moForte Product Expansion: Mobile Apps to Audio Plugins for Desktops and Our Own Hardware
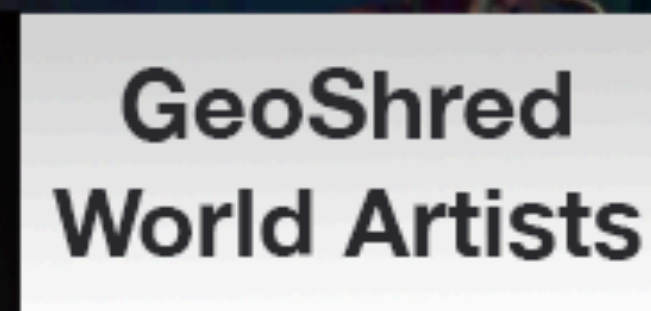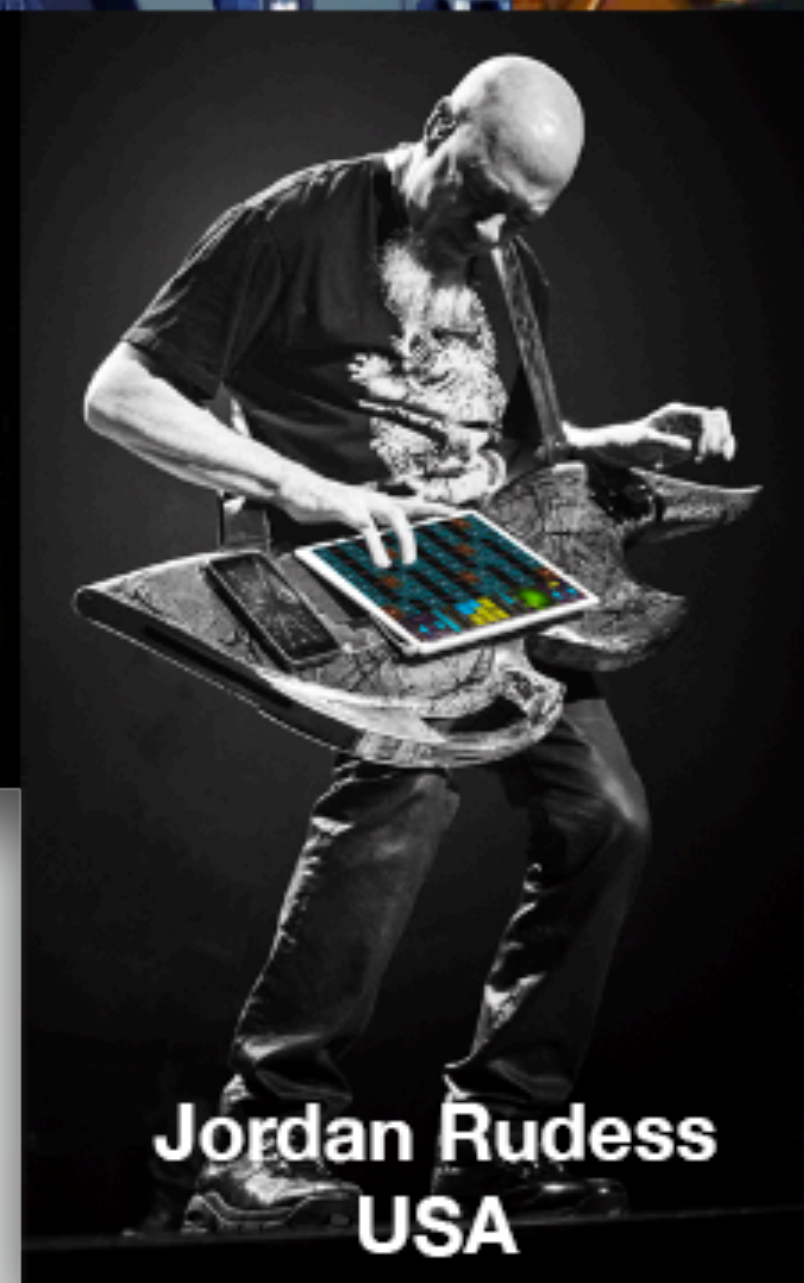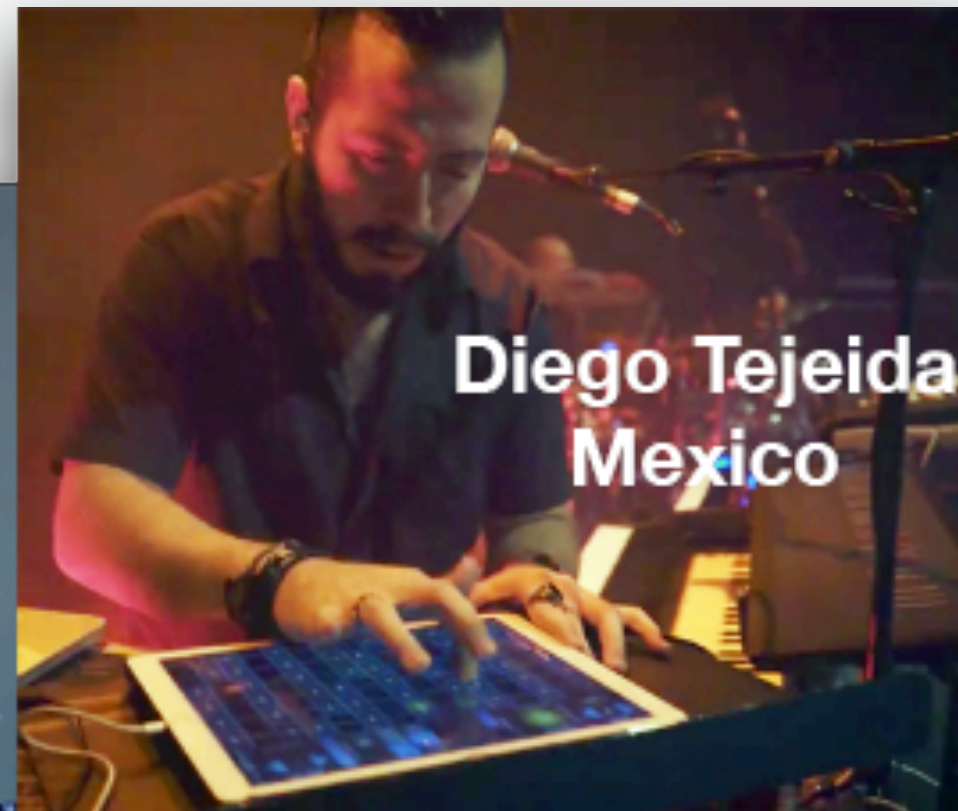
Pitch

moForte is the maker of *award winning, unique* music creation products

Used by *thousands of musicians* worldwide, with *millions* of video views

Props

"GeoShred is brilliant- it's a real instrument."
– Eddie Jobson - Roxy Music, Jethro Tull, Frank Zappa, UK

"A fantastic new invention which is going to revolutionize the way music is played, expressed and learned! 'GeoShred' is one of the foremost best musical inventions I've had the pleasure to experience in recent years. Definitely 5 stars out of 5! GIGANTASTIVISSIMO…..R…A…Z !!!!!"
– Patrick Moraz, Yes, Moody Blues

"That's just nuts. You're [Jordan] the best-guitarist-without-a-guitar of all time."
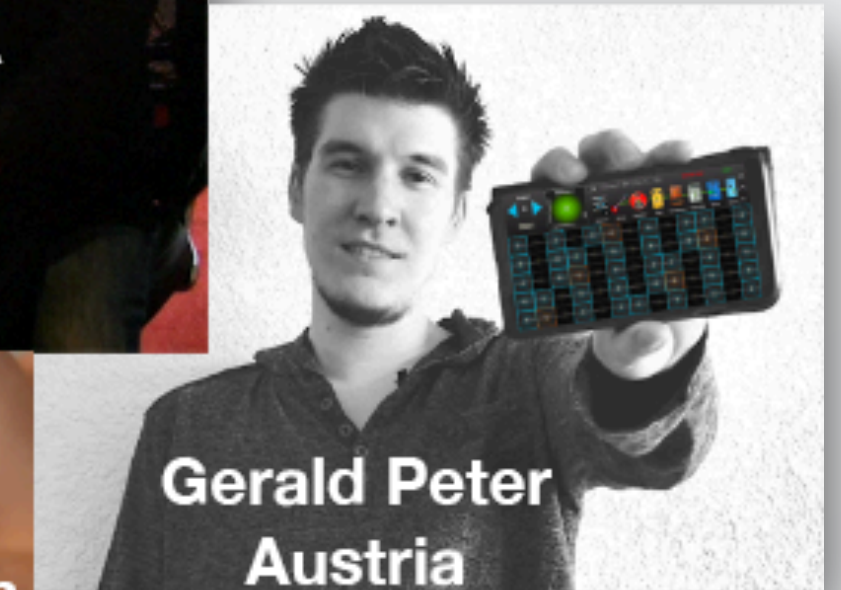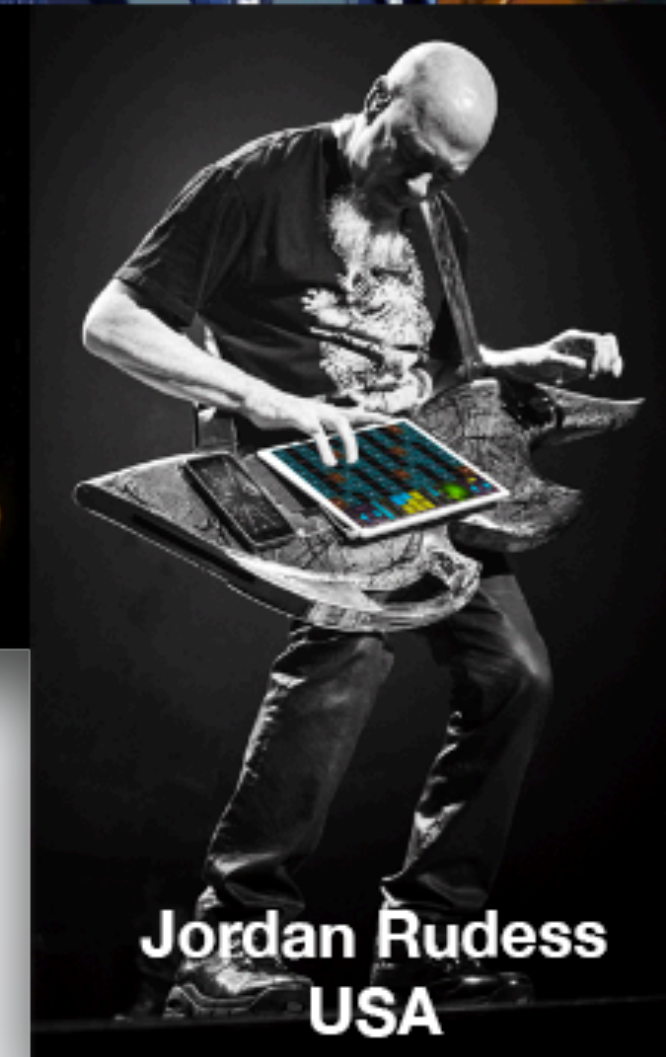**– Joe Satriani**

