

## Advantages of VFDS™ in fire security:



### • Protection for a larger area with faster detection

VFDS™ is able to achieve much faster early stage detection in large areas than conventional flame and smoke detection devices. It provides practical protection for large facilities, especially ones with excessive ceiling heights, which suffer from very slow detection times when conventional devices are installed.



### • Field of view detection

VFDS™ has no limits to the distance and range of its detection capabilities as long as it is within the camera's field of view. It provides a practical protection solution for a wide range of outdoor facilities, as the physical migration of flame or smoke to detectors is not necessary for detection.



### • Immediate visual verification with live video

VFDS™ provides real-time visual verification to determine if an alarm is real, and its level of seriousness. All still and video images are also recorded for future assessment so as to help with an investigation into the cause of fire, as well as aiding improvements in detection accuracy.

## Specification:

VFDS™ Console Server		
Console System	Support up to 16 VFDS™ server with 128 channel video	
VFDS™ Server		
Management Setting	Administrator / General User	
Detection	Event	Flame, Smoke and Video Loss
	Speed	15 seconds/Flame, 35 seconds/Smoke
Video	Input	8 channel(NTSC/PAL)
	Compression	MPEG 4/JPEG
	Resolution	320 * 240 pixels
I/O Interface	USB	6 ports (2 front ports; 4 back ports)
	PS/2	1 ports for keyboard; 1 port for mouse
	Audio out	1 port for audio line
	VGA	1 port for monitor output
	RS - 232	1 port for message box
	Min. Resolution	1280 * 1024 pixels
	Miscellaneous	9-pin D-sub opening reserved (*1)
Operating Ambience	Temperature	0 ~ 40°C (32 ~ 104°F)
	Humidity	0 ~ 85% @ 40°C
	Vibration (5 ~ 500Hz)	1G
	Shock	10G (w/ 11 ms duration, half sine wave)
Power	Supply	110V ~ 220V AC
	Consumption	150 W
Storage	220GB - 3.5" SAS/SATA HDD * 1	
Internet Transmission	10M/100M, support RTP/IP, UDP/IP, TCP/IP	
Cabinet	2U case	
Dimension	482(W) * 88(H) * 480(D) mm	
Weight	10.7 kg (23.5 lb)	
VFDS™ Video Equalizer		
Display frame	NTSC 30fps / per channel	
Video	Input	8CH BNC, Vp-p ≥ 0.3V 75Ω
	Output	8CH BNC, 0.95V 75Ω < Vp-p < 1.05V 75Ω
Power	Supply	AC 120V /220V
	Consumption	6W max.
Operating Ambience	Temperature	0 ~ 49°C (32 ~ 120°F)
Dimension	270(L) * 164 (W) * 57 (H) mm	
Weight	2.2 kg	
VFDS™ Alarm box		
Alarm	Input	8 ports/ fire alarm, 8 ports/ smoke alarm, 8 ports / video loss & 3 ports / spare use
	Communication Port	50-pin male ribbon-cable connector
	Type	Sound alarm, Digital alarm (SMS & MMS)
	Output (Dry Contact Point)	Fire Alarm Control Unit
Power	Input	DC 5V < 700 mA, 50-pin box header
	Consumption	3.5W Max.
Operating ambience	Temperature	0 ~ 40°C
	Humidity	0 ~ 85%RH
Dimension	105(L) * 238.6(W) * 37(H) mm	
Weight	0.72 kg	

GKB Security Corporation (GKB) is a global security solutions provider with a full range of user-friendly products, security solutions and support services designed to meet the needs of small and medium-sized system integrators and security installers.

For more information about this solution, please visit us at [www.gkbsecurity.com](http://www.gkbsecurity.com) or email to [sales@gkbsecurity.com](mailto:sales@gkbsecurity.com) for solution enquiries.



