

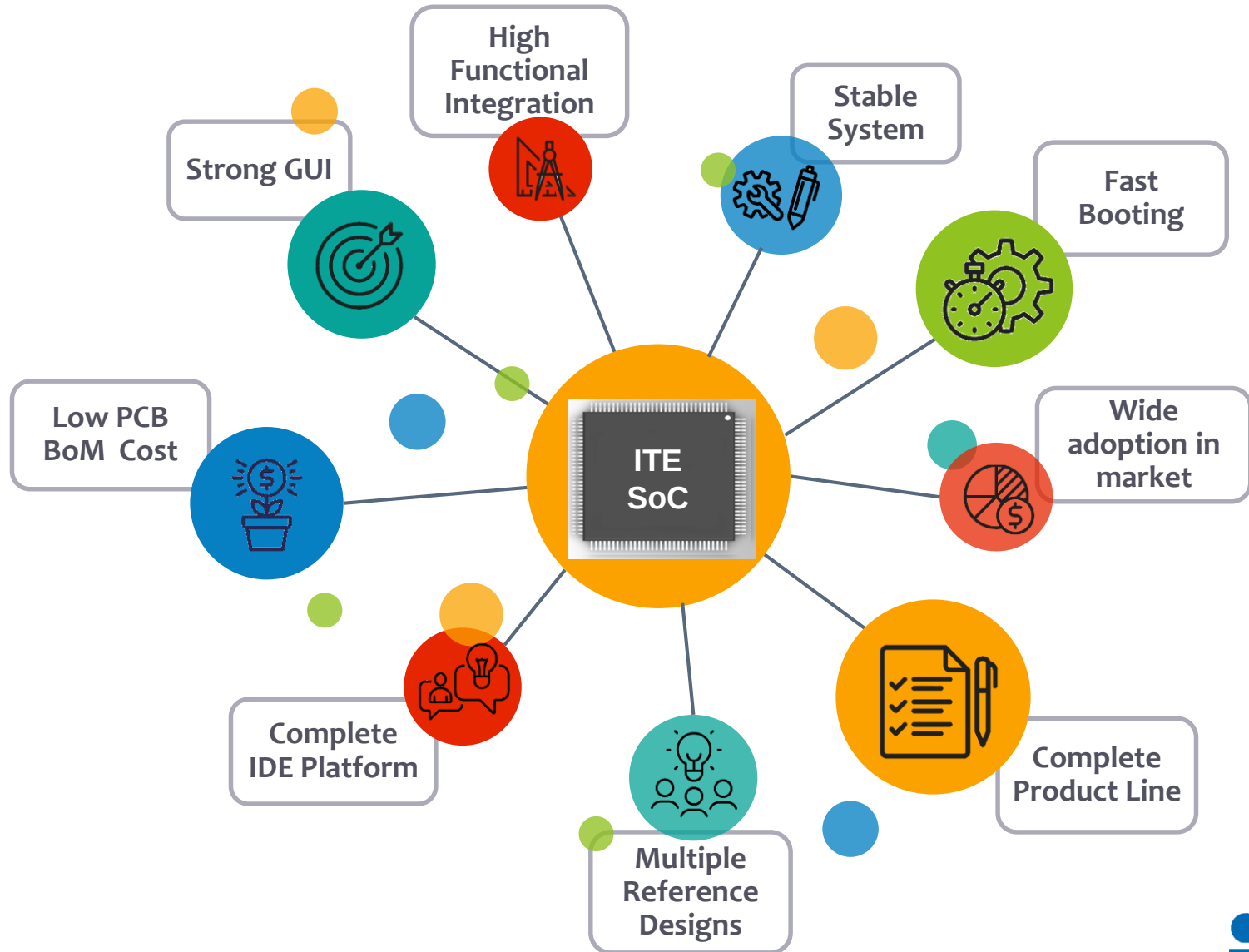
Introduction to ITE SoC Platform

SoC: System on chip

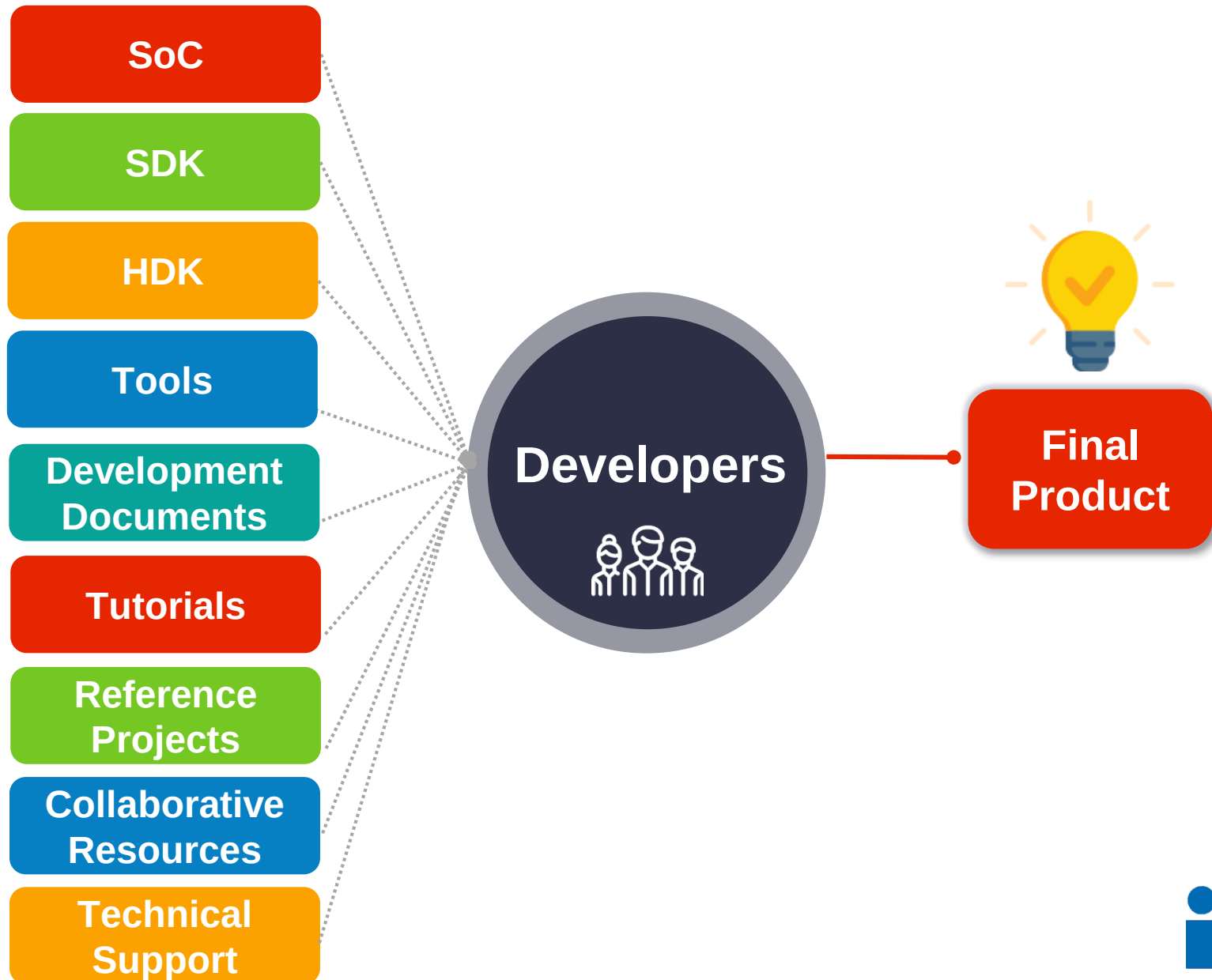
IDE: Integrated Development Environment



ITE SoC Product Line Features



ITE SoC Developer Resources



ITE SoC (Industrial Grade) Roadmap

Function

MP
ES
In Dev.
Planning

IT97x series

IT978

- . ARM926 CPU 800MHz
- . Dual RISC 300MHz
- . H.264 Video CODEC
- . Graphic Engine
- . RGB/ MIPI/ LVDS/ CPU
- . Two USB ports
- . Boot ≈1 sec
- . 128 pins LQFP

