

Seagull Concepts

Custom Camera Consulting



Contents

Camera Conception

Requirements

Block Diagram

Closing the loop with ID Team

Schematic and BOM

Prototypes

Manufacturing

Pricing and Team

Camera Conception

Gather requirements from Product Manager

Present via a dialog what camera is possible and when it can MP

Industrial Automotive Consumer



Requirements

Angular Field of View (e.g. 140x80)

Depth of Field (e.g. 20cm-infinity)

Low-light Performance (e.g. ½ Lux)

Pixels/Degree (sets resolution)

Output: Ethernet, USB, WiFi

Night Mode (absolute darkness)

Acceptable Distortion

Linear or HDR

Target BOM Cost

Target MP date

After Requirements

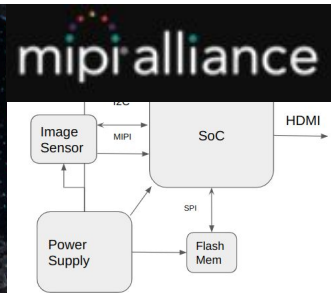
Component Vendor Selection

Part Selection through Lab Testing

Standards connectivity

Component Price Negotiation

Contract Manufacturer Selection



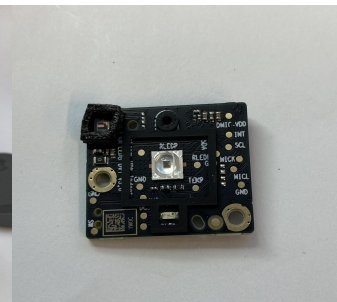
Close the loop with ID Team

Optical path

Light Leakage Prevention

Material Selection

Estimate MP Price per Camera



Schematic and Bill-of-Materials

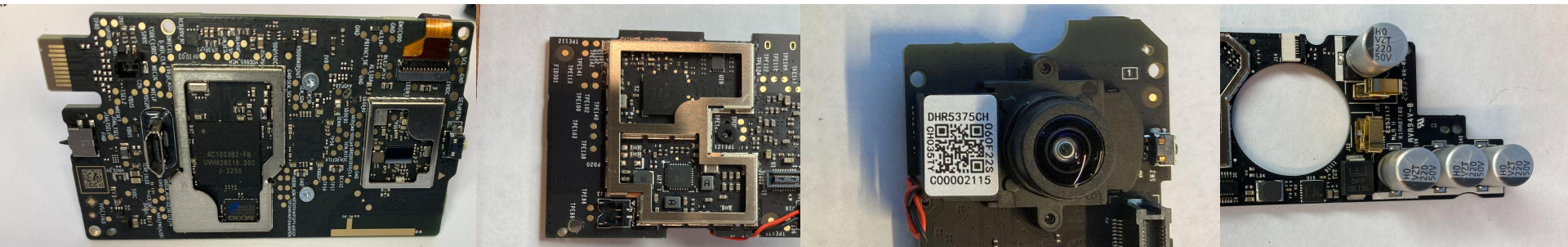
Schematic

Based on vendors reference designs

Optimized for custom use

Verified by all vendors

Supervise PCB Layout



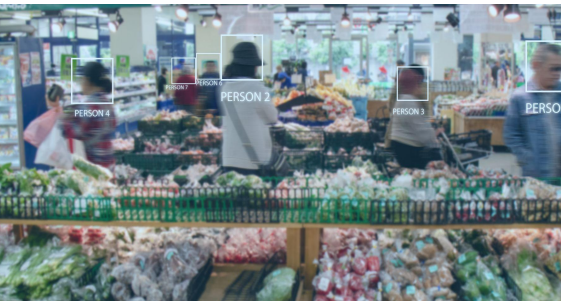
Prototypes

Overall management

Bring-up

Lab and Field Testing

Camera Tuning including Computer Vision



Manufacturing

Automatic Production Testing Machine Design (through partner)

Manufacturing line debugging

Hire camera manufacturing support team in USA, Asia, or India



Your expenses

Before Mass Production (MP)

Seagull Concepts HW Architecture, Design, and Test. Application SW.

Manufacturer's Test Machine Design NRE, Prototypes Cost (PCB, SMT, Test)

During MP

Seagull Concepts Manufacturing Supervision

BOM and Manufacturer's Assembly and Test Costs

Manufacturer's Profit

Standard's Licensing (if outputting compressed video)

AVC/H.264, HEVC/H.265

Pricing (USD) and Team

Retainer

\$500/hour blocks of 10 hours

\$400/hour blocks of 40 hours

Custom Program Proposal

HW-only Linear (\$320K+)

HW + Linear + Embedded SW (\$680K+)

HW + HDR + Embedded SW + Edge CV (\$1.65M+)



Raul I Lopez

IBM SGI INTEL AMAZON/RING
C-CUBE TERALOGIC GEO AFERO
IZAH I VIDEO-CORES ONEREDCAR SEAGULL

+ Selected Proven Subcontractors