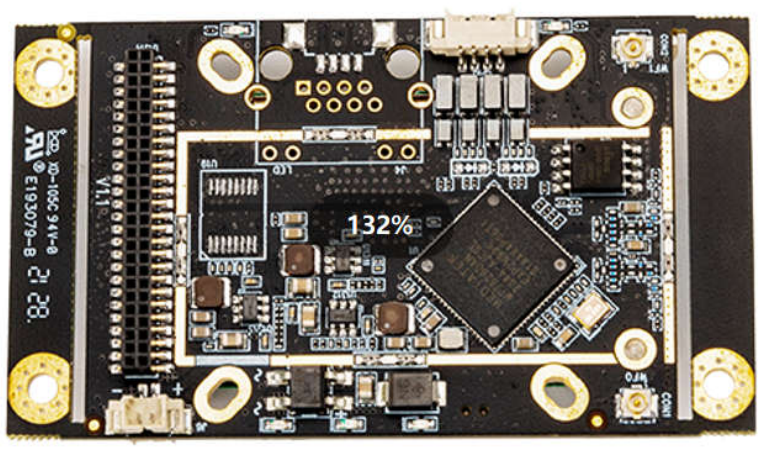
General

V518P is a ultra compact design entry-level IoT router built for industrial applications, such as vending machines, ATM, Kiosk, IP camera, digital signage, EV charging point, water treatment, solar panel power, etc.

V518P provides high speed 5G NR/4G LTE for applications that require different data throughput. V5X8 has 2-Ethernet,1-TTL, 1-RS485, WIFI, GNSS, ,3-GPIO,and it is perfect for connecting the ethernet IP and serial port devices to cloud via cellular network. Besides,its auto switchover between wireless and wired WAN, multiple VPN features provide robust and secure connectivity for data transmission.In addition, V518P is an OpenWrt based Linux OS industrial IoT router,which provides C programmable embedded environment for IoT developers and programmers to implement their industrial applications in a flexible and fast way.



Typical application case

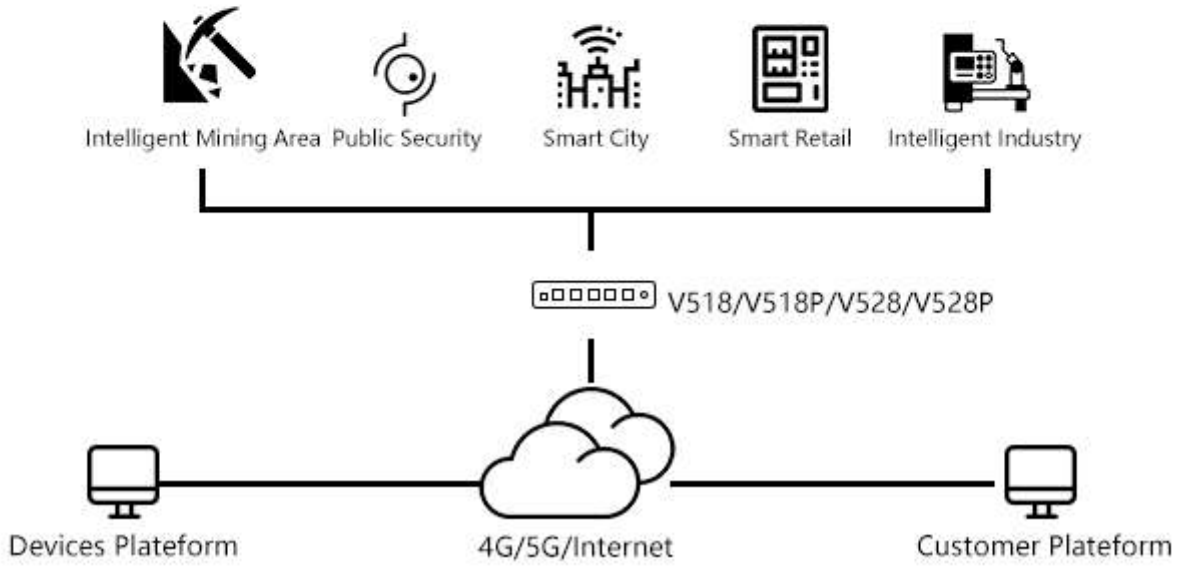

Smart City


Smart Retail


Intelligent Mining Area


Public Security


Intelligent Industry



Key Features

Built-in Design

- Ultra-small size for built-in environment
- High-performance 32-bit processor
- High-performance industrial cellular module
- Industrial connector interface