IT986x series

IT9866
IT9868

- . Dual ARM926 CPU
- . Main CPU 800MHz
- . H.264 Video Decoder
- . Audio CODEC
- . Graphic Engine
- . RGB/ MIPI/ LVDS/ CPU
- . CAN Bus Controllers
- . Boot ≈1 sec
- . 128 pins LQFP

IT983x series

IT9832
IT9836

- . Dual RISC-V CPU
- . Main CPU 500MHz
- . Graphic Engine
- . MIPI/ RGB/ CPU/ SPI/ LVDS
- . Audio DAC, DMIC
- . CAN Bus Controllers
- . Boot ≈ 1 sec
- . 76 pins QFN

IT988x series

IT988x

- . Dual 1GHz RISC-V CPU

2018

2019

2020

2021

2022

2023

2024

2025

Time

ITE SoC (Automotive Grade) Roadmap

Function

MP
ES
In Dev.
Planning

IT9866-AT
IT9868-AT

- . AEC Q100
- . Dual ARM926 CPU
- . Main CPU 800MHz
- . Second CPU 400MHz
- . H.264 Video Decoder
- . Audio CODEC
- . Graphic Engine
- . RGB/ MIPI/ LVDS/ CPU
- . Two FD CAN Bus Controllers
- . Boot $\approx$ 1~2 sec
- . 128 pins LQFP

IT9836-AT

- . AEC Q100
- . Dual 500MHz RISC-V CPU
- . Graphic Engine
- . MIPI/ RGB/ CPU/ SPI/ LVDS
- . Audio DAC, DMIC
- . FD CAN Bus Controller
- . Boot $\approx$ 1 sec
- . 76 pins QFN

