p	Doiby Audio 256kbps	35 hours

*When using the AG-MDC20GJ.

Versatile Interfaces Support IP Streaming and IP Control

LAN Terminal for IP Streaming and IP Control NEW

The LAN terminal supports video and audio streaming distribution to networks, as well as file transfers and external control. Access from PCs and tablets is achieved by web browser, with no special app required. Control is also possible by a Panasonic remote camera system IP controller for integrated system operation. Open IP commands make it easy for users to design original systems.

• IP control: Remote control from a PC, tablet or IP controller enables Rec Start/Stop, Clip Delete, and compact Camera Head control (Zoom, Focus, Iris, and Menu Settings).

• IP streaming: Video and Audio IP streaming supported. Signals can be received and monitored by PCs, tablets, and IP decoders.

• File transfer: Recorded clips can be downloaded from a network PC.

SDI Input Records Endoscope and Other Images, and SDI/ HDMI Output Supports Various Applications

• SDI input: An SDI input with 3G-SDI support is equipped. This lets you connect to an endoscope or other video device and record multi-format images, including FHD (1920 x 1080) 59.94p/50p/23.98p/25p progressive images.

• SDI output: 3G-SDI compatible SDI output is equipped.

FHD (1920 x 1080) 59.94p/50p/23.98p progressive images can be output to an external monitor.

• HDMI output: HDMI output of 4K (UHD)*1/FHD images is supported. Combined with SDI output and IP streaming, this enables simultaneous output*2 to maximum of three systems. NEW

*1: HDMI output of 4K (UHD) video is available only for playback of 4K (UHD) recording clips.

 2: Simultaneous output is not supported for all video formats. Conditions exist for the input/ output signals and recording format.

Versatile Interfaces

• REMOTE terminal: External control is enabled for Rec Start/Stop, Zoom, Focus, and Iris settings. NEW

- Audio input: A stereo mini-jack is equipped. LINE/MIC switchable.
- USB 2.0: PC connection is possible in Mass Storage mode (miniB terminal).

* Audio input can not be used when a compact camera head is connected.

AG-MDR25 Specifications

Comorrol	•		
General	DC = 7.08 V (with bottom) DC = 10 V (with AC advector)		
Power:	DC 7.28 V (with battery), DC 12 V (with AC adaptor)		
Power consumption:	In standalone condition: 1.1 A (with battery), 0.7 A (with AC adaptor) With the optional AG-MDC20GJ Camera Head: 2.2 A (with battery), 1.4 A (with AC adaptor)		
Operating temperature:	0 °C to 40 °C (32 °F to 104 °F)		
Operating humidity:	10 % to 80 % (no condensation)		
Weight:	Approx. 590 g (1.3 lbs)		
Dimensions: (W x H x D)	100 mm x 53.5 mm x 104 mm (excluding protrusion) (3-15/16 inches x 2-3/32 inches x 5-1/2 inches)		
Memory Card Record	ler		
Recording media:	SDHC memory card (4 GB to 32 GB) , SDXC memory card (48 GB to 128 GB) MP4: more than Class10, AVCHD: more than Class4		
Recording slot:	2 Slots		
System format:	59.94 Hz / 50.00 Hz		
Motion recording:	Recording system: MP4, AVCHD Recording mode/Recording time: Please see page 3 for the "Recording Format" table		
Still picture recording:	Recording system: JPEG (DCF/Exif2.2)		
Digital Video/Digital	Audio		
Output video signal:	8 bit 4:2:2		
Recording video signal:	8 bit 4:2:0		
Video compression:	MP4: MPEG-4, AVCHD: AVC/H.264 High Profile		
Recording audio signal:	48 kHz/16 bit 2 CH		
Audio compression:	MP4: LPCM, AVCHD: Dolby Audio		
Headroom:	12 dB		
Video Input/Output			
SDI IN:	BNC x 1, 0.8 V [p-p], 75 Ω, 3 G/1.5 G HD SDI supported Input format:1080/59.94p LEVEL-A/LEVEL-B, 1080/50p LEVEL-A/LEVEL-B, 1080/29.97PsF/25PsF/23.98PsF, 1080/59.94i/50i, 720/59.94p/50p		
SDI OUT:	BNC x 1, 0.8 V [p-p], 75 $\Omega,$ 3 G/1.5 G HD SDI supported Output format: same as input format		
HDMI OUT:	Type A connector x 1, VIERA Link not supported Output format: 2160/29.97p/25p/23.98p, 1080/59.94p/50p, 29.97p/25p/23.98p/59.94i/50i, 720/59.94p/50p, 480/59.94p, 576/50p		
Audio Input/Output			
MIC/LINE IN:	3.5 mm diameter, stereo mini jack (MIC IN and LINE IN) MIC: -60 dBV (sensitivity -40 dB equivalent, 0 dB=1 V/Pa 1 kHz), plug in power supported LINE : -10 dBV		
SDI OUT:	2 CH (LPCM) , switchable gain: 0 dB/–6 dB/–12 dB		
HDMI OUT:	2 CH (LPCM)		
Headphone:	3.5 mm diameter, stereo mini jack x 1		
	20 mm diameter, round x 1		

