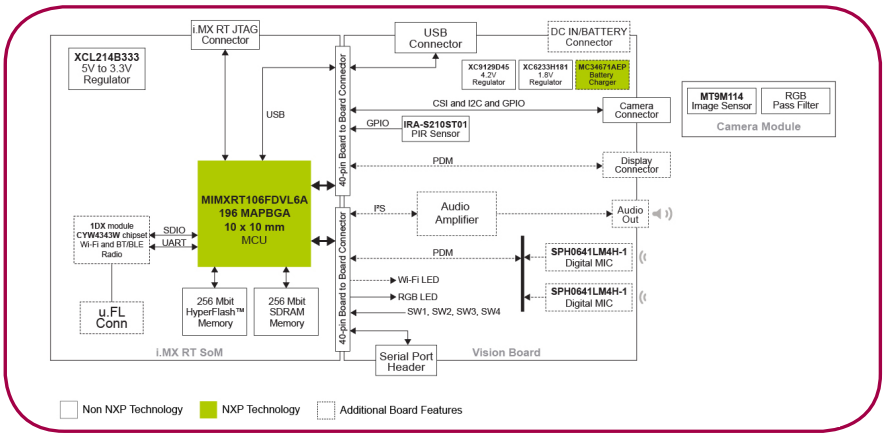
i.MX RT106F VISION CROSSOVER PROCESSOR OVERVIEW

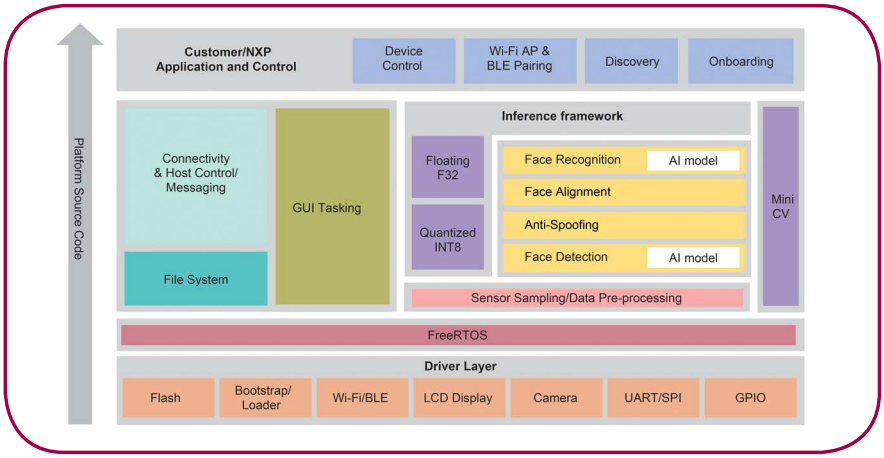
The i.MX RT106F is an EdgeReady member of the i.MX RT1060 family of crossover MCUs, targeting low cost embedded face recognition applications. It features NXP's advanced implementation of the Arm® Cortex®-M7 core, which operates at speeds up to 600 MHz to provide high CPU performance and real-time response. In addition to the face recognition capability, the i.MX RT106F has plenty of horsepower and peripherals, making it suitable to be the main processor in many applications. The i.MX RT106F processor is licensed to run NXP's OASIS run-time library for face recognition which includes:

- Camera drivers
- Image capture
- Image pre-processing
- Face detection
- Face tracking
- Face alignment
- Face recognition
- Face provisioning
- Confidence measuring
- Face recognition quantified results
- Built-in security
- Connectivity

FACE RECOGNITION HARDWARE



FACE RECOGNITION SOFTWARE BLOCK DIAGRAM



PART NUMBERS

PART NUMBER	DESCRIPTION	FEATURES	DIMENSIONS
SLN-VIZN-IOT	MCU-based Friction Free Interface solution evaluation and development kit	Out-of-box evaluation and protoyping for face recognition solutions including: • i.MX RT106F crossover processor • 802.11 b/g/n Wi-Fi • Bluetooth/Bluetooth LE 4.2 • Digital MEMS microphones (x2) • Audio amplifier (Optional) • MC3461 Battery Charger • PCAL6524EV I/O Expander • FXOS8700CQ Motion Sensor (Optional) • PIR Sensor	50 x 40 mm
MIMXRT106FDVL6A	i.MX RT106F Vision crossover processor	• 600 MHz Arm® Cortex®-M7 MCU with complete voice solution software • 1 MB On-chip RAM	10 x 10 mm 0.65 mm pitch 196-pin MAPBGA
PCAL6524EV (Optional)	Ultra-low-voltage I/O expander	• I²C-bus to parallel port expander • 1 MHz Fast-mode Plus I²C-bus • Operating power supply voltage range of 0.8 V to 3.6 V on the I²C-bus side • Allows bidirectional voltage-level translation and GPIO expansion between 0.8 V to 3.6 V SCL/SDA and 1.8 V, 2.5 V, 3.3 V, 5.5 V Port P • Low standby current consumption: 2.0 µA typical at 3.3 V VDD(P)	5 x 5 x 0.56 mm
FXOS8700CQ (Optional)	Digital Motion Sensor Accelerometer	• Wide dynamic range ±1200 µT • Embedded vector magnitude detection • Embedded autonomous hard iron calibration • Low-power consumption • Embedded autonomous hard iron calibration	3 x 3 mm

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