

# Ultravision Newsletter

Volume 3, December, 1999

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## Ultravision Newsletter

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For more information regarding anything in this newsletter, please write to or contact any of the Executive Committee Members. We appreciate any comments, recommendations and contributions for the next issue. If you'd like to help or show your support in any other way, please let us know.

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## Millennium Greeting

Ultravision wishes everyone,

***Joyous and Wonderful Christmas  
&  
Happy New Millennium Year!***

*Lee Wee Khiong  
Managing Director*

## What's New

### **DALSA 3CCD COLOUR LINE SCAN CAMERA (TRILLIUM)**

DALSA new *Trillium* colour line scan camera is the new state of the art camera applying prism beamsplitting technology to provide red, green and blue signals from a common optical axis for high quality colour imaging. An optional matched lens use with the camera will offers imaging fidelity, higher performance unrivaled in the colour line scan camera industry and a much faster lens setting or significantly less illumination than standard optics. Resolution available is either 1K or 2K.



#### Features:

- Precision
  - Prism beamsplitter, dichroic filters and 3 sensors give 3 colour outputs from common optical axis for superior colour registration and transmission efficiency.
  - Pixel-by-pixel correction by integration signal processing for FPN, PRNU, colour balance, and variations in light source intensity and spectra.
  - Separate data channel for each colour (red, green, blue).
- Programmability
  - Automatic self-calibration with programmable sensitivity and colour balancing.
  - Simple ASCII protocol can control virtually all camera functions, including line rate and exposure period.
  - Non-volatile configuration memory for customisable power-up configuration.
  - Camera can control motorised iris.

.....continue on page 3

## Editor's Message

Year 2000 is coming. Let us celebrate the dawning of the new millennium. But it's not good news and celebration for everyone in the industry. Why? Y2K bug is also coming. IT personnel is expected to stand-by in case the highly publicized fear happen.

To our customers, our suppliers had informed us that their products are Y2K compliant. If you still have doubt on the product that you had bought from us, please do check out our homepage <http://www.ultravision.com.sg>. Under the product page, you can click the respective suppliers' logo to access their homepage. Each supplier do have write-up on their products being Y2K complaint.

In this issue, we introduce a new Colour Line Scan and High speed Monochrome Line scan cameras from DALSA, information on Pulnix new 120 frame/sec monochrome progressive scan camera, and JAI MCL-1500 which is a monochrome CCD camera with built-in 10x zoom lens with RS232C.

XCaliper had also up-graded their customise machine vision software from version 4 to version 5. XCaliper 5 offers extensive development toolsets with drag and drop features for fast, simplified creation of custom vision system application. This software is very user-friendly and will definitely reduce your software development process, and conclusively, your ability to bring to the market new machine vision products.

Last of all, just a food for thought, if Y2K precaution had been implemented, shouldn't we relax and enjoy the millennium celebration or wait for another 1000 years to celebrate the next millennium. ■

## Ultravision - The Machine Vision Specialist

### Special Review

#### Computer Controlled Motorise Lens (CCML)

For application that require computer to control zoom and focus of the camera lens, you might like to consider our product model CCML. The **Computer Controlled Motorise Lens** is a customise product develop exclusively by Ultravision.



The system consists of an auto-iris lens, with motorise zoom and motorise focus, connected by an inter-connection cable to an interfacing card in a computer. With a customise software, you can communicate with the lens, through a computer terminal, so as to remotely focus and zoom to your requirement.

When the lens system is integrated with a camera and pan tilt computer-control system, the application will enable a controller in full control to track activity remotely with the ability to zoom in and focus for a magnified image.

*You can communicate with the lens, through a computer terminal, so as to remotely focus and zoom to your requirement.*

#### Main features:

- Can control zoom and focus
- Auto-iris or computer-control iris
- D/A card and software library
- Sample program to zoom and focus ■

#### Ultravision update... (continue)

.....from page 4.

#### Titles of the project are:

- 1) Microflow observation/recording optical system (S\$70K)
- 2) Digital CCD camera with recording systems and accessories. (S\$140K)
- 3) High speed video capture device as a digital motion analyser recorder. (S\$60K)

Due to the sensitivity of the projects, we apologise for not being able to provide more information pertaining to these contracts. ■

.....from page 1.

## What's New... (continue)

### - Performance

- 1024 or 2048 pixels, 14um x 14um.
- 25MHz per output data rate, 8-bit output from 10-bit digitisation.
- Line rates to 21KHz (1K resolution) or 11KHz (2K resolution).
- EIA-644 (LVDS) data format.
- Antiblooming and exposure control.

### - Usability

- On-camera diagnostic display.
- Test pattern output for debugging.
- Grabs reference lines through RS232 port without the need for a framegrabber.
- Single input supply (12-15V).
- CE compliant. ■

### FSI AUTOMATION - XCALIPER 5.0

XCaliper 5.0 is a customise software from FSI Automation for machine vision application. XCaliper simplifies the



development process, therefore saving time, by taking advantage of object-oriented architecture and graphical development. You develop your application by dragging and dropping XCaliper's vision tools and configuring them with graphical property sheets.

### Features:

- *Search/OCR* - Learn and locate grayscale patterns or perform OCR.
- *Edge* - Locate edges along straight lines and along open or closed arcs.
- *Caliper* - Find edge pairs along lines and arcs, and calculate the number of pairs, their location, and the distance between the edges.

