# EPIMX6
## Serial to WIFI or Ethernet Gateway

The EPIMX6 is compact, cost-effective, and powerful platform for connecting legacy serial data based systems to the Internet. The module has 3 x UARTs and will fit into compact spaces. It is industrial rated and supports 1 USB port, and 1 Gigabit Ethernet port and several different I/O options. At the heart of the EPIMX6 is the NXP i.MX 6 UL processor with ARM Cortex A7. Uboot and Linux software are also available for the EPIMX6. Legacy and custom serial protocols can be converted and sent to Microsoft Azure, Amazon AWS and IBM Cloud.



## Feature Summary:

| Specification: | Description: |
|---|---|
| Processor: | i.MX6UL (528MHz processor with ARM Cortex-A7 core) |
| DDR Memory: | 256MB DDR3L DRAM memory |
| Flash: | 4GB eMMC, 64MB QuadSPI NOR flash |
| Ethernet: | RMII to 10/100BASE-T Ethernet port with CAT 5E connector |
| Bluetooth: | Bluetooth 4.0 using Redpine RS9113-NB0-D1N |
| Antenna: | External U.FL to SMA cable, secured to PCB |
| Wi-Fi: | Dual-band 802.11a/b/g/n |
| Cellular (Optional): | Multiple protocol options avalable. CDMA, GSM/GPRS, etc. |
| UART: | 3 RS-232/RS-485 to UART transceivers (connections use TE 5-104363-4) |
| UART Debug Port: | 1 USB micro-B connector |
| User Input: | 3 User pushbuttons |
| LED: | 2 User status |
| Programmer: | Cortex JTAG+ETM debug port |
| Power Input: | 8-30VAC or 8-30VDC (Power connector is Molex 39-30-2030) |

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## M2M Data Access and Management



**MCIMX6G2DVM05AA**

External antenna on SMA connector ↔ U.FL to SMA cable (secured) ↔ Module Wi-FI 802.11n BT4.0 Redpine RS9113-NB0-D1N ↔ uSDHC2

Connector TE 5-104363-4 ↔ RS-232/RS-485 to UART EXAR SP330 ↔ UART2

Connector TE 5-104363-4 ↔ RS-232/RS-485 to UART EXAR SP330 ↔ UART3

Connector TE 5-104363-4 ↔ RS-232/RS-485 to UART EXAR SP330 ↔ UART5

RJ-45 magjack ↔ PHY Microchip KSZ8081 ↔ ENET1

JTAG/TRACE ↔ Connector 2x10 Cortex Debug+ETM

UART1 ↔ CP2104 ↔ USB micro-B

UART4

UART6

DDR3L Controller ↔ DDR3L 256MB

Connector 2x5 Cheetah

QuadSPI ↔ Serial NOR Flash 64MB

uSDHC1 ↔ eMMC 4GB

GPIO → Heartbeat LED

SNVS

I2C2
I2C3
I2C4
SPI1
SPI2
SPI4
ADC1
ADC2
PWMs
LCD
FLEXCAN1
FLEXCAN2

8-30Vac or 8-30Vdc

Connector Molex 39-30-2030

3.3Vdc

AC/DC LM5088

SW3: 1.35V ↔ NVCC_DRAM
SW1: 1.4V ↔ VDD_SOC_IN
SW2: 3.3V ↔ VDD_HIGH_IN
NVCC_GPIO
VLDO2: 1.5V (OFF) ↔ NVCC_ENET
VLDO3: 1.8V (OFF) ↔ NVCC_UART
VLDO4: 1.8V ↔ NVCC_LCD
NVCC_CSI
NVCC_NAND
VLDO1: 3.3V ↔ VDDA_ADC_3P3
VCC_SD: 3.3V ↔ NVCC_SD1
V33: 3.3V — V33
VSNVS : 3.0V ↔ VDD_SNVS_IN

I2C ↔ I2C1
PWRON
INTB ↔ Parallel Control / GPIOs
RESETBMCU

MC32PF3001A7EP

USB OTG1
USB OTG2 ↔ Cellular Modem

Reset Control ↔ POR

RTC_XTALn ↔ 32.768kHz Crystal

V33

Pushbutton

XTALn ↔ 24MHz Oscillator