IT988x-AT

- . Dual 1GHz RISC-V CPU
- . AEC Q100
- . ASIL-B

2021

2022

2023

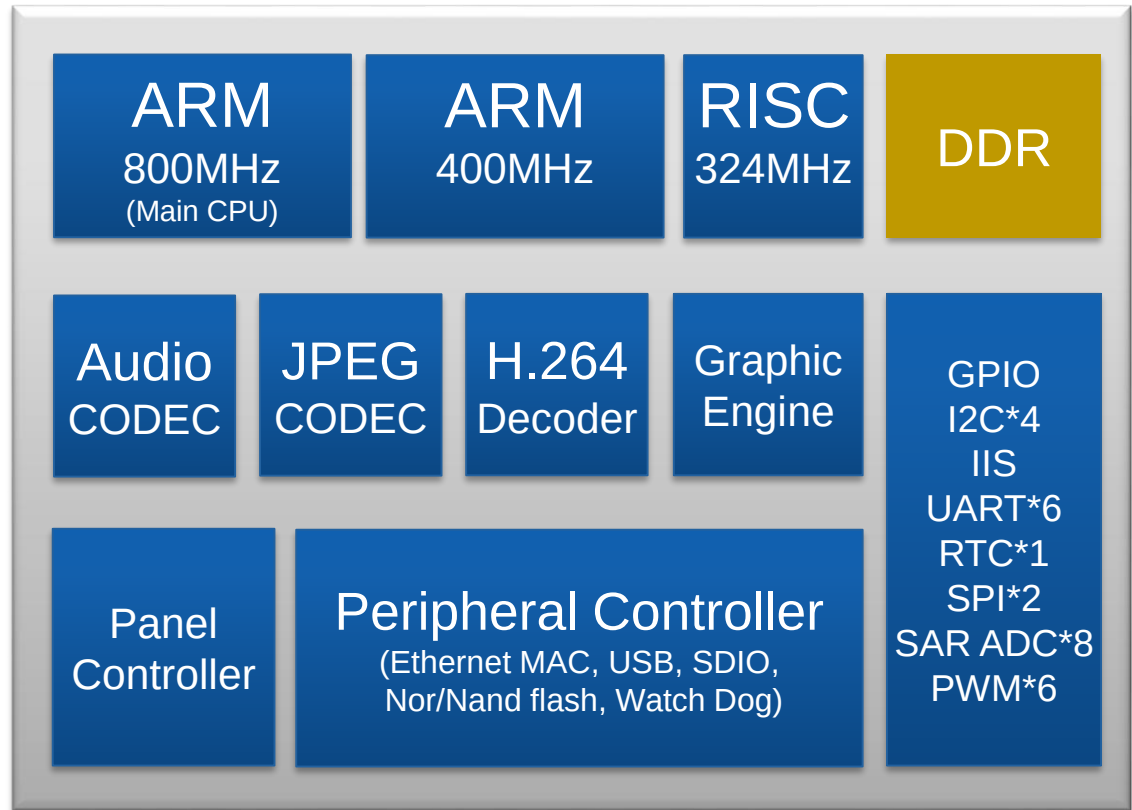
2024

2025

Time

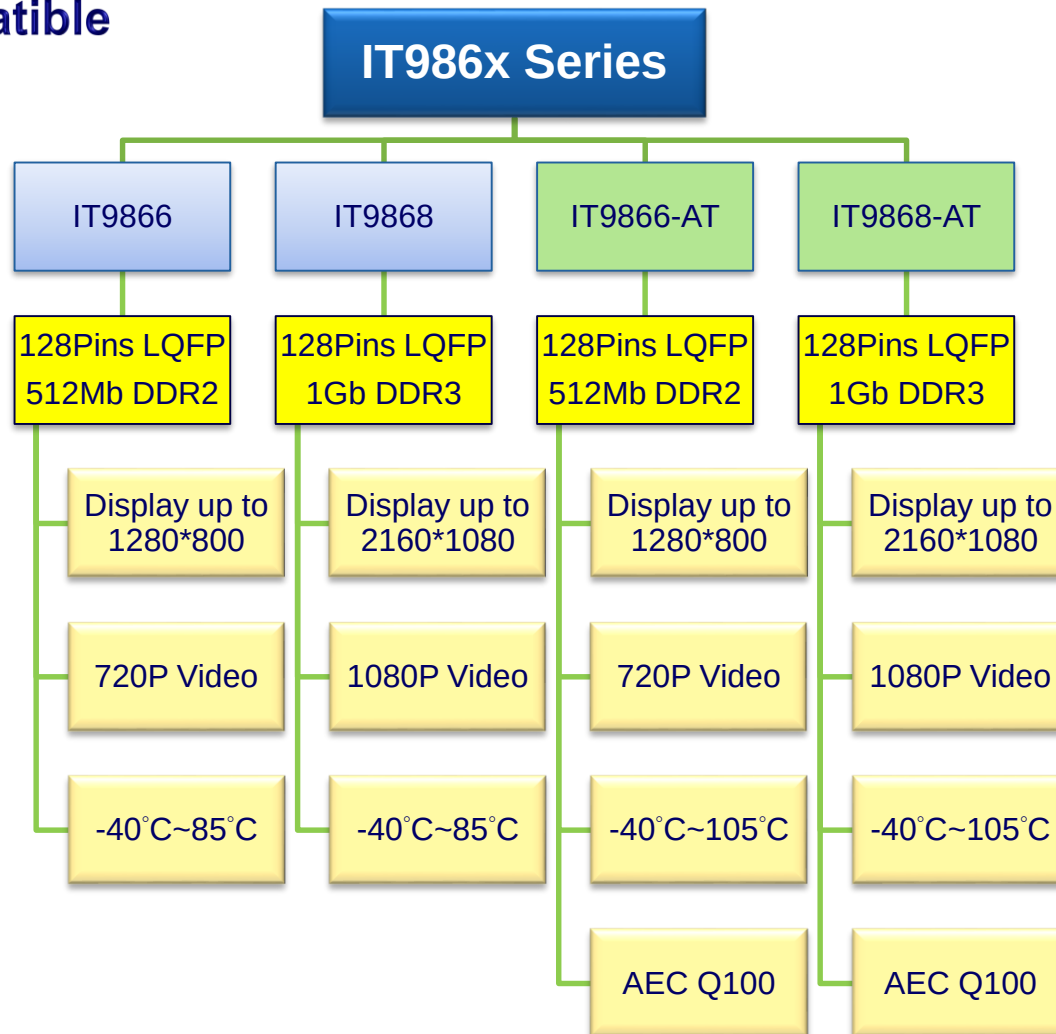
IT986x Function Block

- Dual ARM CPU
- Main CPU 800MHz
- H.264 Decoder Up to 1080P
- Panel Interface:
RGB/ MIPI/ LVDS/
CPU
- Panel resolution up to
2160*1080
- Graphic Engine
- 2 CAN Bus Controllers
- 128 Pins LQFP