- *Blob* - Find and count objects, and extract over 30 measurements from each object including size, position, shape, grayscale. statistics, and texture.
- *Colour* - Train on a known red-green-blue (RGB) or hue-saturation-intensity (HSI) colour and statistically compare inspected colours against known colours.
- *Lightmeter* - Calculate statistics about pixel intensities and normalise to correct for changes in lighting during the inspection process.
- *ImageProcess* - Apply image filters, convolutions, morphological operations, and arithmetic or logical combinations of images. ■

### JAI DSP COLOUR CAMERA (MCL-1500)

For application where you need a built-in zoom lens with DSP and RS232C interface, you might like to consider the JAI model MCL-1500.



### Features:

- High resolution 1/3" Hyper HAD IT Colour CCD sensor
- 752 X 582 (PAL) or 768 X 494 (NTSC)
- Compact construction with built-in 10x motorised zoom lens
- Lens focal length 5.8mm to 58mm. FOV 46deg to 4.8deg (H)
- Ideal for surveillance. Easy to install and setup
- Internal and External synchronisation by composite sync.
- High precision DSP video processing for excellent colour reproduction.
- composite VBS video or Y/C

- Extreme sensitivity and S/N ratio > 48dB.
- Auto Iris and CCD iris for light regulation.
- Auto focus, 10x zoom lens
- Back light compensation (BLC) for critical high light scene illuminations.
- User-friendly access to mode settings on rear panel of camera.
- RS232C interface
- Win 95/NT setup software for camera and lens control. ■

### DALSA NEW LINE SCAN CAMERA (SPYDER)

If you want a new leading-edge line scan camera, but are't willing to compromise



on size and ease of use, you might like to consider Spyder camera.

### Features:

- High responsivity at 40MHz with line rate upto 70kHz.
- Anti-blooming, Exposure control and user-defined data rate, gain and binning.
- Cool running despite its size and high data rates.
- Small body size of 50mm x 50mm x 88mm and weight less than 300gm.
- Resolution of 512, 1024 or 2048.
- 14um square pixel.
- CE compliant. ■

.....continue on page 4

## What's New... (continue)

### **Pulnix 120 Frames/Sec Progressive Scan CCD Camera (TM-6710)**

The Pulnix TM-6710 is a monochrome camera with non-interlace quad speed scanning, 120Hz format and partial scanning (200 and 100 lines) capabilities. Since the quad speed mode is standard, images can be displayed on a multi-sync monitor.

#### Features:

- High resolution 1/2" progressive scanning interline transfer CCD imager 648(H) x 484(V)
- Quad speed progressive scan (510 lines at 120Hz, 60Hz) or partial scan at up to 350Hz
- Full frame shutter, 1/60 to 1/32,000 sec.
- Asynchronous reset with external shutter control
- 8-bit x 2 (or 8-bit x 1) RS-644 digital output and up to 120Hz analog output
- RS-232 (or RS-482) control for gain, A.D ref., shutter and mode selection with Win98/NT compatible software
- AGC on/off, gamma 1.0 or 0.45 (AGC off, gamma 1.0 standard)
- On chip micro-lens and low smear at fast shutter.

#### Possible application:

- Motion analysis
- High speed on-line inspection
- Gauging
- Character reading
- High definition graphics ■

## Ultravision Update

### **Malaysia Branch Office - Advance Ultravision Sdn Bhd**

To provide better service to our Malaysian customers, Ultravision had opened an office in Selangor, Malaysia.

The operation is lead by Mr. A.K. Ooi, Director of Sales. He is a graduate in Electrical and Electronics. with many years of experience in marketing and selling to industrial end-users.

For our Malaysian customers, with this new office, Ultravision is now closer to you.

Address: 17, Lorong PJS 7/7K,  
Bandar Sunway, 46150, Petaling Jaya,  
Selangor, Malaysia.  
Tel: 03-736 2562  
Fax: 03-737 5243 ■

### **New Distributorship - Direct Perception, Imagenation and SMD**

Ultravision has again expand her product ranges in width and depth. We had included new products from our new suppliers - Direct Perception, Imagenation and SMD.

Direct Perception is the manufacturer for Computer Controlled Pan-tilt Unit. Their homepage is <http://www.DPerception.com>.

Imagenation is the maker for some popular low cost frame grabber card widely used in machine vision application. Their homepage is <http://www.imagenation.com>.

SMD is the manufacturer for very high speed, high resolution, scientific grade CCD camera. Their homepage is <http://www.smd.com>. ■

### **Ultravision Awarded 3 Major Contracts**

Ultravision was fortunate to be awarded 3 major tender contracts from NTU for motion analysis and video recording application in FY99. The total worth of the 3 contracts were estimated at S\$270K. The work scope included supply, delivery and commissioning.

.....continue on page 2

## Product Range

<u>Lens</u>	<u>Camera</u>	<u>Lighting</u>	<u>Frame Grabber</u>	<u>Analysis Software</u>	<u>Industrial PC</u>
- Optem / US	- Dalsa / Canada	- Illumination	- Epix / US	- IO Industry / Canada	- ICP / Taiwan
- Avernia / Japan	- JAI / Denmark		- Bitflow / US	- Optimas / US	
	- Pulnix / US		- Imaging Technology / US	- XCaliper / US	<b>Pan-Tilt</b>
			- Mutech / US	- Halcon / Germany	- Direct Perception / US

Note : If you need more information on Ultravision's products, please visit our homepage at [www.ultravision.com.sg](http://www.ultravision.com.sg) or call us.