Fire Security Systems

GKB Video Fire Detection System (VFDS™)



### An Innovative Video Surveillance Solution for the Prevention of Fire-Related Disasters

The GKB Video Fire Detection System (VFDS™) preempts fire related disasters through the detection of flame and smoke utilizing Video Image Detection (VID) technology. VFDS™ allows fast detection with immediate visual verification; solving the inadequacies inherent in conventional detection.

**Over the last century, losses caused by fire, such as deaths, permanent injuries, property and environment damages have increased rapidly, despite advances in traditional fire alarm technology.**

According to the statistic provided by the National Fire Protection Association (NFPA), there were 1,348,500 fires reported in the U.S. alone in 2009; causing 3,010 civilian deaths, 17,050 civilian injuries and property damage worth \$12.5 billion.

Further analysis reveals that 36% of reported fire incidents can be classified as structure fires (building) and another 48% are categorized as open-space fires in outdoor areas such as parks, parkland, and forests. While the causes for these fires vary, most damage is the result of an inability to respond before the fire gets out of control.

In a different survey completed by the NFPA from 2003 to 2006, 23% of the deaths resulting from structure fires were due to the failure of smoke or fire alarms to operate. Although the causes of device failure varied, the high percentage of smoke and fire alarms failures demonstrates the limitations of traditional fire detection technology.

The lack of adequate means to achieve early detection of fire and smoke has remained one of the major reasons fires have caused such significant damage to person and property.

Responding to these challenges, GKB has developed a solution to reduce fire-related loss of life and property damage by making early stage fire and smoke detection more reliable and more ubiquitous.

### Applications:

The GKB VFDS™ system is an ideal solution for the preemption of fire disaster in outdoor areas, spacious indoor areas, structures with extreme temperature or ceiling heights over 30 meters.

VFDS™ works in combination with GKB high resolution cameras and operate during day and night with equal effectiveness.

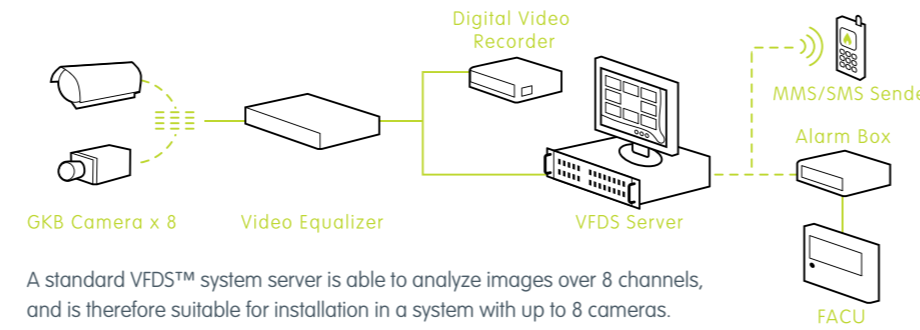
Locations that are well-suited to the GKB VFDS™ system including:

- Warehouses
- Factories
- Mining Sites
- Railway Stations
- Public Parks
- Tunnels
- Museums

### Solution Choices:

VFDS™ fire security solutions are available in basic and customized installation. The standard installation is available for purchase through GKB distributors and agents. For larger and more complex applications, customized installation can be developed with GKB consultation.

