FREEMASTER 3.0

EDGE PROCESSING & AUTOMOTIVE PROCESSING

SOFTWARE TOOLS & ENGINEERING

January 2020

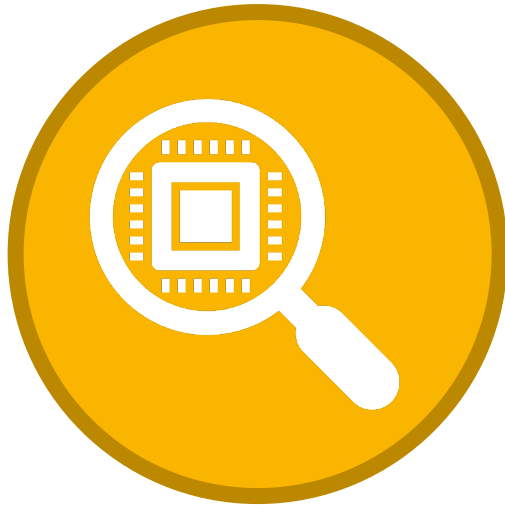SECURE CONNECTIONS
FOR A SMARTER WORLD

FreeMASTER

Real-Time Data Visualization Tool

Debug and tune *embedded algorithms during* ***development***
Use ***visual widgets*** *to* ***monitor and demo*** *final embedded applications*

Monitor

Watch target application variables in real time at individual sampling rates

Visualize

Use built-in charts or create custom controls for complex dashboards and interactive demos
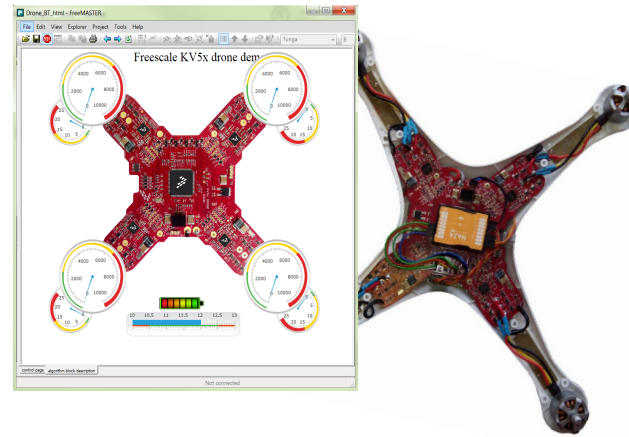
Control

*Tune variables values and send commands to the hardware*

Example Applications

· *Real-time visualization of system output*

· *Prototyping complex data visualization HMIs*

· *Automated, script-based control systems*

· *Sensor processing*

· *Motor control parameter tuning*

· *Display and tuning*

· *Sensor processing*

· *Wireless charging control and configuration UI*

· *Tuning of touch-sensing HMIs*

· *Drone control development*
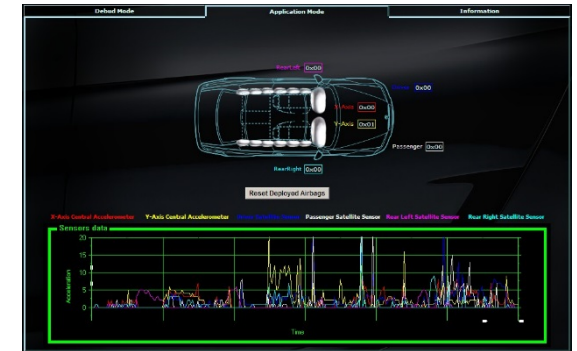
· *Reliability monitoring data analysis and display*