	As of April, 2017
External Terminal	
CAMERA:	20 pin dedicated interface
LAN:	IP control LAN connector (RJ-45) Straight/cross cable auto-detect function
REMOTE:	2.5 mm diameter stereo mini jack x 1 (ZOOM, S/S) 3.5 mm diameter mini jack x 1 (FOCUS, IRIS)
USB 2.0:	Type Mini-B connector, mass storage (read/write)
DC IN 12 V:	DC 12 V (11.4 V to 12.6 V) EIAJ Type4
Monitor	
LCD monitor:	3.5-type LCD monitor, approx. 1,150,000 dots
Network	
Video compression:	MP4:MPEG-4, AVCHD:AVC/H.264 High Profile
Audio compression:	AAC-LC (48kHz, 16 bit, 2 CH, 128 kbps)
Transfer mode:	Resolution 640 x 360:
(JPEG)	Frame rate (59.94 Hz) : 30 fps, 15 fps, 5 fps Frame rate (50.00 Hz) : 25 fps, 12.5 fps, 5 fps
Transfer mode: (H.264)	Resolution 3840 x 2160/640 x 360: Frame rate (59.94 Hz) : 30 fps, 15 fps, 5 fps Frame rate (50.00 Hz) : 25 fps, 12.5 fps, 5 fps Resolution 1920 x 1080/1280 x 720: Frame rate (59.94 Hz) : 60 fps, 30 fps, 15 fps, 5 fps Frame rate (50.00 Hz) : 50 fps, 25 fps, 12.5 fps, 5 fps *By the conditions, the frame rate is lower than setting.
Supported protocol:	TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, DHCP, DNS, NTP, IGMP, UPnP, ICMP, ARP, RTSPoverTCP, RTSPoverHTTP, SSL (TLS) , MultiCast/UniCast
IP connector cable:	LAN cable* (moer than category 5) max. 100 m *STP (Shielded Twisted Pair) recommend
Supported OS	
Windows:	Microsoft® Windows 10 (32 bit/64 bit) , Internet Explorer 11 Microsoft® Windows 7 (32 bit/64 bit) SP1, Internet Explorer 11
Mac:	MacOS v10.12 Safari10, OS X v10.11 Safari10
Supported Browser	
iOS device:	iPhone/iPad/iPod touch, iOS 10, standard browser
Android:	Android OS 4.4, standard browser
Supported Controller	•
Controller:	AW-RP50, AW-RP120G, AK-HRP200G *Depending on a model, upgrade is required.
AC Adapter	
Rated input voltage:	AC 100 V – 240 V, 50 Hz/60 Hz, 1.2 A
Input capacitance:	79 VA (AC 100 V) , 99 VA (AC 240 V)
Rated output:	DC 12 V, 3.0 A
Operating temperature:	0 °C to 40 °C (32 °F to 104 °F)
Operating humidity:	10 % to 90 % (no condensation)
Weight:	Approx. 225 g (0.496 lbs)
Dimensions:	115 mm (W) x 37 mm (H) x 57 mm (D) (excluding DC code) (4-1/2 inches \times 1-7/16 inches \times 2-1/4 inches)

