Communication Gateway

(with NXP i.MX6 ARM Cortex application processor)

FleetPC-ARM-100
Communication Gateway

FleetPC-ARM-300
Communication Gateway

FleetPC-ARM-300

FleetPC-ARM-100

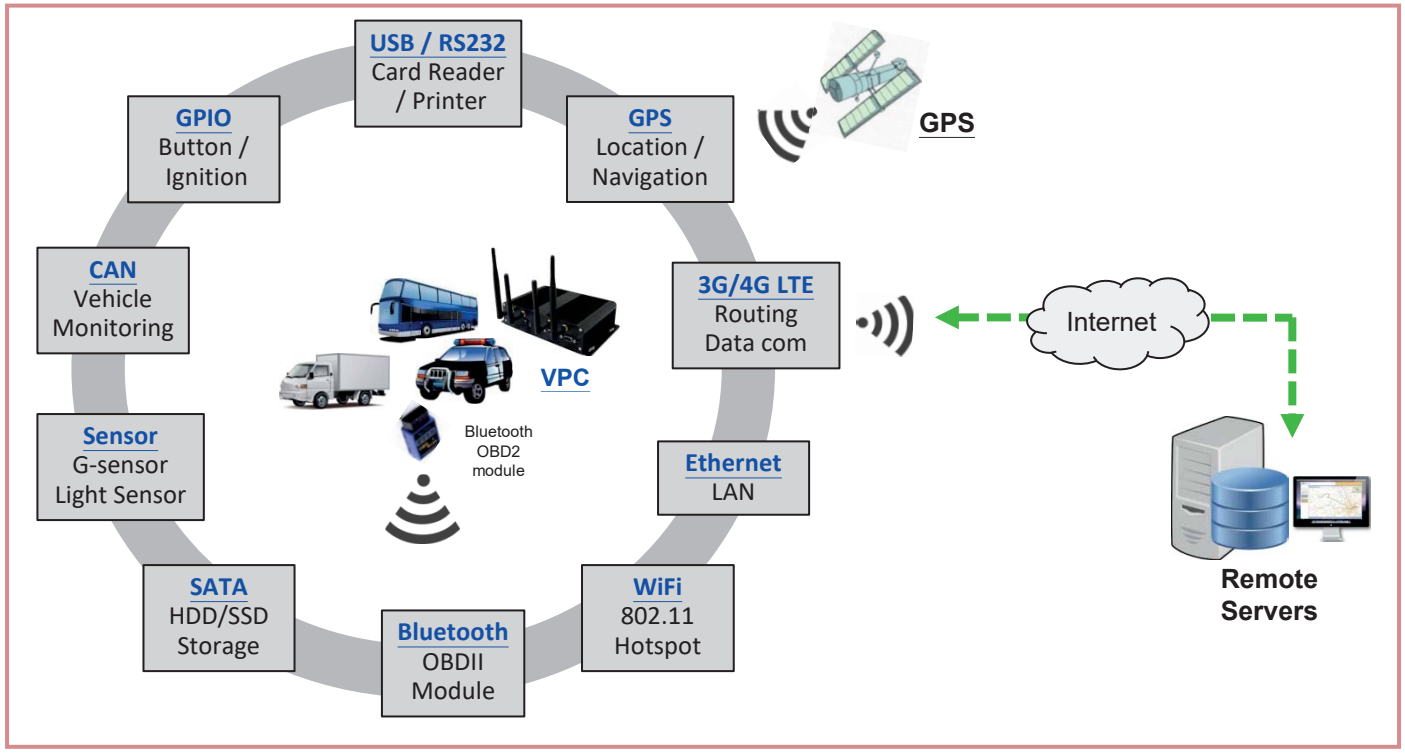
Typical Applications

- **Vehicle Tracking**
- **Fleet Management**
- **Asset Tracking**
- **IOT (Internet of Things) Gateway**

