

## Technical Specifications

<b>System</b> <ul style="list-style-type: none"> <li>CPU: TI DM365 SoC</li> <li>Flash: 128MB</li> <li>RAM: 256MB</li> <li>Embedded OS: Linux 2.6</li> </ul>	<b>Networking</b> <ul style="list-style-type: none"> <li>10/100 Mbps Ethernet, RJ-45</li> <li>ONVIF support</li> <li>Protocols: IPv4, IPv6, TCP/IP, HTTP, HTTPS, UPnP, RTSP/RTP/RTCP, IGMP, SMTP, FTP, DHCP, NTP, DNS, DDNS, PPPoE, CoS, QoS, SNMP, and 802.1x</li> </ul>
<b>Lens</b> <ul style="list-style-type: none"> <li>Board lens, Vari-focal, f = 3 ~ 9 mm, F1.2 (wide), F2.1 (tele), auto-iris</li> <li>Removable IR-cut filter for day &amp; night function</li> </ul>	<b>Alarm and Event Management</b> <ul style="list-style-type: none"> <li>Triple-window video motion detection</li> <li>Tamper detection</li> <li>One D/I and one D/O for external sensor and alarm</li> <li>PIR (Passive Infrared Sensor) for human detection</li> <li>Event notification using HTTP, SMTP, or FTP</li> <li>Local recording of MP4 file</li> </ul>
<b>Angle of View</b> <ul style="list-style-type: none"> <li>31.7° ~ 93.0° (horizontal)</li> <li>23.8° ~ 68.4° (vertical)</li> </ul>	<b>On-board Storage</b> <ul style="list-style-type: none"> <li>SD/SDHC card slot</li> <li>Stores snapshots and video clips</li> </ul>
<b>Shutter Time</b> <ul style="list-style-type: none"> <li>1/5 sec. to 1/40,000 sec.</li> </ul>	<b>Security</b> <ul style="list-style-type: none"> <li>Multi-level user access with password protection</li> <li>IP address filtering</li> <li>HTTPS encrypted data transmission</li> <li>802.1X port-based authentication for network protection</li> </ul>
<b>Image Sensor</b> <ul style="list-style-type: none"> <li>1/3.2" CMOS sensor in 1600x1200 resolution</li> </ul>	<b>Users</b> <ul style="list-style-type: none"> <li>Live viewing for up to 10 clients</li> </ul>
<b>Minimum Illumination</b> <ul style="list-style-type: none"> <li>0 Lux / F1.2 (IR LED on)</li> </ul>	<b>Dimension</b> <ul style="list-style-type: none"> <li>Ø 143 mm x 106 mm</li> </ul>
<b>IR Illuminators</b> <ul style="list-style-type: none"> <li>Built-in IR illuminators, effective up to 15 meters</li> </ul>	<b>Weight</b> <ul style="list-style-type: none"> <li>Net: 697 g</li> </ul>
<b>Video</b> <ul style="list-style-type: none"> <li>Compression: H.264, MPEG-4 &amp; MJPEG</li> <li>Streaming: <ul style="list-style-type: none"> <li>Simultaneous multiple streams</li> <li>H.264 streaming over UDP, TCP, HTTP, or HTTPS</li> <li>MPEG-4 streaming over UDP, TCP, HTTP, or HTTPS</li> <li>MJPEG streaming over HTTP or HTTPS</li> </ul> </li> <li>Supports activity adaptive streaming for dynamic frame rate control</li> <li>Supports video cropping for bandwidth efficiency</li> <li>Supports ePTZ for data efficiency</li> <li>Supports 3GPP mobile surveillance</li> <li>Frame rates: <ul style="list-style-type: none"> <li>H.264: up to 30 fps at 1280x720</li> <li>up to 15 fps at 1600x1200</li> <li>MPEG-4: up to 30 fps at 1280x720</li> <li>up to 15 fps at 1600x1200</li> <li>MJPEG: up to 30 fps at 1280x720</li> <li>up to 15 fps at 1600x1200</li> </ul> </li> <li>Interface: <ul style="list-style-type: none"> <li>Audio/Video output</li> <li>NTSC/PAL video output switch</li> </ul> </li> </ul>	<b>LED Indicator</b> <ul style="list-style-type: none"> <li>System power and status indicator</li> <li>System activity and network link indicator</li> </ul>
<b>Image Settings</b> <ul style="list-style-type: none"> <li>Adjustable image size, quality, and bit rate</li> <li>Time stamp and text caption overlay</li> <li>Flip &amp; mirror</li> <li>Configurable brightness, contrast, saturation, sharpness, white balance, and exposure</li> <li>AGC, AWB, AES</li> <li>Automatic, manual, or scheduled day/night mode</li> <li>BLC (Backlight Compensation)</li> <li>Supports privacy masks</li> </ul>	<b>Power</b> <ul style="list-style-type: none"> <li>12V DC</li> <li>Power consumption: Max. 6.5 W</li> <li>802.3af compliant Power-over-Ethernet</li> </ul>
<b>Audio</b> <ul style="list-style-type: none"> <li>Compression: <ul style="list-style-type: none"> <li>GSM-AMR speech encoding, bit rate: 4.75 kbps to 12.2 kbps</li> <li>MPEG-4 AAC audio encoding, bit rate: 16 kbps to 128 kbps</li> <li>G.711 audio encoding, bit rate: 64 kbps, µ-Law or A-Law mode selectable</li> </ul> </li> <li>Interface: <ul style="list-style-type: none"> <li>Built-in microphone</li> <li>External microphone input</li> <li>Audio/Video output</li> <li>External/Internal microphone switch</li> </ul> </li> <li>Supports two-way audio via SIP protocol</li> <li>Supports audio mute</li> </ul>	<b>Approvals</b> <ul style="list-style-type: none"> <li>CE, LVD, FCC, VCCI, C-Tick</li> </ul>
	<b>Operating Environments</b> <ul style="list-style-type: none"> <li>Temperature: 0 ~ 50 °C (32 ~ 122 °F)</li> <li>Humidity: 90% RH</li> </ul>
	<b>Viewing System Requirements</b> <ul style="list-style-type: none"> <li>OS: Microsoft Windows 7/Vista/XP/2000</li> <li>Browser: Mozilla Firefox, Internet Explorer 6.x or above</li> <li>Cell phone: 3GPP player</li> <li>Real Player: 10.5 or above</li> <li>Quick Time: 6.5 or above</li> </ul>
	<b>Installation, Management, and Maintenance</b> <ul style="list-style-type: none"> <li>3-axis mechanism for flexible ceiling and wall mount installation</li> <li>Camera angle adjustment: pan 350°, tilt 85°, rotate 350°</li> <li>Installation Wizard 2</li> <li>32-CH ST7501 recording software</li> <li>Supports firmware upgrade</li> </ul>
	<b>Applications</b> <ul style="list-style-type: none"> <li>SDK available for application development and system integration</li> </ul>
	<b>Warranty</b> <ul style="list-style-type: none"> <li>24 months</li> </ul>

