



產業解決方案



寬頻服務



市話服務



國際服務



大數據



資安服務



雲端/IDC服務



智慧城市



行動通信

5G

5G Private Network

A great leap in industrial innovation



Chunghwa Telecom 5G private network provides private network services with high security and quality in applications such as manufacturing, medical and transportation industries through high speed, low latency, and massive connectivity of 5G. Data is transferred in the private network and does not enter the public network, ensuring data security, avoiding leakage of sensitive information, and enhancing business management and competitiveness.

Application Scenario

Smart manufacturing



[Increase productivity and operational efficiency]
Use the 5G private network to help the smart factory adjust the production line quickly via a 5G private network. Data transfer is not interrupted. The private network is not congested. Increase productivity and operational efficiency.

Smart medical treatment



[Enhance efficiency for telemedicine]
Use the high speed and low latency features of 5G, and terminal measuring measurement and software to send HD images instantly, offer solutions for first aid and telemedicine and increase the efficiency of telemedicine.

IoV



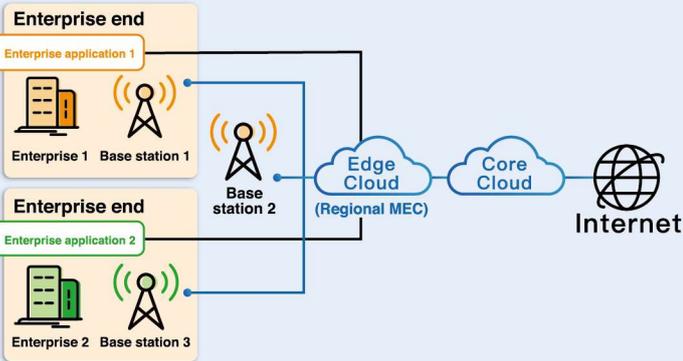
[More secured autonomous commute]
The 5G mobile edge computing system, C-V2X IoV communication technology are integrated to offer a telecommunication environment with low latency, high security, and diverse application for autonomous cars.



Product Description

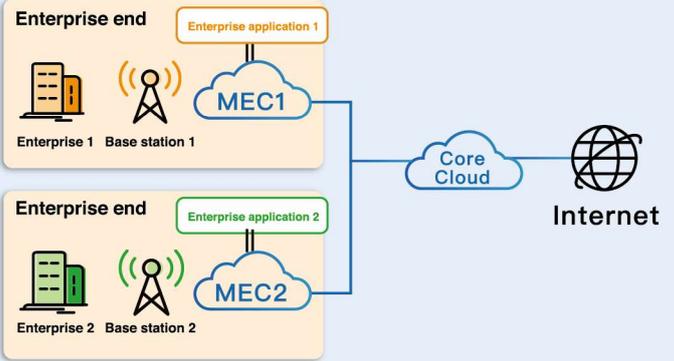
Private Type 1 (Sharing Type)

Share Edge Cloud with numerous enterprises. You can share the base station or use your own base station. This product is widely used for IoT, cloud gaming, and SMEs in industrial clusters.



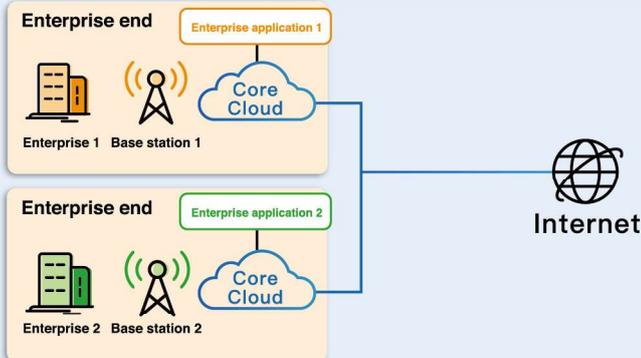
Private Type 2 (Private Type)

It provides private MEC and base stations for the enterprise and it is suitable for applications including smart manufacturing and smart medical treatment.



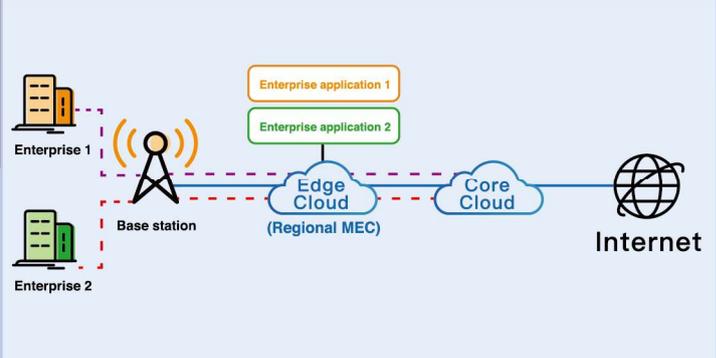
Private Type 3 (Independent Type)

The enterprise can use its own base station and core network. The product is suitable for the high-tech industry, disaster relief, and security and protection.



