

MSX 2025 and 2026 domains and products

2025 December 13

Tokyo

Kazuhiko Nishi

Last 40 years of 5 million MSXs

- Japan 3million unites sold.
- Korea 1 million unites without KB as game machine
- North America: USA could not compete the Commodore
- South America: Brazil, Chili, Algentina
- UK: could not compete the Spectrum price
- Europe: Spain, Holland, France, Italy,

アメリカとイギリスのチャンピオン



Where we want to go

- More of today
 - Game
 - Education/Self-learning computer from 8 bit to higher
- New things
 - Next generation MSX3
 - AI
 - More games
 - More fun
 - Desktop orchestra
 - Manganimation

Why Do MSX Again?

- A return of gratitude to the people who bought it
- We want to connect it to the internet and try various things
- To summarize and recover from failures due to misjudgment in the development process
 - Use Linux for 16, 32, 64-bit systems, maintaining 8-bit non-competition with IBM
 - Focus on games on the Internet, in comparison to the Famicom
 - Proper international expansion: Solidly in the EU, Brazil, and Arab countries
- Development of proper educational materials as DIY and open source

Future Positioning

- **Do not compete with:**
 - Spectrum PC
 - Commodore PC
 - Windows PCs and Android smartphones
 - Smart TVs or high-end game consoles
- Create a product that can coexist with these, with an appeal that makes people want to buy it
- It is called "Retro Computing"
- To see "Retro" not just as old but as an era of development, consistency and continuous compatibility are necessary for architectural evolution
- Build such a system and create an "educational machine" that is relevant today Use Linux for 16, 32, 64-bit systems, maintaining 8-bit non-competition with IBM

Redefining the Future of MSX

- The 40th-year revival of MSX , catching up with the changing times
- Exploring new ways to use a PC ¹⁸⁵
- Re-challenge the things we couldn't do, the things we gave up on
 - Reflecting on avoiding games, this time we'll dive deep into retro games
 - Properly do anime and synthesizers too ¹⁸⁸
- **Five Pillars of the New MSX:**
 - **MSXIoT:** Internet of Things - Connect to the Internet ¹⁸⁹, the world of sensors and controllers
 - **MSXPLAYER:** A multi-OS emulator ¹⁹¹, addressing how to legally run games
 - **MSXDIY:** Do It Yourself - The world of homebrew, repair, and expansion
 - **MSXNxT:** Next Generation MSX - Development of the future MSX
- **MSXxSC:** Experimental Super Computing - Learn, build, and use supercomputers and AI

Elemental Technologies for the Next Development

- Furthers enhancing three basic technologies:
 - **Emulator technology** (Mainly CPU and software)
 - **Translator execution technology**
 - **FPGA technology** (Mainly hardware)
- Challenge of **SoC** (System on Chip) to make money and lower costs
- **Future Road Map:**
 - **MSXNxT**: MSX3, MSX3+
 - **MSXxSC / HPC**: Dynamic resource management by TaoX for AMD/ARM
 - **MSXxSC / AI**: Support for AMD/Nvidia
- Our goal is to challenge and catch up to this

なぜ今MSXなのか

- ハードウェアの透明性 MSX透明ブルーケースでシンボリックに
 - 現在のパソコン
 - 現在のスマホ
 - 現在のSBC ラズパイ
ラテパンダ は透明から離れていっている

MSXはハードとソフトがオープンになる方向性に進んでゆきたい
オープンハードウェア 誰でも改造、生産が可能
セミオープンソフトウェア 情報が開示されており、改造可能
そのための情報、資料の開示 アカシックライブラリーで無料で

MSX0Stack MSX0Tab5 in Transparent Blue

MSX0Stack



IOTのセキュリティ

- IOTのアウトバウンドはすべて暗号化
 - ESP32P4の暗号化モジュールを使用

High-performance System

Dual-core 400MHz

AI

AI Instruction
Extension

FPU

DSP

768KB
SRAM

64MB
PSRAM
(Optional)

Low-power System

Low-power 40MHz

Dedicated
Low-power
Peripherals

LP SPI, LP UART, LP I2C,
LP I2S, Touch Sensor



Independent
in Deep-sleep

32KB
LP SRAM

16KB
LP ROM

55
Programmable
GPIOs

USB 2.0 OTC @480Mbps
Ethernet MAC @100Mbps
SDIO 3.0 I3C
.....



ESP32-P4



Security

DEV
Community

+ Wi-Fi 6
+ Thread/Zigbee

Full HD 1080P
MIPI-CSI & MIPI-DSI



Multi Camera
MIPI-CSI + DVP



Integrated ISP

H.264 1080P @30fps

HMI

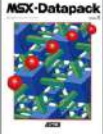
PPA
2D DMA

MIPI-DSI
RGB
18080

JPEG Decoding

MSX 2 ++ までの開発環境

- ネットコネクトカートリッジ オプションで販売
- オンライン資料の完備 アカシックライブラリー
- New SDK
 - Microsoft eXtended BASIC
 - MSX DOS
 - MSX BASICコンパイラ
 - Cコンパイラ ANSI
 - C++コンパイラ
 - Macro80アセンブラ
 - Link80リンカ
 - MSX write, MSX plan, MSX powerpaint(powerpoint viewable paint app)

ユーザー名: (あなたのメールアドレス) nishi@nishi.org パスワード: ***** ユーザログイン パスワード紛失? 新規登録はこちら  楽天IDでログイン	MSX-C入門 下巻 桜田幸嗣/染谷哲人 価格: ¥0 詳細内容  購入する / 立ち読みする	MSX-C入門 上巻 桜田幸嗣 価格: ¥0 詳細内容  購入する / 立ち読みする	MSX-DOS アセンブラプログラミング BIT5 価格: ¥0 詳細内容  購入する / 立ち読みする	MSX-DOS アセンブラプログラミング 蔭山哲也 価格: ¥0 詳細内容  購入する / 立ち読みする
お知らせ 新規公開しました! ●MSX-C入門 上巻 ●MSX-C入門 下巻 ●MSX-DOS入門 ●MSX-DOS アセンブラプログラミング ●MSX-DOS スーパーハンドブック MSXマガジン 1992年3月号 1992年4月号	MSX-DOS入門 中村哲 価格: ¥0 詳細内容  購入する / 立ち読みする	MSX0 Stack 利用方法v4.1 IoTメディアラボラトリー 価格: ¥0 詳細内容  購入する / 立ち読みする	IoT_BASIC ノード情報 _FirmVer0.15 IoTメディアラボラトリー 価格: ¥0 詳細内容  購入する / 立ち読みする	[MSX POCKET BANK]があると ないじゃ大違い 便利ツール、 コキ使って! アスキー 価格: ¥0 詳細内容  購入する / 立ち読みする
MSX0 ●MSX0 Stack 利用方法v4.1 ●IoT_BASIC ノード情報 _FirmVer0.15 ●MSX0 Stack 利用方法v2.0 ●IoT_BASIC ノード情報 MSXマニュアル ●[MSX POCKET BANK]あるとないじゃ大違い 便利ツール、コキ使って! ●V9978 E-VDP-III データシート ●V9938 MSX-VIDEO データシート ●V9958 MSX-VIDEO データシート ●TeksInstruments 9900 TMS9918A TMS9928A TMS9929A Video Display ●MSX-Datapack Volume 1 ●MSX-Datapack Volume 2 ●MSX-Datapack Volume 3	V9978 E-VDP-III データシート アスキー 価格: ¥0 詳細内容  購入する / 立ち読みする	V9958 MSX-VIDEO データシート アスキー 価格: ¥0 詳細内容  購入する / 立ち読みする	V9938 MSX-VIDEO データシート アスキー 価格: ¥0 詳細内容  購入する / 立ち読みする	TeksInstruments 9900 TMS9918A TMS9928A TMS9929A Video Display アスキー 価格: ¥0 詳細内容  購入する / 立ち読みする
カテゴリメニュー	MSX-Datapack Volume 3 アスキー 価格: ¥0 詳細内容 	MSX-Datapack Volume 2 アスキー 価格: ¥0 詳細内容 	MSX-Datapack Volume 1 アスキー 価格: ¥0 詳細内容 	日本語MSX-DOS2 リファレンスマニュアル アスキー 価格: ¥0 詳細内容 

AIとMSX3

- MSX2++までにはLLMの搭載は不可
 - AIで開発された、成果をエンジョイする
 - AIをプログラミングに活用したい
- MSX3で、LinuxにハードウェアのAIをどう取り組むのか
 - 各種LLMチップを評価中
- MSX x SCでPCIeの基板を設定し、AI SDKとして開発環境に
 - Windowsパソコン、Linuxパソコンとの並行運転

MSX3+ to Ai PC

- A PCIe card MSX3 motherboard featuring MSX3, ESP32, 3588, and more



ESP32 3588 X SOUND
MSXEngine3x2



BASIC Maintenance and What's Next

- Improve while maintaining compatibility ²²⁸
- Implement both an interpreter and a compiler ²²⁹
- Increase supported memory ²³⁰
 - MML Music Macro Language
 - PML Phonetics Macro Language
 - GML Graphics Macro Language
- New SDK offring

C++ and Python

- Support for implementing AI LLMs ²³²
- Use AI for programming assistance on MSX ²³³
- Supported on both MSX-DOS and TaoX ²³⁴

What's Next for MSX-DOS:

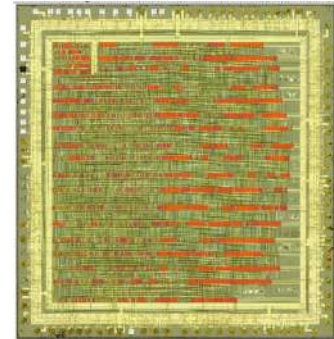
- Run NesterOS and TaoX separately in a VM
- Eventually, integrate them into TaoX,
- with MSX-DOS as a single tree

TaoX VM64

- A 64-bit Virtual CPU developed for many-core processors ²³⁹
- The runtime will work on x86, Arm, RiscV, R900, and R1800 ²⁴⁰
- Aims to switch "personalities" (Win, Android, Mac, iOS) via add-on software masks ²⁴¹

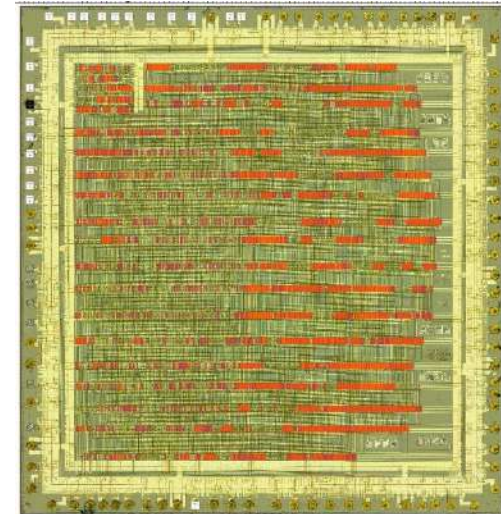
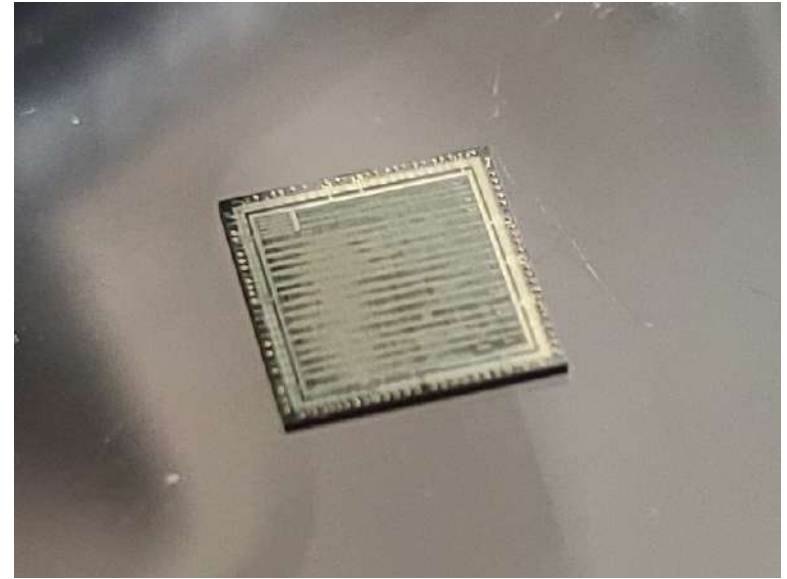
R80 CPU

- Higher speed than Z80
- Very good compatibility
- Would like to have 100MHz version
- Design macro cell also for SoC

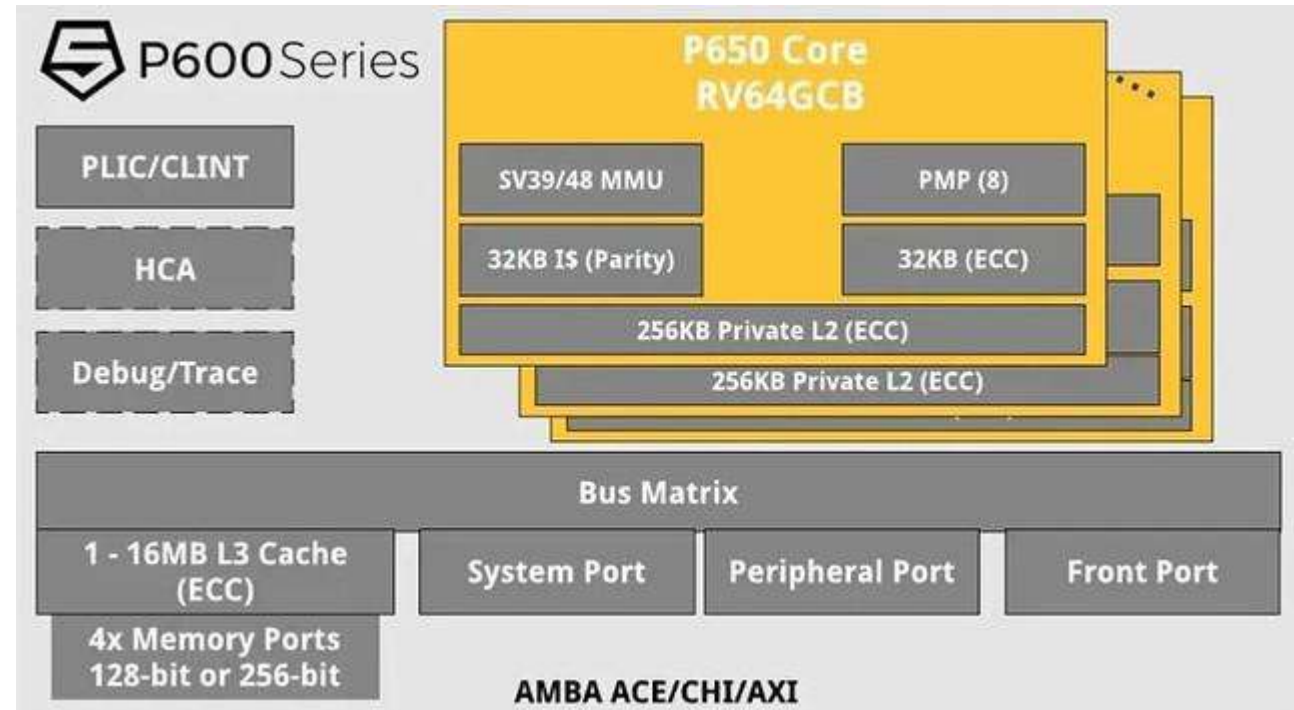
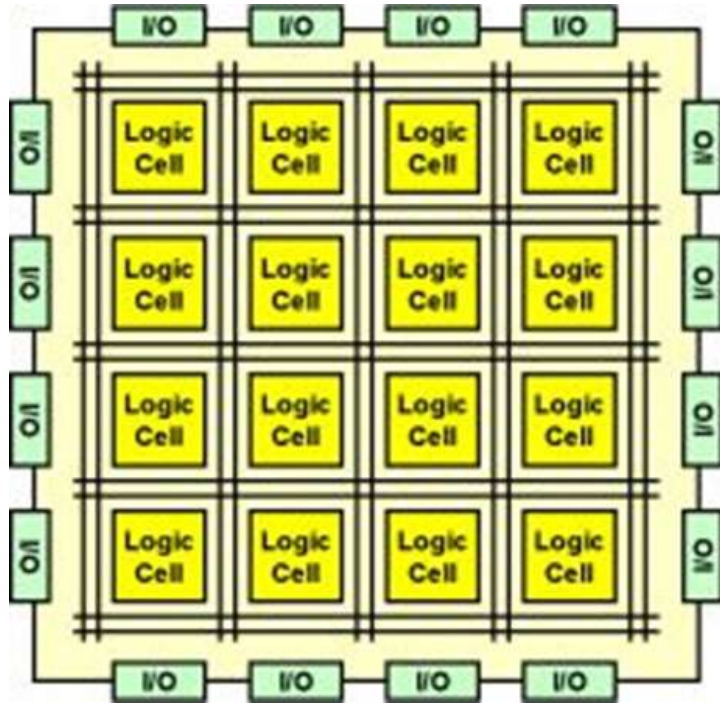


R900 CPU

- Based on Ikabiku-san's R800 readout ,
- designed by spacemoai-san and HRA!.
- MSX-san ²¹³, and made into an FPGA library