Stability&Reliability

- Hardware&software watchdog design
- Wide power input design（DC 7V～16V）
- Power reverse protection
- Industrial grade temperature design（-30℃～+70℃）
- Complete link detection mechanism

Standard&Convenience

- Standard TTL,RS485, Ethernet and WIFI Interface
- Intelligent data terminal,data can be transmitted after powered on
- Convenient configuration and maintenance interface（WEB or CLI）
- Integrate more than 1000 carrier APNs

High-performance

- Support multiple connection modes, 4G, PPOE, wireless relay, mixed mode
- Support double link backup between cellular and WAN(PPPOE, ADSL)/WLAN
- Multiple VPN protocols, IPsec, L2TP, PPTP, GRE and OpenVPN, to ensure secure data transmission

Specifications

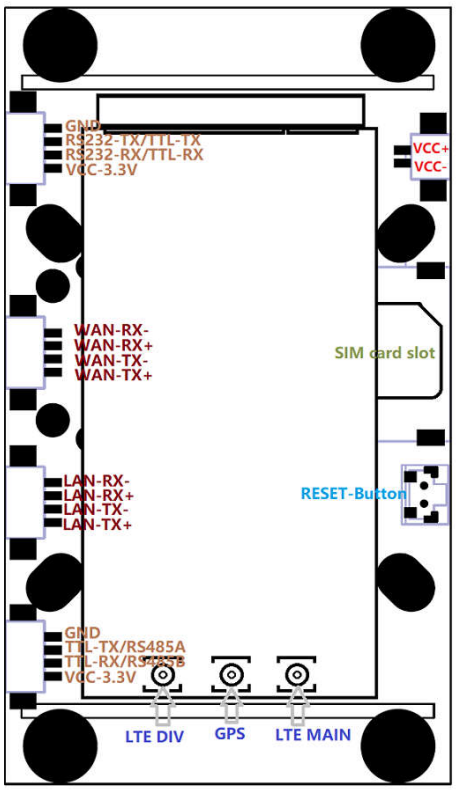
Item	Content
Dimensions（mm)	58*42*11.8mm（without panel），73.4*42*11.8mm（with panel)
CPU	High performance processor
Cellular Module	Industrial cellular module
WiFi(2.4G)	IEEE802.11b/g/n 300Mbps
Ethernet	10/100M Ethernet (4pin connector ,1.25mm pitch) x2
Serial Port	TTL×1 RS485×1
Power Supply	2Pin connector,1.25mm pitch ;DC 7-16V/2A
GPIO	GPIO×3
Antenna	WIFI×2 ； 4G×2 ; GPS×1(optional)
SIM/UIM	Micro SIM×1
Reset Button	Restore the router to its original factory default settings
Indicator	Blue: System×1 Green: 4G signal strong Red: 4G signal poor
Power Consumption	About 250mA@12V DC
Operating Temperature	-30~+70ºC
Storage Temperature	-40~+85ºC
Relative Humidity	95% (No condensation)

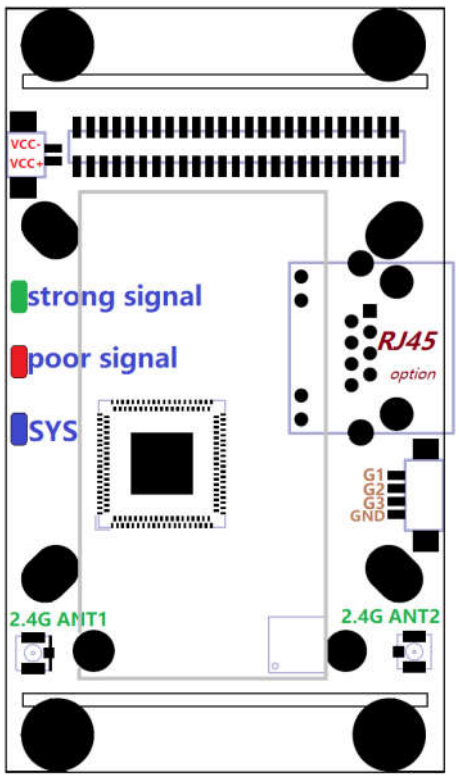
Cellular Specification

Cellular Module	Industrial cellular module
Standard and Band	***For EMEA*** ***V518P-4G_EU*** EC25-E: LTE FDD: B1/B3/B5/B7/B8/B20 LTE TDD: B38/B40/B41