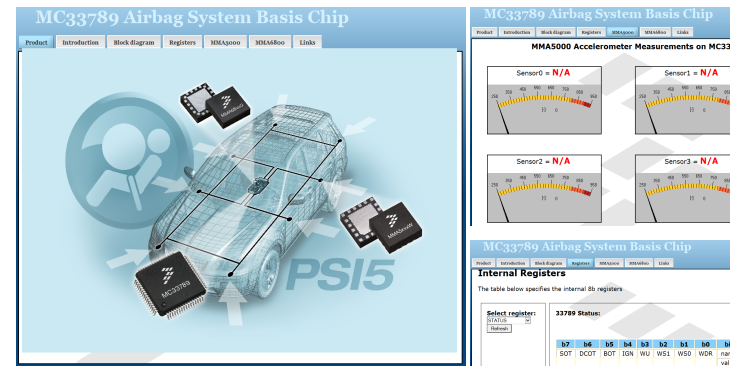**Drone Demo**

eTPU Engine Control
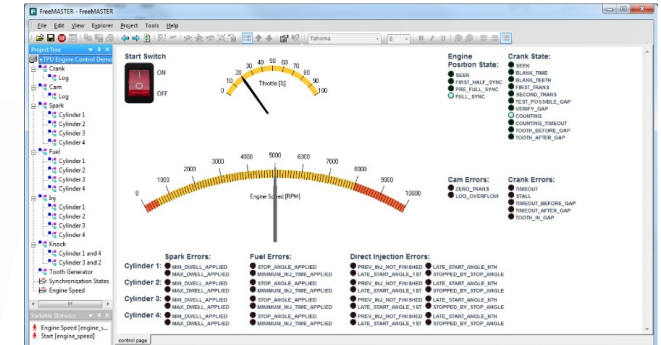
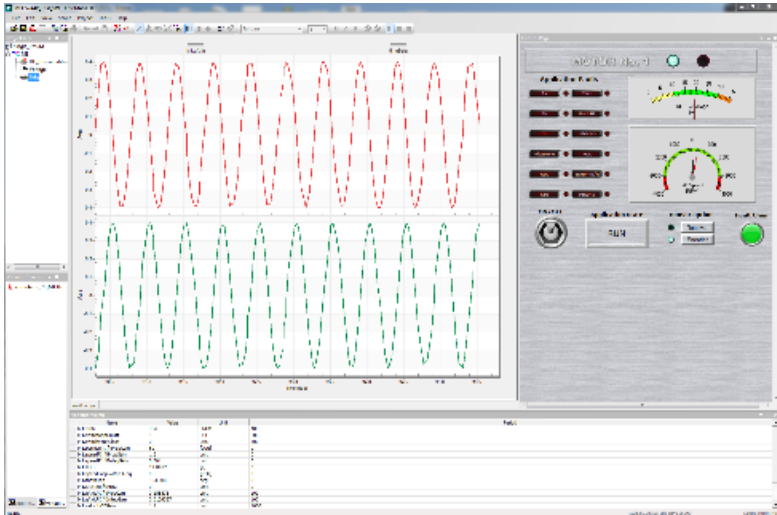**Airbag Reference Design**

Sensor Rapid Evaluation Tool

Easy to Use and Flexible

HOST PC	COMMUNICATION LAYER	NXP OR CUSTOMER BOARD

FreeMASTER 3.0

- *Communication library & plug-ins*
- *Windows native charts, table views*
- *Integrated IE 11 and Chromium*
- *Light weight service with JSON-RPC API*

Ixxat BY HMS NETWORKS 吉陽光電 GLINKER ZLG PEAK System

NATIONAL INSTRUMENTS KVASER

ARM mbed SEGGER PE micro

Embedded application

FreeMASTER Communication Driver (minimal changes to application)

← UART / USB-CDC →

Plain serial line or on board USB port

← USB to CAN →

USB to CAN convertor

← JTAG / SWD →

Debug probes

NXP
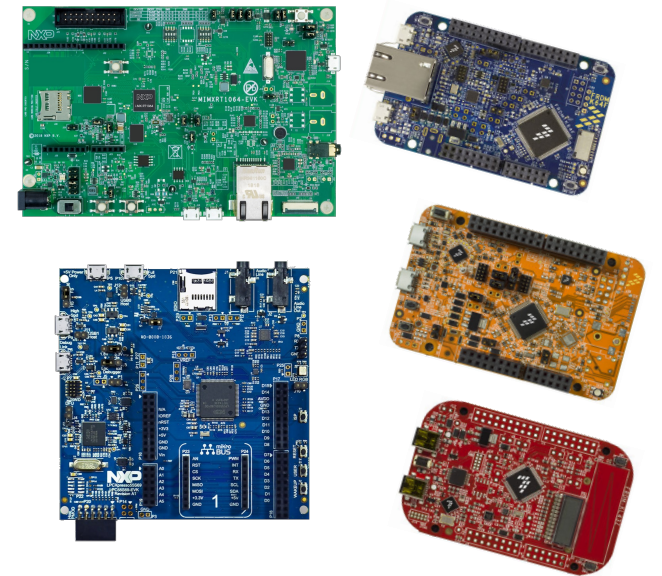
Feature Rich

Features:

· *Graphical environment with easy-to-understand navigation*

· *Wide range of **serial and debug probe** connectivity options*

· *FreeMASTER Lite service enabling **remote access** to target system*

· *Interfacing to 3rd party applications using ActiveX or JSON-RPC API*

· ***Non-intrusive real-time** access to application variables*

· ***Visualization** of real-time data in the scope window*

· *Acquisition of fast data changes using the **on-target recorder***

· *Demo mode with **password protection** support*

· *Communication **diagnostics and logging***

· *Integration with NXP tools ecosystem: ready to use examples inside*

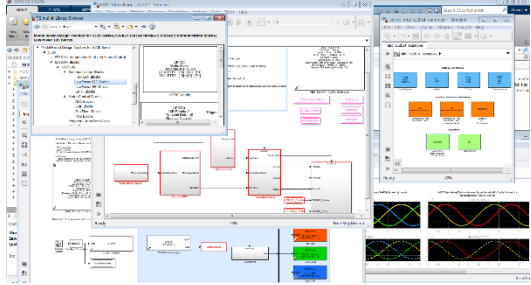 *MCUXpresso SDK, Model-Based Design Toolboxes and S32 Design Studio*
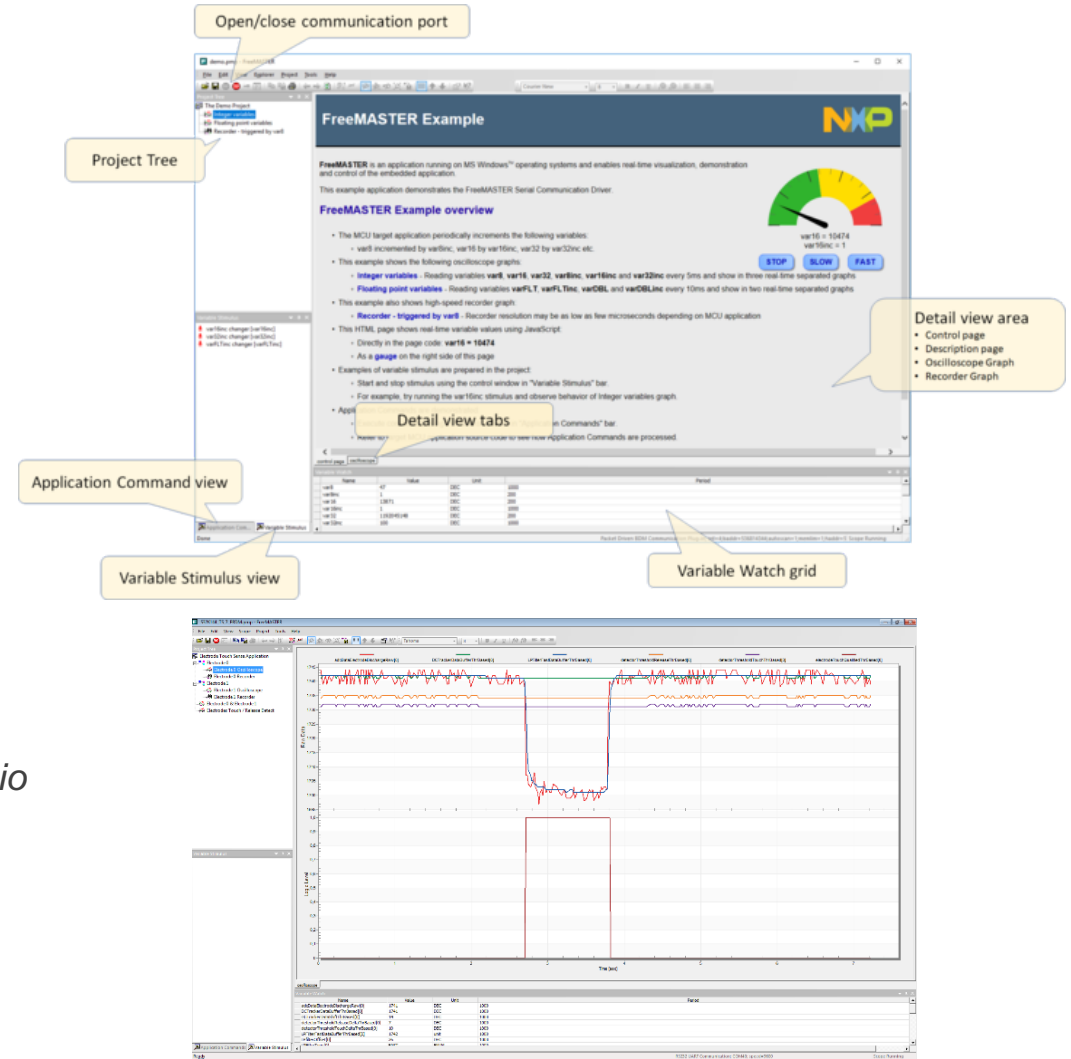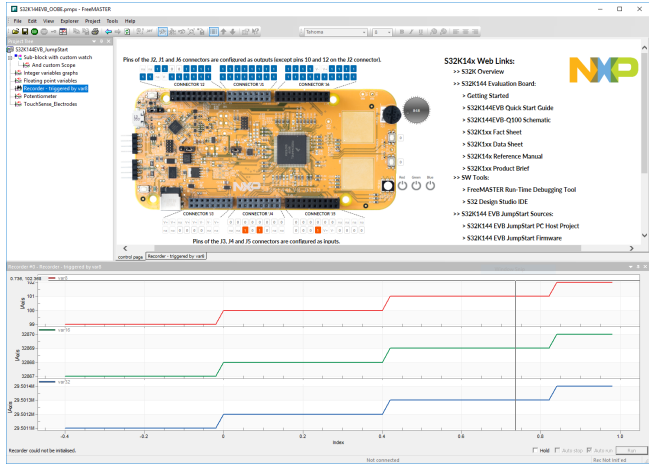
Ecosystem Support