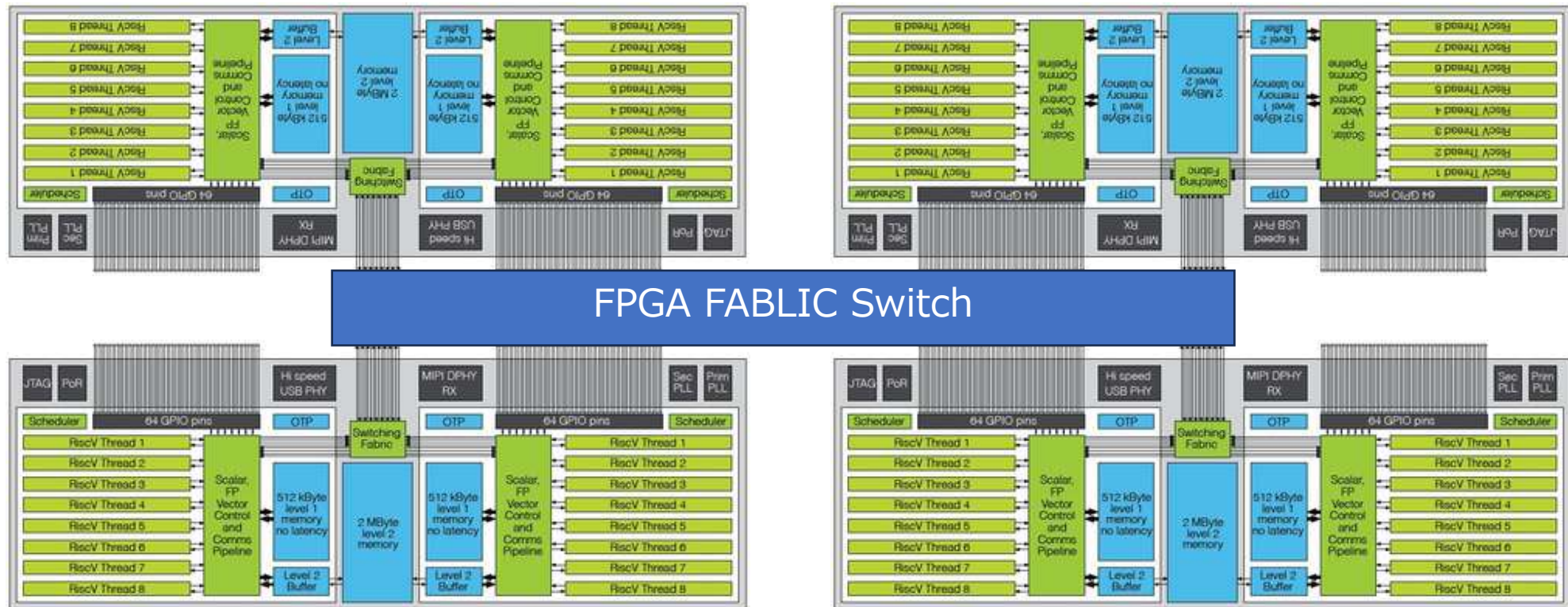
R1800(32bit)CPU + RISC V(32/64bit)



Currently being designed by spacemoai-san with a planned collaboration with HRA!.MSX-san

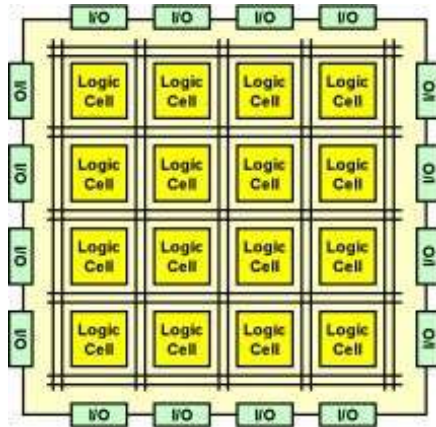
MSX Engine 5 Many-core CPU Expansion

Expand downward from the motherboard with up to 16 MSXM boards for a total of 1024 CPUs

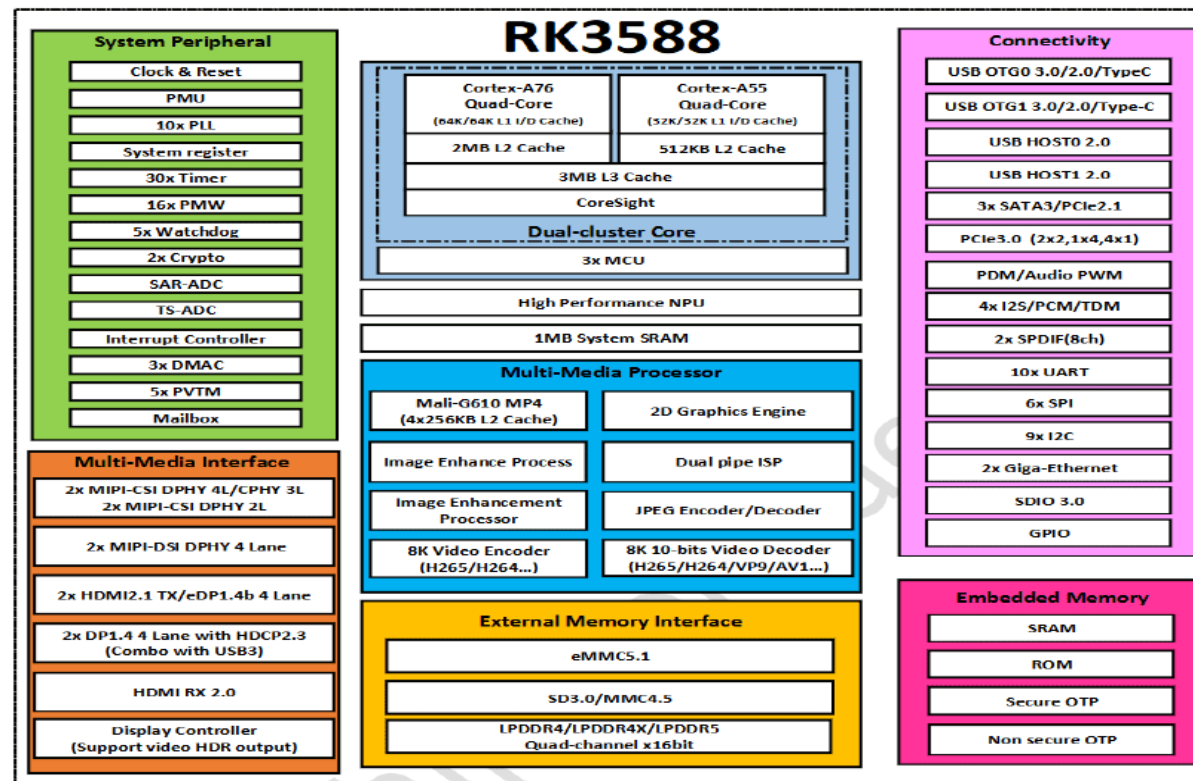
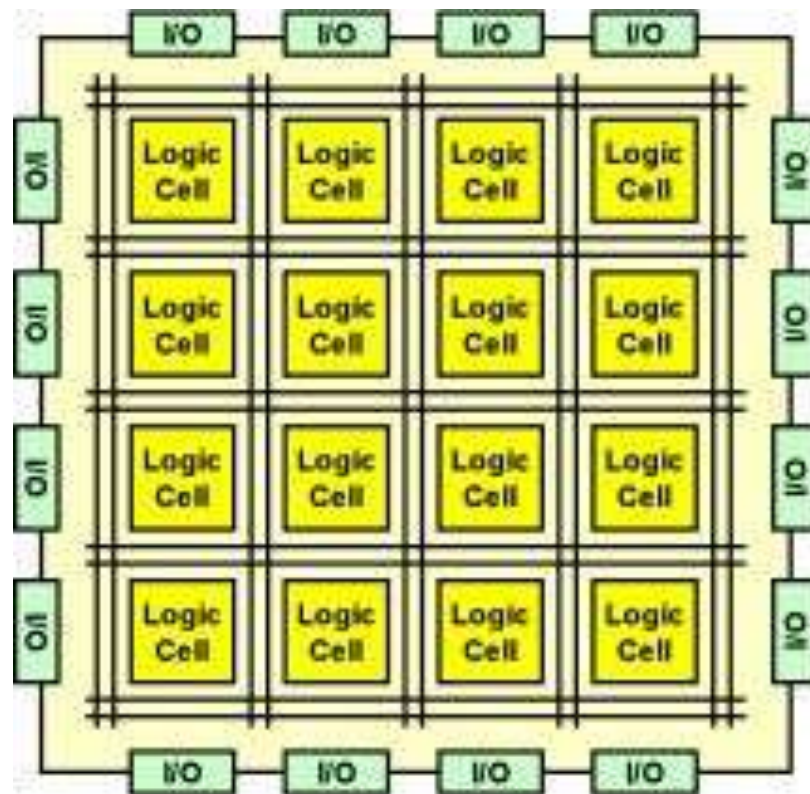


V9968, V9978 + P4

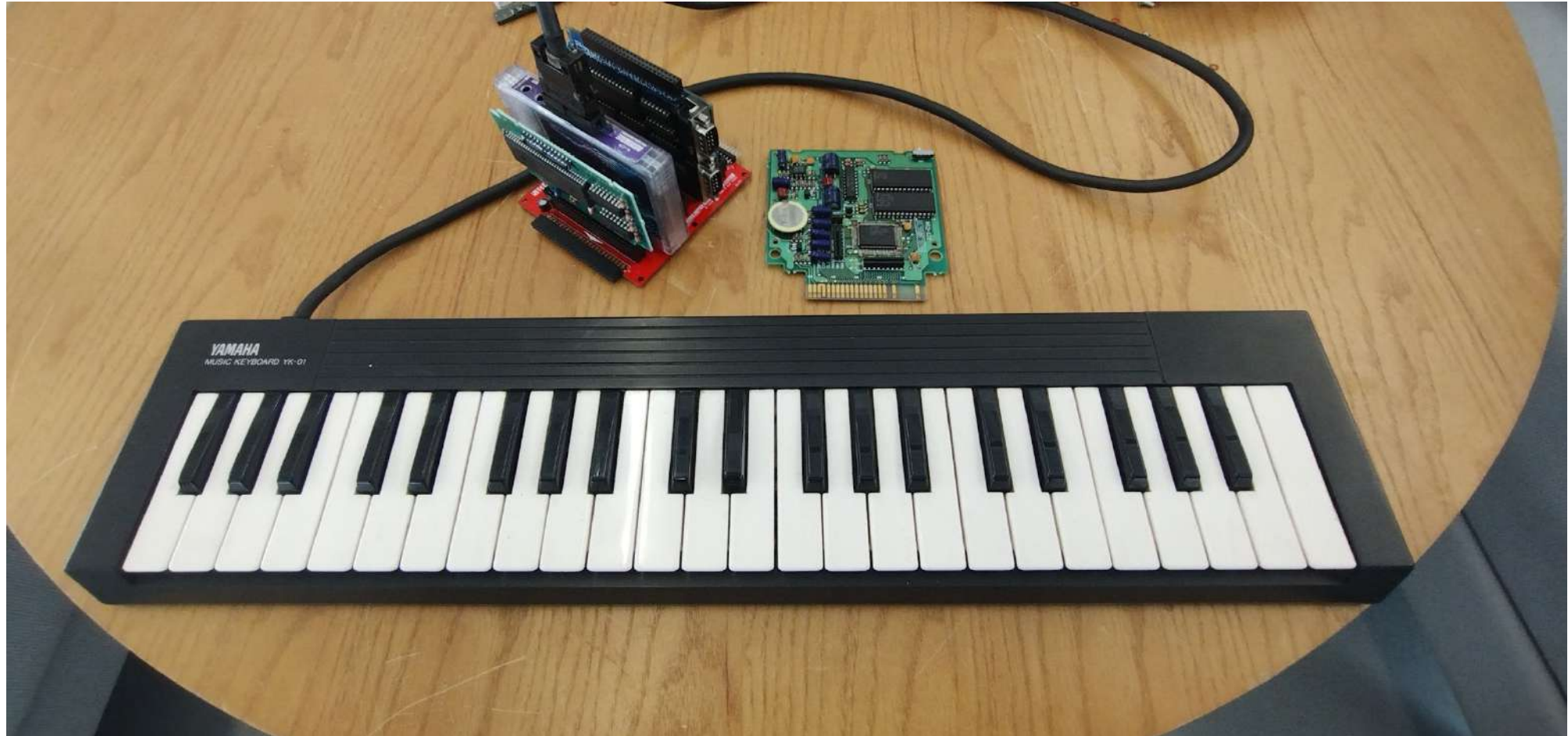
- Combination of FPGA and Espressif P4)



FPGA9988 と RK3588



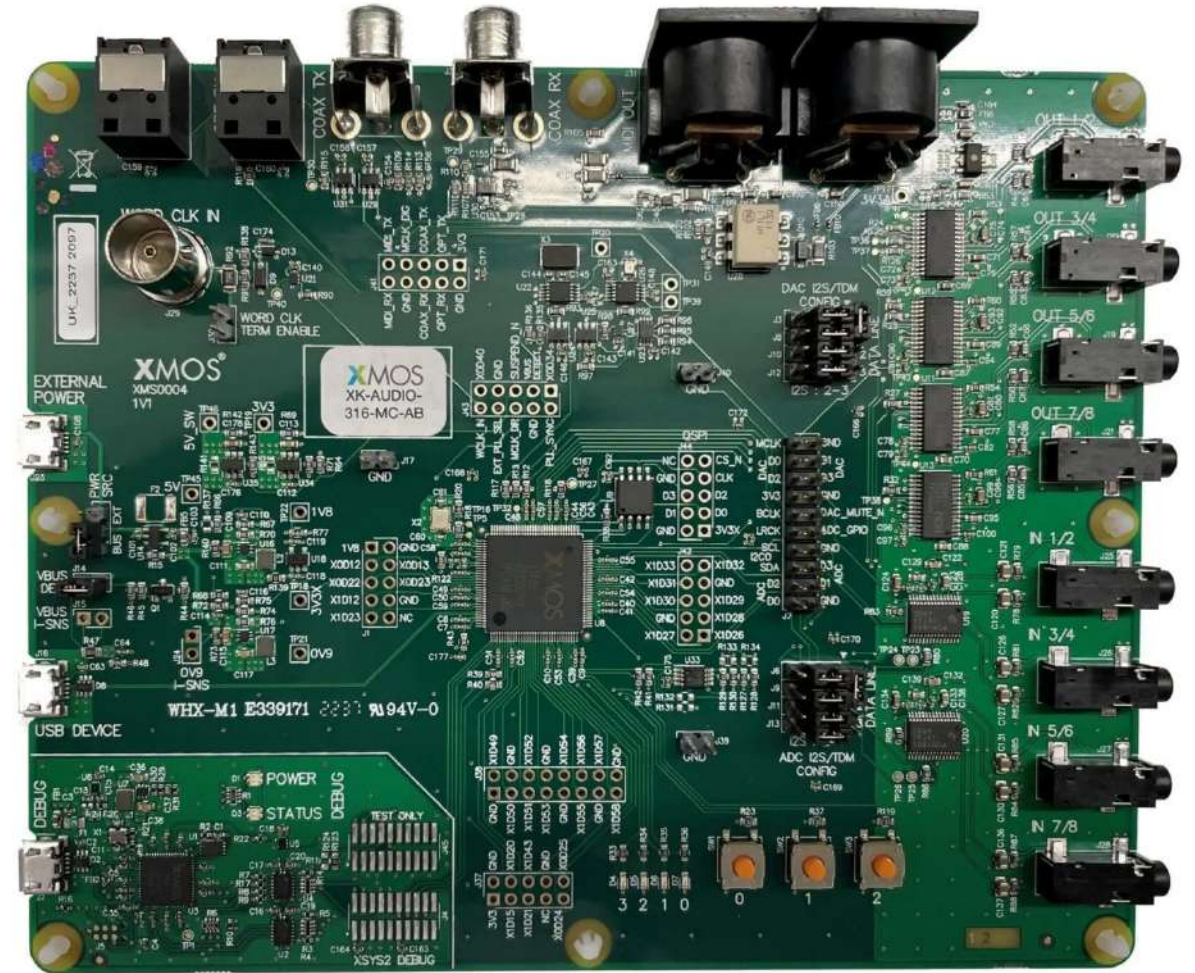
Sound All FPGA A8960



8910 , 76489 , SCC , 8950 , 2413

Assign to Xsound A8970

- Will also feature'
 - MIDI 2.0
 - Voice synthesis
 - PCM and DSD
 - and FM with XMOS



MSXの3つの階層

- エントリーとIOT MSX0
 - センサー
 - 教育
 - 制御
- エンスーとレトロ MSX、MSX2、MSX2+、MSXturboR、MSX2++
 - 資産継承
 - ホビーハード
 - ホビーソフト、ゲームエミュレーション
- プロと未来 MSX3、MSXxSC
 - AI開発
 - ハイエンドAV
 - スーパーコンピューティング

MSX^{PLy}

- The official emulator that runs on the Web
- Bundled with a book ²⁵
- ⁵and supported by the Akashic Library



MSXPLAYer: Downloadable from the net

- Downloadable from the net for free
 - For Windows, Android, MAC, iPhone
 - Aims to increase new users and build a software business
 - Application also can be downloaded
 - Manuals will also be sold as books
- We want to build a system that enables a software business here

High-performance System

Dual-core 400MHz

AI

AI Instruction Extension

FPU

768KB SRAM

DSP

64MB PSRAM (Optional)

Low-power System

Low-power 40MHz

Dedicated Low-power Peripherals

LP SPI, LP UART, LP I2C, LP I2S, Touch Sensor

Independent in Deep-sleep

32KB LP SRAM

16KB LP ROM

55 Programmable GPIOs

USB 2.0 OTC @480Mbps
Ethernet MAC @100Mbps
SDIO 3.0 I3C
.....

