

# PRODUCT FOCUS

## INTELLIGENT CAMERAS

### Are you smarter than a camera?

Embedded analytics from numerous manufacturers puts brains behind the lens

Angelique Carson, contributing editor

It may sound simplistic to distinguish between cameras by calling them “dumb” versus “intelligent,” but that’s only until intelligent cameras’ capabilities become apparent. Intelligent, then, sounds modest.

A “dumb” camera, as referred to by industry insiders, requires a significant amount of bandwidth to run analytics. Data from the camera is transmitted back to a central server that is working diligently all the time, compressing and decoding raw data from each camera within a system. The amount of work the server must do limits the number of cameras each server can handle, necessitating multiple servers for systems employing multiple cameras.

An “intelligent” camera on the other hand is a camera with embedded analytics, which takes some of the pressure off the server by thinking on its own. It decides, before sending any data, which data is appropriate to send

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—Greg Bell, Lumenera

and which is not. The data that isn’t significant never reaches the server. The information that does reach the server is converted, within the camera, to metadata, which takes up significantly less bandwidth.

The type of activity that the camera picks up and then processes can be built in through various algorithms. For example, one may be to record and analyze data if a person has been standing near a door for no less than 20 seconds, to avoid loitering or suspicious persons. Some cameras are intelligent enough to crop out sky and background from a picture, read license plates, detect particular faces and even decipher objects from one another, like whether movement on water is a wave’s whitecap and therefore “normal” or a watercraft, and possibly suspicious.

Greg Bell, vice president of busi-

ness development and co-founder of Lumenera, said there’s a “buzz” surrounding his company’s intelligent cameras. “It helps automate surveillance,” he says, adding that the product is cost-effective as well. “It’s not quite plug-and-play, but it’s most accessible to people from a cost, integration and ease-of-use [stand point].”

The future of intelligent cam-

eras looks increasingly promising, according to Paul Bodell, chief marketing officer of IQInvision, who said intelligent cameras will increasingly have megapixel resolution. He compares the picture megapixel cameras provide to an HD television.

“I hate to go downstairs and watch my non-HD TV, it’s horrible. End users want the high quality,

just like HD TV. You see the crisp, clear picture and you’re like, ‘that’s what it should be. [End users] are willing to spend more to get the image quality that’s useful to them,” he says.

Bell agrees with Bodell’s optimistic view of the future. He says Lumenera, which focuses mainly on high-end sensor technologies, is adding algorithms with

increasing sophistication, capable of solving a greater number of problems. He sees costs coming down, reduction of false alarms and increasing integration of software systems. He says there’s a need for standardization in the industry, however.

“In terms of the data coming out of analytics cameras being recognized, no matter who the manufacturer or analytics software is, there’s a need to speed up integration and acceptance of this new technology. [There’s a need for a] standard interface between camera and recording system.” **SSN**

Company name	Product name	Server required?	Multi-VMS compatible?	Uses back-end software?	Recognizes plate numbers?	Uses facial recognition?	Box, fixed or PTZ dome?
IntelliView Technologies www.intelliview.ca	Intelligent Video Analyzer	No	Yes	Yes	Yes	Yes	PTZ
SYAC Canada, Inc. www.syac.com	Concerto Line ANPR	No	Yes	No	Yes	No	Box
Verint Systems www.verint.com	Nextiva IP cameras	No	Yes	Yes	No	No	Box
VideoIQ www.videoiq.net		No	Yes	No	No	No	Box
Intellio www.Intellio.us	Intellio Solution	Yes	No	Yes	No	No	Box
DRACO SYSTEMS www.dracosystems.net	Smart Eyes Cam	No	Yes	Yes	No	No	Box
Smart Guard Systems www.smartguardsystems.com	Big Eye	No	Yes	No	No	No	Box
IndigoVision Ltd www.indigovision.com		No	Yes	No	No	No	Box
MOBOTIX AG Vision Security Systems www.mobotix.com	Hemispheric Camera Q22M	No	Yes	No	No	No	PTZ
MATE - Intelligent Video www.mateusa.net	iSense	No	Yes	No	No	No	Fixed
Lumenera Corporation www.lumenera.com	High Sensivity True Day-Night Li165 Color IP Camera	No	Yes	Yes	No	No	Box
ioimage www.ioimage.com	ioicam mmp100dn	No	Yes	No	No	No	Fixed
Avigilon www.avigilon.com	High Definition Surveillance Cameras	Yes	Yes	Yes	Yes	Yes	Box
3VR www.3VR.com	3VR SmartCams	Yes	Yes	No	No	No	Box
Bosch Security Systems www.boschsecurity.us	Dinion IP NWC-0495	No	Yes	No	No	No	Box