"GeoShred is a breakthrough [musical instrument] for the iPad. Some might think it's the best evidence yet that there has indeed been reverse engineering of alien technology, but if that's the case, then aliens play guitar… and worship Jimi Hendrix."
– Craig Anderton, Harmony Central, Founding Editor Electronic Musician Magazine

"…one of the most innovative, groundbreaking products to emerge in the past twelve months"
- Electronic Musician, 2017 Editor's Choice

Our current mobile product family, GeoShred, is used for recording and live on stage

Valerio Fuiano Italy
Diego Tejeida Mexico
Greg Hosharian USA
GeoShred World Artists
Navneeth Sundar India
Jordan Rudess USA
Mahesh Raghvan Dubai
Gerald Peter Austria

30% of GeoShred Users are in India

Product Success

- In partnership with Wizdom Music, the award winning GeoShred is one of the highest rated, best reviewed music creation products for the iPad/iPhone in the iTunes App Store

- $365k/18k units in 44 countries

- "It's not an app…it's an INSTRUMENT"

- "…one of the most innovative, groundbreaking products to emerge in the past twelve months" - Electronic Musician, 2017 Editor's Choice Award
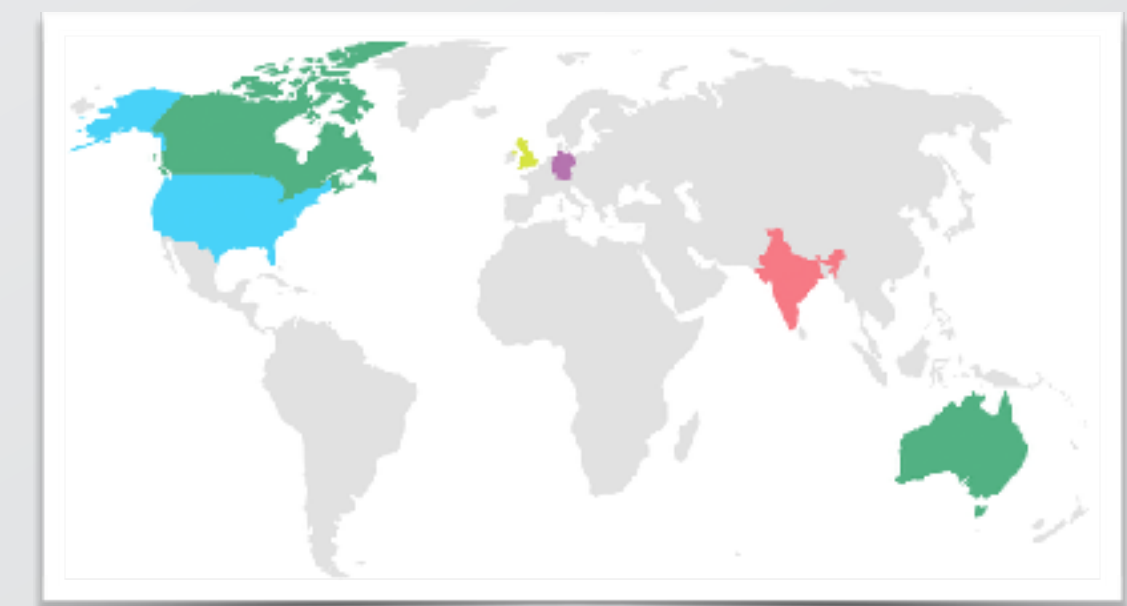

PLAY   Control   PRO
★★★★★ 443 Ratings in 44 countries
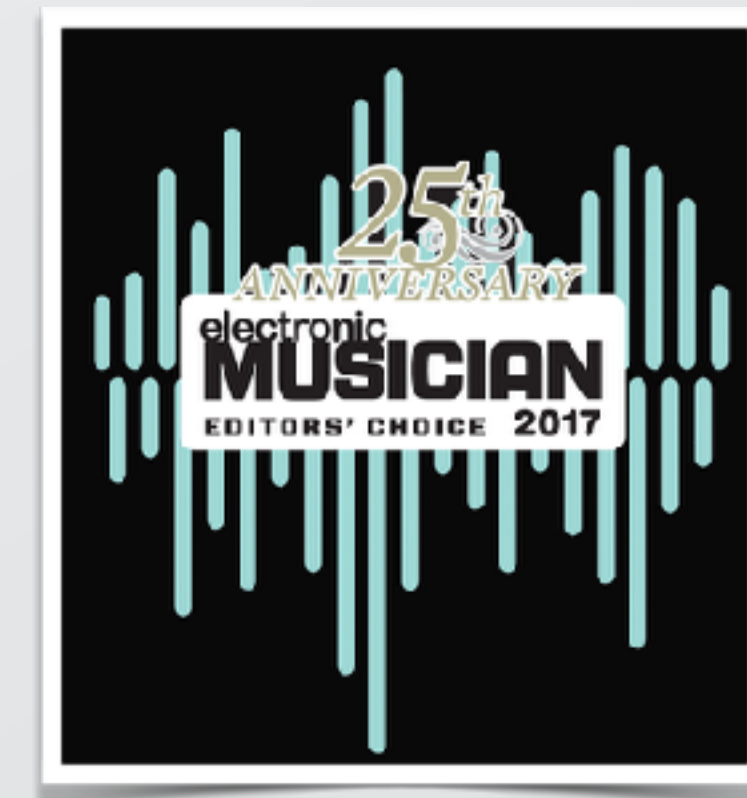
Up until now, moFort's products have been targeted for mobile devices

Building on our *success* with mobile devices, we are expanding our products to multiple platforms …

Including audio plugins for desktops

And plugins for our *own DSP hardware,* which can be used *with mobile devices,* computers or stand alone

