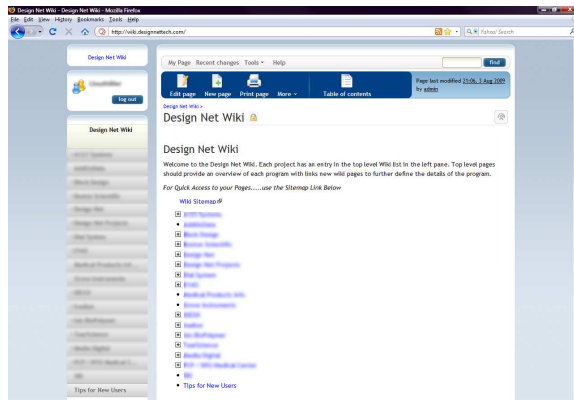


Design Approach Turn-Key Design Services

- Concurrent Design Tools - Secure Online Tools provide real-time client involvement and interaction throughout development.



Snapshot of the Design Net Wiki , critical for real-time collaboration throughout our development process.

- In-House Services - Industrial, Electronic, PC Board Design and Software Development
- Patents - We identify Patent opportunities and apply for protection for our clients.
- Modular Approach – Designs are modular to simplify verification and validation efforts.
- Modular Components - Modular assemblies are used where appropriate to control development and product costs. Examples include, use of off-the-shelf CPU Boards and WiFi / Bluetooth Modules.
- Reference Designs - Our library of reference design modules ensures reliable proven results at no additional cost.
- Industry Crossover - We leverage our experience in consumer product components to reduce the cost of medical and commercial products.

Prototypes

- We build, test and verify all product prototypes in-house.

Manufacturability

- We work with manufacturing organizations concurrently throughout the development to ensure manufacturability.

Documentation Package

- We deliver a complete documentation package suitable for any ISO or FDA manufacturing organization.

Manufacturing Support

- We support your manufacturer of choice to ensure a smooth transition into production.

Content Experience

Product Categories

- Consumer Products
- Commercial Products
- Medical Products

Wireless Technologies

- WiFi
- Bluetooth
- Zigbee
- Broadband - 2G/3G/4G



Specialties

- Custom Control Systems
- Custom USB Devices
- Custom GUI Interfaces
- Medical Products with Redundant Hardware Safety Systems
- Compact Designs
- Flex Circuit Designs
- Touchscreens
- Digital Cameras

Microprocessor Platforms

- Texas Instruments ARM, MSP4xx
- Microchip PIC
- Intel x86 including ATOM
- AMD x86
- Atmel Microcontrollers

Operating Systems

- Windows XP
- XP Embedded / Windows Embedded 7
- Windows CE
- Linux

Software Development

- C/C++
- Adobe FLASH
- GUI Interface Design
- Complex Application Software
- 3D rendering analysis software

Designnet

Since 1995, Design Net has been developing products for clients in the medical, commercial and consumer markets.

Some of our clients include:





Surgical Laser Controller

Use: Medical system for skin resurfacing in an outpatient environment.

Surgical Laser Controller with a 3-axis motion control controller for 150 watt CO2 Laser, Graphical User Interface (GUI) Display and a membrane keyboard.

- Microcontroller Based System
- 16 Bit A/D D/A I/O
- X86 Custom Embedded System
- Hi-Speed Watchdog Circuits
- Programmable Gate Array
- Graphic LCD Interface
- Motion Control System-Galvo Drivers

Endometrial Ablation System

Use: Medical System for treating menorrhagia in women.

The Endometrial Ablation system is a software-controlled hysteroscopic thermal endometrial ablation system that consists of a console unit and a sterile procedure set. The System is built on a modular architecture and includes a GUI control subsystem with an LCD display, keypad, and audio sound system. The Procedure Control subsystem includes hardware safety controls that monitor critical microcontroller functions to ensure patient safety.



- Multi-Processor System
- Windows® XP Embedded
- Graphical User Interface (GUI) Control System



Ocular Surface Interferometer

Use: Medical System for detecting and grading Evaporative Dry Eye.

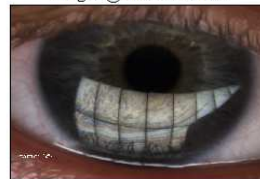
The Ocular Surface Interferometer is an office-based system that includes a camera and zoom lens, illuminator and a touchscreen GUI display. It operates on the principle of white light interferometry and provides an interferometric color assessment of the tear film by specular reflection.