IT986x SoC Series Application

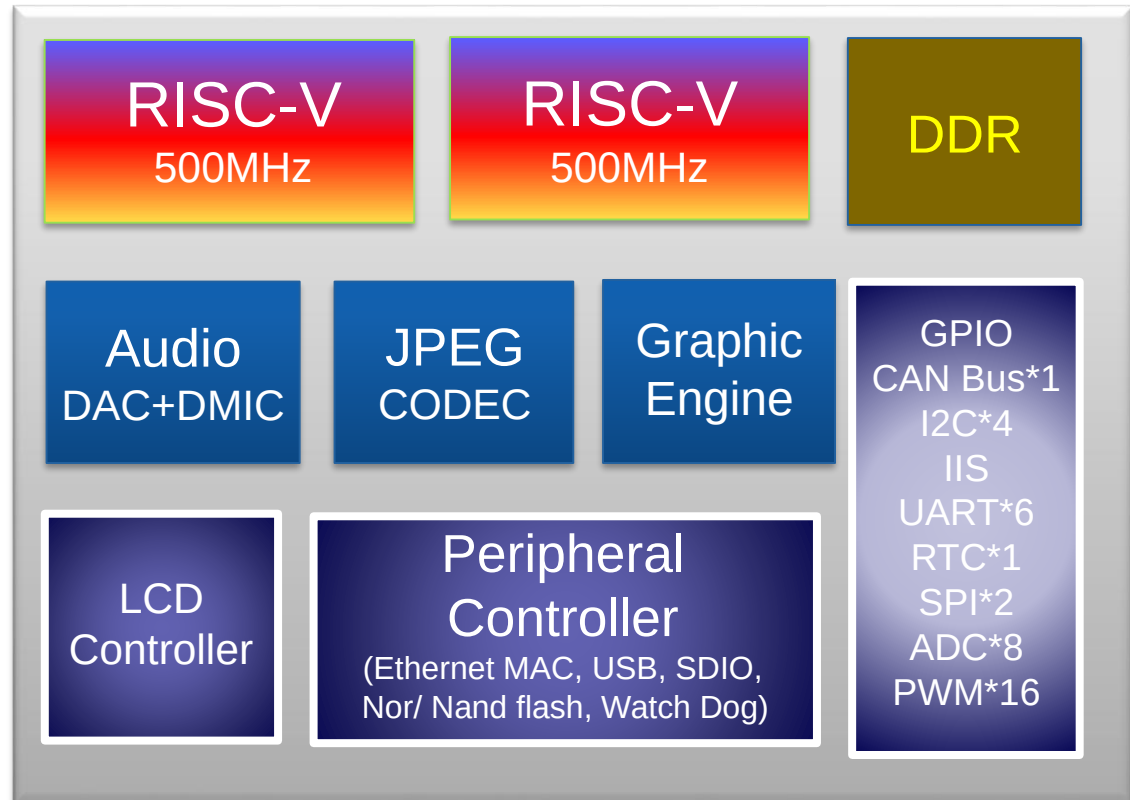
IT986x All Pin compatible



※ Resolution depends on the complexity of UI design.

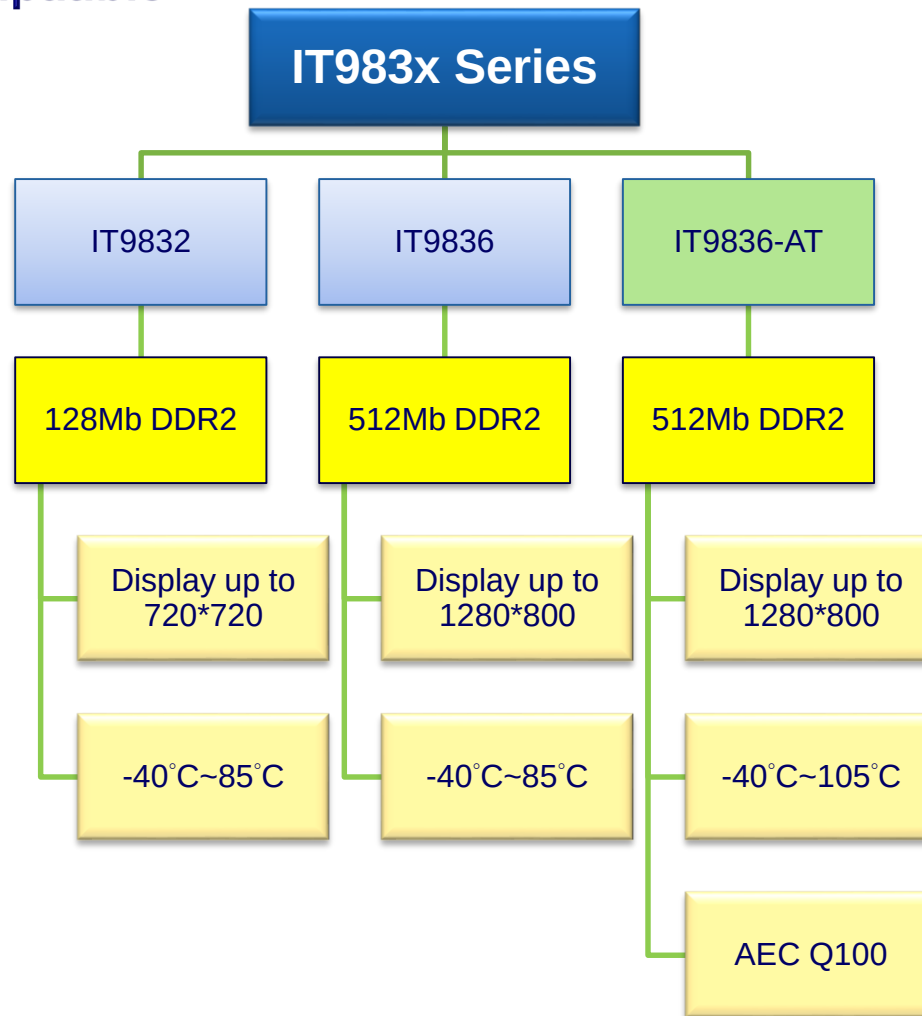
IT983x Function Block

- Dual CPU
- Panel Interface:
MIPI / RGB / SPI/ CPU/LVDS
- Panel resolution up to
1280*800
- Panel longer side resolution
up to 2560
- Graphic Engine
- 1 CAN Bus Controllers
- eFuse for security
- 76 Pins QFN