Leveraging our multi platform software and hardware, audio DSP *framework …*
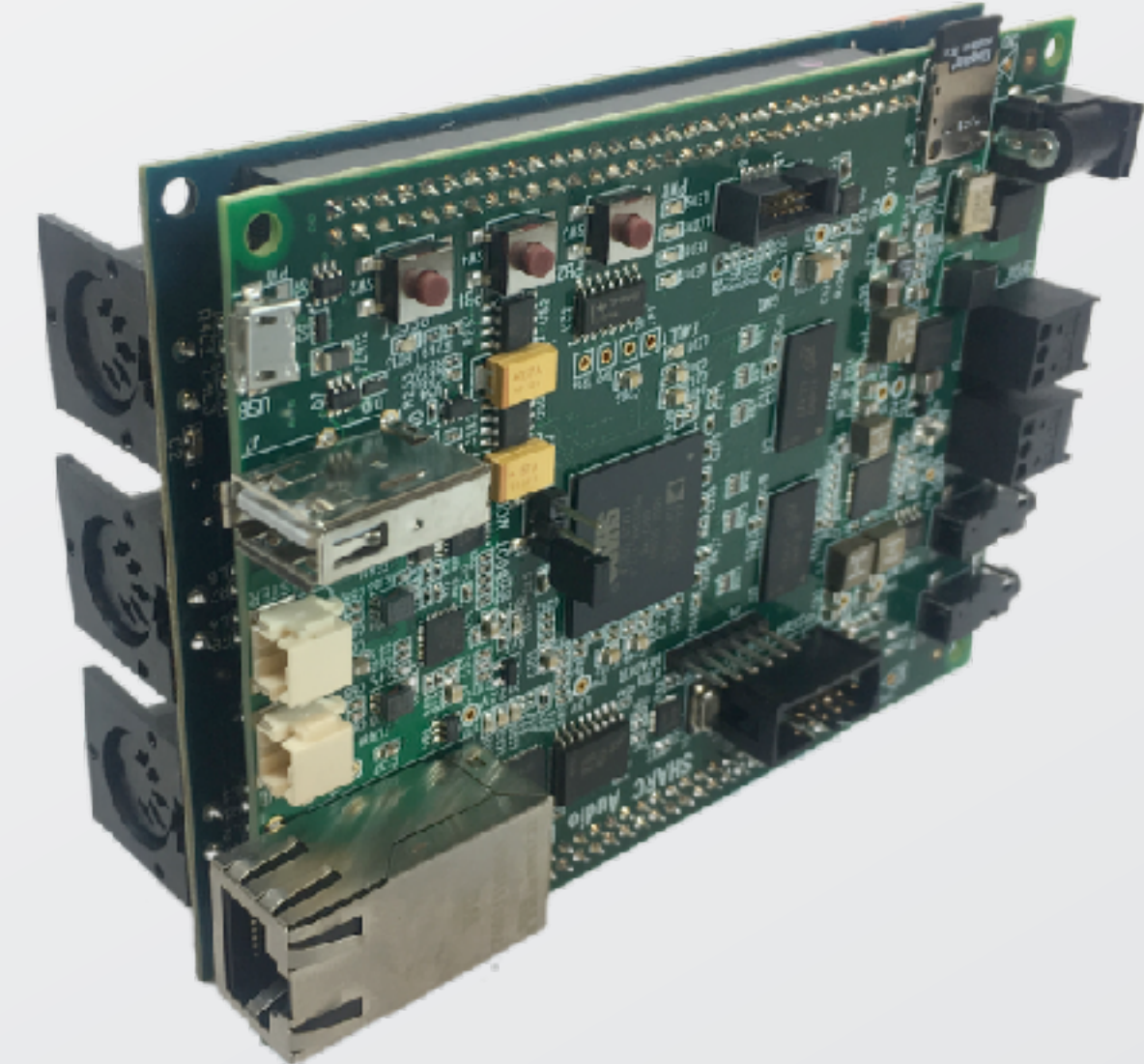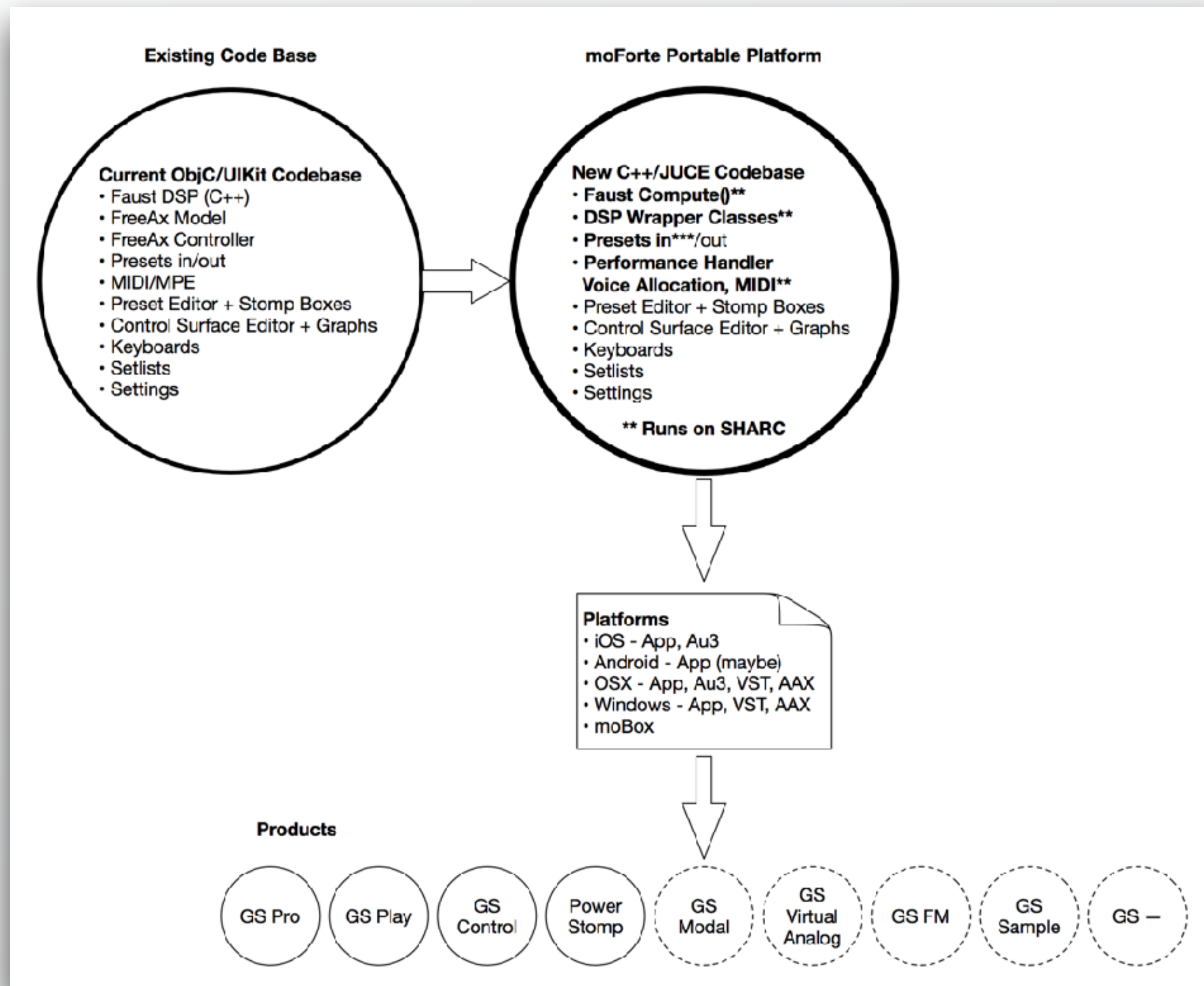
We are currently focusing on virtual musical instruments
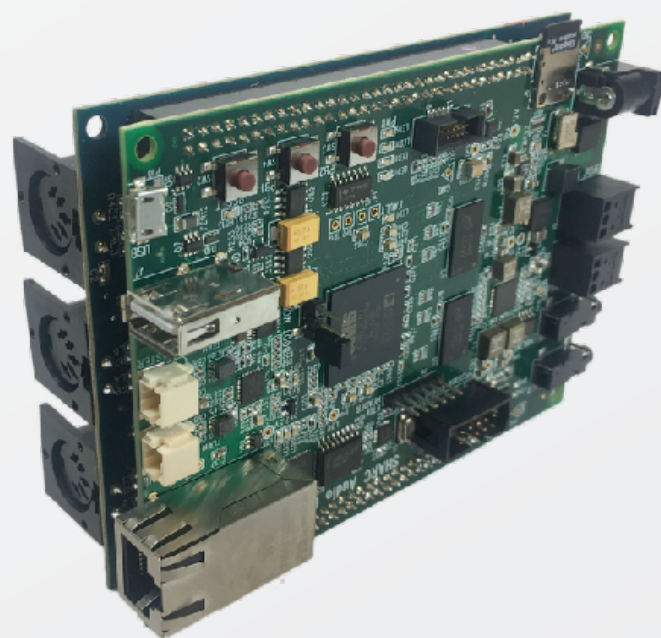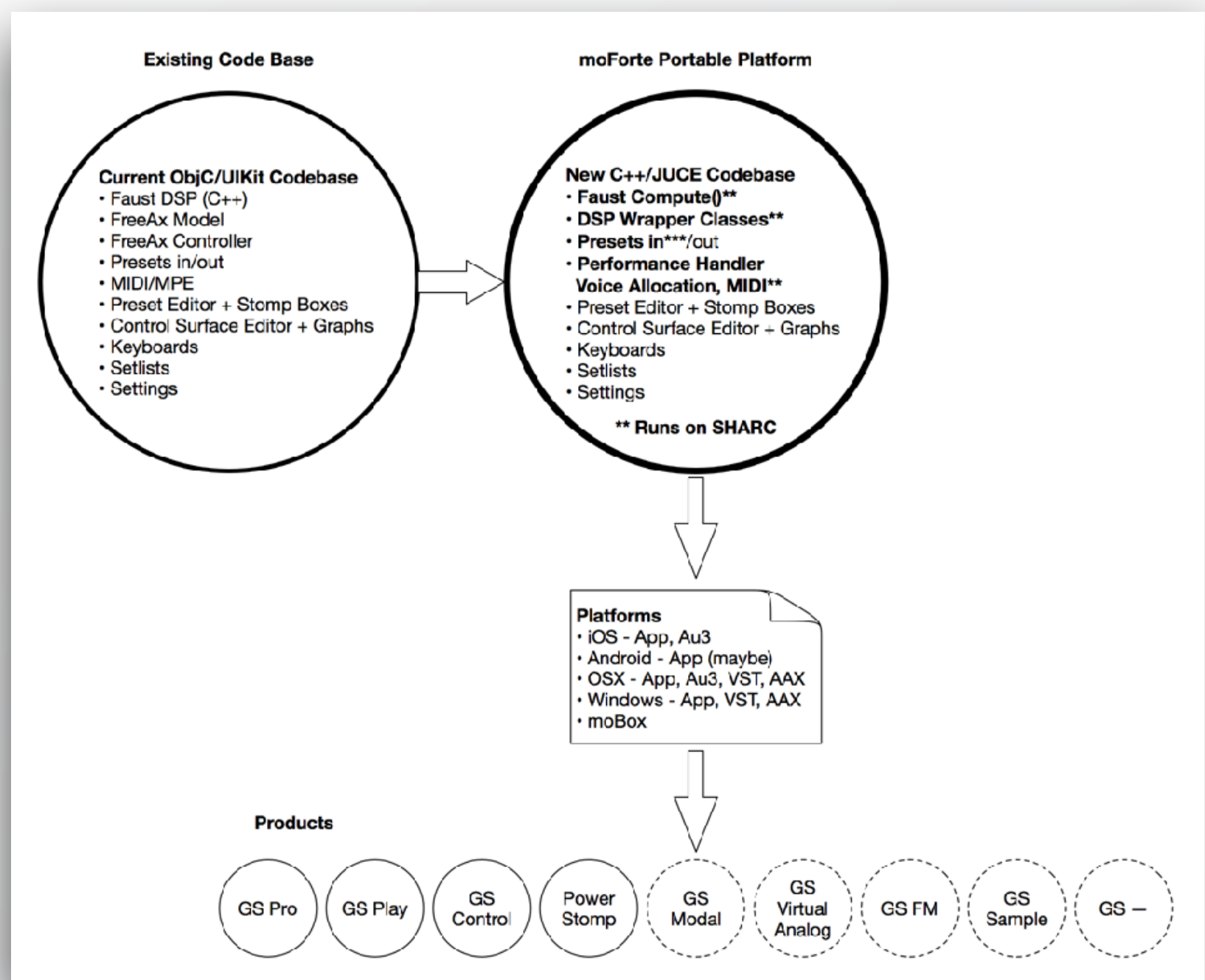
And later effects processing
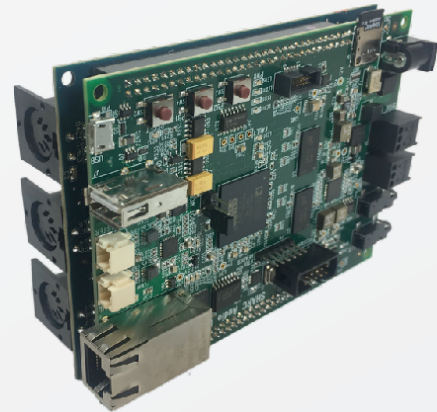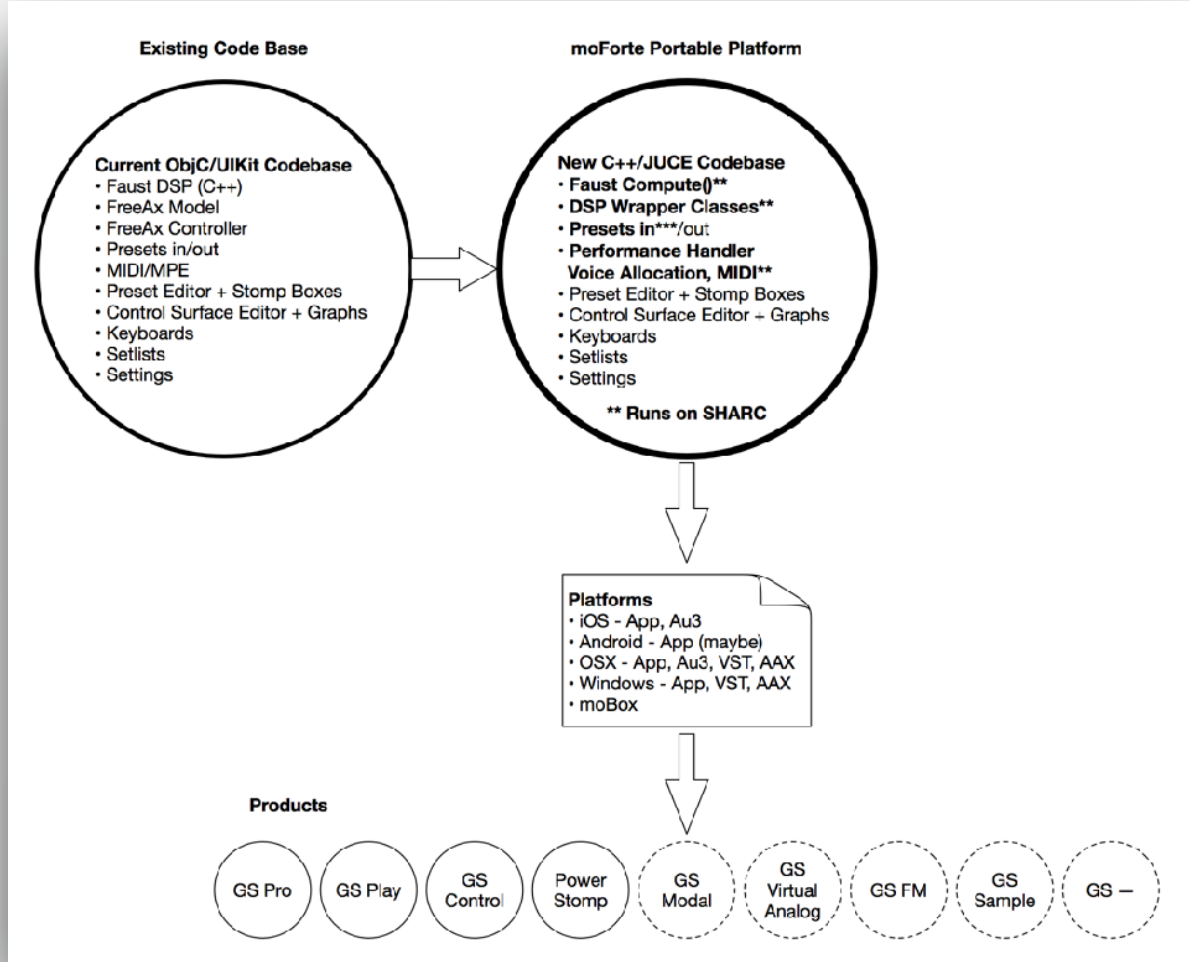
We are turning this ...   Into this!