ESP32-P4

Security

DEV Community

+ Wi-Fi 6 + Thread/Zigbee

Full HD 1080P

MIPI-CSI & MIPI-DSI

Multi Camera MIPI-CSI + DVP

Integrated ISP

H.264 1080P @30fps

HMI

PPA 2D DMA

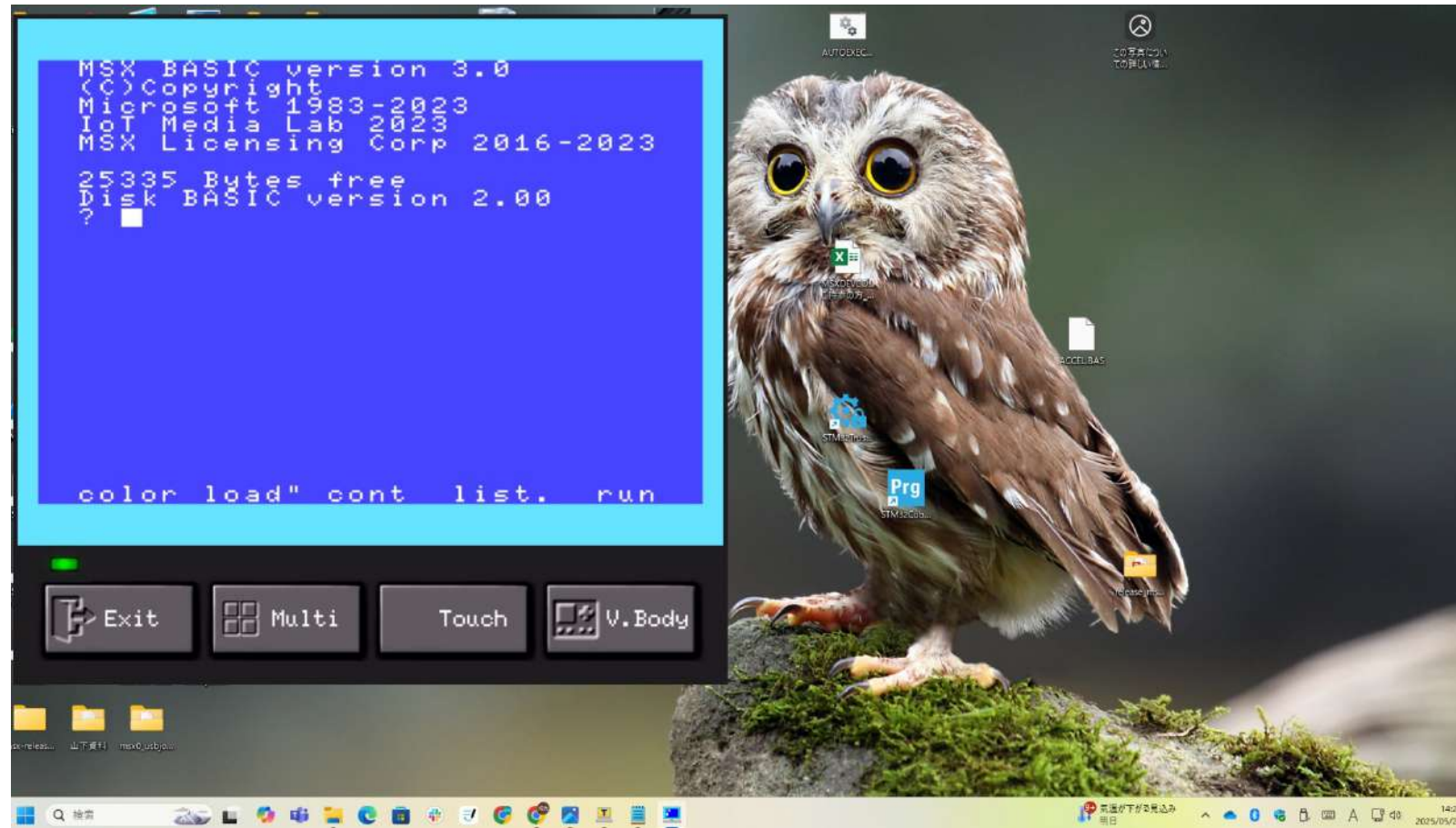
MIPI-DSI RGB 18080

JPEG Decoding

Emulator and FPGA technologies becomes the key

- ESP32 C2 240MHz
- ESP32 P4 400MHz
- Altera 1chipMSX
- Xilinx MSX Engine3
- Yang nano FPGA9968, 9978, 9988

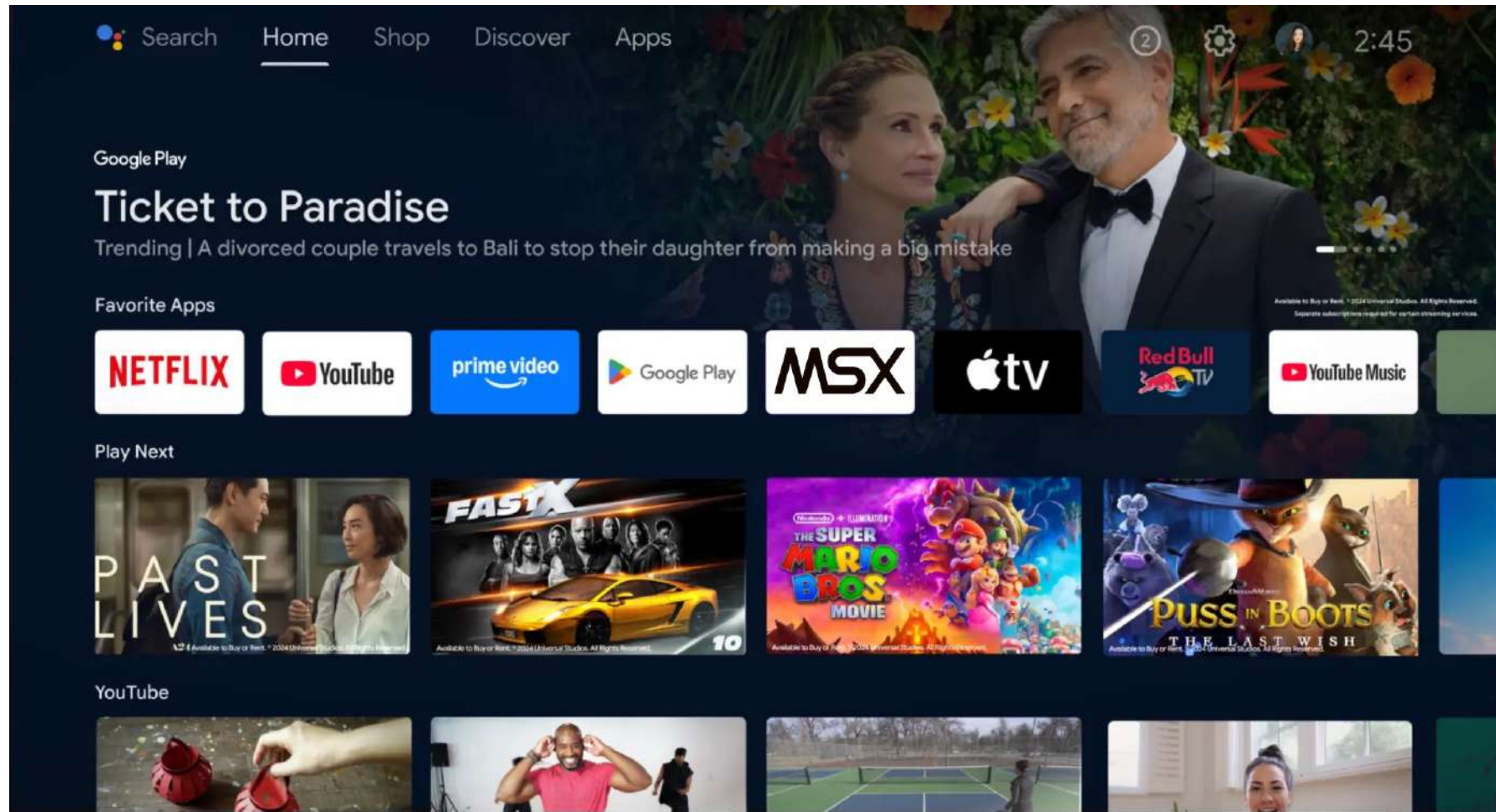
MSX remote desktop Windows version



MSX emulator for Android smart phone



MSX emulator on smart TV OS



MSXIoT : MSX0

- **MSX0**: The completed form of MSX2++ for IoT,
- with a faster MSX0Pro version and MSXturboR+ on TAB5 ²⁴²
- **The 4 Elements of MSX IoT**: ²⁴³
 - Edge (Sensors, Controllers, Actuators) ²⁴⁴
- Wireless Link

MSX IoT Sensor

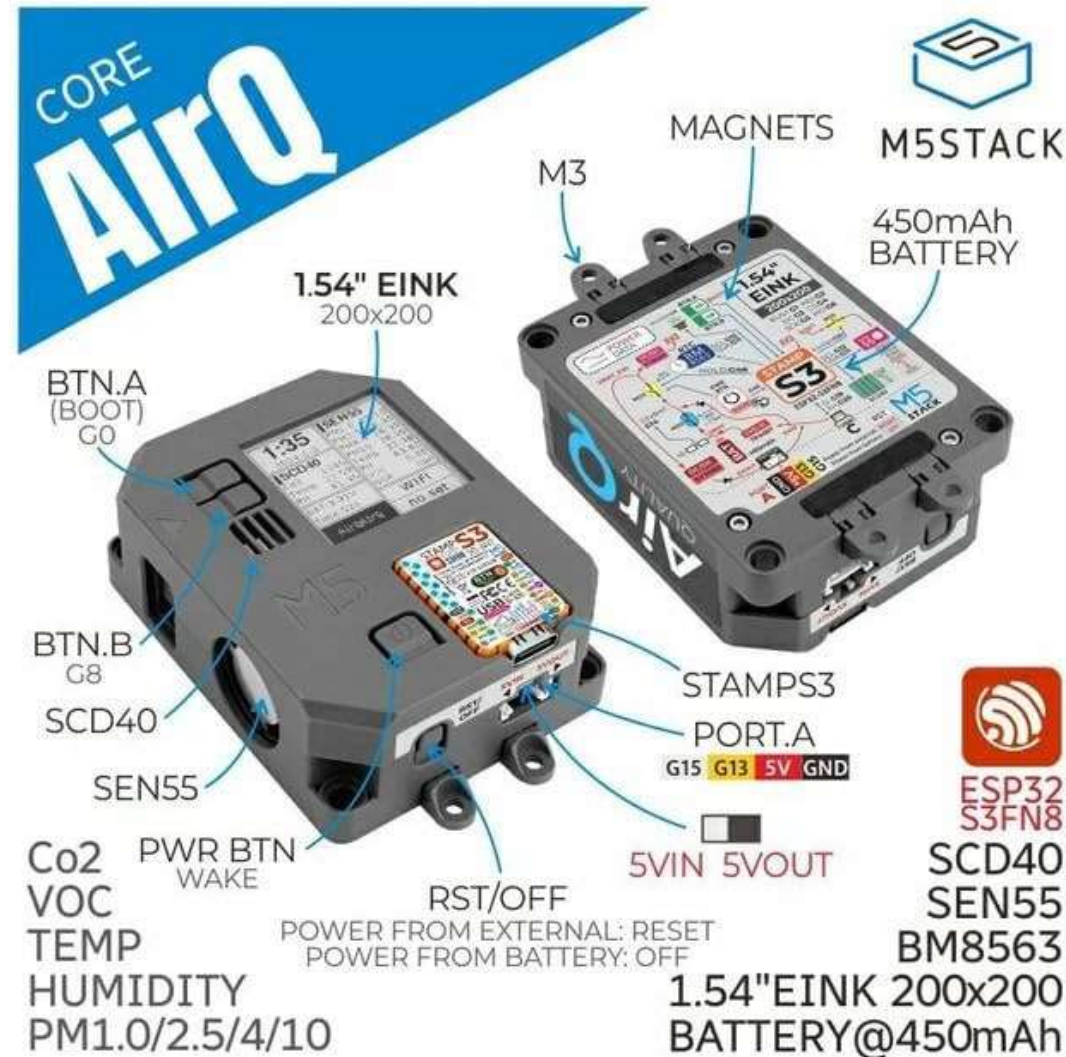


MSXIoT Controller

MSX0Stack MSX0Stick MSX0Stamp MSX0Atom MSX0Nano



IOT actuator needs security measures.



High-performance System

Dual-core 400MHz

AI

AI Instruction
Extension

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DSP

768KB
SRAM

64MB
PSRAM
(Optional)

55
Programmable
GPIOs

USB 2.0 OTC @480Mbps
Ethernet MAC @100Mbps
SDIO 3.0 I3C
.....

Full HD 1080P
MIPI-CSI & MIPI-DSI



Multi Camera
MIPI-CSI + DVP



Integrated ISP

Low-power System

Low-power 40MHz

Dedicated
Low-power
Peripherals

LP SPI, LP UART, LP I2C,
LP I2S, Touch Sensor



Independent
in **Deep-sleep**

32KB
LP SRAM

16KB
LP ROM



Security

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Community

+ Wi-Fi 6
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ESP32-P4

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HMI

PPA
2D DMA

MIPI-DSI
RGB
18080

JPEG Decoding

MSX0 TAB5



MSX0Mini



MSX0Stack coreP4

- NEWSoC
- NewLCD
- Same bus
- 2026Summer



MSXDiY : MSX2++ , MSXturboR+

- An MSX you can assemble and use
- **Final 8-bit MSX2++ (FPGA):** R800, V9968, A8960
- **Near-final 16-bit MSXturboR+ (FPGA):** R900, V9978, Xsound 8970

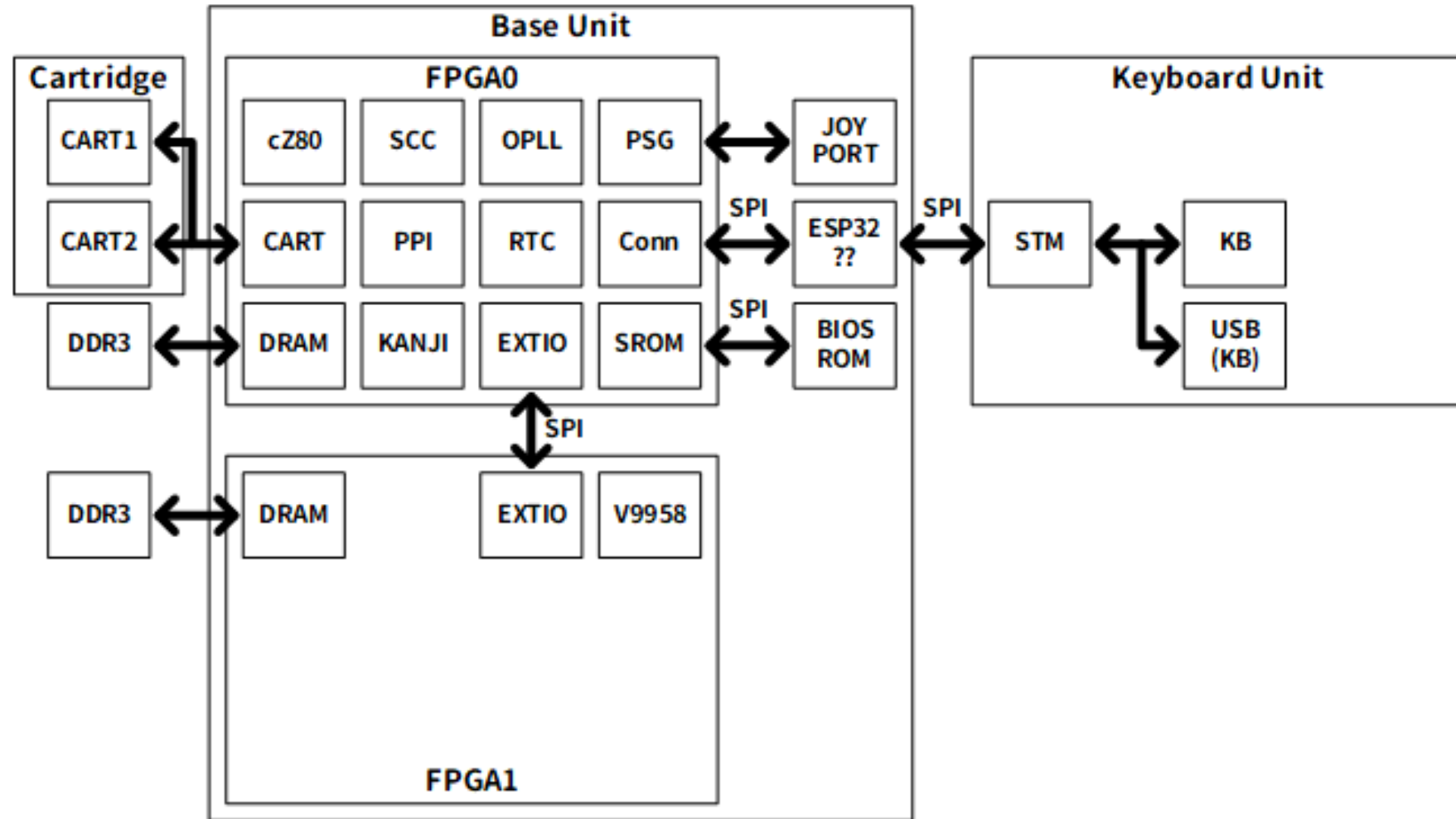
Open Development experiment

- Provide an MSX that anyone can build
- Clarify the intent and publish the design and manufacturing process
- Complete the MSX that was left unfinished due to the changing times
- Review the specs once more for the next generation