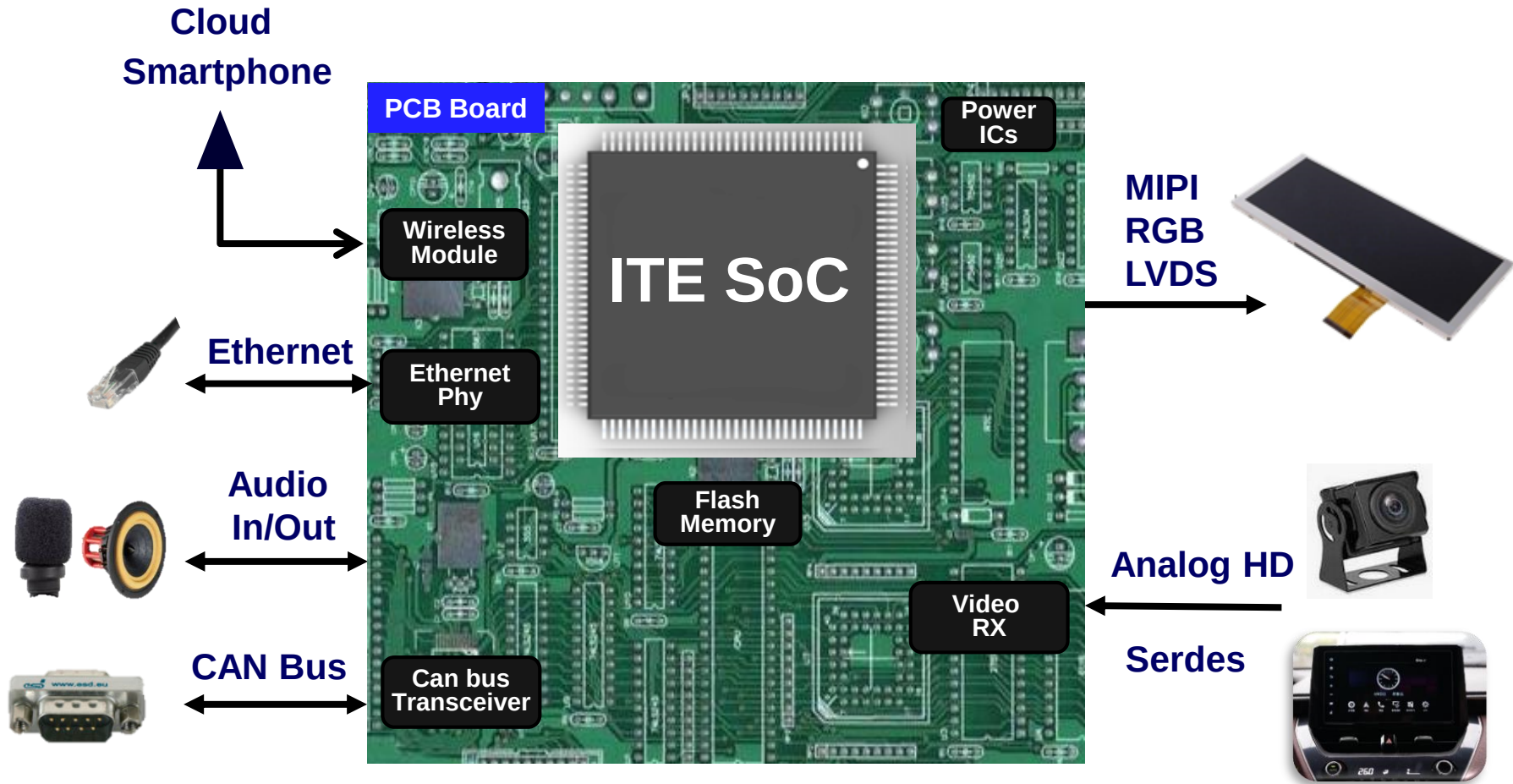
IT983x SoC Series Application

IT983x All Pin compatible



*Panel resolution will be determined by the complexity of the UI interface.