The electronics category of music creation products, which includes desktop plugins and hardware, is estimated to be a $3.8B market world wide

The desktop form factor for hardware, has been identified by a major music retailer as the *fastest growing segment* of the music creation market

We have identified an under-served *opportunity, with* a new generation of *music makers, who embrace mobile devices* and desktop music production tools
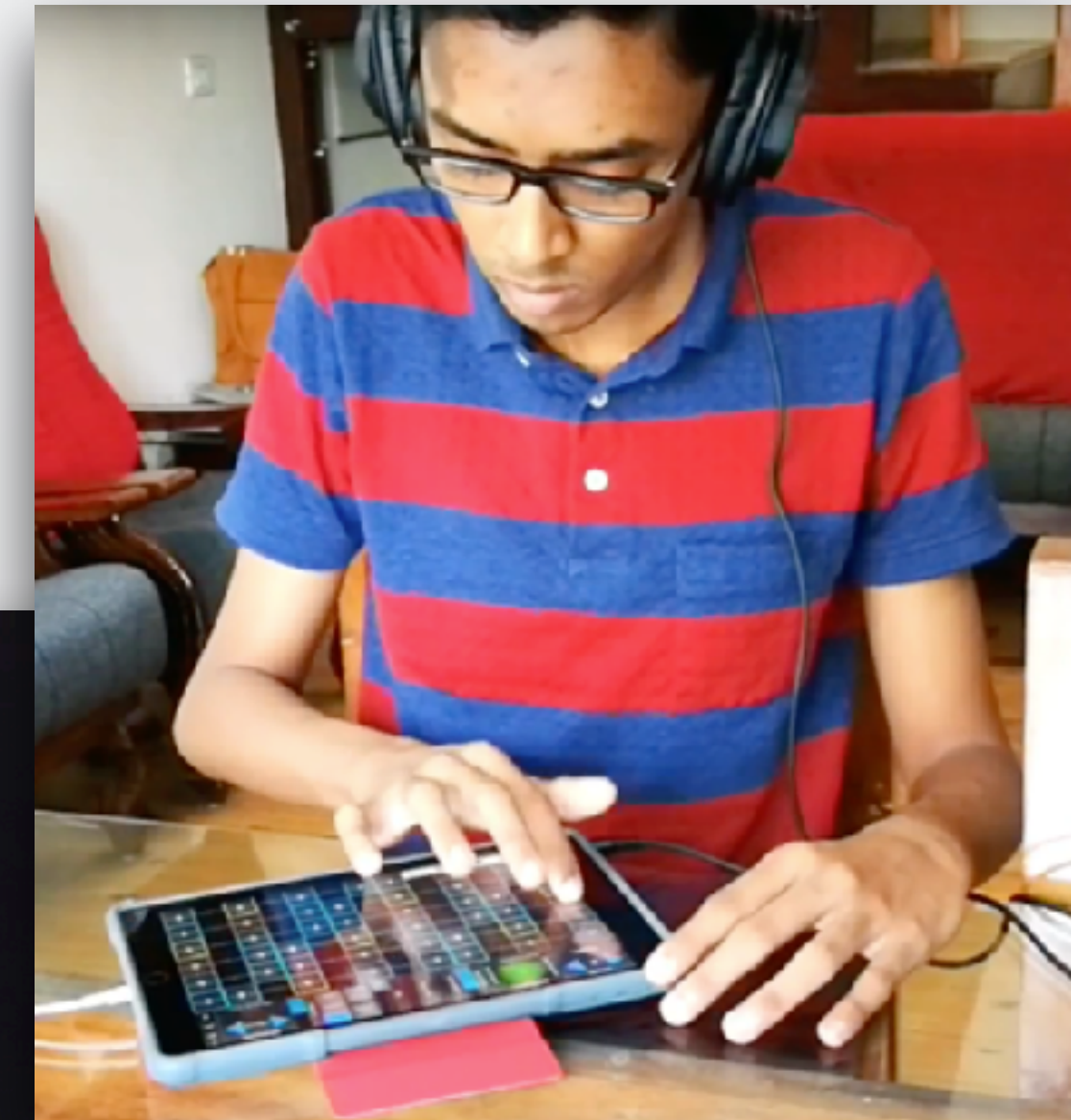
Initially moForte will offer these users a programmable, low latency DSP box for desktop ...

moBox

or *stand-alone* stage applications
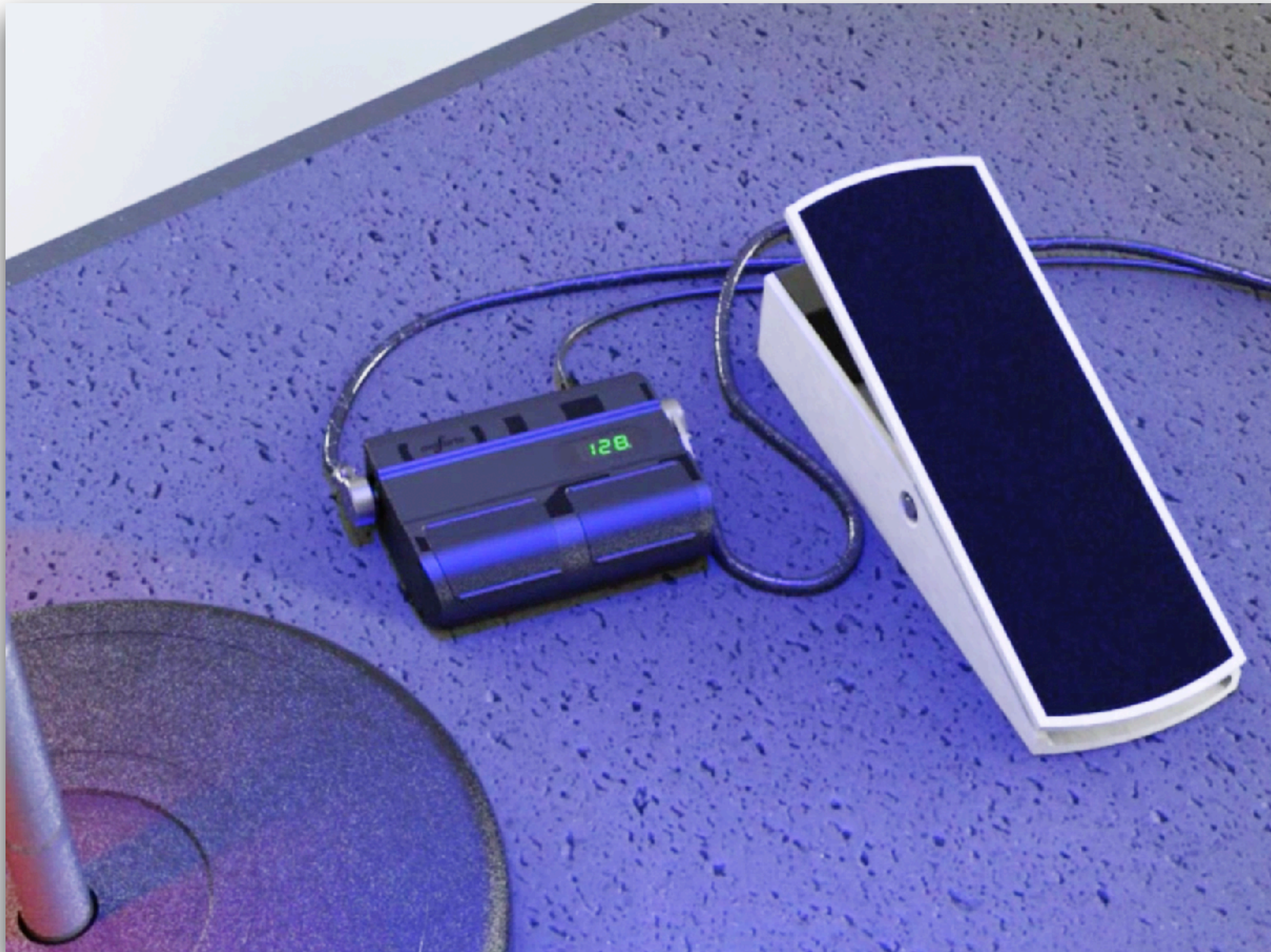
Programmable from a mobile device or computer