	WCDMA: B1/B5/B8 GSM: B3/B8 EC25-EU: LTE FDD: B1/B3/B7/B8/B20/B28A LTE TDD: B38/B40/B41 WCDMA: B1/B8 GSM: B3/B8 ***For North America*** ***V518P-4G_NA*** EC25-AF(AT&T/Verizon/T-mobile） LTE-FDD: B2/4/5/12/13/14/66/71 WCDMA: B2/4/5 ***For Australia/New Zealand/Taiwan/Brazil*** ***V518P-4G_AU*** EC25-AU: LTE FDD: B1/B2①/B3/B4/B5/B7/B8/B28 LTE TDD: B40 WCDMA: B1/B2/B5/B8 GSM: B2/B3/B5/B8 EC25-AUT: LTE FDD: B1/B3/B5/B7/B28 WCDMA: B1/B5 EC25-AUTL: LTE FDD: B3/B7/B28 ***For Japan*** ***V518P-4G_J*** EC25-J: LTE FDD: B1/B3/B8/B18/B19/B26 LTE TDD: B41 WCDMA: B1/B6/B8/B19

Interface





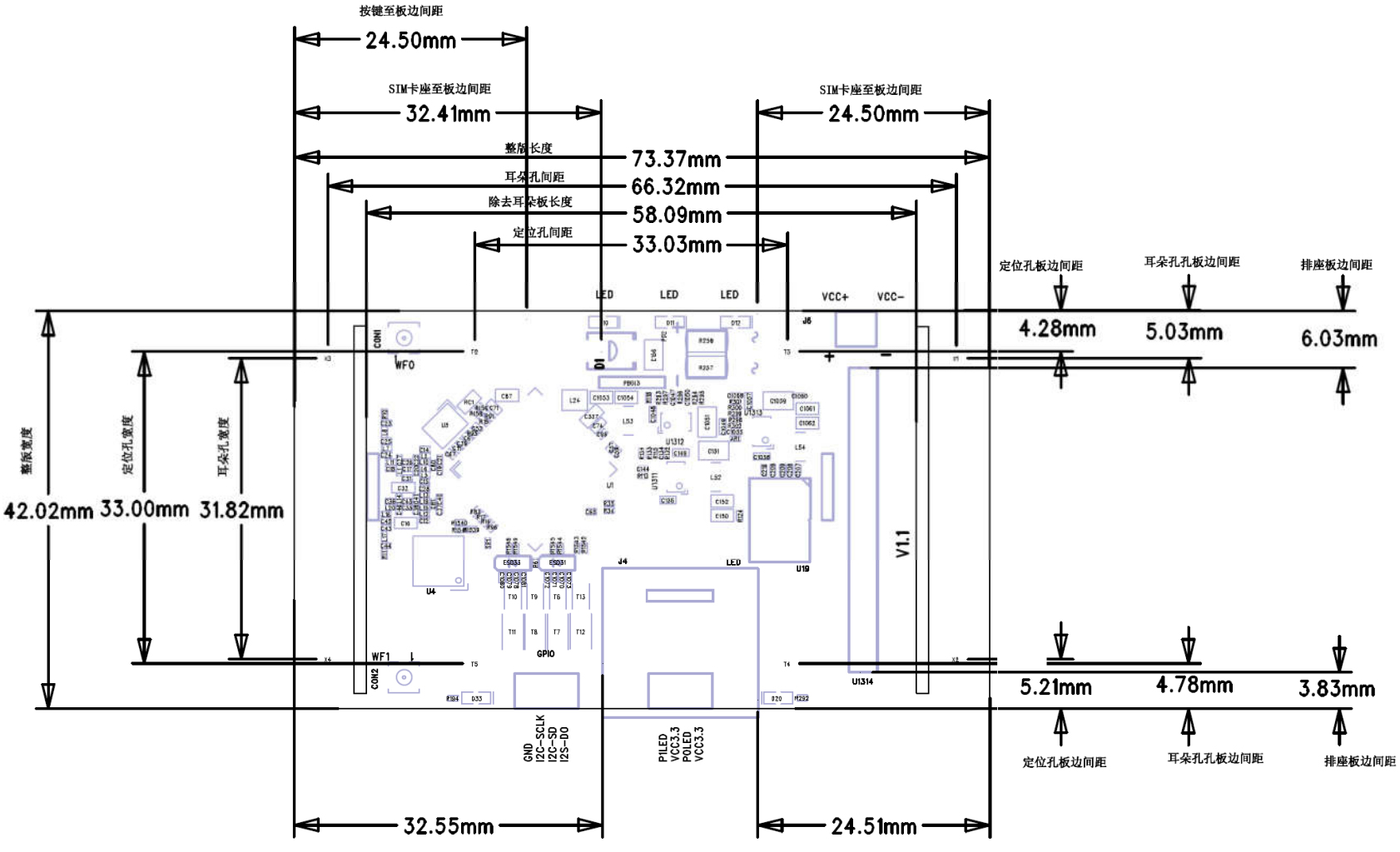
Serial 1: GND, RS232-TX/TTL-TX, RS232-RX/TTL-RX, VCC-3.3V