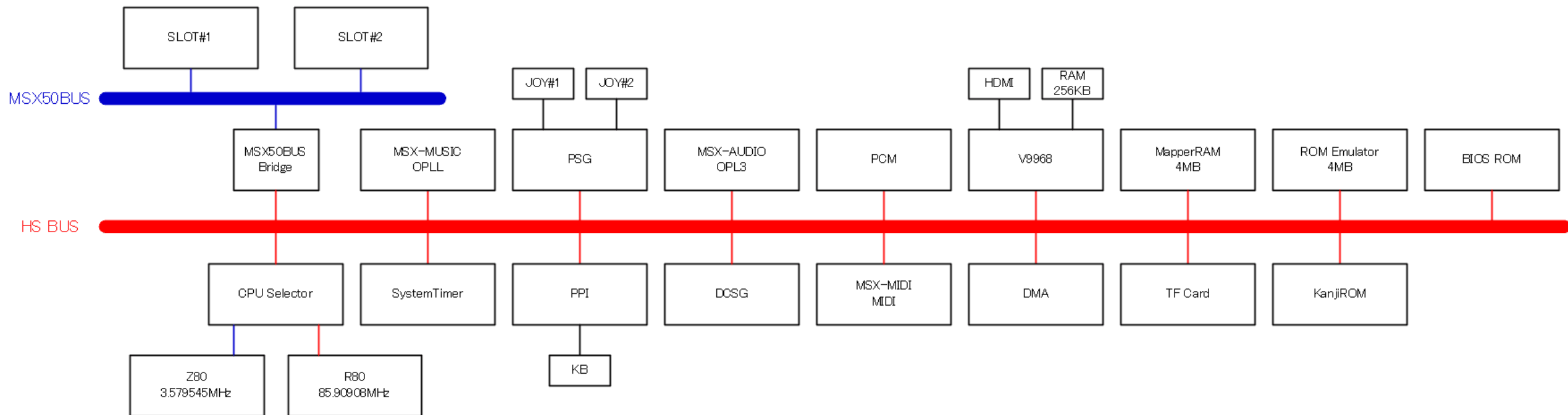
Cherish the Past

- Revival of 4 million units
- Establish a repair system
- Provide upgrades with the "Booster"
- Organize documents, digitize/reprint magazines and books
- Vitalize electronic software distribution

Hara's FPGA project

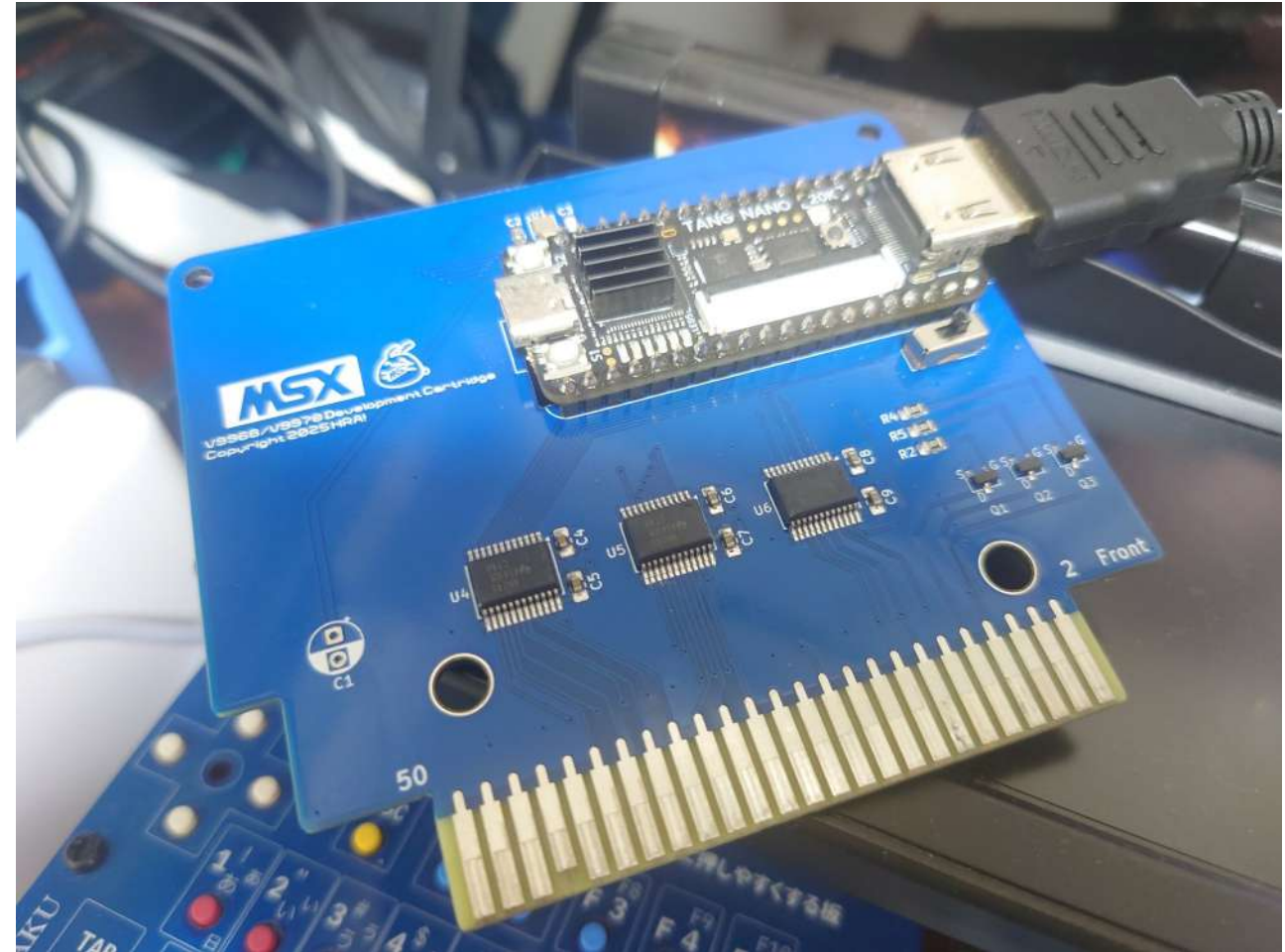


原さんのFPGAプロジェクト



New VDP s

- FPGA9968 MSX2 + +
- FPGA9978 MSXturboR+



FPGA R80(8 5 MHz) The last Z80



SOUND All 未定

- FPGA8960
 - GI PSG 8910 ON/OFF
 - TI Sound
 - SCC
 - MSX Audio Y8950
 - MSX MUSIC
 - PCM 44.1,88.1/16,24



Standard Keyboard type MSX



ちくわさん



2026/1/14

Chikuwa-DIYcube

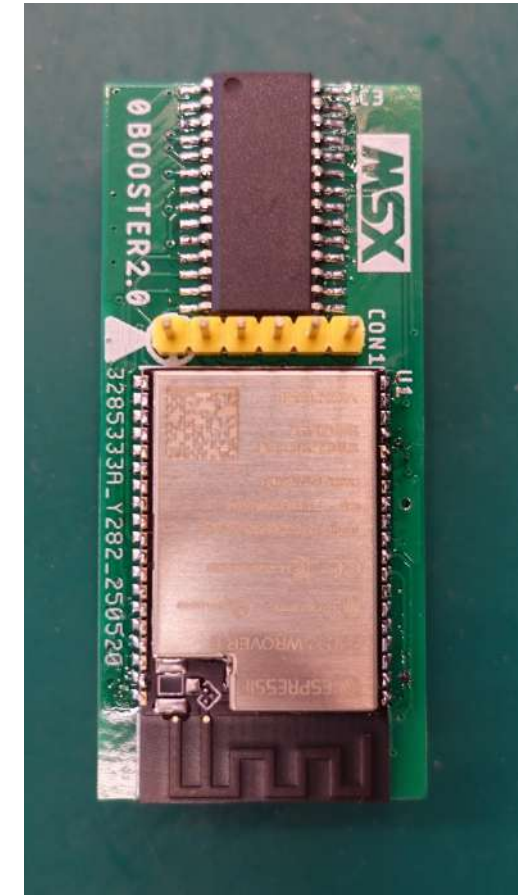
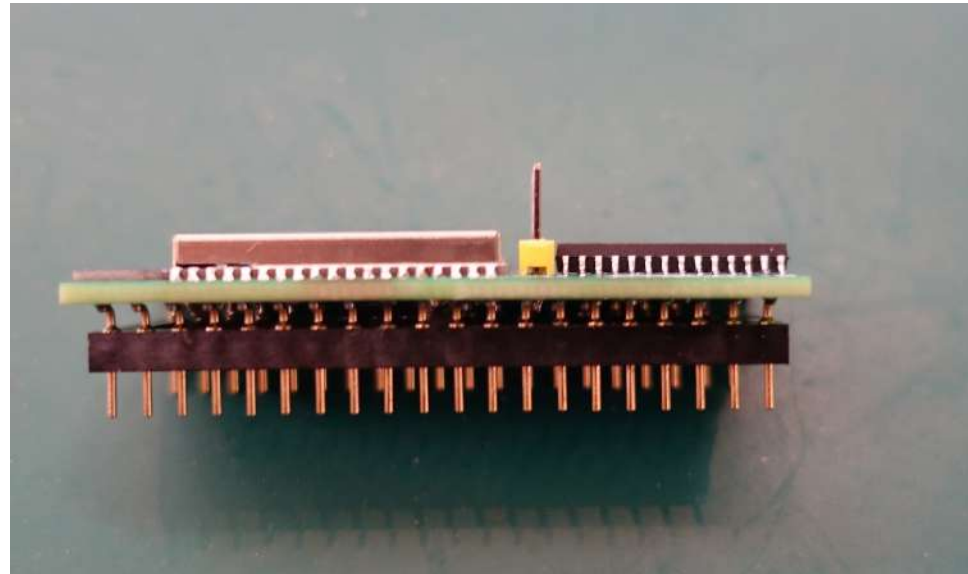
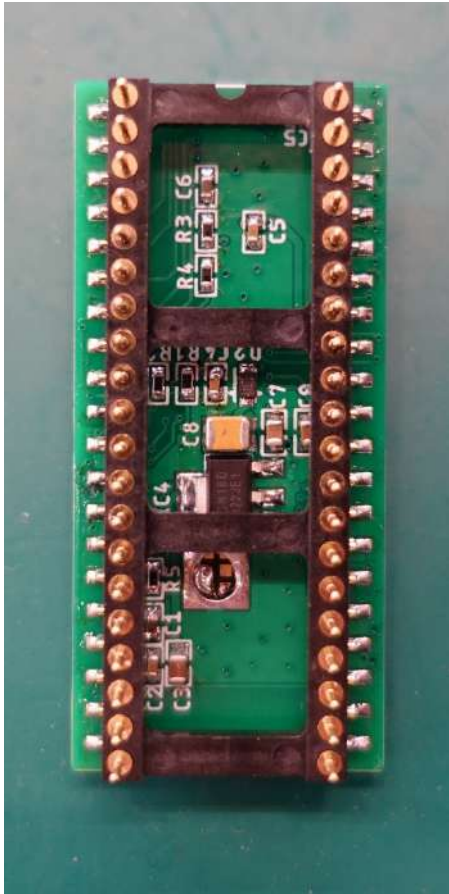


Portable MSX



すべてのMSXをアップグレードしたい

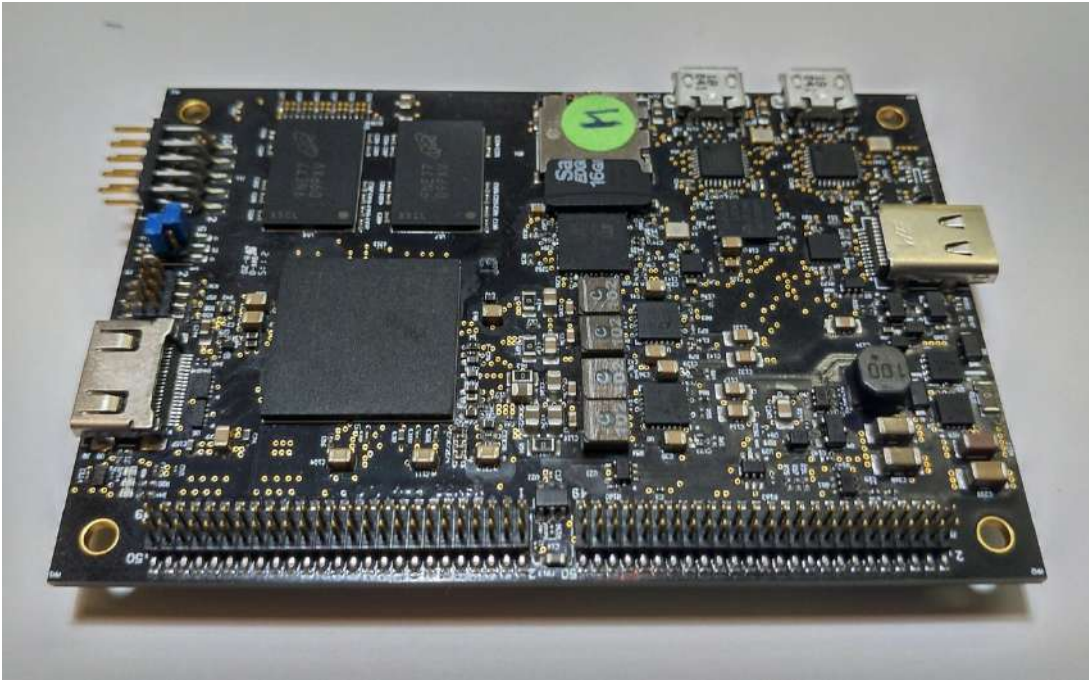
MSXBooster2 + + ESP32



MSXBoosterturboR + FPGA + ESP32



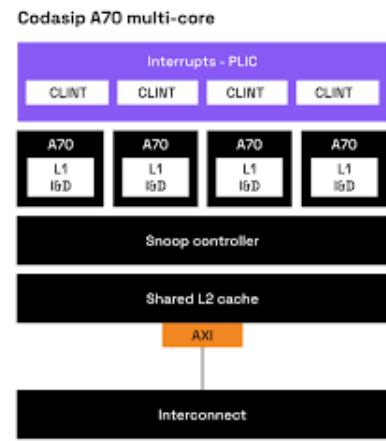
MSXBooster 3 Cartridge FPGA + ESP32



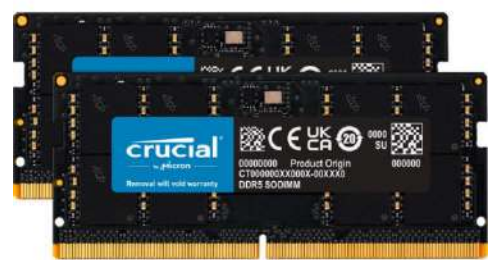
MSX**NxT** : MSX3 , MSX3+

- **FPGA-based system:** ²⁸⁷
 - **CPU:** 32-bit R1800 (MSX binary compatible) and 64-bit RISC-V (TaoX binary compatible) ²⁸⁸
 - **Interface:** PCIe ²⁸⁹
 - **Video:** Bundled V9988 ²⁹⁰, with an option for up to eight 3588 boards ²⁹¹
 - **Audio:** Bundled Xsound8970 ²⁹²
- **Official Languages:** C++, BASIC, and Python ²⁹³

A new, unique image to be added to the MSX3's MSX compatibility



RISC-V Many-core



DDR5 64GB



8 K video



16CH Audio

1ChipMSX3 and Expandability:

The case can be expanded with spacers and ring side plates



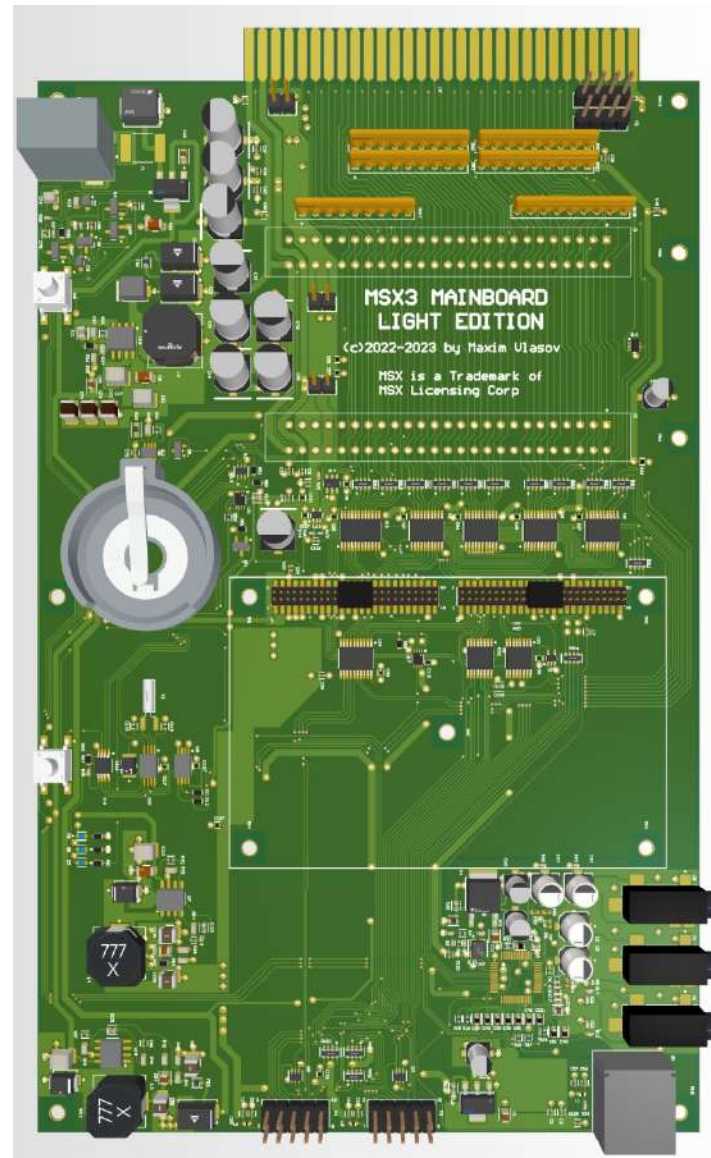
Development Status of MSX3

- 1 . USB , Joystick M5Stack adaptor completion, start to MP
- 2 . 1 ChipMSX3 upgradable to MSX3+
- 3 . MSX3 on PCIE
- 4 . 32bit R1800 by FPGA, 64bit CPU macro(RISCV) in FPGA
- 5 . Memory DDR5 64GB
- 6 . VIDEO 2Kx2K FPGA9988 + Rock3588
- 7 . AUDIO Xsound Engine 16-channel

MSX Engine3



MSX3 MB



Upward Expansion (Video/Audio)

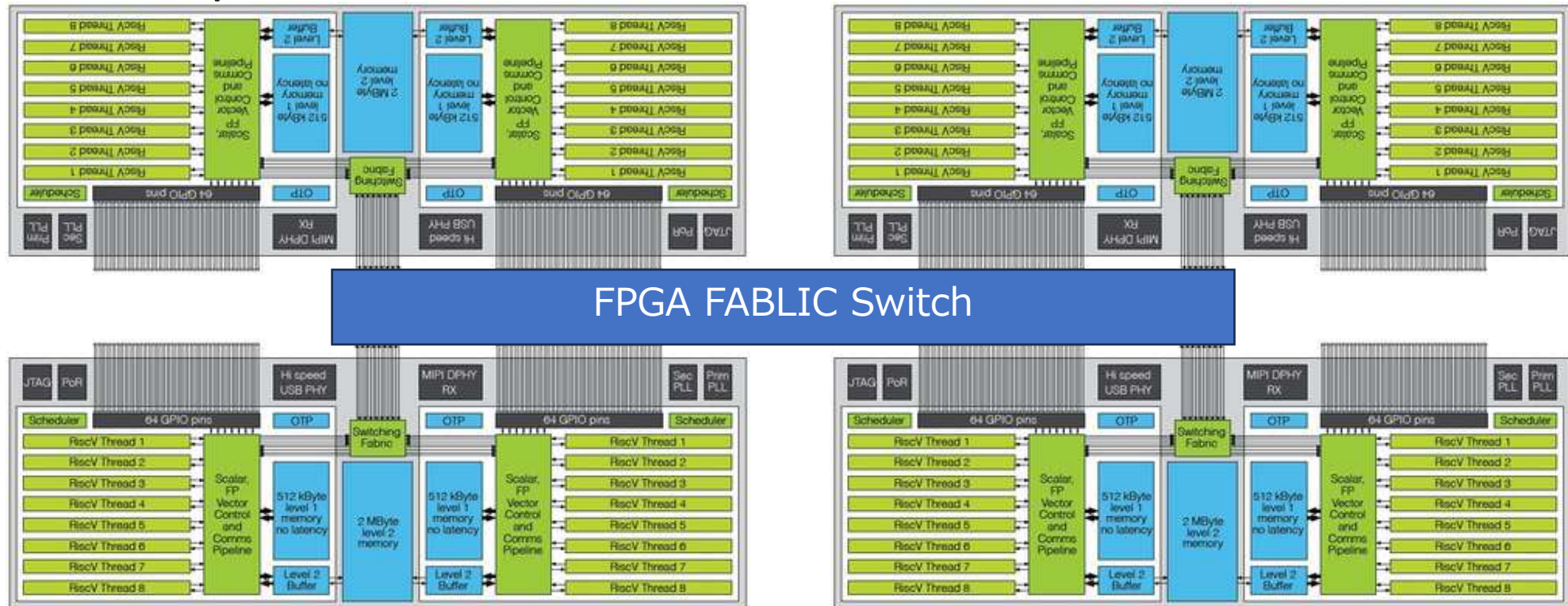
- Add an MSXM9988 with RK3588 on top for 4K/8K video, up to a maximum of 8 screens



MSX Engine 5

Downward Expansion (CPU)

Add up to 16 MSXM boards below for a many-core system
with up to 1024 CPUs via an FPGA Fabric Switch



MSXxSC Supercomputers, cheap and easy

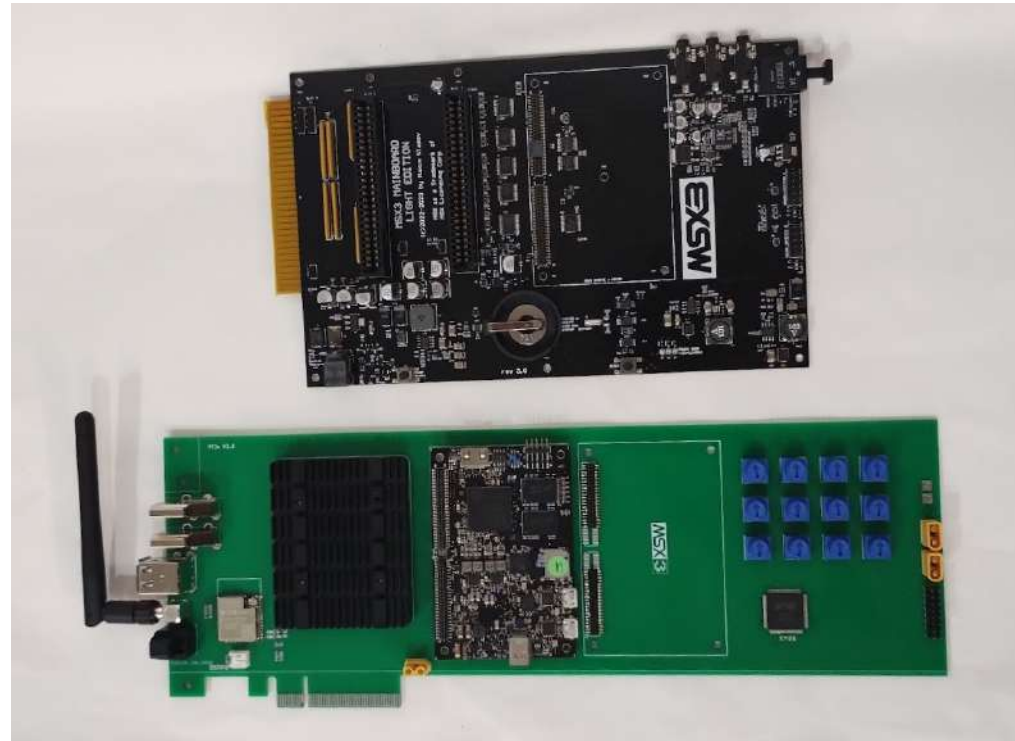
- MSXxSC
 - MSXHPC
 - RISCv 32bit XMOS32bit 64CPUx16=1024
 - RISCv 64bit XMOS64bit 64CPUx16=1024
 - REZY SC3 512CPU
 - PEZY SC3 4096CPU
 - PEZY SC4 CPU 8000CPU
 - PEZY SC4 CPU 16000CPU
 - MSXAiPC
 - Access to Nvidia's many-core CPU and many-core GPU via PCIe

HPC and Ai as Open source

- Linux、 C + + 、 Python
- Each company's LLM model runs easily on them
- Memory size of GPU is KEY
- CPU many-core Amd, many-core Arm
- GPU Nvidia CPU Amd GPU

MSX3+ for any PC

- A PCIe card featuring MSX3, ESP32, 3588, and more



ESP32 3588 MSXEngine3 XSOUND

Base to the many-core mother board with PCIe



MSX HPC

- 32bit many-core XMOS >> 64CPU
- 64bit many-core XMOS >> 64CPU
- 64bit many-core PEZY's SC3 >> 512 CPU
4096 CPU

MSX and AiPC ex MSX3+DGX Spark



- Try AMD's GPU and Nvidia's GPU
- Used products will become cheaper
- PCIe will become the mainstream in the future

From cheap used GPU to the highest GPU



To add GPU, connect with OcuLink connector



MSX as a Retro Game Player

個人所有のゲームROMをMSXで動かす

ソフト、ハードで
エミュレーション



カートリッジ
リーダー



各社ROM
個人所有



MSX Game Emulation

- Emulation other machine
 - Static method
 - Dynamic method
- If you are doing yourself, it's possible to extract ROMs from various companies and convert them into disk images.
- It is possible to change disk image with DOS editor or to make an execution file by overwrite the changed file
- If the individual ROM owner executes them on DOS within the scope of personal use, it should be possible.

Emulator support

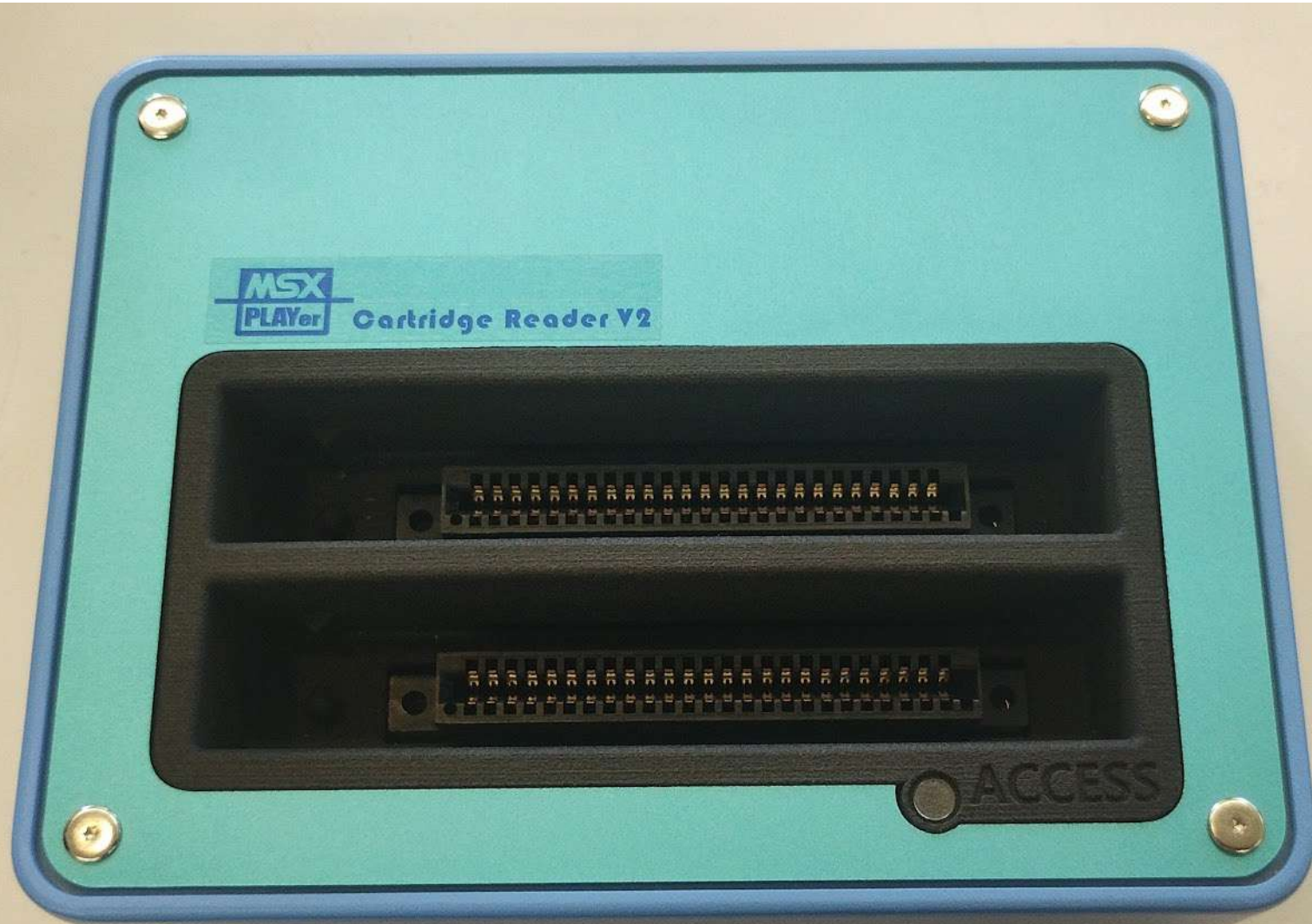
- MSXPLAYer supported in the next version
- MSX0TAB5 supported by the MSX2++ emulation
- FPGA MSX2++ will include the TI sound chip
- FPGA MSXturboR+ will include the TI sound chip
- MSX3 Exploring a new EMU scheme to run even more game consoles and PCs