Programmable from a mobile device or computer

Later we will offer a line of multi-core DSP accelerators …
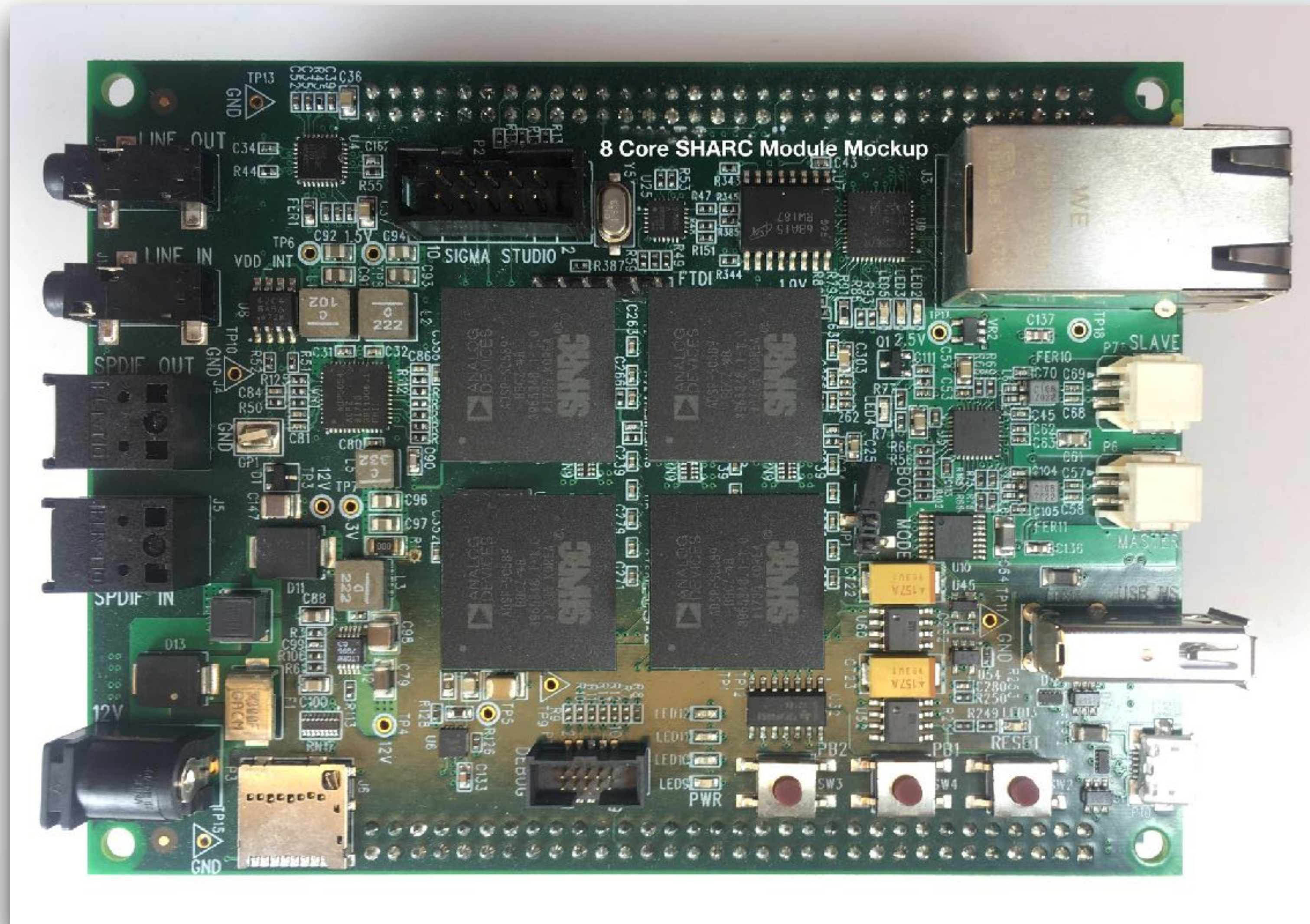
That can run *multiple audio plugins* on mobile devices, computers *or stand-alone*
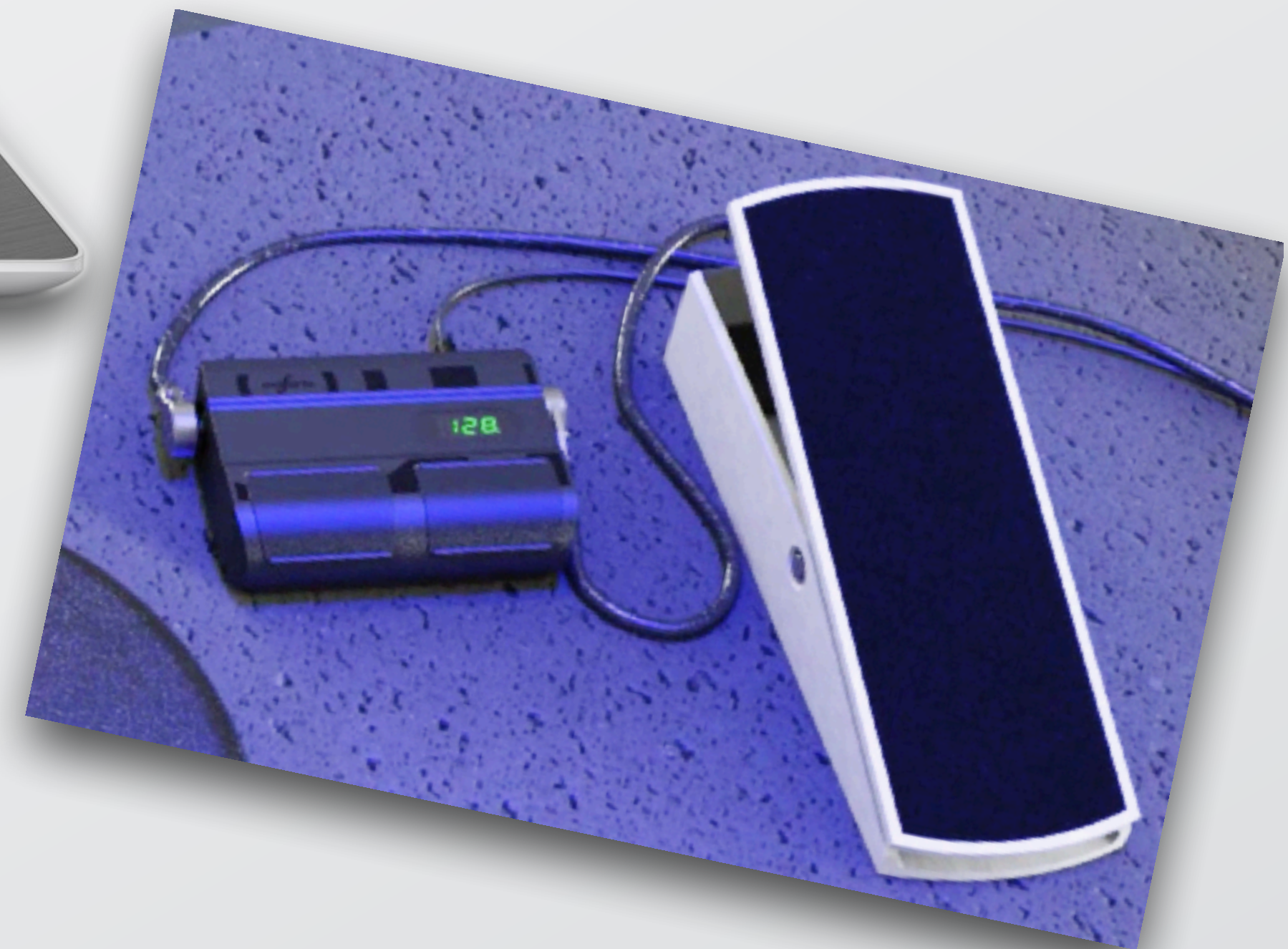
moForte will build a developer community for our DSP accelerators, creating a new monetization opportunity for developers from the mobile audio world
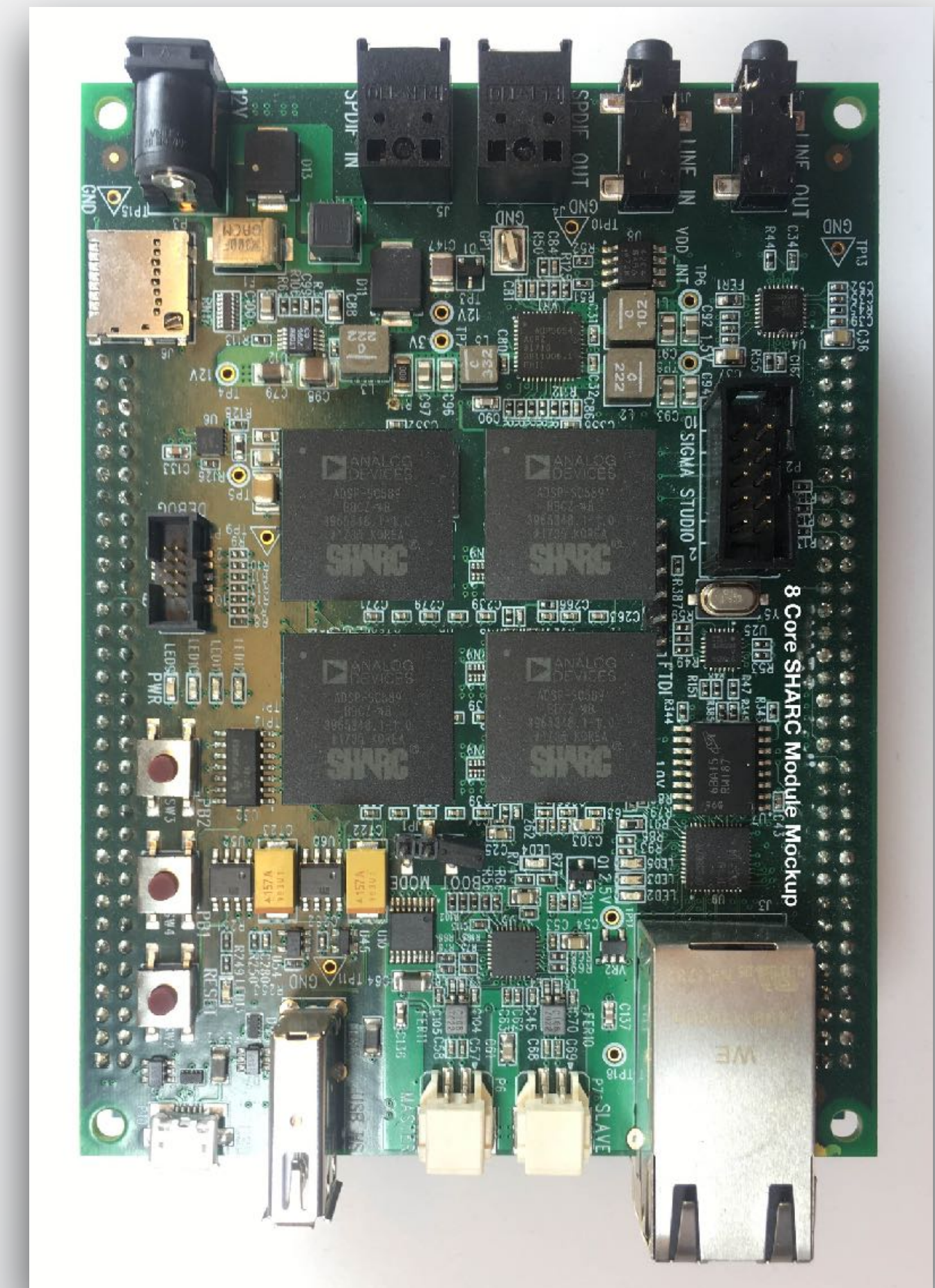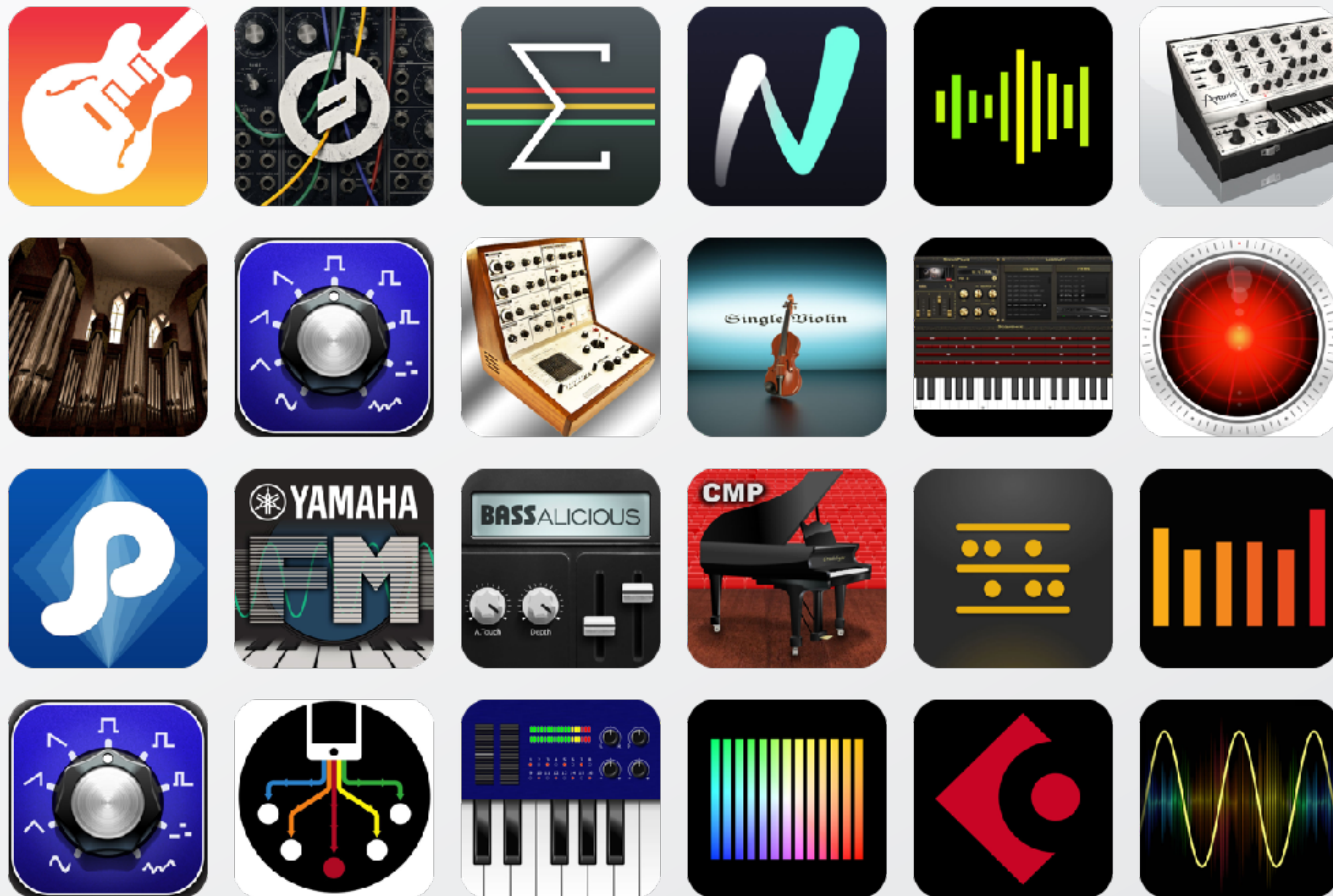
Guided and developed by a team of industry insiders