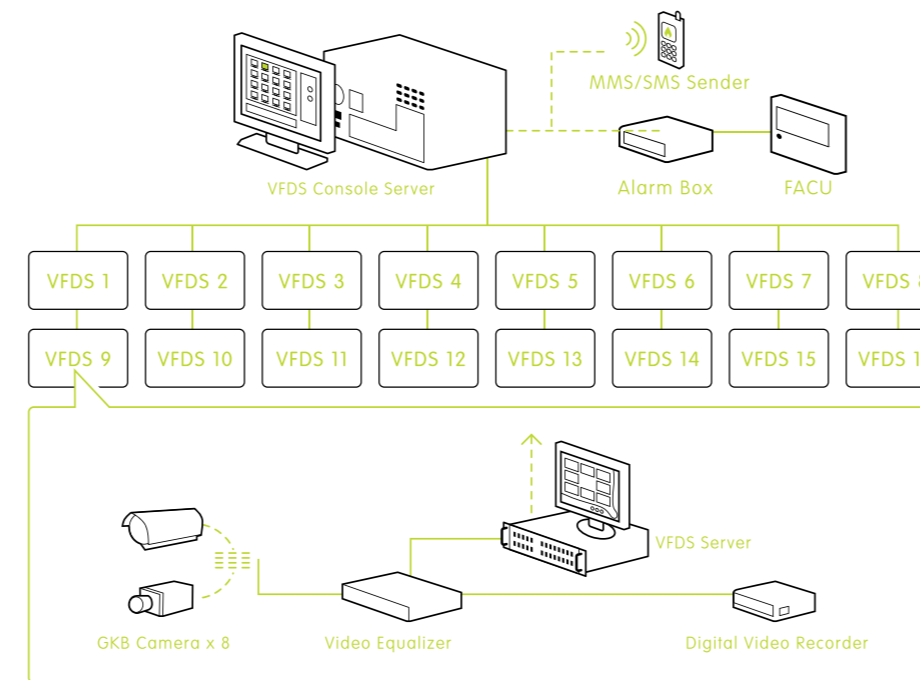
#### • VFDS™ System



A standard installation of a VFDS™ system solution:

- VFDS™ server – 1 unit
- GKB surveillance camera – 8 units
- Video Equalizer – 1 unit
- Alarm Box – 1 unit
- SMS Box – 1 unit

#### • VFDS™ Console System



A customized installation of a VFDS™ system solution:

- VFDS™ console server (manage up to 16 VFDS server and 128 video channel) – 1 unit
- GKB surveillance camera – up to 128 units
- Other equipments available as required

### Camera Options:

The system configures effortlessly with two GKB surveillance cameras. The cameras can be mixed and matched to meet the needs of each applications. Please refer to data sheet for more information about the cameras.

ACHQ-8917DVF	ACHQ-8986S(8)
Weatherproof Camera with Infrared and Varifocal Auto-Iris Lens	High Resolution Box Camera with On-Board OSD
	
<ul style="list-style-type: none"> <li>• Indoor / Outdoor application</li> <li>• Infrared for night use (optional)</li> <li>• Preventing reflection of light with protective glass (optional)</li> <li>• Allowing operation of temperature between -40°C ~ +60°C with embedded heater (optional)</li> </ul>	<ul style="list-style-type: none"> <li>• Indoor application</li> <li>• Basic surveillance needs</li> </ul>

VFDS™ Camera		
ACHQ-8917DVF	Image Sensor	1/3" Sony HQ1 CCD
	Effective Number of Pixels	NTSC: 768(H)*494(V); PAL 752(H)*582(V)
	Resolution	Color: 530TVL; B/W: 530TVL
	Lens	3-9 mm / 9-22mm Auto Iris Varifocal Lens
	Power Supply	24V AC
	Power Consumption	12W for each ACHQ-8917DVF
	Operating Temperature	0 ~ 60°C (32 ~ 140°F)
Dimension	280(L) * 115 mm (Diameter)	
Weight	1.6 kg	
ACHQ-8986S(8)	Image Sensor	1/3" Sony HQ1 CCD
	Effective Number of Pixels	NTSC: 768(H)*494(V); PAL 752(H)*582(V)
	Resolution	Color: 530TVL; B/W: 530TVL
	Lens	Adapt any brands of auto-iris lens made for 1/3" CCD camera
	Power Supply	24V AC
	Power Consumption	3.9W for each ACHQ-8986S(8)
	Operating Temperature	0 ~ 60°C (32 ~ 140°F)
Dimension	105(L) * 57(W) * 52(H) mm	
Weight	0.35 kg	