

VPC Comparison

(with NXP i.MX6/i.MX8M ARM application processor)

VPC450



VPC300



VPC450		VPC300
64-bit i.MX8M plus / Quad (Cortex-A53 @ 1.6GHz)	CPU	32-bit i.MX6 / Quad (Cortex-A9 @ 1GHz)
2GB (or 4GB) LPDDR4 / 8GB eMMC	Memory	2GB DDR3 / 4GB eMMC
Yocto 4.1 / Android 13.0 (and higher)	OS	Yocto 1.6 / Android 6.0
2x LTE slot (mPCIe) / 2x SIM card slot	LTE Modem Slots	1x LTE Slot (mPCIe) / 2x SIM card slot
(optional) GPS / GLONASS / BD ; Accelerometer	GNSS / Sensor	GPS / GLONASS; motion tracking sensor
(isolated) 2x CAN-FD / 2x RS232 (or RS485) 4x Photo-coupled DO / 7x Photo-coupled DI	Inputs / Outputs	(isolated) 2x CAN2.0 bus / 1x RS232 / 1x RS485 3x Photo-coupled DO / 9x Photo-coupled DI
2 x USB2.0 + 2x USB3.0 + 1x OTG (HS) / NO	USB port / mSATA	2 x USB2.0 + 1x OTG (HS) / YES
(optional) WiFi 802.11 b/g/n/ac + Bluetooth 4.2/BLE	WiFi / Bluetooth	WiFi 802.11 b/g/n/ac + Bluetooth 4.2/BLE
1x GbE + 1x (optional) GbE	Ethernet	1x GbE + 4x (optional) switched GbE
HDMI / Head-phone output + MIC input	Display / Audio	HDMI / Head-phone output + MIC input
Power on/off by software	Software on/off	Power on/off by software
DC 9V - 36V with Over-Voltage Protection	Power Input	DC 9V - 36V with Over-Voltage Protection
(optional) PoE	Power over Ethernet	N/A
Yes (Ultra low power)	Power Saving Mode	Yes (low power)
100 x 204 x 48 (L/W/H)	Dimension (mm)	138 x 204 x 48 (L/W/H)
Operating : -20°C-70°C	Temperature	Operating : -20°C-70°C
CE / FCC / E-Mark	Certification	CE / FCC / E-Mark

Software Specifications

Device Drivers

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

GNSS

- Support NMEA protocol / Time sync with GPS

LTE Network

- Support LTE network and routing
- LTE signal strength monitor

Sensor

- Sample command/program for sensors

Unique ID

- Demo program for reading board unique ID

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

GPIO control

- Device driver/ sample code for R/W GPIO

CAN Bus

- Device driver to transmit/receive data packet for various protocol (e.g. J1939,etc)