Team Lineage

Collaborations

Including

Mobile Music Innovator Jordan Rudess

Dr. Julius O Smith III, Stanford/CCRMA

The Rock Star and the Professor!

moForte has a business model for success!

Product price points	MSRP	Cost**	Net
moBox	$599.00	$250.00	$349.00
iOS native code Apps	$25.00	$7.50	$17.50
Hardware plugin (firmware)	$100.00	$0.00	$100.00
Native Code Plugin	$150.00	$45.00	$105.00
Dashboard Apps, All Platforms	$0.00	$0.00	$0.00
** Cost = Production costs or affiliate fees			

Product	Units	Revenue	Cost
moBox	2000	$1,198,000.00	$500,000.00
StringLab			
iOS Native Units	7000	$175,000.00	$52,500.00
Firmware units	500	$50,000.00	$0.00
Plugin units (all platforms)	3000	$450,000.00	$135,000.00
PowerStomp			
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Plugin units (all platforms)	3000	$450,000.00	$135,000.00
Totals		$4,573,000.00	$1,437,500.00
Net Revenue (Total - Cost)		$3,135,500.00	

Gross Revenue by Product Area

- Hardware, $1,198,000
- Native Code Plugins, $2,250,000
- Firmware, $250,000
- iOS Apps, $875,000

Gross Revenue by Product

- Modal/FM Percussion Studio, $675,000
- moBox, $1,198,000
- Virtual Analog Studio, $675,000
- StringLab, $675,000
- EDM Studio, $675,000
- PowerStomp, $675,000

We seeking partners to realize and monetize our vision

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PowerStomp, $675,000
EDM Studio, $675,000
Virtual Analog Studio, $675,000

Product

App/Plugin Products
Focus on VMIs

StringLab

EDM Studio

Virtual Analog Studio

PowerStomp

Modal Percussion FM Studio

StringLab	Next Generation GeoShred
PowerStomp	Modeled Guitar Rig
EDM Studio	TBD - product for the EDM/DJ market
Modal Percussion/FM Studio	TBD - moForte "back room" percussion and FM algorithms
Virtual Analog Studio	TBD - Dynamic architecture, inspired by West Coast synths
3rd Party Developers	VST level compatibility with a competitive affiliate deal

Software: Apps/Plugins/Firmware
Product Configurations

·**iOS app/au3,** native DSP **($25)**

·**moBox firmware plugin ($100**)
   ·Firmware less expensive than desktop plugin to drive HW sales
   ·Firmware locked to user and encrypted using SHARC Cryptokey

·**Desktop plugin,** native DSP **($150)**
   ·mac-AU3, mac/win-VST, mac/win-AAX

·**Dashboard app (free)**
   ·Downloads moBox firmware
   ·UI for programming, sending presets
   ·UI for DAW access to HW acceleration
   ·iOS, Android, Windows, Mac

Hardware: moBox

- Target price: $599

- High Performance Dual Core SHARC DSP

- Rich and Beautiful UI from any device (iOS, android, mac, win)

- Presets are designed using a Powerful UI which is downloaded wirelessly (BLE MIDI) for live performance

- Can be operated stand-alone using presets

- A solution for Android!

- Target market is Desktop/Stage.
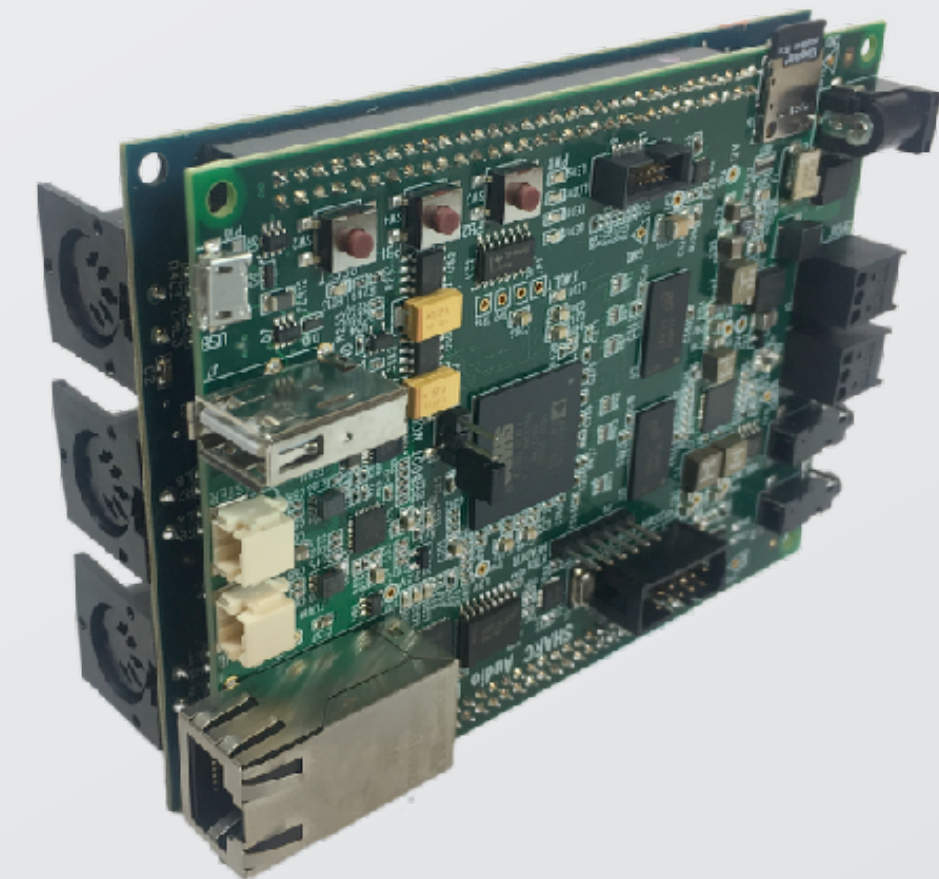
Hardware: Specs

Specs
- Low latency ~2-4ms.
- 1/4" stereo in/out
- USB Audio/MIDI
- (BLE) Bluetooth MIDI
- A2B Serial Audio connection (2 sample latency) supports on-stage digital daisy chaining.
- Program change buttons suitable for foot/hand
- 3-digit LED display

Key Benefits:
- Minimize component cost (knobs, pots switches)
- Minimize customer support due to fewer failure points (no pots, knobs, switches)

Roadmap
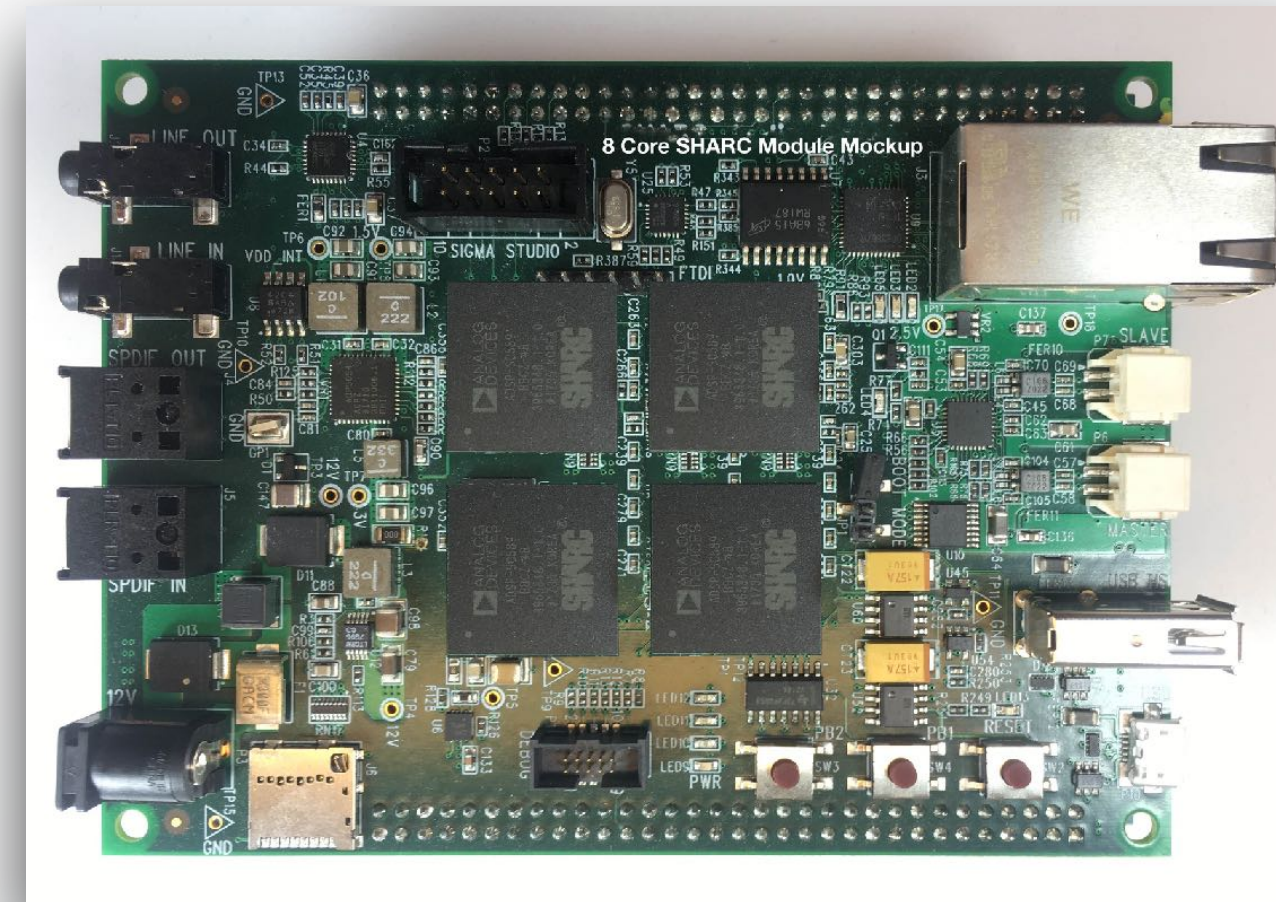
moBox I - $599
StringLab
PowerStomp
EDM Studio
Virtual Analog Studio
Modal Percussion/FM Studio
SDK - Two 3rd Party Apps

moBox Multi
2,4,8 cores
$699, $1199, $2399

Algorithm Store,
Additional 3rd Party

Classic Gear Configurations
HW/SW Licensing

Phase I   **Phase II**   **Phase III**

2019   2020   2021

Price Point Summary

moBox	**$599**
iOS Native DSP App	**$25**
moBox Firmware Plugin	**$100**
Native DSP Plugin AU, VST, AAX	**$150**
Dashboard App iOS, android, mac, win	**Free**