DEVELOP	DEPLOY	VISUALIZE

Mode Based Design Toolbox

Code Generation From Model Based Design Toolbox

MCUXpresso / S32 Design Studio
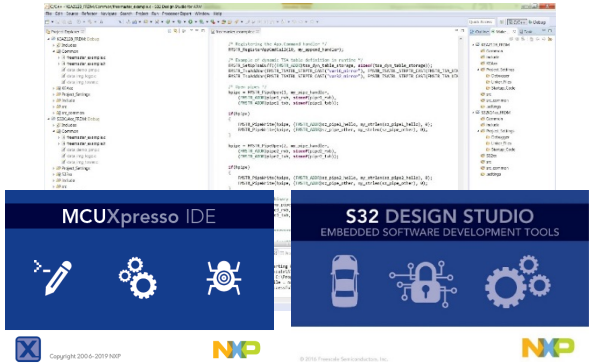
Generate Simple Models Based on SDK

EDGE / AP Evaluation Kits

S32K144
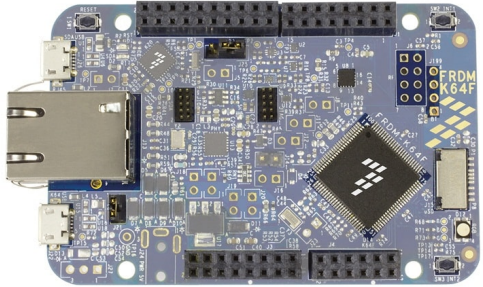
General Purpose Arm Cortex-M based MCUs

FreeMASTER

Load FreeMASTER project for demo, fine tuning or validation of the embedded application

FreeMASTER

Market leading data visualization and control from NXP

✓ *Unique NXP technology*

✓ *Graphical environment with easy-to-understand navigation*

✓ *Wide range of serial and debug probe connectivity options*

✓ *Enables HMI design enablement*

✓ *Real-time access to application variables*

✓ *Model Based Design Toolbox, MCUXpresso and S32 Design Studio integration*

✓ *Ready to use examples*

✓ *Free of charge*

Useful Links

NXP website:
Documentation & Downloads

Engineering Community:
Examples and Support

nxp.com/freemaster

community.nxp.com/community/freemaster

ASK YOUR QUESTIONS!