

ORM PARSEC

Use Cases: Built on SystemReady For Provision, Onboarding and Device Lifecyle

Notes from 3 customer use cases and projects we have done*

Two Core Elements





Showcase full turn-key engagements



Typical customer profile (ICP)

What our customers ask

- Engineering is mostly siloed in decades of MCU developments, never changed platform
- Very vertical focused and is expected to innovation, existing offering is cannibalized by startups pop
- Cloud-native is very distant to customer
- Busy keeping the lights on
- Challenged with allot of moving parts across various tools and correct direction
- Reference images from ODM's are very buggy, not optimized and too big



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Use Cases

Where Security is concretely needed



- Product: (Lodging, Community, Rentals)
- Lodging and Hotel building access control (international groups)
- **Brownfield, existing and legacy** products must be supported over new edge device
- Edge Device that extends cloud compute
- High requirement in security (there business is security!)
- Requires flexibility (Supply chain, time to market, multi-vendor)
- Needs to move fast (client under pressure)
- Less Human Capital liability
- Placed requirement to build on SystemReady and PARSEC

Numbers:

- Year 2025 Onboarding:
 - **x150** units=/sites per month, ramping up to x500 in 6~9 months
 - x26500 deployments
- Edge device per hotel/building in campus,
- 500mil+ door registrations per year (key cuts they call it)
- First Scope is Greengrass v2 to manage device
- PARSEC to secure Greengrass + App Edge app
- Zero-touch provisioning a high-requirement
- MCU's later (e.g doors, encoders) in region of 150k~370k per year in sector







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AWS Greengrass + Device Qualified

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POC – Secure Lock application on Edge





Fresh Energy

- Product: GridDemand / Grid Flexibility
- GridController Solution critical load. demand-response
- OT Device, critical-infra, but need data in cloud (for modelling)
- Already using JAVA on edge device
- Security is critical in this application use case (Data Concentrator) sub-stations devices
- Focus on cloud-native and opensource
- Open to HyperScaler IoT Platforms
- Very open, want to move fast, POC example End of Year, next year MVP,
- But model's cost based on cost-sensitivity of Hardware and lack massively the level of software engineering ontop

In numbers

- Current focus: Switzerland market
- **2mil controllable** field switches (Boilers, heaters) *MCU based, connectivity over PowerLine, LAN and 4G*
- 54k substations/transformer stations /w GW device
- 6mil field devices (MCU+SBCs)
- Looking to expand EV charging stations vi API







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PARSEC

Product: Portal Measurment Scanner

- 7 product variations from this scanner and controller
- Challenges
- Lack of "real connected product"
- Trapped ecosystem, WinCE/Window Embedded 7 (deprecated)
- Wants to move to Linux/Yocto, but windows shop
- Build on OMAP TI, very old
- Customers are asking for modern stack

Good news:

- Strategic customer, 7 figure spend per year on a hyperscaler, management are on board with modernization
- Cloud-native team, but IoT/Device teams lacking huge knowledge linux and cloud-tools)
- Specifically asked for PARSEC, interested in SystemReady (but no valueProb)

Numbers:

- Largest market share in 3rd scanners in business
- 15k~25k USD device value
- **3000~5000** brownfield devices (single product line)
- More devices along other product lines
- More clarity on number of devices to come



SystemReady vi Customer ask

Weidmuller multi-vendor system builder example (linux based PLC)

- PLC's are largly vertical integrators(e.g motors, drives, IO blocks and PLC are all same vendor)
- Field buses are complicated but not impossible,
- End Customer wanted flexibility built in, (Drove the requirement)
- PLC logic starts to get more complicated business logic outside the typical (IEC 1131-3 can only go so far)
- Vendor was missing technical guidance and a technical strategy aligned with the industry



https://www.weidmueller.de/de/unternehmen/presse/fachpressemeldungen/plattformoffen_mit_u_os_any_hardware___any_soft ware___any_cloud.jsp

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Building Blocks

Common Typical Stack

- Make Best use of:
- Common HW/OS platform
- Decouple of HW and Hardware dependant software
- Based on AArch64, built natively in cloud
- Build on existing ecosystem (UEFI/EDK + SR)
- Multi-tenet secure element (vi PARSEC)
- Secure IoT Provisioning
- All asking for "quick win in security", GG+PARSEC opportunity





Secure PARSEC + Greengrass Deployment

- Inherits certification, device, lifecycle management from AWS (ACM/ Private CA)
- Customer/Custom Components allow (/w GG SDK) to build on MQTT and mTLS HTTP
- Can be building into as part of Internal SDK
- Uses Cloud-Native Components (PARSEC), (Containers, larger devices)



Next Steps

- Clear investment needed (open-source)
- Long-term view of sustainable open-source stack, but business value-prop can still be built on-top
- Partnerships that are not one-way, but 1:1
- We should aim for less market capitalization ontop of developer programs



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"you would have a secure banking app (CID) **migrated** before you have a secure boot+ provisioning and an app secured running on SR device*

same people, same knowledge, just allot of work to glue all this together with the developer tools

- Standards are only driving the opportunity
- Compliance drives the ask (where's SystemReady Compliance in our industry?)



Questions

Be nice ;)





"you would have the **bank migrated to cloud** before you would have **secured application running an edge device***

same people, same knowledge, just allot of work to glue all this together! With a weak developer tooling landscape today, still allot of opportunity to improve!

- Standards are only driving the opportunity
- Compliance drives the ask (customer requirements)

Dormakaba - Ambiance - Secure Use case