Financials First Year Sales

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EDM Studio, $675,000
PowerStomp, $675,000
StringLab, $675,000

Supporting Slides

Music-Creation Market Primer

- $16.4B Global,
  - $7.1B US
  - 40% of sales US, 60% elsewhere
  - Rule of thumb: Global = US * 2.3

- Primary Trade Organizations:
  - **NAMM** - US, Russia, Asia, Pacific
  - **MusikMesse** - Europe
  - **NAMM** Show has 100k attendees in comparison to CES 140k attendees.

- Important Categories
  - Guitars   : 25%, $4B
  - Pianos   : 25%, $4B
  - **Electronics : 37%, $6B**

- Instrument Players
  - Guitar   - 120M Global, 60M US
  - Keyboards - 120M Global, 60M US

Electronics Category

- The Electronics category is **undergoing a transformation from physical to digital goods.**

- Apple has embraced music production for the iPad and external HW.

- Number of target devices
  - iOS   1.3B active
  - Android 2B active
  - Windows 1B
  - macOS 100M

- According to major retailer Sweetwater, small desktop boxes + software is currently the fastest growing category.

| Selected Subcategories	Units	Size	YOY Growth
Synthesizers	700k	$350M	9%
Effects Pedals	2.3M	$350M	7%
Computer Music Products		$760M	0%
DJ	1M	$350M	8%
Pro Audio		$2B	-1%
Total		**$3.8B**	

Marketing/Sales

- Leverage App Market Sales to convert to HW

- Heavy Social Media Marketing/Advertising

- Key Artist Relationships

- Initially Online Direct Sales

- Amazon Store

- Key retailers, Sweetwater, Guitar Center, Sam Ash, Musician's Friend

- Mailchimp

- Late stage crowd funding campaign for marketing visibility

Unfair Advantages

· No hardware development costs for Phase I. Leveraging a hardware platform developed for automotive and consumer audio applications.

· moForte Spent the past year working with Analog Devices, the maker of the SHARC DSP processors. Contracted to develop virtual analog synthesizer example code for Analog Devices new SHARC Audio Module developer platform, giving moForte early access to technology that was originally developed for automotive and consumer audio applications. **Based on this work, we are uniquely positioned to leverage ADI's hardware into a new platform for audio production acceleration.**

· Unlike other hardware audio accelerators, the moBox can be detached from the host and used on stage stand-alone.

· Not locked into specific hardware platform. Software stack (faust, C++) is designed to be hardware agnostic and can shift to new hardware platforms for best CPU/$ value.

· UIs are implemented in JUCE and can be easily migrated to multiple platforms.

· **The moForte stack is designed to propagate audio products simultaneously to multiple Hardware/Software platforms.**

Why Android is a Challenging Platform for Audio Products Targeted for Musicians

- Most Android devices have **audio** latency/jitter issues.

- Roli has measured a Mobile Audio Quality Index MAQi.

- With the exception of a few Android devices, only iOS devices have suitable audio latency/jitter properties

- **moBox is a solution for Android**
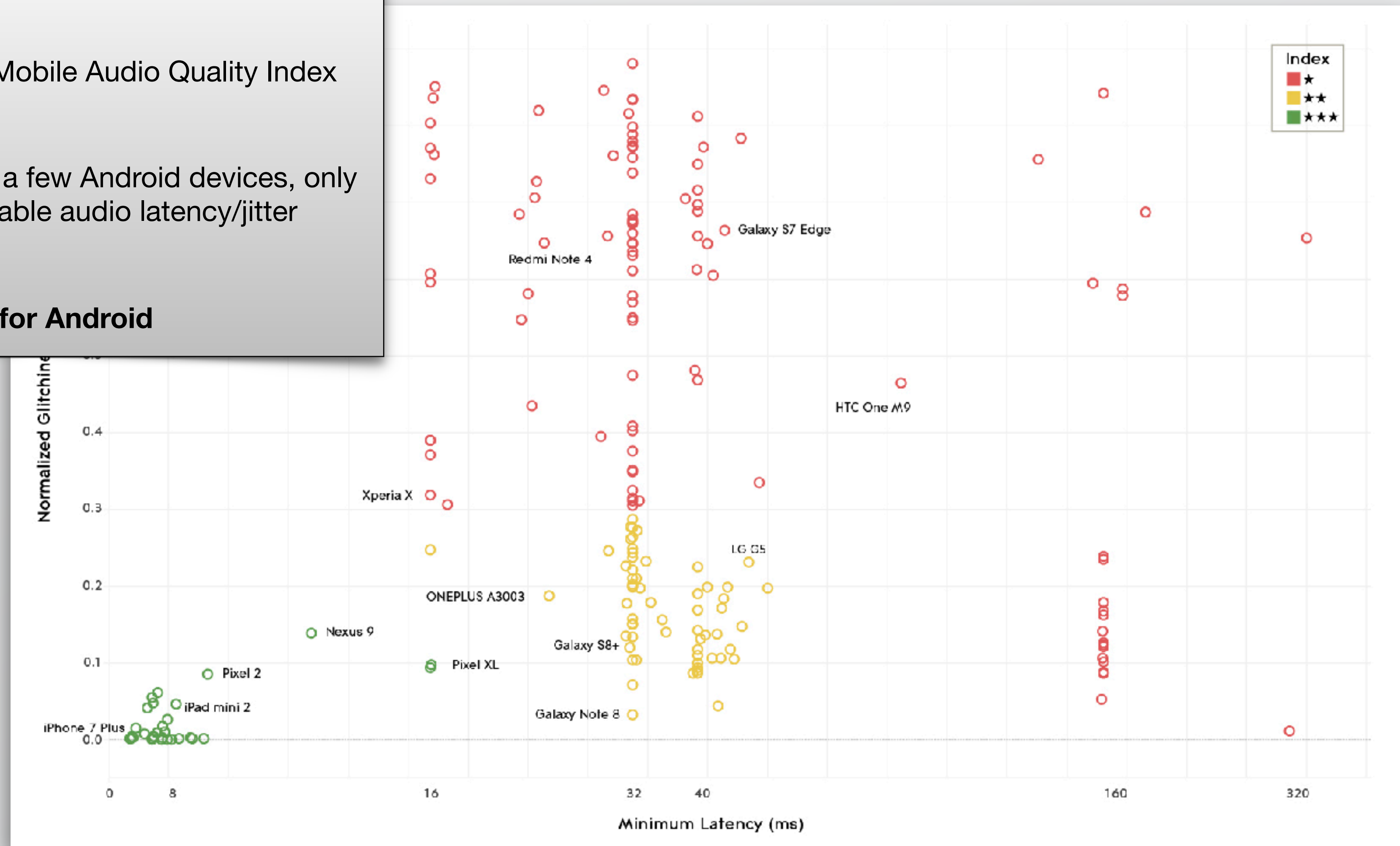
Mobile Audio Apps On Desktop/Stage

- (+) Mobile Apps offer great UIs for configuring audio processing algorithms.

- (-) Mobile apps can have poor latency/jitter properties.
  - 25-40ms for iOS.
  - Most android devices are unsuitable with some having > 800ms of latency.
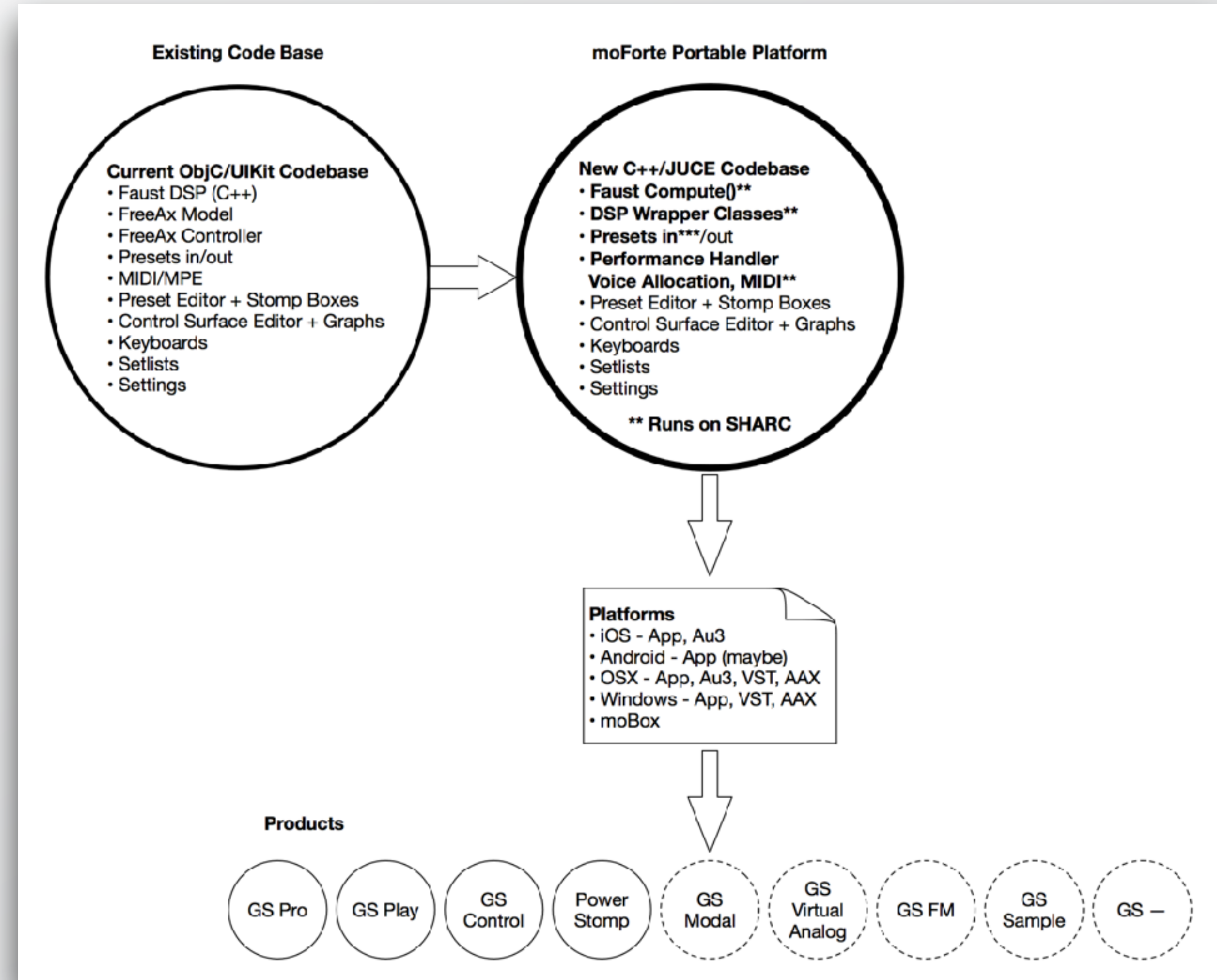 - Target latency needs to be < 10ms.

