Synaptix

Intelligent, Secure, and Reliable IOT-SCADA Solutions

Real-time monitoring, control, and data integrity for the next generation of grid control.

CMC group

Through Vision, By Innovation, With Determination

What is CMCloud?

- **CMCloud** is a web-based user interface and configuration module designed for the X3C IOT-SCADA System.
- It provides a centralised platform for monitoring and managing your entire network of substations, kV levels, bays, and IEDs through an intuitive, explorer-like tree view.
- With **CMCloud**, users can access real-time status updates, event lists, and control functions, as well as manage both fleeting and persistent alarms.
- This dynamic interface allows for extensive user customisation, ensuring a tailored and efficient user experience.

Sequence of Events & Trending

- Historical event recording with precise time stamps.
- Historian Data Viewer for analysis and report generation.
- Graphs or table-based data visualisation.
- Export data in Excel format.
- Customisable monitoring for electrical parameters (MW, MVAR, Voltage, Current).

Get in Touch

Ready to enhance your monitoring and control systems? **Contact us today**.

CMC Engineering Sdn Bhd
A6-3A Jalan Selaman 1/1, Dataran Palma,
68000 Ampang, Selangor, MALAYSIA

www.cmcgroup.com.my

contactus@cmce.com.my

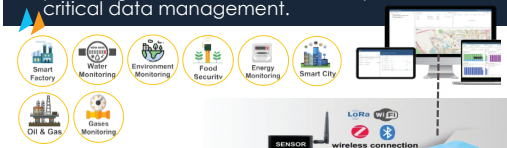
+603-2724 2553

CMC Engineering

Visit Us:

Unlock the Power of Your Data

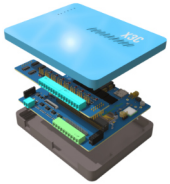
The **Synaptix X3C IOT-SCADA** System is engineered to be the vital link between your on-site sensors and your central dashboard, providing a secure and robust platform for critical data management.



Main Purpose

- **Monitor, Gather, and Process** real-time data with precision.
- **Communicate Directly** with devices like meters, sensors, and motors through an intuitive Human-Machine Interface (HMI).
- **Record and Log** critical events for detailed analysis.
- **Visualise Data** through advanced trending and reporting.

Key Benefits



- Real-time data synchronisation and collection
- Seamless integration with archiving servers for secure data storage.
- A powerful platform for future data manipulation and applications.
- An intuitive Graphical User Interface (GUI) for end-users.
- Operates on Linux OS for enhanced reliability and performance.

Revolutionizing Real-Time Grid Control

Engineered on a robust LINUX OS platform, the **Synaptix X3C IOT Gateway** boasts an extensive array of advanced features designed to meet the demanding needs of modern utility firms and industrial applications. Its modular design ensures it can be tailored to your specific requirements.

Advance Hardware & Connectivity

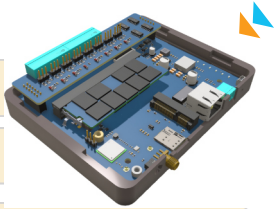
Our **Synaptix X3C** hardware platform is built for flexibility and performance.

- **Modular Design:** Easily customise and adapt the gateway with its Communigate feature.
- **Flexible Connectivity:** The ModemSwitch capability allows for easy changes to
- **Upgradable Performance:** With ProcSwap, you can easily upgrade the processing core for enhanced performance.
- **Wireless Ready:** Integrate 2G/3G/4G or WiFi modules for secure VPN access to your complete data model.

Data Security

- **HTTPS encryption** with secure key pairs to protect data during transmission.
- **Cloud-hosted** on highly secure servers with multi-layered protection protocols.
- Strict **user authentication and access control** to prevent unauthorised access.
- **Optional Two-Factor Authentication (2FA)** for enhanced account security.
- **Regular system audits and vulnerability assessments** to ensure ongoing compliance.
- **Continuous data backup and recovery measures** to safeguard against data loss.
- **Role-based permissions** allowing administrators to control and monitor user

Hardware Specifications



Voltage Input	7 - 30 VDC
Min. Current In	3A 7VDC
Power Protections	reverse polarity & current overvoltage, undervoltage surge (IEC 61000-4-5)
Operating Param	Temperature: -25C and up to 60C Humidity: 10% to 60%
Systems	Processor: Quad-core 32-bit ARM Cortex-A7 RAM: 2GB LPRDRR4 Storage: eMMC 8GB OS: Custom base LINUX
Network	Ethernet: 16Bps WIFI: 2.4GHz IEEE 802.11 b/g/n/ac Build-In 4G LTE Modem with: ○ nano sim card slot ○ external antenna
Main Interfaces	Serial RS485 (half-duplex): ○ Modbus RTU ready ○ Resettable fuse protection ○ ±15kV ESD (Human Body Model)
Real-Time Clock	Build-in RTC with coin cell battery backup
Build-In 10	8 CH Bi-directional IO (Configurable from factory): ○ Input: Isolated Wet/Dry, 5~30VDC, pluggable screw terminal ○ Output: Sink (clamp diode), max 30VDC 500mA, pluggable screw terminal
Indicator	Power Error Power On System Status System Working 4G Network Serial