- Intuitive GUI Touchscreen / Display
- Windows® XP Embedded
- Optional Joystick Accessory (Auto-Detected)
- Captures Lossless Full Motion Videos of the Eye



Patient ID: UID21 Patient Name: JOHN JOHNSON Report Date: 2009-05-05 17:33 Operator:	DR. JOHN SMITH 12345 OPTICAL DR BOSTON MA 55555 555-555-1212 LipiView Interferometer Serial Number: 00000000
EYE: OD 2008-10-28 17:51:42	EYE: OS 2008-10-28 17:51:39
Tags: [FORCED BLINK] [] [TAG3-6] [TAG4-6]	Tags: [FORCED BLINK] [] [TAG3-5] [TAG4-5]

Images @ Maximum ICU



# Frames	371	Avg ICU	85
Max ICU	105 @ 354	Min ICU	48 @ 152
Std. Dev.	13	C-Factor	0.72

Images @ Maximum ICU



# Frames	546	Avg ICU	48
Max ICU	61 @ 494	Min ICU	38 @ 295
Std. Dev.	4	C-Factor	0.89

Interferometric color assessment of the tear film



Dry Eye Thermal Pulsation System

Use: Medical System for treating Evaporative Dry Eye.

The LipiFlow Thermal Pulsation System is a standalone office-based system with a disposable component. The core technology of this device uses controlled heat and pressure therapy to relieve Evaporative Dry Eye.

- Intuitive GUI Touchscreen / Display
- Windows® XP Embedded
- LED Indicators provide additional system feedback



Intuitive Touchscreen Graphical User Interface (GUI)

Lipiflow Project Documentation - Phase 1 - Design Net Wiki - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Lipiflow Project Documentation - Phase ...

designnettech.com https://wiki.designnettech.com/Kolis_Scientific/Title/Project_Task_Lists/Lipiflow_Project_Docu ☆ Google (SSL)

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Design Net Wiki

- ▼ TearScience
- ▼ AutoMini
- ▼ Project Tasks - Phas...
- Beta Build
- Disposable
- FDA Regulatory Docu...
- Gamma Build
- GUI Interface
- Interface Board
- ▼ Lipiflow Project Doc...
- V&V Testing
- Project History
- Prototype PCB Build

My Page Recent changes Tools Help

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Page last modified 11:06, 7 Dec 2010 by nluck

Design Net Wiki > TearScience > AutoMini > Project Tasks - Phase 1 > Lipiflow Project Documentation - Phase 1

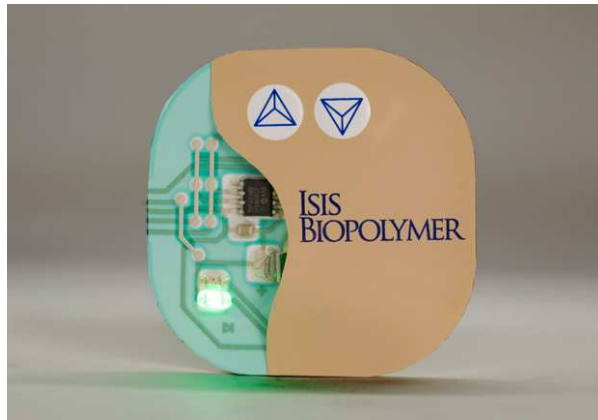
Lipiflow Project Documentation - Phase 1

Was this page helpful?

Phase 1 deliverables are listed in the table below. As the project progresses and documents are assigned Tear Science document numbers they will be moved to the [FDA Regulatory Documents](#) page.

Title	Owner	Initial Due Date
Lipiflow - Overall Project Plan	SG	7/15
Lipiflow - HW Requirements Document	RB	8/14
Lipiflow - HW Block Diagram	RB	7/13
Lipiflow - HW Design Implementation Document	RB/MF	8/28
Lipiflow - Interface Board Design/Layout/Prototype	MF/BB	Design Complete, PCB Layout to begin 8/12
Lipiflow - SW Profile and Project Quality Plan	RB/SG	7/17
Lipiflow - SW Requirements Document	MZ	8/14
Lipiflow - SW Block Diagram	MZ/NL	7/15
Lipiflow - SW Design Implementation Document	MZ/NL	8/28
Lipiflow - SW Integration Test Plan	MZ/NL/GG	TBD
Lipiflow - GUI Define/Update Screens	MZ/SG	TBD - After TS Reviews Standalone FLASH App
Lipiflow - GUI Design Document (includes GUI Screens , Screen Definition , Screen Rules)	LL	8/6 SW Rev1001 8/11 Update
Lipiflow - GUI Flash Standalone w/updates	MZ	7/24
Lipiflow - GUI Command Interface Document	NL	8/21
Lipiflow - Operational Manual (Draft)	RB/LL	12/30 draft
Lipiflow - HW/SW Risk Analysis	SG	7/17
Lipiflow - Hardware Communications Protocol	JH	7/15