Phase I Deliverables

- **MPAF** - New Multi Platform aDSP Framework (JUCE, C++)

- iOS native DSP apps for each Algorithm

- moBox targeted for stage

- Dashboard apps, to program moBox (iOS, Android, macOS, win)

- Native plugins (Au3, VST, AAX)

- SDK and Developer Program + 2 Additional Algorithm offerings

Multi-Platform Audio DSP Framework MPAF

·C++/JUCE/Faust/source level VST

·MPAF is partitioned between the UI Layer and the Control/DSP layer.

·The control/DSP layer can run **stand-alone** on the moBox or a host

Existing Code Base

Current ObjC/UIKit Codebase
• Faust DSP (C++)
• FreeAx Model
• FreeAx Controller
• Presets in/out
• MIDI/MPE
• Preset Editor + Stomp Boxes
• Control Surface Editor + Graphs
• Keyboards
• Setlists
• Settings

moForte Portable Platform

New C++/JUCE Codebase
• **Faust Compute()****
• **DSP Wrapper Classes****
• **Presets in***/out**
• **Performance Handler**
 Voice Allocation, MIDI**
• Preset Editor + Stomp Boxes
• Control Surface Editor + Graphs
• Keyboards
• Setlists
• Settings

** Runs on SHARC

Platforms
• iOS - App, Au3
• Android - App (maybe)
• OSX - App, Au3, VST, AAX
• Windows - App, VST, AAX
• moBox

Products

GS Pro | GS Play | GS Control | Power Stomp | GS Modal | GS Virtual Analog | GS FM | GS Sample | GS –

Hardware

- 1st generation **SHARC Audio Module** based on powerful dual 500 MHz SHARC cores.

- A2B Serial audio, 2 sample latency, for daisy chaining.

- 2nd generation moForte propriety boards with multiple cores, 2,4,8,16
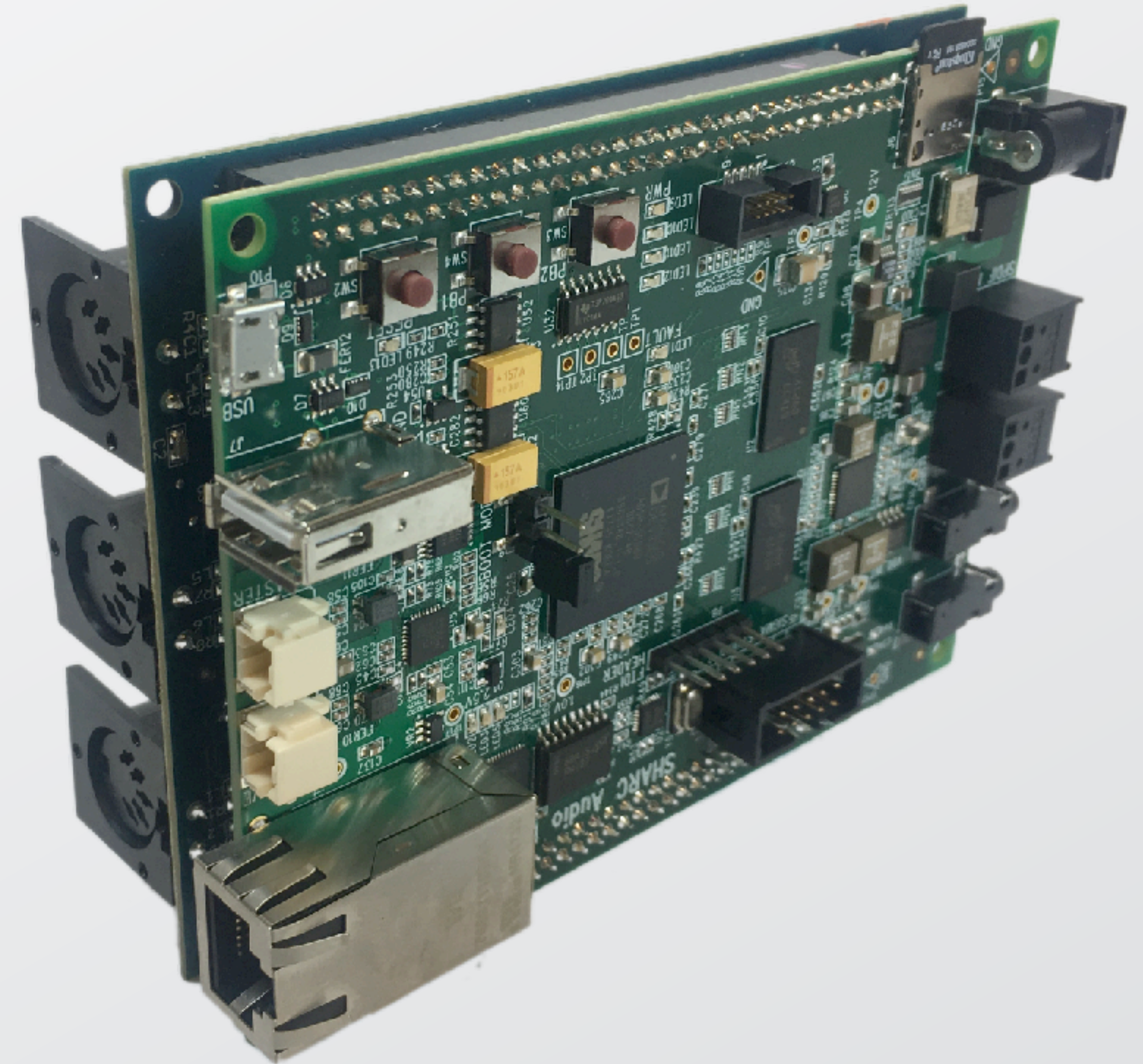
Software

- **DSP**: Internally we use **Faust** extensively *as well as C++/source-level VST* to quickly develop algorithms.

- **Key Benefit:** Faust is our secret weapon for our own rapid prototyping/development.   VST will be our secret weapon to quickly build a 3rd party developer program.

- **UI**: Based on the multi-platform JUCE SDKs. This allows us to get to multiple platforms with a single UI code base.

- **Key Benefit:** JUCE is one of our secret weapon for rapid prototyping/development.

Secure Firmware Delivery
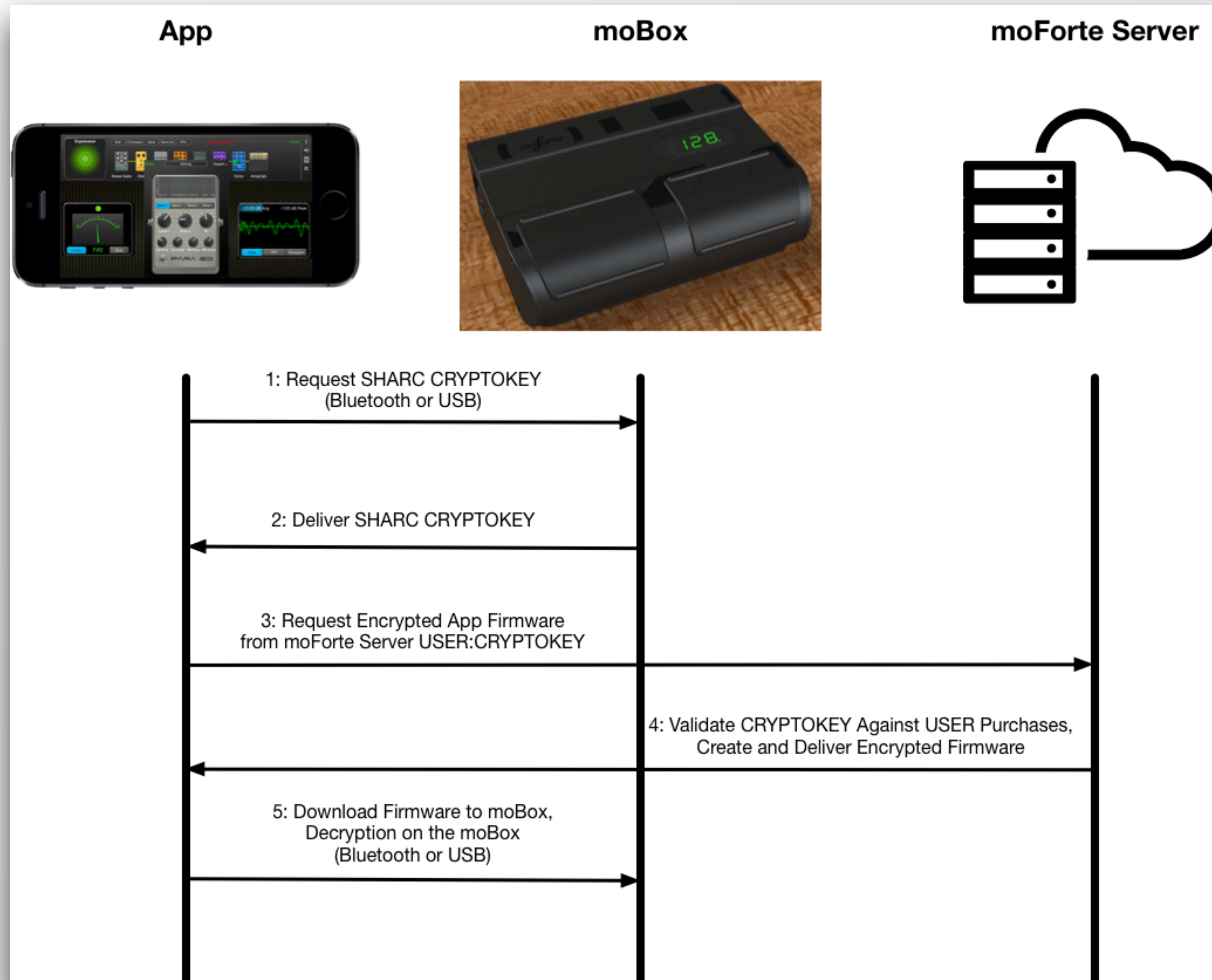
Demo Prototype Hardware

- moProto 1
  Mini Moog (8% Core 1)
  Effects (12% Core 2)

- moProto 2
  Guitar Effects (12% Core 2)