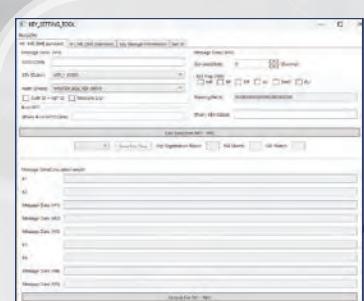
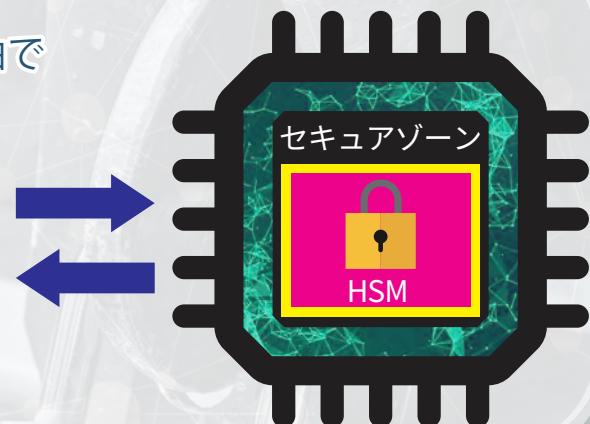


# HSM (Hardware Security Model) マイコン 鍵管理ツール (開発中製品)



シリアル /CAN FD 経由で  
鍵データを書き込み



## HSM 導入をもっと簡単に - 鍵管理の課題を解決

### HSM 対応の 安全な鍵書き込み

マイコンの HSM へ  
直接鍵データを書き込み。  
専用ツールで高い安全性と  
効率を提供します。

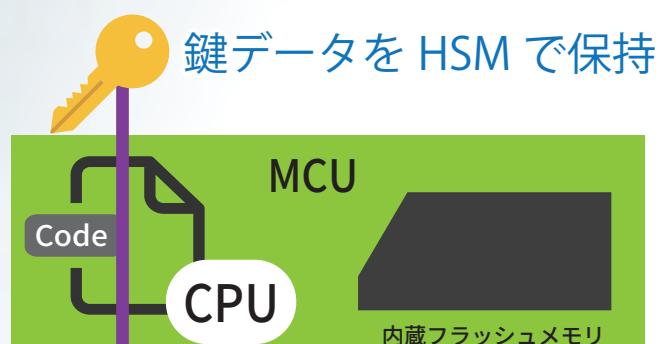
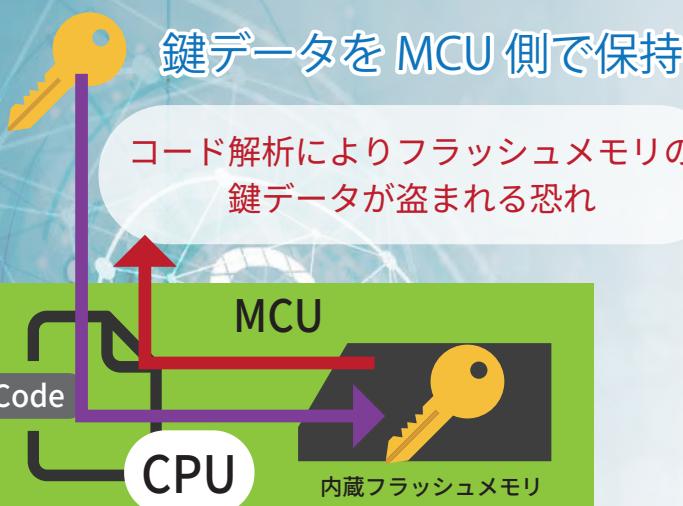
### 鍵データの一元管理

鍵データを GUI で集中管理、  
ステータスを可視化。  
ECU ごとの情報記録で  
品質管理にも活用可能です。

### 簡単操作で 導入ハードル軽減

ユーザーフレンドリーな  
GUI で専門知識が不要。  
技術負担を抑え、HSM の  
導入を支援します。

## HSM 使用による鍵データ保存の違い



HSM は独立構造で鍵データの  
直接読み出しを防止



HSM は専用ロジックと内部に  
鍵データ保持用のフラッシュメモリを搭載。  
鍵データは直接読み書き出来ない仕組み。

# RL78/F24 マイコン対応鍵管理ツール

## 鍵書き込み環境がすぐに揃うセット構成



鍵書き込み管理  
GUI アプリケーション



MicroPeckerX  
(CAN/CAN FD 送信)

HSM 鍵書き込みファームウェア  
(CAN ドライバ搭載)

※AESEA Sample Security Driver は  
ルネサスエレクトロニクス社から提供



RL78/F24 ボード  
《S810-CXG5》

### 鍵データ書き込み機能

- ・鍵の書き込み (共通鍵)
- ・鍵の消去
- ・Secure Boot for LOADER KEY と MAC の登録
- ・KEY\_STORAGE の初期化
- ・PlainKey から SHE の Update Protocol Data 生成
- ・SHE の拡張機能に対応