Example of documentation prepared for 510K



- Fully Programmable
- Low-Cost Iontophoresis
- Personalized for Each Patient
- Reliable Drug Delivery

Medical Drug Patch

Use: Disposable medical drug-infusion patch.

The Isis- Patch is a compact, wireless, active iontophoretic patch that is comprised of low-cost microcontrollers and thin film batteries. It utilizes patented drug delivery techniques which enable multiple drugs, as well as a wide variety of drugs to be delivered transdermally.

Laser Welding Control System

Use: Medical / Commercial product for precision-welding of jewelry or dental appliances.

Laser welding control system features pre-programmed application parameters. It has a digital messaging display and a keypad. Diagnostics can be performed remotely over a serial connection by running included software on a remote device.



- Modular Design
- Rabbit Based Microcontroller
- Remote Diagnostic via Windows® Program



SpectraPod™

Use: Consumer Product uses Windows 7 Embedded to deliver the web to the living room HDTV.

SpectraPod is a compact, full featured HD content delivery solution that is perfect for the home theater. SpectraPod features a dual-core AMD processor, single docking connector and Windows® Embedded Standard 7 to fuel a rich user experience and provide enhanced connectivity across PCs, servers and online services.

- Windows® Embedded Standard 7
- Wired/Wireless Networking
- Compact Package - 6" x 3.6" x 1.4"
- 100% Secure Digital Delivery
- Plays ALL Content That Runs on Windows®

Time Clock Terminals

Use: Commercial for time and attendance.

Time clock terminals provide real time data collection and reporting for businesses. It features ARM-based processing technology and a highly intuitive graphical user interface (GUI). Two configurations were developed, one with a 7" color touchscreen; the other featuring a 4.3" color screen with keypad input.



- Utilizes Powerful Processor Technology Found in Smartphones
- Linux OS with Qt Software Application Environment
- Biometric, Bar Code or Proximity Card input options



Digital Jukebox

Use: Commercial product delivers music & karaoke to restaurants and bars.

The digital jukebox is a powerful touchscreen computer. An intuitive graphical user interface (GUI) uses drag and drop technology to build instant playlists. It even provides an option to view and play the songs on your connected iPod.

- Windows® XP Media Center
- Patented Drag & Drop Technology
- CD Drive
- Connects to an iPod

Digital Wallet

Use: Consumer iPhone® Accessory

The digital wallet is a personal iPhone® accessory that can store a user's credit cards, loyalty cards and membership cards safely on their iPhone.



- Biometric Security
- Intuitive GUI App

gumstix



Overo[®]
OMAP3 - ARM
Size: 17 x 58mm

Off-the-Shelf CPU Modules

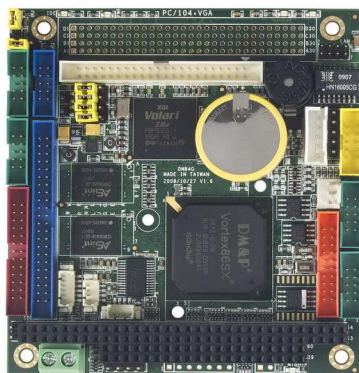


OMAP3 - ARM
Size: 66 x 44 mm

SEVEN



OMAP 3 - ARM
ATOM - x86
Size: 70 x 70mm



PC-104 - x86
Size: 90 x 96mm

Module Benefits

- Reduced Time to Market
- Ultra Compact CPU Designs
- Modules Also Available for WiFi, Bluetooth, Bluetooth LE, Zigbee & Broadband



Covers Entire Range of x86
Platforms, ATOM - AMD - I7 (x86)
Size: 135 x 95mm

Design Net offers a full range of Product Design Services.

We specialize in the complete design and delivery of a wide variety of products in a turn-key fashion with a focus on quality, cost and manufacturability of products.