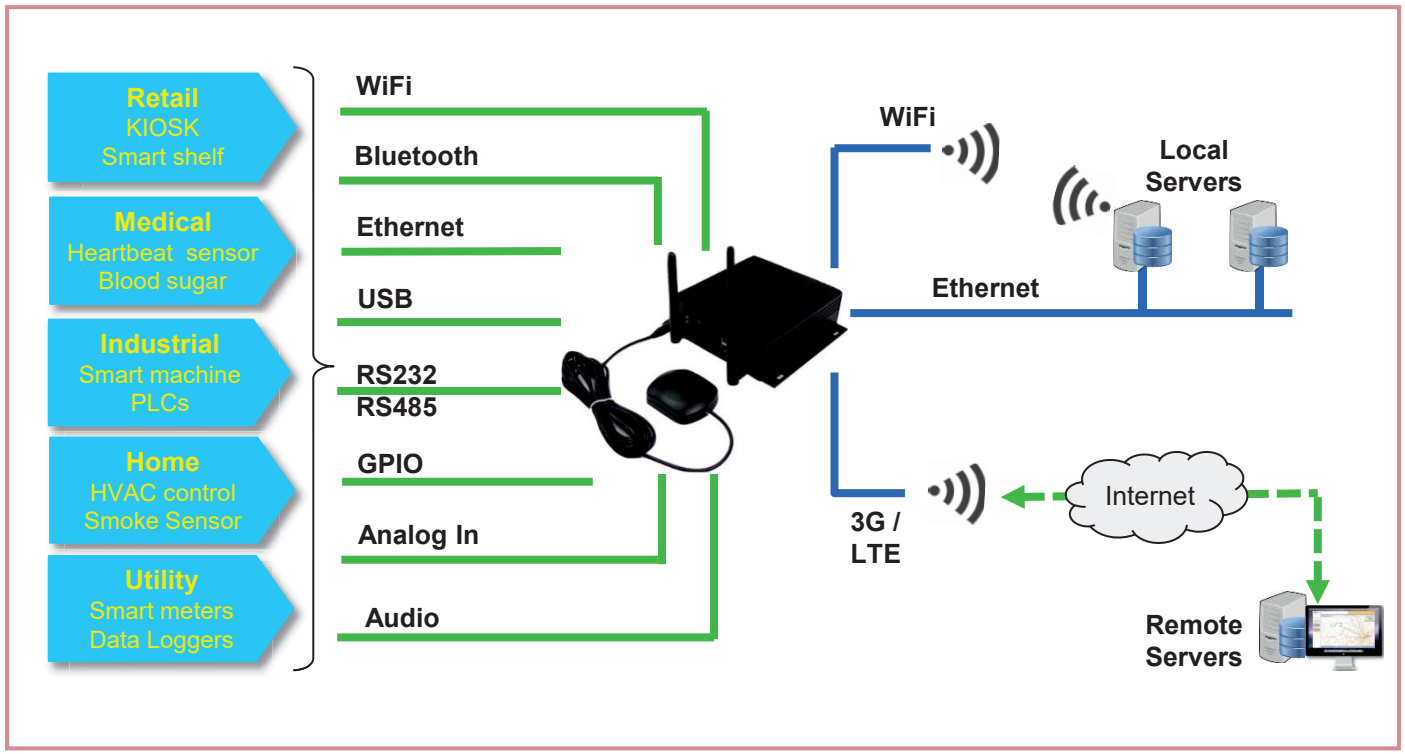
FleetPC

Communications Gateway
(Internet of Things, In-Vehicle Computer)

