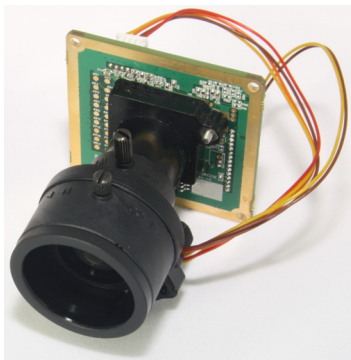


D8800C 42mm Seawolf Board Camera Reference Design

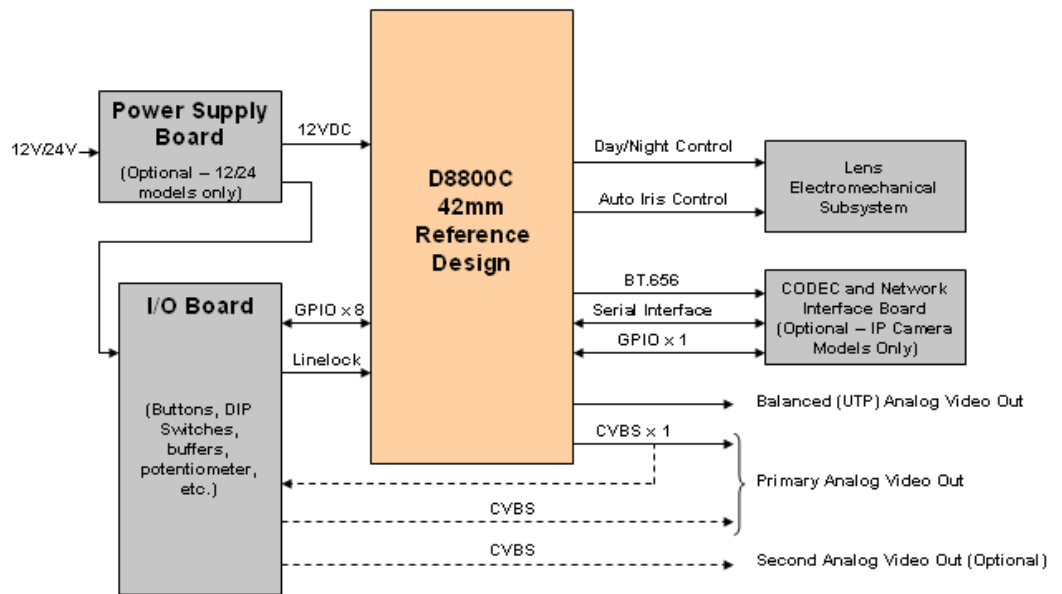
Highlights

Pixim's 42mm board camera reference design enables rapid development of next generation, high-performance, cost-optimized CCTV and IP cameras based on Pixim's D8800C "Seawolf" digital imaging system. The reference design utilizes the PixMate™ analog companion chip from Kiwi Semiconductor that integrates the functionality of five active components and their associated passive devices into a single chip, reducing BOM cost and simplifying sourcing and inventory management.

The 42mm x 42mm board camera has been designed to fit within a wide variety of camera housings and applications and includes mounting holes for lens mounts as well as for attaching to gimbals and housings.



True Day/Night Board Camera Using D8800C 42mm Reference Design



Specifications

Item	Specification
Power	9-14 VDC, 170 mA
Video Standards	NTSC or PAL (software selectable), ITU-656
Camera Types	Color, True Day/Night, IP
Dimensions	42mm x 42mm, 6-layer PCB

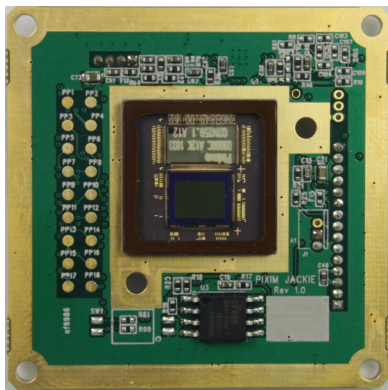
Connectors

The reference design interfaces to other camera subsystems and I/O boards using five industry standard connectors. Pogo pin pads are also provided to support high-volume manufacturing.

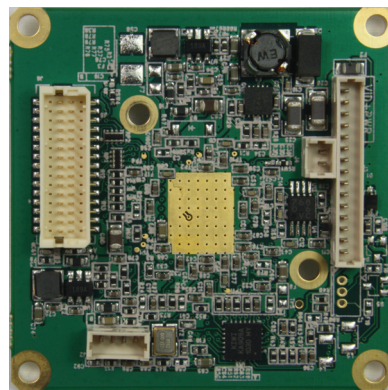
Designator	Manufacturer / Part Number	Pins	Functions / Connections
J1/J4	Molex 53047-0210	2	Day/night switcher control (front and back of board options)
J2	Molex 53047-0410	4	DC auto-iris control
J3	Molex 53047-1510	15	Power, composite video, line lock input, joystick or 5-button keypad
J6	Hirose DF20-30DP-1V	30	8/10-bit digital video, serial port, flash memory programming interface, and sensor calibration connections
J7	Molex 53047-0310	3	Unshielded Twisted Pair (UTP) video output
PP1-PP18	N/A	18	Pogo pads used during manufacturing for power, programming, and calibration.

Development and Manufacturing Support

Camera Development Package	Everything needed for modifying PCL (Pixim Configuration Language) to create customized menus and controls
Property Access Tool (PAT)	Allows easy extraction and insertion of camera setup parameters for rapid menu development and performance tuning
Camera Setup Manual	Documentation for menus in MS Word (.doc) format
Board Camera Reference Design and Specification	Includes complete electrical and mechanical specifications, connector pin assignments, schematics, gerbers, and layout files
Applications Support	Pixim Development Partners have 24/7/365 access to all documentation plus help desk support via Pixim's support web site



Front View
D8800C 42mm Reference Design



Back View
D8800C 42mm Reference Design

Pixim Digital Pixel System® Technology

Pixim's Digital Pixel System technology represents a fundamental breakthrough in imaging technology. This image capture and processing system provides high-quality pictures with enhanced dynamic range that significantly improves image quality in scenes consisting of both bright and dark areas.

The core invention is the inclusion of an analog-to-digital converter (ADC) within each pixel of the image sensor. The ADC translates the light signal into a digital value immediately at the point of capture eliminating signal degradation and cross-talk in the sensor array. A variety of digital signal processing techniques are then used for optimal image reproduction.

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For more information on the PixMate™ analog companion chip from Kiwi Semiconductor, email pixmate@pixim.com