AG-MDC20GJ Specifications

General			
Power:	DC 9 V (supplied from the AG-UMR20)		
Power consumption:	0.6 A		
Operating temperature:	0 °C to 40 °C (32 °F to 104 °F)		
Operating humidity:	10 % to 80 % (no condensation)		
Weight:	Body: approx. 325 g (0.717 lbs) Shooting: approx. 333 g (0.734 lbs) (including Protector)		
Dimensions: (W x H x D)	Body: 64 mm x 72 mm x 131 mm (excluding protrusion) (2-17/32 inches x 2-27/32 inches x 5-5/32 inches) Shooting:64 mm x 72 mm x 134.5 mm (including protrusion) (2-17/32 inches x 2-27/32 inches x 5-9/32 inches)		
Camera			
Pickup device:	1/2.3-type MOS MOS solid state image sensor (Total pixels: approx. 12.76 megapixels)		
Lens:	Zoom: optical 20x motorized zoom Fvalue: F1.8 to F3.6, Focal length: f= 4.08 mm to 81.6 mm 35 mm conversion: 29.5 mm to 612.0 mm (Hybrid O.I.S mode "OFF") Filter diameter: 49 mm, ND filter: CLEAR, 1/4, 1/16, 1/64 (built-in) Shortest shooting distance: 1.5 m (4.9 ft) at zoom range, 3 cm (0.1 ft) at wide angle IR cut filter : incorporates the ON/OFF control function		
Zoom:	i. Zoom: x30 (HD), x22 (4K) Digital zoom: x1.4, x2, x4, x6, x8		
Image stabilizer:	Optical image stabilizer (HD/4K) 5-Axis hybrid image stabilizer (HD)		
Gain setting:	Automatic, manual 0 dB to 30 dB(1 dB step), Super Gain 33 dB, 36 dB *At auto mode, 3 dB to 30 dB (3 dB steps) can be selected with AGC limit setting.		

White balance:	ATW, ATW LOCK, AWB A, AWB B, P3200K, P5600K, VAR (2000 K to 15000 K)
Shutter speed:	59.94i/59.94p mode: 1/60 sec., 1/100 sec., 1/120 sec., 1/180 sec., 1/250 sec., 1/350 sec., 1/500 sec., 1/750 sec., 1/1000 sec., 1/1500 sec., 1/2000 sec., 1/3000 sec., 1/4000 sec., 1/8000 sec. 29.97p mode: 1/30 sec., 1/50 sec., 1/60 sec., 1/100 sec., 1/120 sec., 1/180 sec. to 1/8000 sec. (same as above) 23.98p mode: 1/24 sec., 1/48 sec., 1/50 sec., 1/60 sec., 1/100 sec., 1/120 sec., 1/180 sec. to 1/8000 sec. (same as above) 50i/50p mode: 1/50 sec., 1/60 sec., 1/100 sec., 1/125 sec., 1/180 sec. to 1/8000 sec. (same as above) 50i/50p mode: 1/50 sec., 1/60 sec., 1/100 sec., 25.00p mode: 1/25 sec., 1/50 sec., 1/60 sec., 1/100 sec.,
Slow shutter:	1/125 sec., 1/180 sec. to 1/8000 sec. (same as above) 59.94i/59.94p mode: 1/2 sec., 1/4 sec., 1/8 sec., 1/15 sec., 1/30 sec. 29.97p mode: 1/2 sec., 1/4 sec., 1/8 sec., 1/15 sec. 23.98p mode: 1/2 sec., 1/3 sec., 1/6 sec., 1/12 sec. 50i/50p mode: 1/2 sec., 1/3 sec., 1/6 sec., 1/12 sec.
Synchro scan:	59.94i/59.94p mode: 1/60.0 sec. to 1/285.6 sec. 29.97p mode: 1/30.0 sec. to 1/206.5 sec. 23.98p mode: 1/24.0 sec. to 1/200.1 sec. 50i/50p mode: 1/50.0 sec. to 1/209.2 sec. 25p mode: 1/25.0 sec. to 1/224.3 sec.
Minimum illumination:	0.2 lx (slow shutter: 1/2 sec., gain: +36 dB)
Horizontal resolution: (Typ, Center)	1,300 TV (HDMI output 2160/29.97p, when 25.00p playback) 1,000 TV (HDMI output 1080/59.94p, when 50.00p playback)
Input/Output	
AUDIO IN:	Built-in microphone (2 CH stereo)
Connecter:	20 pin dedicated interface (to the AG-MDR25)

As of April, 2017

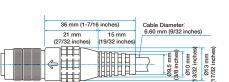
4

Options





AG-C20003G 3 m (9.84 ft) SDHC/SDXC Memory Card AG-C20020G 20 m (65.62 ft) Camera Head Option Cable



E E E

AG-VBR118G (11,800 mAh) AG-VBR89G (8,850 mAh) AG-VBR59 (5,900 mAh) Battery Pack

VW-VBD58

*When using the AG-BRD50.