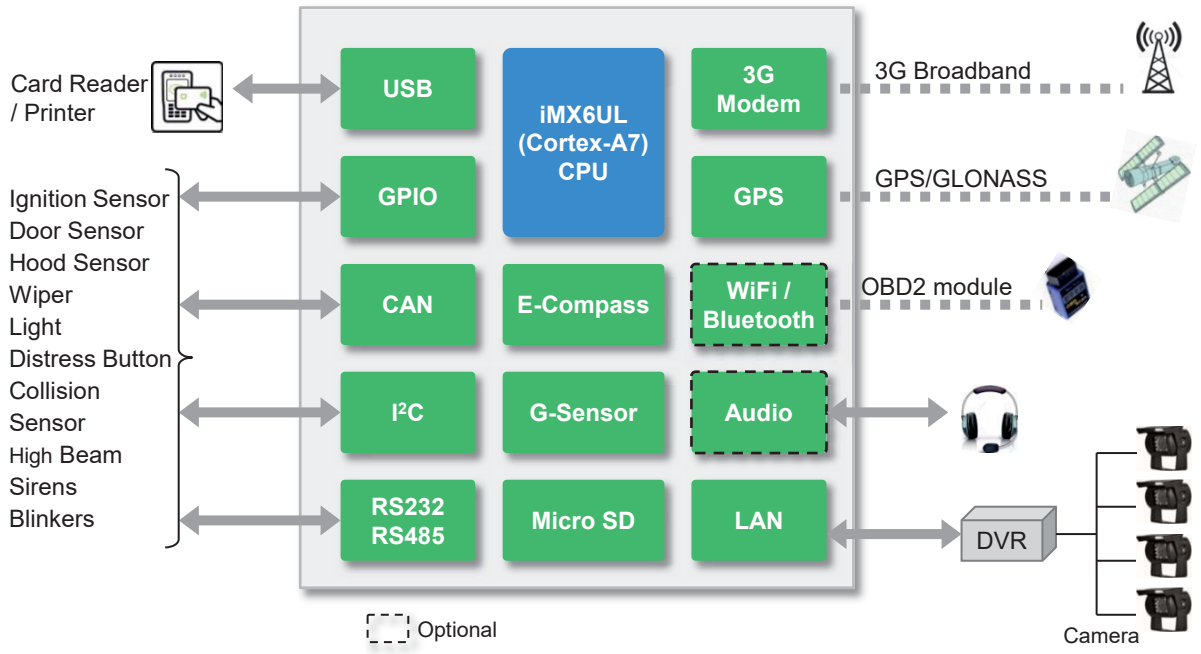
Application: In-Vehicle Computer



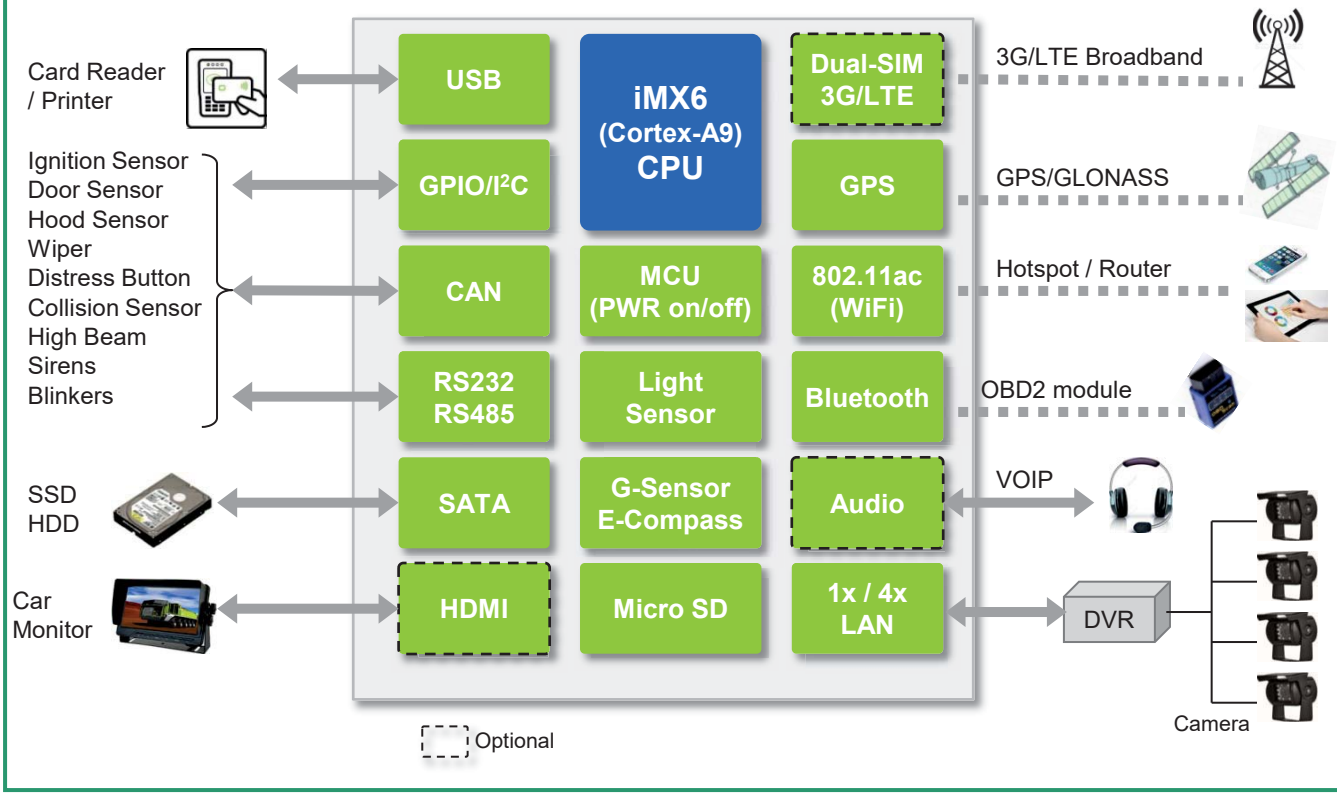
Application: IOT Gateway



FleetPC-ARM-100 Block Diagram



FleetPC-ARM-300 Block Diagram



FleetPC-ARM-100

FleetPC-ARM-300

FleetPC-ARM-100		FleetPC-ARM-300
NXP iMX6UL (Ultra Lite) ARM Cortex™-A7 @ 500MHz	**CPU**	NXP iMX6 Solo/Dual/Quad-core ARM Cortex™-A9 @ 1GHz
256MB RAM / 512MB Flash	**Memory**	1GB (Solo/Dual) ; 2GB (Quad) RAM / 4GB Flash
Linux 3.14 (Yocto 1.8)	**OS**	Linux 3.10 (Yocto 1.6) / Android 6.0 (and newer)
Built-in (3G modem only) Quad Band UMTS/HSPA Speed: HSPA: 5.76Mbps (UL) / 14.4Mbps (DL) SIM card slot: single / Antenna: external	**3G/4G Modem**	**Optional (3G or LTE modem)** Quad Band UMTS/HSPA: Speed: HSPA: 5.76Mbps (UL) / 14.4.6Mbps (DL) SIM card slot: **dual** / Antenna: external
ublox UBX-G7020 Chip GNSS Engine: GPS / GLONASS	**GPS**	ublox UBX-G7020 Chip GNSS Engine: GPS / GLONASS
3-axis motion tracking sensor	**G-Sensor**	3-axis motion tracking sensor