ITE SoC: General Architecture



※ The photos are for reference only

Application(1): Home Appliances

Major Appliances



Washing Machine



Refrigerator



Thermostat

Household Appliances



Water Dispenser



Vacuum Cleaner

Kitchen Appliances



Microwave



Food Processor



Rice Cooker

Application(2): Automotive Smart Display

Rear Seat Control



Instrument Cluster



HUD



Motorcycle



E-Bikes



Car



Truck



Bus



Engineering Vehicle

Application(3): Others



Exercise Bike



Standard HMI Module



Color Screen Printer



**Video Intercom
(Indoor Phone)**



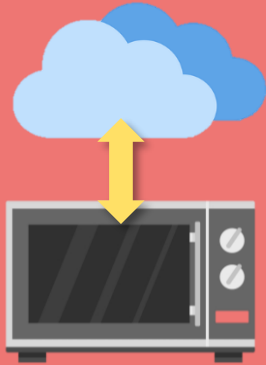
Massage Chair



AD Displayer

Advanced Functions

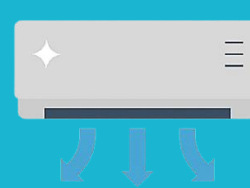
Cloud Service



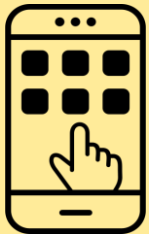
OTA
Data &
Image Transfer

Speech Recognition

Online & Offline
Speech Recognition



Smartphone Connections



Mirroring
APP



Apple
Carplay

...more

Dewarping



Fisheye
Dewarping



HUD Dewarping

ITE SoC IDE Introduction

HDK

- Reference circuit & guide
- Reference layout & guide
- Component reference
- Mass production guide

SDK

- RTOS
- Driver, API
- Middleware, Protocol
- Functional reference project
- AP reference project

Tools

- Drawrocker
- Panel script generator
- Debug tool
- Emulator

Documents

- Register spec
- SDK documents
- HDK documents
- Tooling documents
- Reference project guide

ITE SoC IDE Highlight

- **One-stop service**
- **Full functionality SDK**
- **Comprehensive Tools**
- **Various reference projects**

Training

- Tutorial videos
- Documents

ITE SoC Advantages

High Performance, Low Cost

Fast Booting (≈ 1 to 2 sec)

Panel Interfaces (MIPI, RGB, LVDS, SPI)

Operating temperature (Industrial Standard): $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$

Operating temperature (AEC Q100 Grade 2): $-40^{\circ}\text{C} \sim 105^{\circ}\text{C}$

Supporting wireless modules (WiFi, Bluetooth, 4G...)

Powerful Graphic Engine

Complete IDE, Easy to develop

ITE SoC Customers

Whirlpool TOSHIBA AC Smith DAIKIN Haier

Panasonic LG 美的 Midea HITACHI Inspire the Next Hisense 海信

E-LEAD 怡利电子 长江·EV BYD HSAE 航盛 东风小康

GIANT niu 雅迪 QJMOTOR Segway-Ninebot 九号机器人

OGAWA 奥佳华 星星充电 Star Charge GIGABYTE ROTAI 荣泰 JOHNSON 乔山健康科技 KOMATSU

ite



ITE Tech. Inc.

3F, No. 13, Chuangsin 1st Rd.,
Science Park, Hsinchu 30076, Taiwan,
R.O.C.

<http://www.ITE.com.tw>

Thank You