USB MSX Game Reader that connects to a PC



Called 2 thousand titles in the total
for MSX, MSX2, MSX2+, MSX turbo R

Game Reader 2



書き込み型 ROMカートリッジ

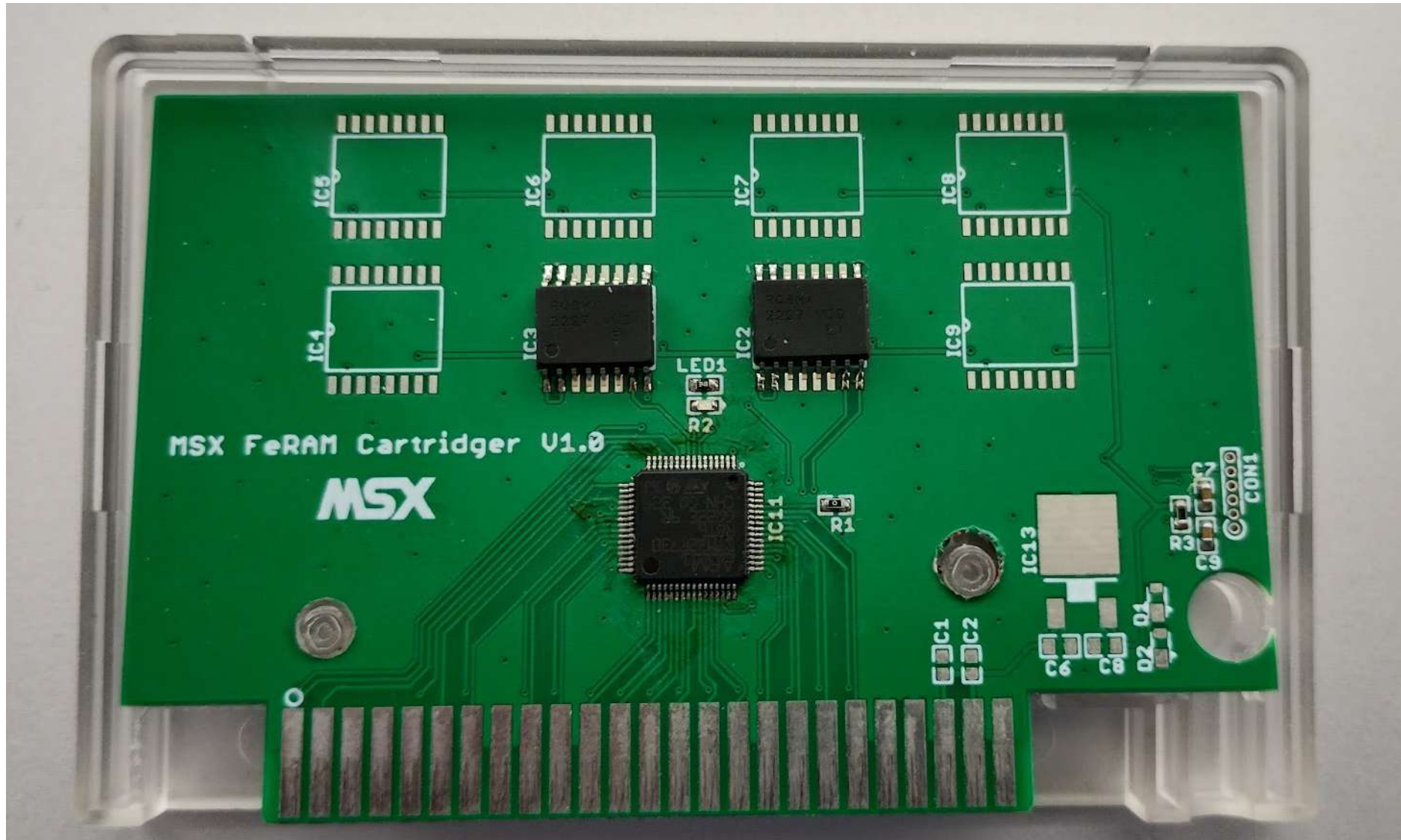


営業部 課長
若木 一雄

株式会社 コロンバスサークル
〒111-0043



FRAM cartridge Engineering sample



Sega SG1000,SG3000



Coleco Vision



Sega Game Gear



任天堂 ゲームボーイ



任天堂 FC

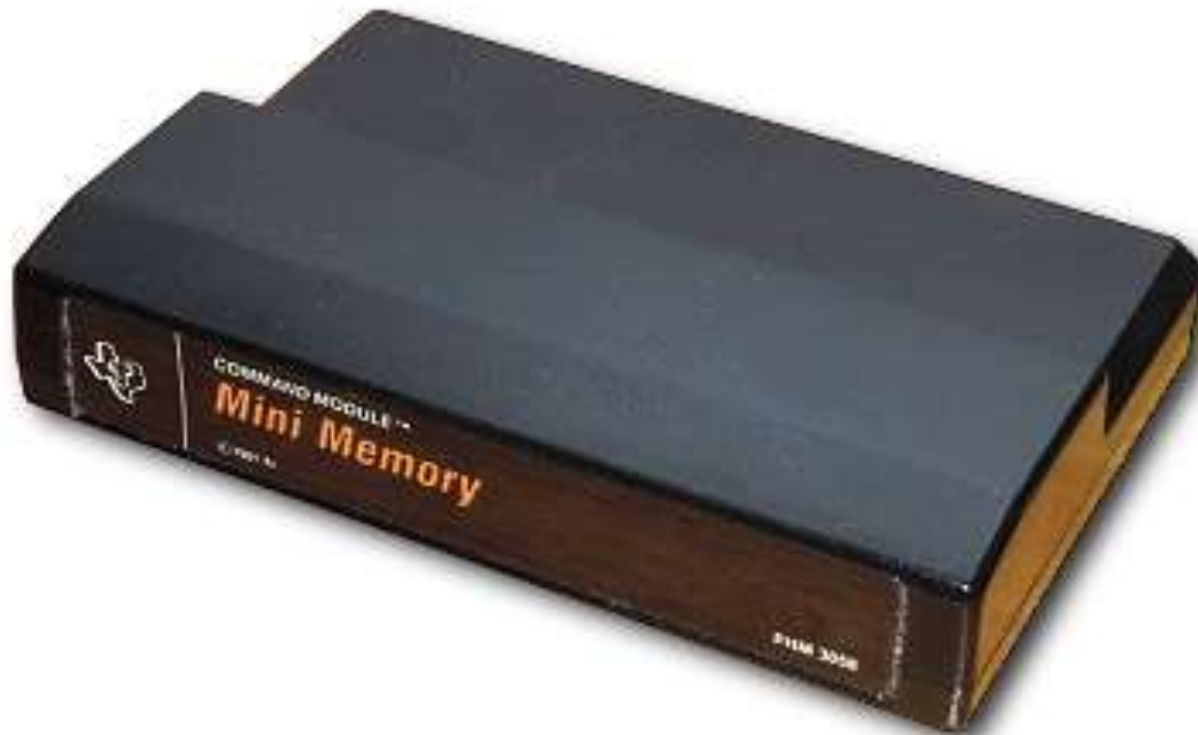


任天堂 FCディスク



2026/1/14

TI 99/4



トミー ピュー太



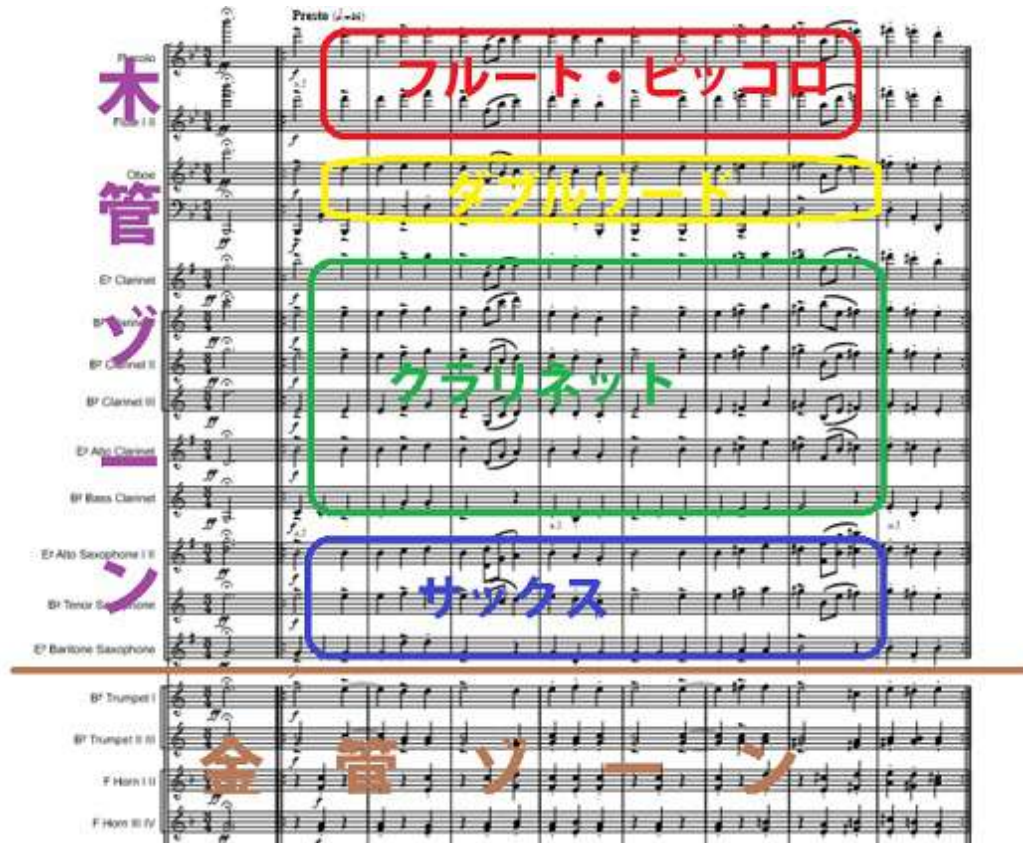
MSX as DTO DeskTop Orchestra

- Load a PDF orchestral score and convert it into a musical tone file ³³¹
- Secure orchestral sound sources with 16+16 simultaneous notes ³³²
- Adjust parameters reflecting the conductor's intent in real-time, with recording support

Reshuffle Sound and Music and MIDI 2.0

- **MSX2++/turboR+:** Will use "MSX Sound All" on FPGA (PSG, SCC, TI, MSXmusic)
- **MSX3/3+:** Will use Xsound on XMOS via an emulator, stackable for multiple units
- **Interface:** MIDI 1.0 and MIDI 2.0 support planned
- **MSX2++/turboR+:** Will use "MSX Sound All" on FPGA (PSG, SCC, TI, MSXmusic)
- **MSX3/3+:** Will use Xsound on XMOS via an emulator, stackable for multiple units
- **Interface:** MIDI 1.0 and MIDI 2.0 support planned

Convert Orchestral score (PDF) to MIDI file



木
フルート・ピッコロ

管
ダブルリード

ソ
クラリネット

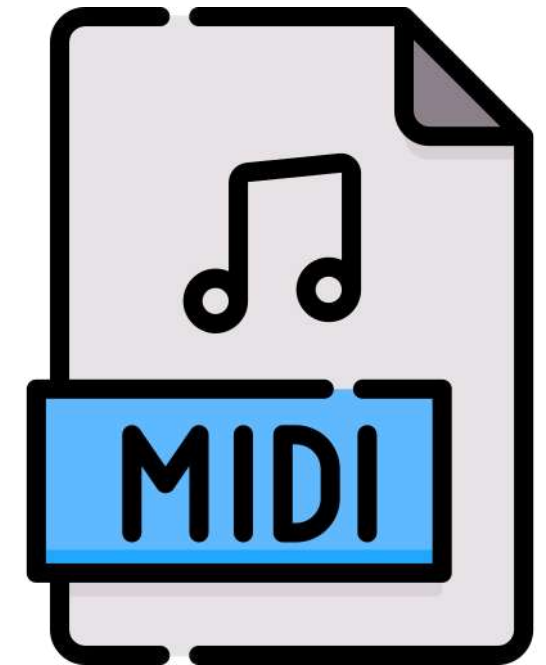
ン
サクソ

金
管
ゾーン

ソ
ーン

The image shows a snippet of an orchestral score. The top section is labeled 'Presto (♩=24)'. It features staves for Flute (フルート・ピッコロ), Oboe (ダブルリード), Clarinet (クラリネット), and Saxophone (サクソ). The bottom section is labeled '金管ゾーン' (Brass Zone) and includes staves for Trumpet I, Trumpet II, Horn I, and Horn II. The score is written in Japanese with musical notation.

「OCR」



Support multi-Keyboard and multi-sound



SLOT Expander with audio output function by Illegal function call

MSX as MANGAanimation

**Can view 200~300 milion manga contents
as pera-pera animations on MSX**

- Split PDF info panels and convert to JPEG still images>convert to
- PowerPoint format
- Perform OCR on speech bubbles > PML text to speech synthesis
- Later, dub with MSX AUDIO PCM audio

You too can be a voice actor!

FML can be changeable to human recorded voice.



Read Manga PDF and then convert it to PPT

- Cut each page into strips to make a paper theater

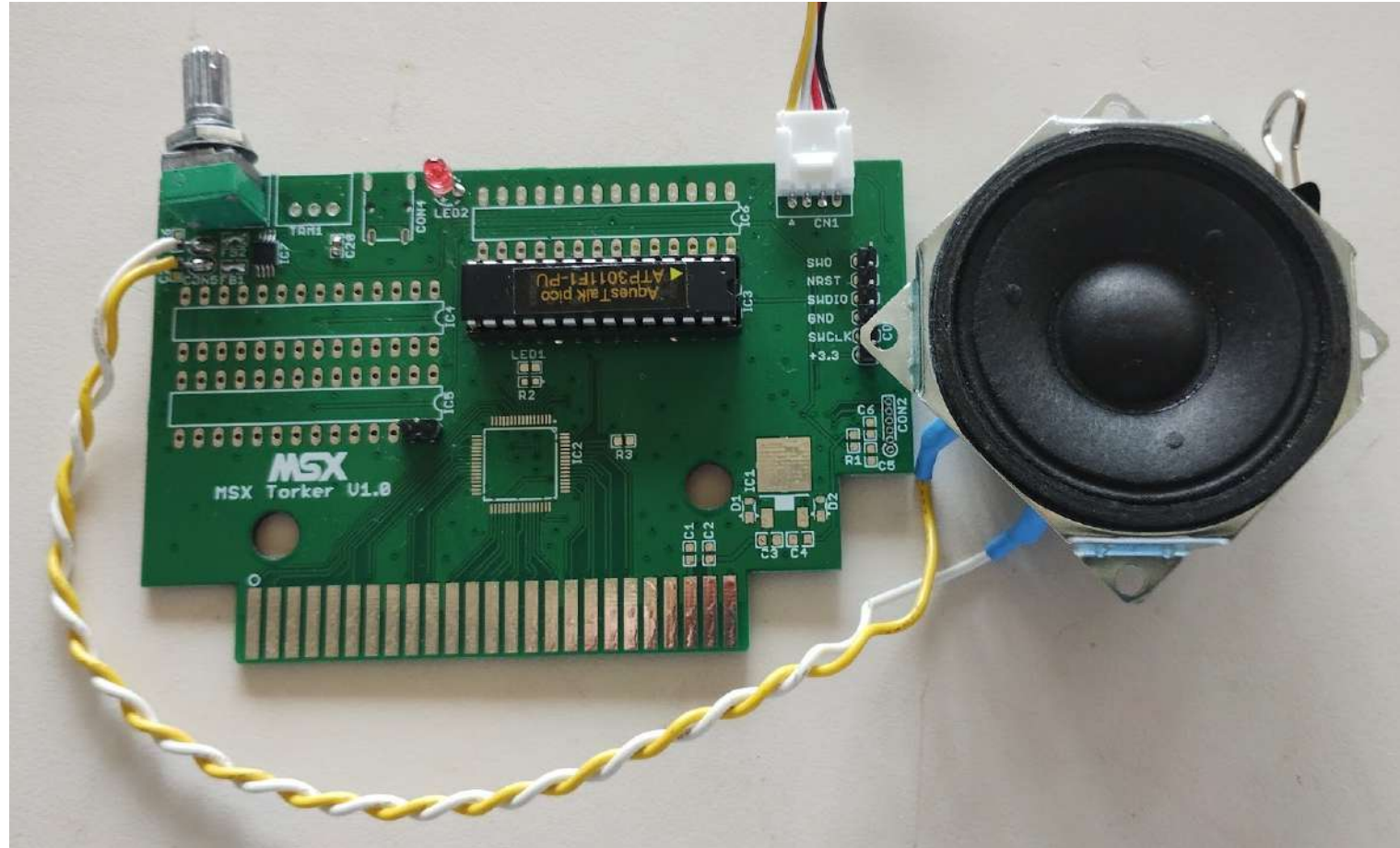


OCR



- OCR convert Manga's line to FML and the add it to PPT
- MSX Talker can read

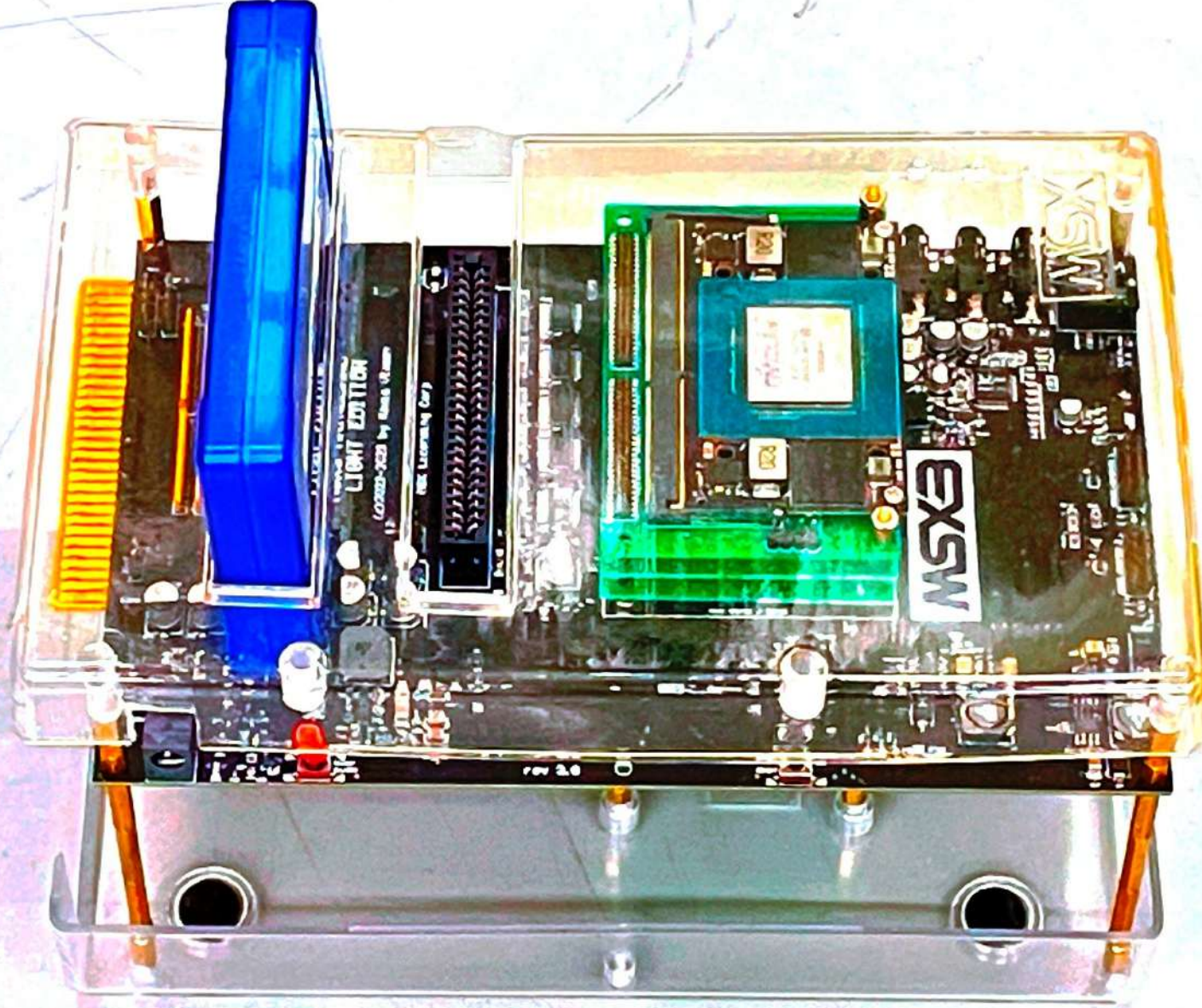
Phonetic Macro Language Basic support Text to Speech LSI