Virtual Private Type (Slicing Type)

The product is expected to be released in 2022. It provides end-to-end and QoS guarantee by network slicing, which is provided via MDVPN service for now.



Service Features



The private network is in independent operation and it is not affected by public network congestion.



Ensures high communication quality for network connection of sensing equipment and guarantees high reliability of IoT application.



The physical layers of private and public networks are separated to prevent the sensitive data of the organization from leaking.

Service Advantage

Use 5G Intelligent A+ and private network under flexible management (By Time By Service By Location)

- **Flexible self-management:** The private network does not only provide local unloading of data. The enterprise can decide the right to access the Internet or the private network, adjust the broadband and use the service based on the phone number, time and location.
- **Quick customization:** Provide customization service quickly integrate applications in different regions, and reduce corporate costs to adapt to customer needs.

Equipment Features

Soil EC / Temp. / Moisture Sensor

This product measures soil electrical conductivity, soil temperature and soil moisture, which can have farmers know the farm status and make better field management.



Ambient Temp. / Humidity Sensor

This product measures air temperature and relative humidity. The information plays an important role in farming, such as getting effective temperature accumulation which is a basic parameter affecting the growth progress of crops.



Water Temperature Sensor

This product measures underwater environmental temperature, which can be used in any circumstances monitoring water temperature. And it can also be the reference data to take care of field environment.



Solar Radiation Sensor

This product measures solar radiation, which helps farmers take control of the basic growth essentials. And it can even foresee when to harvest farmers' crops, allowing them to make better predictions about the distributions of production.



- ▶ State-of-the-art NB-IoT communication network technology.
- ▶ Rated as IP66, "dust tight" and protected against heavy seas or powerful jets of water.
- ▶ Gateway-free solution with easy installation.
- ▶ Multiple types of power supplies available, including battery, adapter or solar cell.

4G wireless IP camera(Outdoor)

A solution to livestreaming /recording crop growth, pest analysis and environment monitoring. Thanks to AI technology, we can be able to reduce the cost of management and add more value to the goods with the traceability of video.

- ▶ Wireless design, with built in li-battery, solar panel and 4G-LTE wireless communication technology.
- ▶ Full HD 200MP high quality image(1920*1080p), giving you clear and accurate crop growth records.
- ▶ 130° wide-angle lens, covering all area without dead angle.
- ▶ Crisp night vision with IR LED, PIR motion detection and IP65 weather-resistant.



Weather Station

Meteorological environment monitoring and control complete solution, powerful and scalable, you can choose a variety of sensors such as air temperature, humidity, wind direction, wind speed, rainfall, illuminance, light radiation, atmospheric pressure, carbon dioxide, VOC, etc. Integrate the collected data through the Internet to the cloud for big data analysis, providing a variety of environmental monitoring applications for agricultural farming and outdoor environments.

- ▶ Users can choose NB-IoT/Cat-M1/4G/WiFi and other communication technologies to connect to cloud services for recording and big data analysis.
- ▶ The control box is IP65 protective box, suitable for all kinds of environments.
- ▶ One controller can connect up to 32 industry standard sensors and provide 4 controllable outputs.
- ▶ Solar or mains power can be selected depending on the environment.



Success Stories



Miaoli Strawberry

- ▶ Soil EC / Temp. / Moisture Sensor
- ▶ Ambient Temp. / Humidity Sensor



Changhua Tomato, Piper betle

- ▶ Weather Station
- ▶ Soil EC / Temp. / Moisture Sensor
- ▶ Ambient Temp. / Humidity Sensor



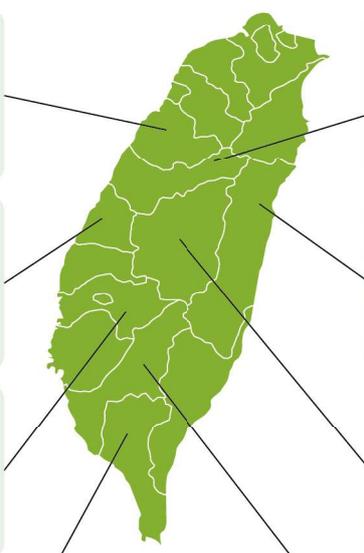
Chiayi Tomato

- ▶ Weather Station
- ▶ Soil EC / Temp. / Moisture Sensor
- ▶ Ambient Temp. / Humidity Sensor



Pingtung Orchid

- ▶ Ambient Temp. / Humidity Sensor



Taichung

Rice, Tea tree, Milk vetch

- ▶ Weather Station
- ▶ Soil EC / Temp. / Moisture Sensor
- ▶ Ambient Temp. / Humidity Sensor



Hualien Aquaculture

- ▶ Weather Station
- ▶ Water Temperature



Nantou Tea tree

- ▶ Soil EC / Temp. / Moisture Sensor



Kaohsiung Green soy beans

- ▶ Weather Station
- ▶ Soil EC / Temp. / Moisture Sensor



More Advantages
of CHT