All specifications are subject to change without notice. Copyright © 2010 VIVOTEK INC. All rights reserved.



## Fixed Dome Network Camera

# FD8161

2-megapixel • H.264 • Day & Night

VIVOTEK FD8161 is a professional-series fixed dome network camera featuring superb megapixel image quality and exceptional bandwidth efficiency. It is especially suitable for wide open spaces such as building entrances and airports, or applications requiring accurate identification of human faces or license plate numbers.

Featuring a 2-megapixel sensor, this camera is able to provide extremely wide coverage with the finest details. With a field of view 6 times larger than a VGA camera, the FD8161 significantly reduces the number of cameras installed.

The FD8161 supports the latest in H.264 compression technology, drastically reducing file sizes by 90%. The cropping function removes unnecessary information and transmits only the designated image to optimize bandwidth and storage usage, and the ePTZ feature enables users to focus on close-up shots of different areas in the camera's view without moving the camera physically. Together with multiple streams which transmit individually configured video feeds simultaneously for viewing on different platforms, the FD8161 is able to meet a diverse set of needs and bandwidth constraints.

The camera also comes equipped with a removable IR-cut filter and IR illuminators (15 meters) to provide great clarity and contrast 24 hours a day. Other advanced features include a PIR (Passive Infrared) sensor, a 3-axis mechanism for flexible installation, 802.3af PoE, SD/SDHC card slot, tamper detection, and SIP-enabled two-way audio. With the included ST7501 32-CH central management software, the FD8161 is the ultimate camera for demanding environments.