1x CAN bus / 1x I^2C 1x RS232 (or RS485) 2x Analog input 3x Photo-coupled digital output 9x Photo-coupled digital input	**Inputs / Outputs**	1x CAN bus / 1x I^2C bus 2x RS232 (or RS485) Analog input: N/A 3x Photo-coupled digital output 9x Photo-coupled digital input (5 – 24V)
2x Host (HS) / 1x OTG (HS)	**USB port**	2 x Host (HS) / 1x OTG (HS)
Optional (802.11 **b/g/n and** Bluetooth 4.0/BLE)	**WiFi / Bluetooth**	**Built-in** (802.11 **b/g/n/ac** and Bluetooth 4.0/BLE)
1x 10/100Mbps Ethernet	**Ethernet**	1x (**default**) / 4x (**optional**) Gigabit Ethernet
N/A	**Display Interface**	HDMI
Optional (Head-phone output; MIC input)	**Audio Interface**	Head-phone output; MIC input
DC 9 – 36V <TBD>	**Power Input Consumption**	DC 9 - 36V <TBD>
125 mm x 147 mm x 41 mm (L/W/H) <TBD>	**Dimension Weight**	121mm x 204mm x 50mm (L/W/H) <TBD>
Operating : -20 °C to 70 °C Storage : <TBD>	**Temperature**	Operating : -20 °C to 70 °C Storage : <TBD>
<TBD>	**Shock/Vibration**	<TBD>