### 鍵データ管理機能

KEY Name	KEY ID	KEY Name	Length	KEY Storage Information							
				KEY Type	KEY Mag	KEY Ang	KEY Dir	KEY Temp	KEY Hum	KEY Pres	KEY Acc
KEY1	KEY1_ID	KEY1	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY2	KEY2_ID	KEY2	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY3	KEY3_ID	KEY3	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY4	KEY4_ID	KEY4	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY5	KEY5_ID	KEY5	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY6	KEY6_ID	KEY6	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY7	KEY7_ID	KEY7	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY8	KEY8_ID	KEY8	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY9	KEY9_ID	KEY9	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY10	KEY10_ID	KEY10	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY11	KEY11_ID	KEY11	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY12	KEY12_ID	KEY12	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY13	KEY13_ID	KEY13	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY14	KEY14_ID	KEY14	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY15	KEY15_ID	KEY15	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY16	KEY16_ID	KEY16	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY17	KEY17_ID	KEY17	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY18	KEY18_ID	KEY18	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY19	KEY19_ID	KEY19	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY20	KEY20_ID	KEY20	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY21	KEY21_ID	KEY21	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY22	KEY22_ID	KEY22	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY23	KEY23_ID	KEY23	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY24	KEY24_ID	KEY24	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY25	KEY25_ID	KEY25	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY26	KEY26_ID	KEY26	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY27	KEY27_ID	KEY27	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY28	KEY28_ID	KEY28	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY29	KEY29_ID	KEY29	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY30	KEY30_ID	KEY30	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY31	KEY31_ID	KEY31	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY32	KEY32_ID	KEY32	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY33	KEY33_ID	KEY33	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY34	KEY34_ID	KEY34	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY35	KEY35_ID	KEY35	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY36	KEY36_ID	KEY36	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY37	KEY37_ID	KEY37	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY38	KEY38_ID	KEY38	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY39	KEY39_ID	KEY39	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY40	KEY40_ID	KEY40	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY41	KEY41_ID	KEY41	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY42	KEY42_ID	KEY42	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY43	KEY43_ID	KEY43	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY44	KEY44_ID	KEY44	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY45	KEY45_ID	KEY45	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY46	KEY46_ID	KEY46	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY47	KEY47_ID	KEY47	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY48	KEY48_ID	KEY48	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY49	KEY49_ID	KEY49	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY50	KEY50_ID	KEY50	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY51	KEY51_ID	KEY51	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY52	KEY52_ID	KEY52	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY53	KEY53_ID	KEY53	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY54	KEY54_ID	KEY54	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY55	KEY55_ID	KEY55	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY56	KEY56_ID	KEY56	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY57	KEY57_ID	KEY57	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY58	KEY58_ID	KEY58	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY59	KEY59_ID	KEY59	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY60	KEY60_ID	KEY60	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY61	KEY61_ID	KEY61	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY62	KEY62_ID	KEY62	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY63	KEY63_ID	KEY63	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY64	KEY64_ID	KEY64	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY65	KEY65_ID	KEY65	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY66	KEY66_ID	KEY66	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY67	KEY67_ID	KEY67	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY68	KEY68_ID	KEY68	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY69	KEY69_ID	KEY69	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY70	KEY70_ID	KEY70	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY71	KEY71_ID	KEY71	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY72	KEY72_ID	KEY72	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY73	KEY73_ID	KEY73	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY74	KEY74_ID	KEY74	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY75	KEY75_ID	KEY75	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY76	KEY76_ID	KEY76	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY77	KEY77_ID	KEY77	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY78	KEY78_ID	KEY78	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY79	KEY79_ID	KEY79	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY80	KEY80_ID	KEY80	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY81	KEY81_ID	KEY81	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY82	KEY82_ID	KEY82	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY83	KEY83_ID	KEY83	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY84	KEY84_ID	KEY84	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY85	KEY85_ID	KEY85	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY86	KEY86_ID	KEY86	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY87	KEY87_ID	KEY87	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY88	KEY88_ID	KEY88	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY89	KEY89_ID	KEY89	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY90	KEY90_ID	KEY90	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY91	KEY91_ID	KEY91	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY92	KEY92_ID	KEY92	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY93	KEY93_ID	KEY93	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY94	KEY94_ID	KEY94	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY95	KEY95_ID	KEY95	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY96	KEY96_ID	KEY96	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY97	KEY97_ID	KEY97	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY98	KEY98_ID	KEY98	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY99	KEY99_ID	KEY99	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY100	KEY100_ID	KEY100	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY101	KEY101_ID	KEY101	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY102	KEY102_ID	KEY102	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY103	KEY103_ID	KEY103	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY104	KEY104_ID	KEY104	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY105	KEY105_ID	KEY105	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY106	KEY106_ID	KEY106	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY107	KEY107_ID	KEY107	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY108	KEY108_ID	KEY108	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY109	KEY109_ID	KEY109	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY110	KEY110_ID	KEY110	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY111	KEY111_ID	KEY111	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY112	KEY112_ID	KEY112	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY113	KEY113_ID	KEY113	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY114	KEY114_ID	KEY114	1024	✓	✓	✓	✓	✓	✓	✓	✓
KEY115	KEY115_ID	KEY115	1024	✓	✓	✓	✓	✓			