VIVOTEK INC.  
6F, No.192, Lien-Cheng Rd., Chung-Ho, Taipei County, Taiwan  
T: +886-2-82455282 | F: +886-2-82455532 | E: sales@vivotek.com

VIVOTEK USA, INC.  
470 Lakeside Drive Suite C, Sunnyvale, CA 94085 USA  
T: 408-773-8686 | F: 408-773-8298 | E: salesusa@vivotek.com

Ver 1.2



## Flawless Image Quality & Data Efficiency

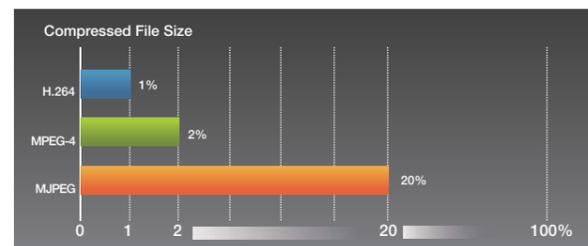
The FD8161 is equipped with a 2-megapixel sensor, making it capable of providing highly detailed images by which users can easily and accurately identify minute objects such as vehicle license plates or facial features.

To take full advantage of the high resolution capabilities, the FD8161 is incorporated with several innovative bandwidth-saving technologies. Cropping allows for the removal of unnecessary information and transmits only the image of a selected region. ePTZ can zoom in on a target area without changing the camera direction physically, then deliver only the image of that region via the Multiple Streams feature for optimal bandwidth allocation. Activity Adaptive Streaming allocates bandwidth usage dynamically with a configurable frame rate to optimize bandwidth consumption for different situations.



### H.264

H.264 is a high performance video compression standard that boasts a much higher compression ratio than MJPEG or MPEG-4. With a 90% reduction in file size, a 2MB image can be drastically reduced to 20KB with H.264. As such, uncompromised image quality and less required bandwidth and storage space make H.264 ideal for megapixel cameras.



## Consistent Surveillance Performance

### Clear Images 24/7

The FD8161 delivers day & night functionality with a built-in removable IR-cut filter. By day, the IR-cut filter screens out infrared light to reduce color distortion, and at night, the filter is removed to accept infrared light for higher lighting efficiency. Additionally, the built-in IR illuminators effective up to 15 meters provide increased light sensitivity at night, enabling the FD8161 to be used in total darkness.



## Enhanced Security

### Tamper Detection

This feature prevents the interruption of monitoring and recording due to camera tampering events such as blockage and spray-painting. By detecting scene changes caused by camera tampering, the FD8161 is an invaluable solution for vandalism-prone areas such as train stations or prisons.



### PIR Detection

The FD8161 is equipped with a PIR sensor that detects moving objects by their thermal characteristics. When unauthorized access is detected, the sensor will send out notifications and trigger the alarm, thereby guaranteeing a higher level of security and peace of mind.



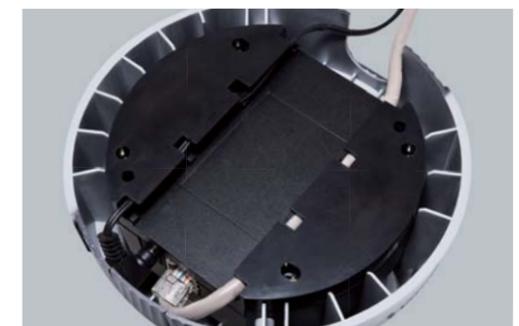
### Uninterrupted Recording

The FD8161 features a SD/SDHC card slot to provide short-term and portable video storage on removable memory cards, thereby providing a higher level of convenience and data protection. With this feature, because camera images are continuously recorded on the SD/SDHC card, the chance of data loss due to network disconnection is greatly reduced.



### Cable Management for Clean Appearance

The FD8161 comes with a recessed design, allowing for cable concealment at the bottom of the camera. This innovative design helps maintain a clean and neat installation environment while at the same time ensuring a professional look.



## Product Features

- 2-megapixel CMOS Sensor
- 3 ~ 9 mm Vari-focal, Auto-iris Lens
- Removable IR-cut Filter for Day & Night Function
- Built-in IR Illuminators, Effective up to 15 Meters
- Real-time H.264, MPEG-4 and MJPEG Compression (Triple Codec)
- Simultaneous Multiple Streams
- Video Cropping for Bandwidth Saving
- ePTZ for Data Efficiency
- Activity Adaptive Streaming for Dynamic Frame Rate Control
- Built-in PIR Sensor for Human Detection
- Tamper Detection for Unauthorized Changes
- Built-in 802.3af Compliant PoE
- Built-in SD/SDHC Card Slot for On-board Storage
- 3-axis Mechanical Design for Ceiling/Wall Mount Installation
- Recessed Design with Cable Management for Clean Installation
- Supports ONVIF Standard to Simplify Integration and Enhance Interoperability



ONVIF