AI as a Program Translator

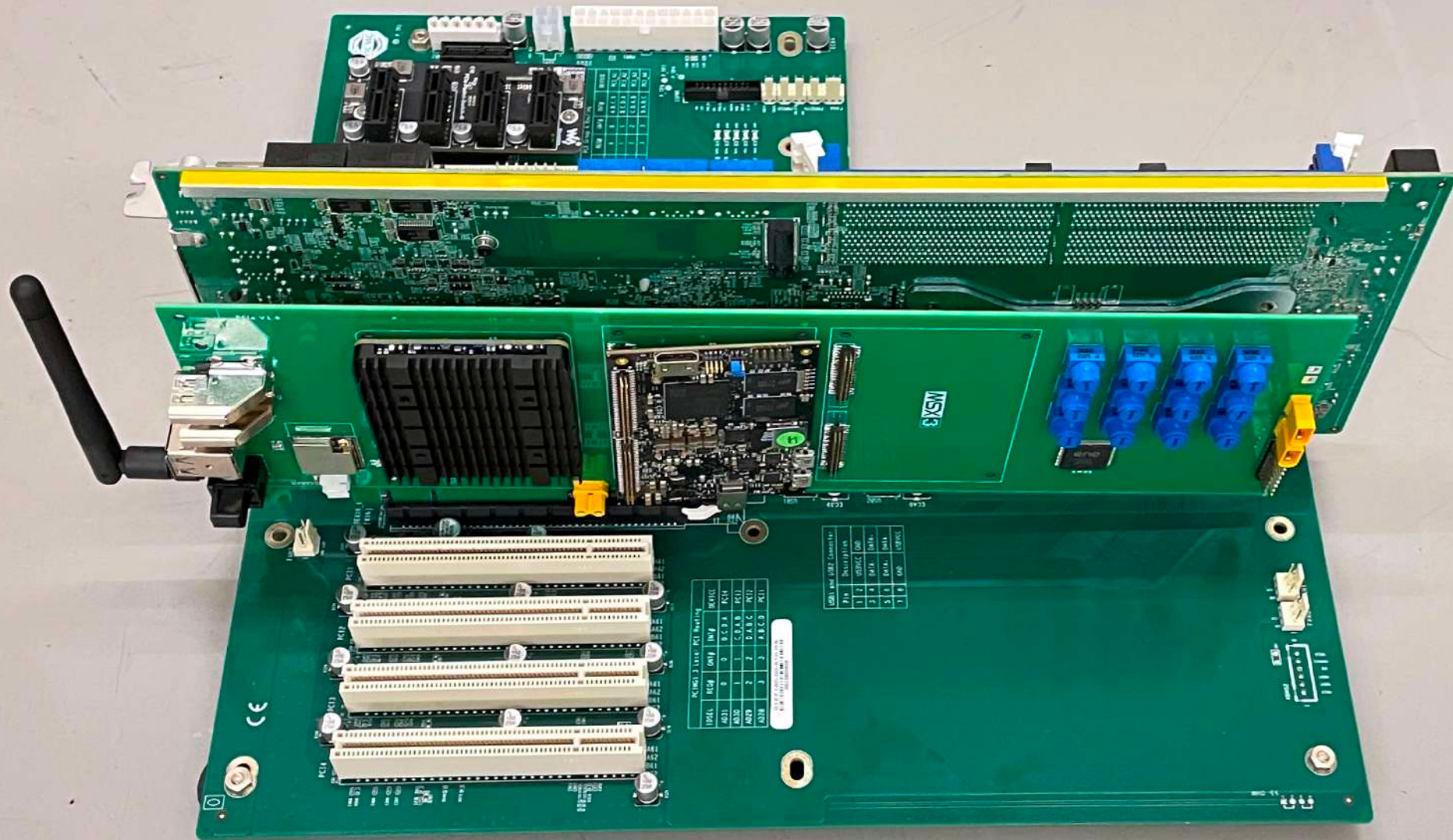
安い中古の GPU から、最高の GPU まで





GPU の追加は OcuLink コネクタで





Past Crowdfunding MSXIoT

- MSX0FACE2
 - MSX0Card
 - MSX0TAB5
 - MSX0Watch
-
- Official emulator for Windows
 - Official emulator for Android

MSX0StackFACE2 Big success



MSX Remote desktop update & HyperApps-MSX everywhere

- IP Address, Groupe ID
 - Anything
 - Basic program
 - game
- 





Next Crowdfunding (Worldwide)

- MSX0Mini and Cartridge Reader ³⁵⁵
- MSX0TAB5 and Cartridge Reader ³⁵⁶
- MSX0Laptop (upgradable to MSX3) ³⁵⁷
- MSX3Laptop (MSX0 with MSX3 engine) ³⁵⁸
- MSXDIY's desktop MSXCube

MSX0Tab5 P4 SoC very high spec.



High-performance System

Dual-core 400MHz

AI

AI Instruction
Extension

FPU

DSP

768KB
SRAM

64MB
PSRAM
(Optional)

55
Programmable
GPIOs

USB 2.0 OTC @480Mbps
Ethernet MAC @100Mbps
SDIO 3.0 I3C
.....

Full HD 1080P
MIPI-CSI & MIPI-DSI



Multi Camera
MIPI-CSI + DVP



Integrated ISP

Low-power System

Low-power 40MHz

Dedicated
Low-power
Peripherals

LP SPI, LP UART, LP I2C,
LP I2S, Touch Sensor



Independent
in **Deep-sleep**

32KB
LP SRAM

16KB
LP ROM



Security

DEV
Community

+ Wi-Fi 6
+ Thread/Zigbee

ESP32-P4

H.264 1080P @30fps

HMI

PPA
2D DMA

MIPI-DSI
RGB
18080

JPEG Decoding

MSX0Tab5 and Game Reader next Crowd-funding



最終パッケージ



MSX 0 TAB5 and Cartridge reader



- From Cartridge reader to MSX-DOS
 - Decided: .MSX
 - Decided: .SCX .SGX .GGX
 - Decided: .CVX .CAX
 - Not yet: .FCX .SFX .GBX
 - Not yet: .ATX .A2X .CDX .SSX
- Combine to TAB5 or M5Stack

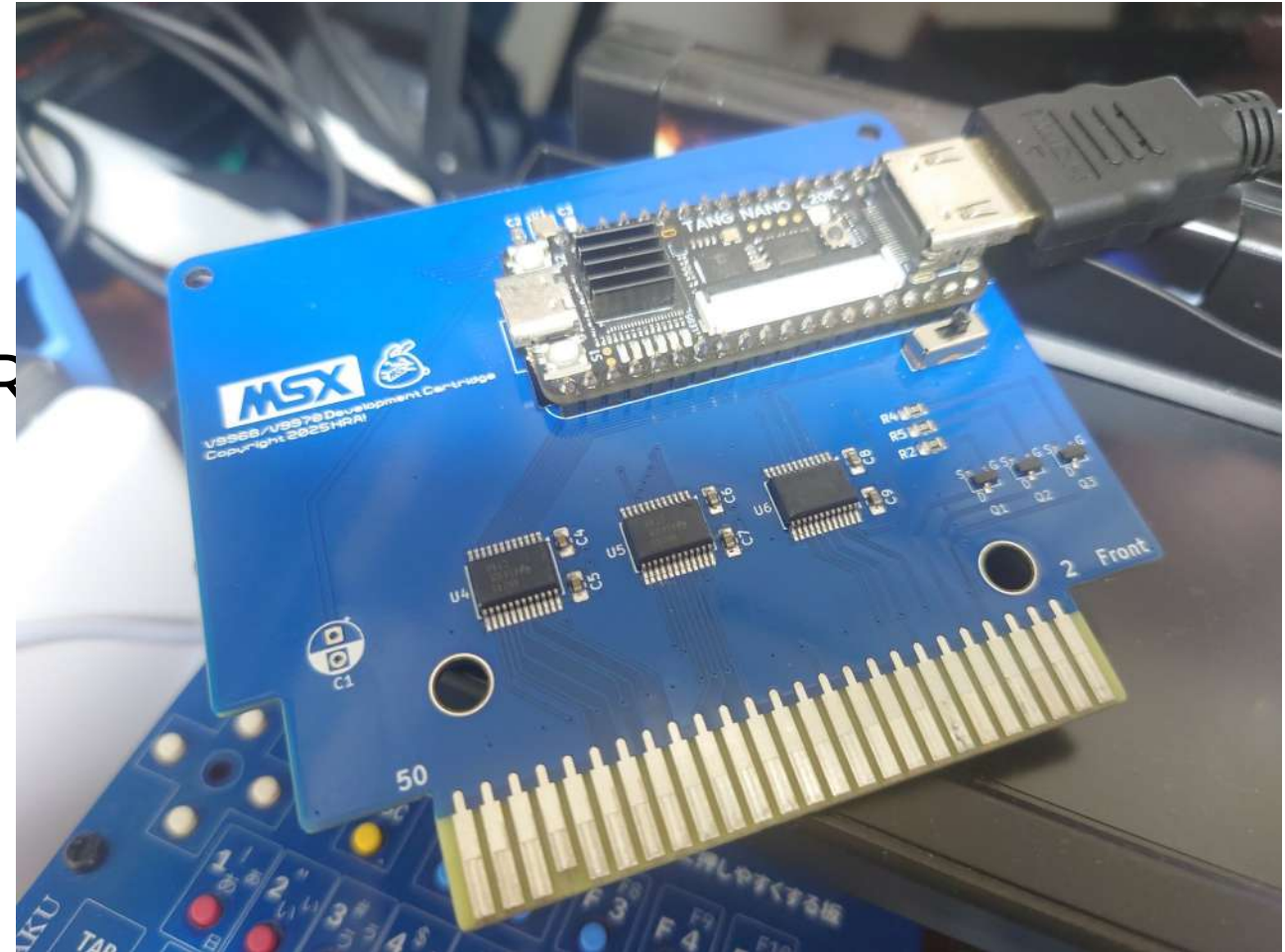
MSX0 TAB5





FPGA projects

- FPGA9968 MSX2 + +
- FPGA9978 MSXturboR



The last Z80(40MHz) or FPGA R80(85MHz)



SOUND

- FPGA8960

New Sound all FPGA

- GI PSG 8910
- MSX Audio Y8950
- MSX MUSIC
- TI Sound
- SCC



2026/1/14





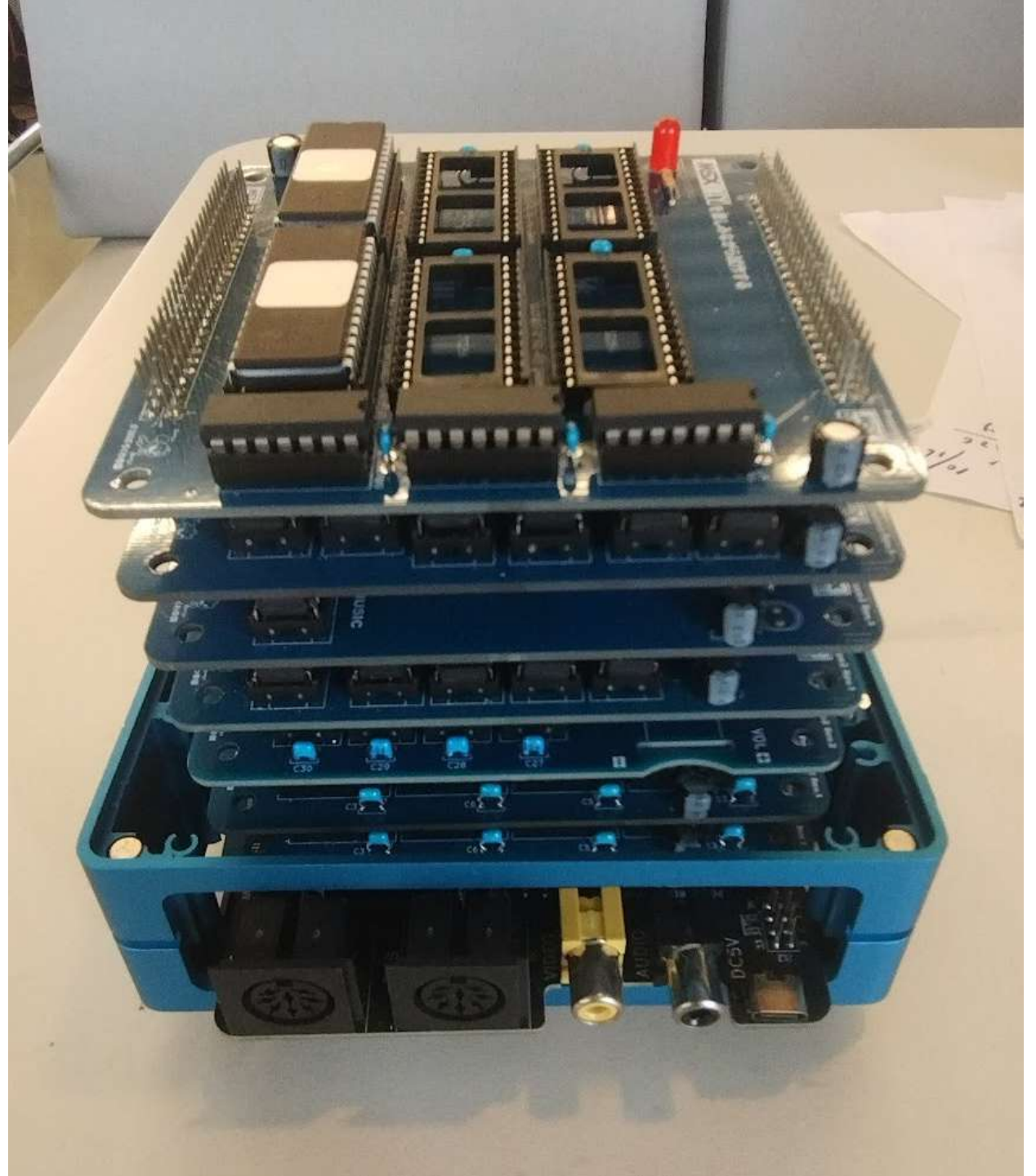
MSX Cube

ちくわさん

- DIY MSX platform



MSX100 bus stack





Portable MSX

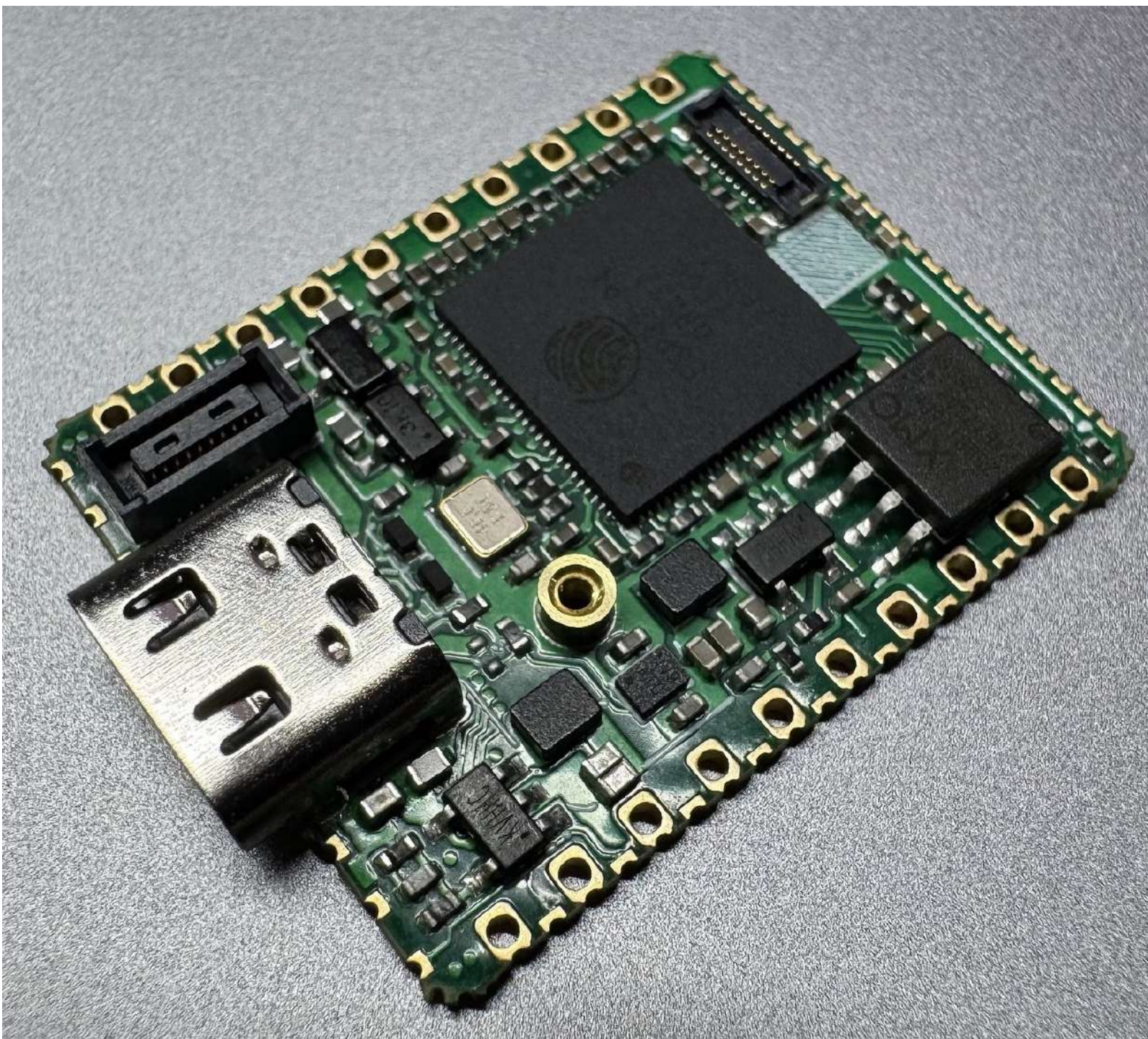


MSX0Mini



MSX0Card 2nd trial for crowdfunding.