00 mAh) **AG-BRD50** 50 mAh) Battery Charger 00 mAh)



VW-VBD58 (5,800 mAh) Battery Pack AG-B23 Battery Charger

Battery Pack Charge Capacity and Charge Time			
	Product Number	Voltage/Capacity	Charge time*
	AG-VBR118G	7.28 V 11800 mAh 86 Wh	Approx. 280 min.
	AG-VBR89G	7.28 V 8850 mAh 65 Wh	Approx. 240 min.
	AG-VBR59	7.28 V 5900 mAh 43 Wh	Approx. 200 min.

7.2 V 5800 mAh 42 Wh Approx. 320 min.

Camera Head Option Cable Dimensions

Please refer to the latest Non-linear Compatibility Information, Download and Service Information, etc. at the following Panasonic website:



AVCHD Progressive and the AVCHD Progressive logo are registered trademarks of Sony Corporation and Panasonic Corporation. The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries. Dolby, Dolby Audio, and the double-D symbol are trademarks of Dolby Laboratories. Mac, Mac OS, OS X, iPhone, iPad, iPod touch, iOS 10, Quick Time and, Safari are trademark of Apple Inc., registered in the U.S. and other countries. Microsoft, Windows, Windows 7, Windows 10 and Internet Explorer are registered trademarks of Microsoft corporation. Android is a registered trademark of Google inc.

*Specifications are subject to change without notice.



Panasonic Corporation Connected Solutions Company 2-15 Matsuba-cho, Kadoma, Osaka 571-8503 Japan http://pro-av.panasonic.net/

[Countries and Regions]

Denmark Egypt	+54 11 4122 7200 +61 (0) 2 9491 7400 +55 11 3889 4035 +1 905 624 5010 +86 10 6515 8828 +852 2313 0888 +421 (0) 903 447 757 +45 43 20 08 57 +20 2 23938151
Finland, Latvia, L	
	+358 (9) 521 52 53
France	+33 (0) 1 47 91 64 00
Germany, Austria	
	+49 (0) 6103 313887
Greece	+30 210 96 92 300
Hungary	+36 (1) 382 60 60
India	+91 1860 425 1860
Indonesia	+65 6277 7284
Iran	
(Vida)	+98 21 2271463
(Panasonic Office)	+98 2188791102
İtaly	+39 02 6788 367
Jordan	+962 6 5859801
Kazakhstan	+7 727 298 0891
Korea	+82 2 2106 6641

Kuwait	+96 522431385
Lebanon	+96 11665557
Malaysia	+60 3 7809 7888
Mexico	+52 55 5488 1000
Mongolia	+976 70115577
Netherlands, Be	laium
,	+31 73 640 2729
New Zealand	+64 9 272 0100
Norway	+47 67 91 78 00
Pakistan	+92 21 111 567 111
Palestine	+972 2 2988750
Panama	+507 229 2955
Philippines	
Poland	+48 (22) 338 1100
Portugal	+351 21 425 77 04
	a, Bulgaria, Macedonia
	+40 (0) 729 164 387
Russia & CIS	
Saudi Arabia	
Singapore	+65 6277 7284
	, Croatia, Serbia, Bosnia
Montenegro, Slo	
Monterlegio, olo	+421 (0) 903 447 757
South Africa	+27 11 3131622
Spain	+34 (93) 425 93 00
Spain	+34 (33) 425 93 00

Sweden	+46 (8) 680 26 41	
Taiwan	+886 2 2227 6214	
Thailand	+662 731 8888	
Turkey	+90 216 578 3700	
U.A.E. (for All Middle East)		
	+971 4 8862142	
Ukraine	+380 44 4903437	
U.K.	+44(0)1344 70 69 13	
U.S.A.	+1 877 803 8492	
Vietnam	+65 6277 7284	



Factories of AVC Networks Company have received ISO14001:2004-the Environmental Management System certification. (Except for 3rd party's peripherals.)