FleetPC

Communications Gateway
(Internet of Things, In-vehicle Computer)

FleetPC-ARM-100/300 Overview

The FleetPC-ARM is a communication gateway designed for in-vehicle applications or IOT (Internet of Things) applications. The FleetPC offers some unique features, including an application processor, a 3G/LTE modem and a ublox GPS receiver.

With the latest Linux kernel, Android and tools, the FleetPC allows users to design and deploy custom software for various applications, such as vehicle tracking, fleet management and IOT communication gateway.

FleetPC-ARM-100/300 Key Features

- **ARM Cortex-A Application Processor**

The FleetPC incorporates the latest NXP iMX6 low power application processor, an ARM Cortex core @ 500M-1GHz.

- **Application development and deployment**

The FleetPC offers Linux kernel (Yocto), Android OS, tool chains, device drivers and sample application software. These resources enable users to quickly develop and deploy software on the VPC products.

- **Wide input-voltage range**.

The FleetPC operates over a wide input-voltage range of 9V~36V.

- **GPS receiver, G-sensor, E-Compass**

The FleetPC includes a ublox GPS receiver, a G-sensor and an E-Compass, allowing users to create applications for vehicle tracking, asset tracking and vehicle telemetry.

- **Isolated GPIO**

The GPIOs on FleetPC are photo-coupled input and output.

- **OpenGTS (Open GPS Tracking System) software**

A version of OpenGTS software is available for demonstration of GPS tracking system with the VPC. (* Note: OpenGTS is not part of the FleetPC product. It is for demonstration only).

- **Bluetooth OBD2 module (option)**

The optional OBD2 module transmits vehicle data (mileage, fuel usage , etc) to the FleetPC via Bluetooth. The FleetPC can report vehicle data to remote server for monitoring.

- **Customization Services**

We offer FleetPC hardware and software customization services. Please contact us for more information.

FleetPC-ARM-100/300 Software Specifications

OS
- FleetPC-ARM-100: Linux 3.14 (Yocto)
- FleetPC-ARM-300: Linux 4.0 (Yocto) and Android 6.0

Device Drivers
- DDR3, Flash, USB, MicroSD, RS232, RS485, GPS, 3G/LTE, G-sensor, E-compass, CAN, GPIO, Analog input, LAN, WiFi, Bluetooth, Audio

Management
- Local and remote advanced configuration through http-based Device Manger program
- Report: CPU usage, frequency , temperature, DRAM size
- Support HTTP protocol
- Command Line Interface via TTY/SSH
- System power control , support suspend mode operation
- Li-on Battery DC power monitor

Routing Features
- IPv4
- DNS Server
- NAT
- Port forwarding Ethernet & WIFI both
- Routing function

OBD-II
- Bluetooth OBD-II connection function

GPS
- Support NMEA protocol
- Time sync with GPS

3G Network
- Support WCDMA/HSDPA network and routing
- 3G signal strength monitor

GPIO control
- Set/Read GPIO by local and remote http-based Device Manager

OpenGTS connection
- Demo program for connecting OpenGTS remote server

MQTT
- Demo program for MQTT function

Sensor
- Demo program for 3-AXIS
- Demo program for e-compass

Unique ID
- Demo program for reading board unique ID

The FleetPC-ARM is not a product for end customers. It is intended for software developers or system integrators to develop and deploy software for their end applications.