High-performance System

Dual-core 400MHz

AI

AI Instruction Extension

FPU

768KB SRAM

DSP

64MB PSRAM (Optional)

Low-power System

Low-power 40MHz

Dedicated Low-power Peripherals

LP SPI, LP UART, LP I2C, LP I2S, Touch Sensor

Independent in Deep-sleep

32KB LP SRAM

16KB LP ROM

55 Programmable GPIOs

USB 2.0 OTC @480Mbps
 Ethernet MAC @100Mbps
 SDIO 3.0 I3C

ESP32-P4

Security

DEV Community

+ Wi-Fi 6 + Thread/Zigbee

Full HD 1080P

MIPI-CSI & MIPI-DSI

Multi Camera

MIPI-CSI + DVP

Integrated ISP

H.264

1080P @30fps

HMI

PPA

2D DMA

MIPI-DSI

RGB

18080

JPEG Decoding

Panasonic FSA1A



Sony HBF1XD



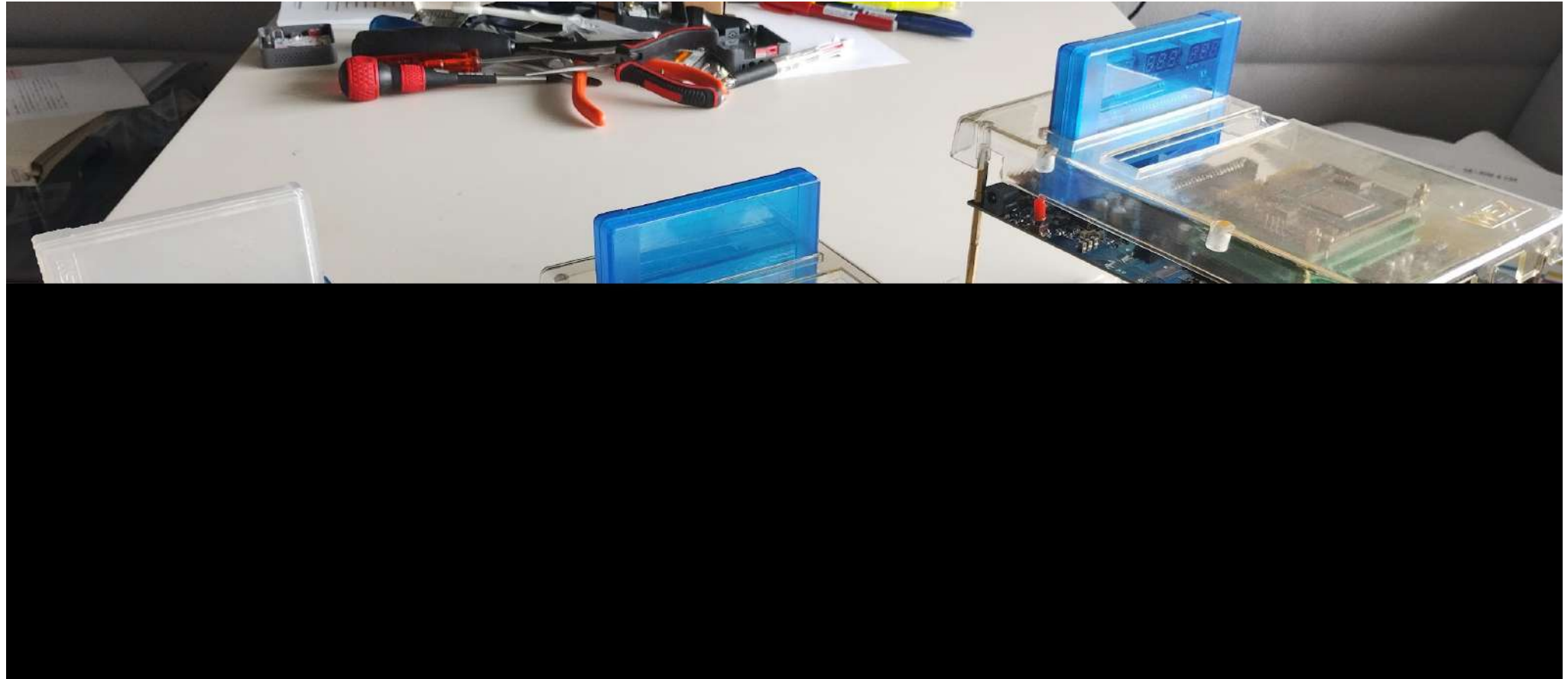
Philips VG8020



Spectravideo SVI328



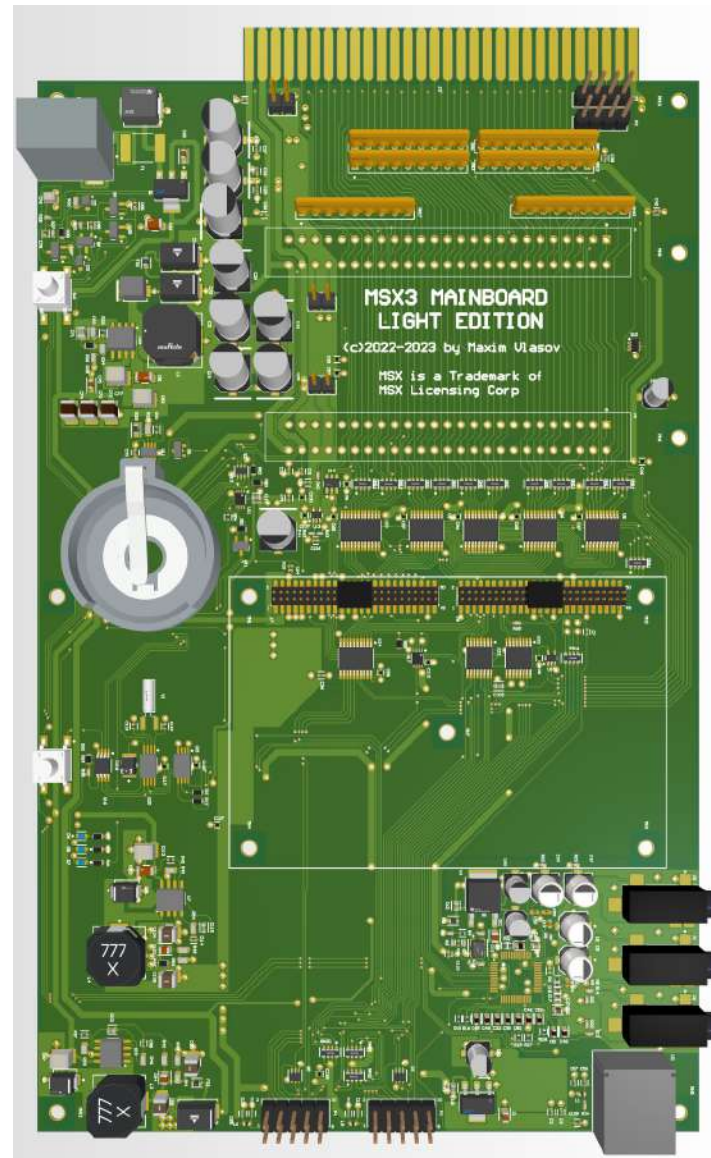
1 ChipMSX3



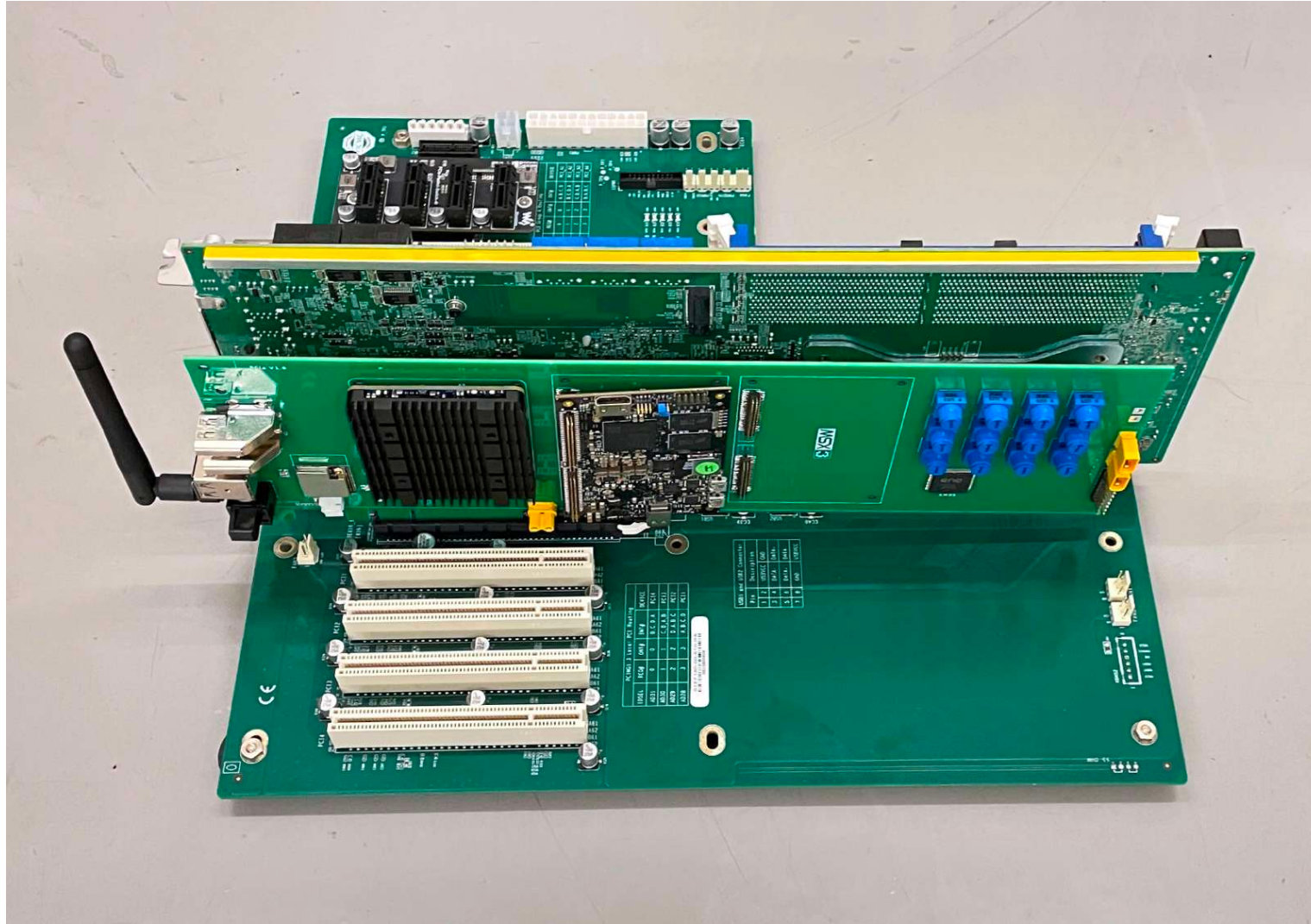
MSX Engine3



MSX3 MB

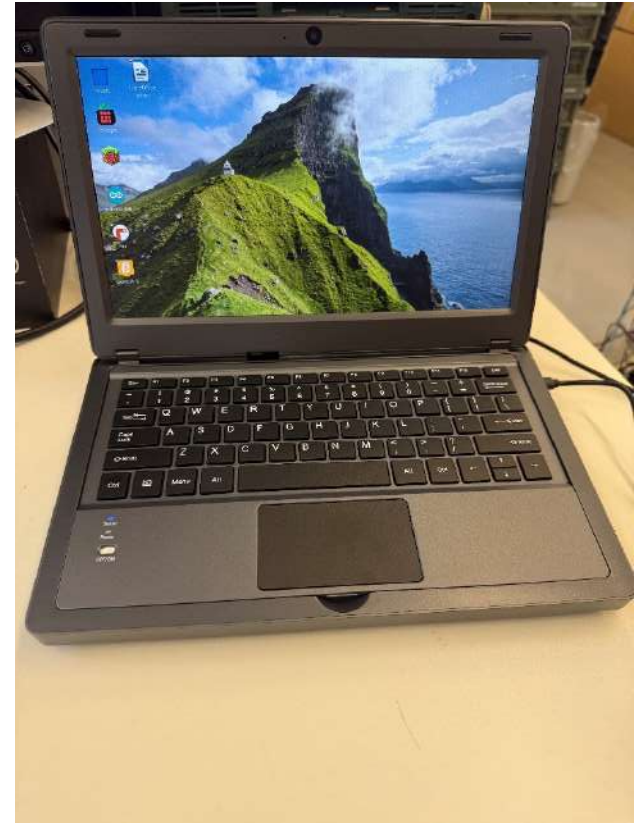


MSX3 PCIe for AI PC tower



MSX 0 Laptop can be MSX3 laptop

- FPGA-based, with a new case
- Built-in LTE and certified WiFi
- Will be upgradeable to MSX3



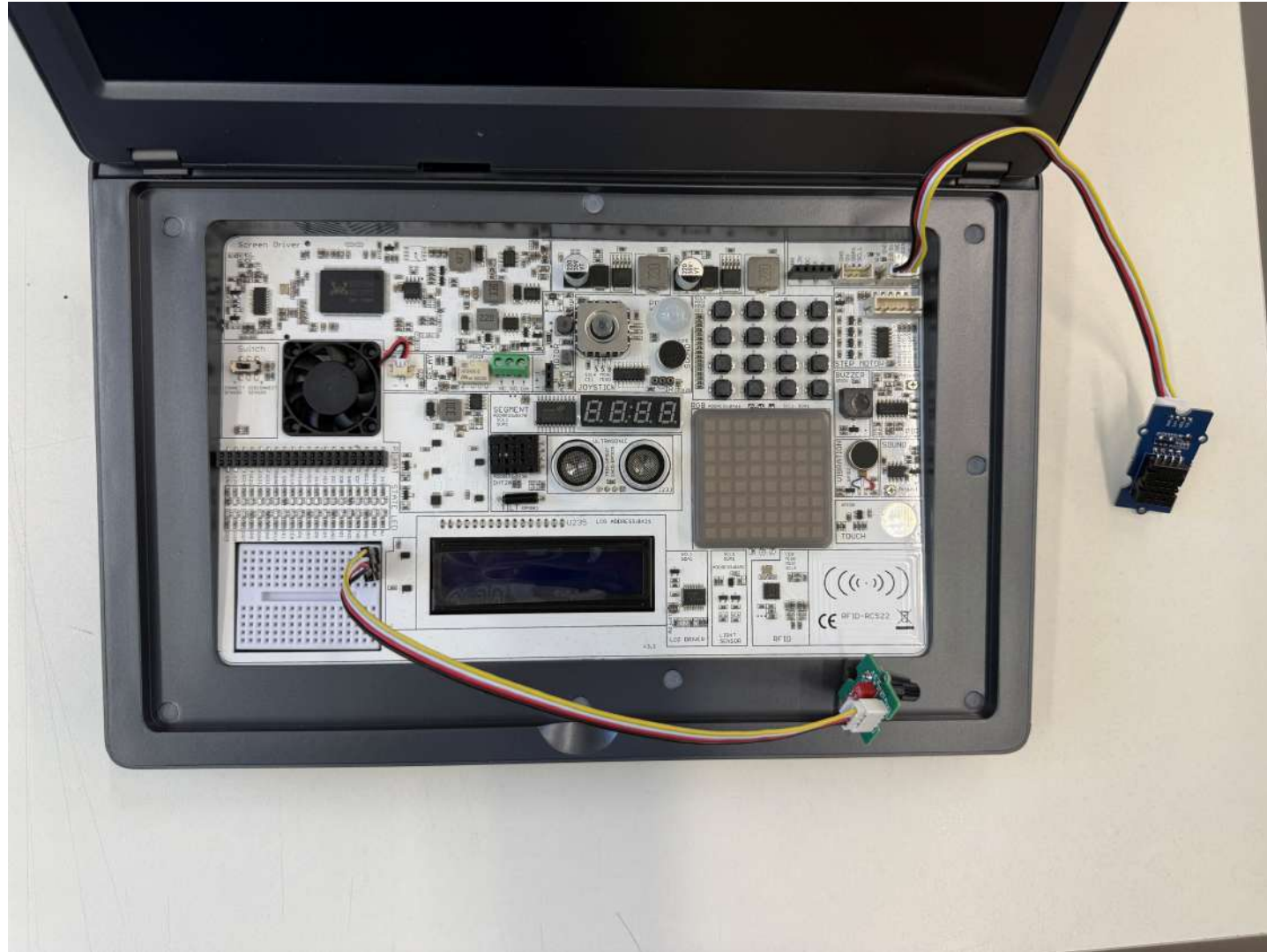
GrowPi2

Keyboard can be removed



GrowPi2

I2C connector, Breadboard, LED matrix and so on can be used



MSX Engine3



MSX3laptop!

Built-in MSX3-Engine



MSX3 Engine

Japan

- Test market new product idea.
- MSX2 + + , MSXturboR+ before MSX3.
- Offer MSX Boosters to many MSXs.
- Then MSX3.

EU senario

- Will sell in Spain, Holland, France, Italy
all the future MSX products
via Amazon and local net shop.
- Next will be UK and Germany.

North and South America entry senario

- Cant fight. Will co-exist.
- Shall include Commodore emulator?
- From MSX3 hardware.
- Brasil MSX Love.