- TTL mode default，RS232 mode optional
- VCC-3.3V ,it can provide DC 3.3V/200mA output

Serial 2: GND, TTL-TX/RS485-A, TTL-RX/RS485-B, VCC-3.3V

- Serial2　support TT Land RS485 two mode，it can be convert in web page .
- VCC-3.3V ,it can provide DC 3.3V/200mA output

Dimensions（mm）



Oder Information

Models	Description	Antenna options as follows	
V518P-4G_EU	*For EMEA*		
V518P-4G_NA	*For North America*		
V518P-4G_J	*For Japan*		
V518P-4G_AU	*For Australia/New Zealand/Taiwan/Brazil*		

FCC Statement:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.
Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement
This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.
1. The module is limited to OEM installation ONLY
2. The OEM integrators is responsible for ensuring that the end-user hasno manual instructions to remove or install module
3. The module is limited to installation in mobile or fixed applications,according to Part 2.1091(b)
4. The separate approval is required for all other operatingconfigurations, including portable configurations with respect to Part 2.1093and different antenna configurations
5. Because WiFi RF is highly integrated in the main chip, whether to install a shield cover will not affect the RF, so this module does not need to use a shield cover.
The host uses this unshielded module and has passed the test with stable performance, so this module does not need to use a shield cover.
6. The Limited Modular approval, integration into each new host would require a Class II Permissive Change filing. Applicant will provide guidelines to the integrator.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: “Contains Transmitter Module FCC ID: 2A9JF-HY0710-YARBO and FCC ID:XMR202008EC25AFXD Or Contains FCC ID: 2A9JF-HY0710-YARBO and FCC ID:XMR202008EC25AFXD”

When the module is installed inside another device, the user manual of the host must contain below warning statements;
1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.
Any company of the host device which install this modular with limit modular approval should perform the test of radiated emission and spurious emission according to FCC part 15C : 15.247 and 15.209 requirement,Only if the test result comply with FCC part 15C : 15.247 and 15.209 requirement，then the host can be sold legally.

ISED Statement:

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada’ s licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
This device must accept any interference, including interference that may cause undesired operation of the device.
L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux
CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
1) L'appareil ne doit pas produire de brouillage;
2) *L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.
Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ouémetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

Please notice that if the ISED certification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: “Contains IC: 29777-HY0710YARBO and IC : 10224A-022EC25AFXD” any similar wording that expresses the same meaning may be used.
Veuillez noter que si le numéro de certification ISDE n’est pas visible lorsque le module est installé à l’intérieur d’un autre dispositif, alors l’extérieur du dispositif dans lequel le module est installé doit également afficher une étiquette se référant au module fermé. Cette étiquette extérieure peut utiliser des libellés tels que: «contient IC: 29777-HY0710YARBO and IC : 10224A-022EC25AFXD» toute formulation similaire qui exprime la même signification peut être utilisée.