

FluxData's FD-1665 embedded product is an integrated multispectral imaging system, combining the optical subassembly utilized in the FD-1665 with a PC/104 small form factor computer. The camera can be specified with custom filters as well as selecting from a range of sensor options. The addition of an embedded computer creates a dynamic, flexible, and powerful multispectral system to solve problems across many application areas.

## Applications

The FD-1665 PC/104 is especially useful in applications where accelerated on-board processing or data reduction are required. It can interact directly with the other systems and assets to solve complex target detection, surveillance and machine vision problems through coordinated peer-to-peer networking.

- Coordinated perimeter security
- Data efficient persistent surveillance
- Vehicle and personnel detection at stand-off distances
- Multi-target tracking in cluttered or urban environments
- Real-time polarization based 3D imaging
- Long range biometric identification



## Features and Benefits

- Powerful embedded computer for onboard image processing
- Customer choice of Windows or Linux based operating system
- Multispectral (400-1000nm), HDR and Polarization camera configurations
- Sensor types of varying resolutions and frame rates for different applications
- Customer specified narrow or broadband filters and beam splitter coatings
- Standard Nikon F-mount or T-mount
- Fixed focal length lenses choices from 14 to 1500mm to match FOV or working distance requirements
- Full suite of standard PC connections under side access port (IEEE1394b, eSATA, USB2.0, LAN and VGA)
- Pixel-binning and region-of-interest support for increased frame rates and sensitivity

## Computer Specification

Processor	Intel® Core2Duo 2.16Ghz
Memory	2048MB DDR-RAM
Video	Intel® 945GME Analog: 2048 x 1536 @ 75Hz
Network	Standard: 10/100Base-T Lan
Storage	Standard: Internal 32GB CF for OS Optional: Solid State Drive
Access Ports	2x USB 2.0 eSATA 1394b FireWire
Power	+5/+12 VDC, 30 Watt total consumption (computer and camera)
Operational Environment	Temperature: 0°C ~ +60°C (32°F ~ 140°F) Humidity 10% ~ 95% (non-condensing)
Size	5 x 5 x 7 inches without lens

## Sensor Options

Sensor Type	Sensor Size (H x V pixels)	Optical Size	Pixel Size (microns)	Max FPS (at full resolution)
Sony ICX414	659 x 494	1/2"	9.9 x 9.9	84
Sony ICX415	782 x 582	1/2"	8.3 x 8.3	61
Sony ICX204	1034 x 779	1/3"	4.65 x 4.65	31
Sony ICX445	1296 x 966	1/3"	3.75 x 3.75	30
Sony ICX267	1392 x 1040	1/2"	4.65 x 4.65	15
Sony ICX285	1392 x 1040	2/3"	6.45 x 6.45	16
Sony ICX274	1628 x 1236	1/1.8"	4.4 x 4.4	14

