

THE COMMUNICATION PLATFORM

for the Industrial Internet of Things

Welcome

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1. What is itcyanbu?

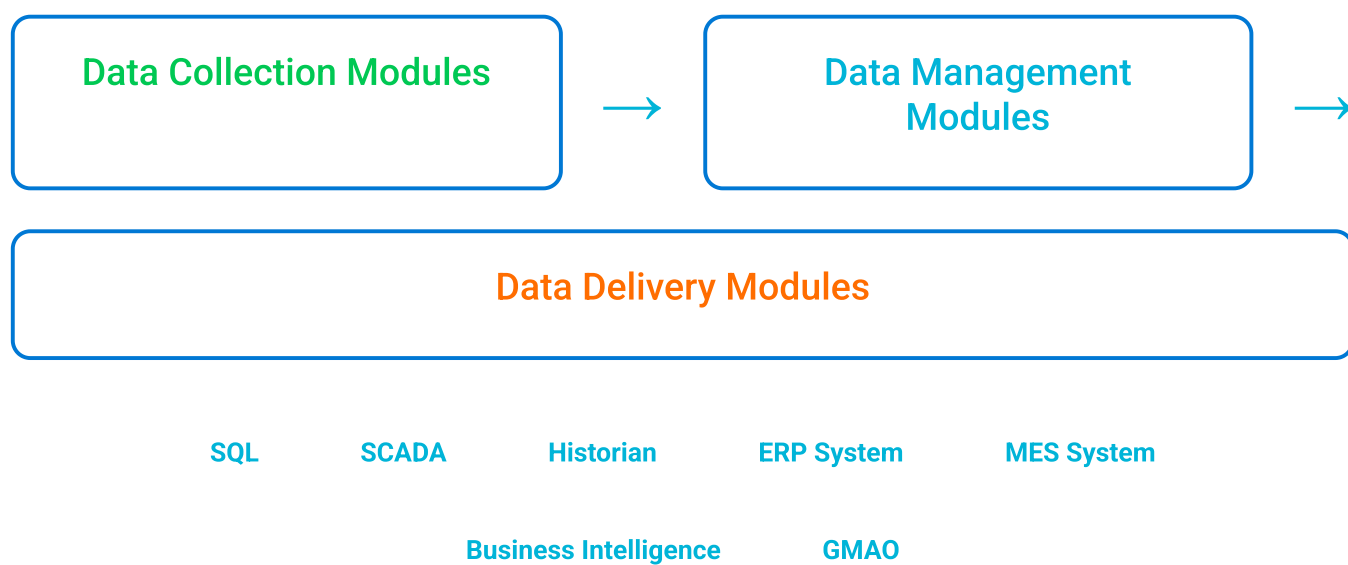
itcyanbu is an industrial connectivity software platform. Some of its features are:

- ✓ IIoT out-of-the-box → Plug and play
- ✓ Multiplatform
- ✓ Store & Forward built-in
- ✓ Object oriented configuration
- ✓ Creates a network of connected nodes
- ✓ Minimum hardware requirements
- ✓ Affordable pricing

Modules

itcyanbu Platform

2. Architecture Options – Standalone



2. Types of Projects – Remote Data Acquisition

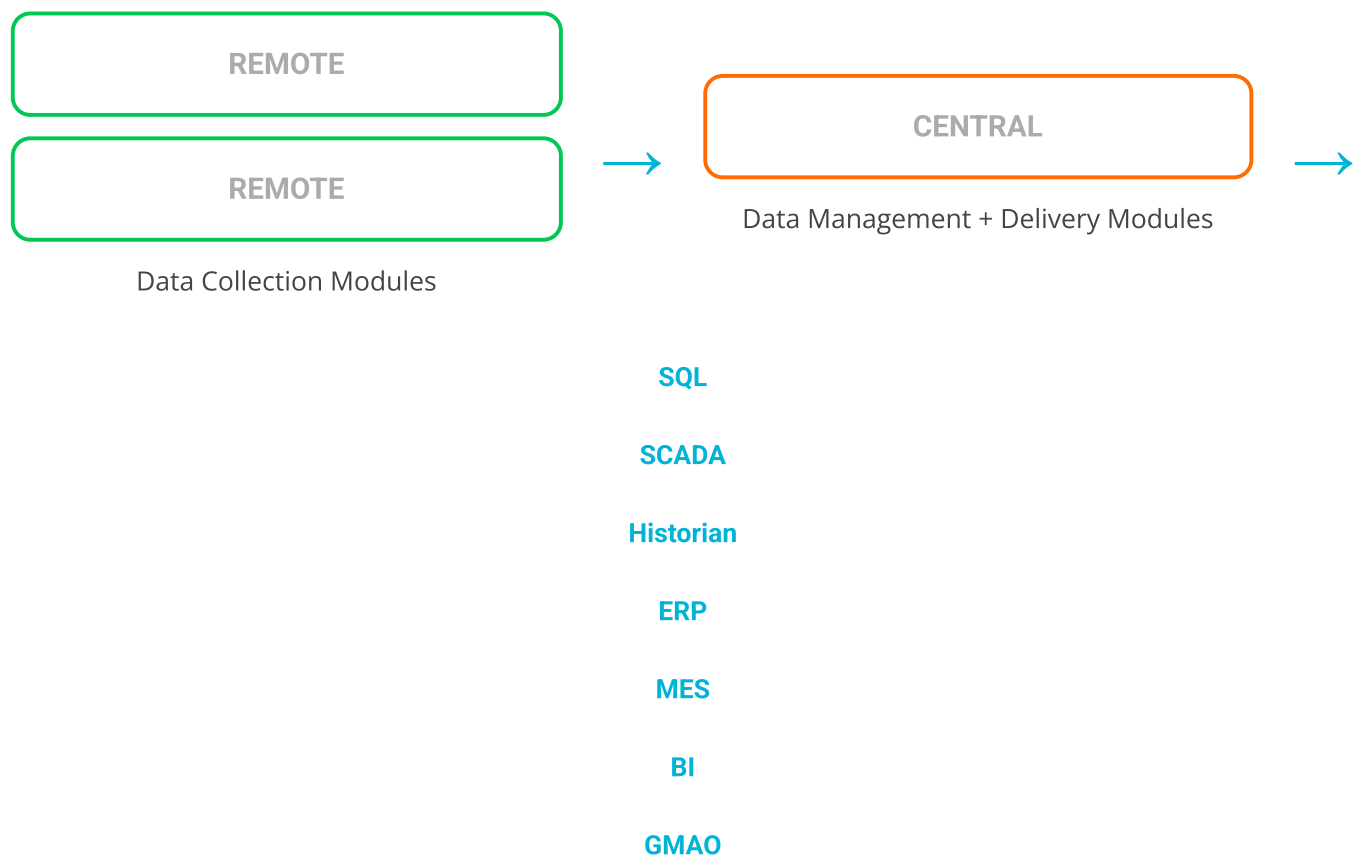
Types of projects

Data acquisition on cranes, water management, renewable energy plants, ships and vehicles monitoring, power substations, Smart Cities, infrastructures, gas pipelines, and more.

Advantages

- Works with any kind of connection: WiFi, 3G, satellite, GPRS → **Store&Forward**
- **Minimum hardware requirements**
- **Very affordable prices for repetitive installations**

2. Architecture Options – Distributed



2. Data Grouping & Cyber-Security

Types of projects

Grouping data from PLCs, expose tags to SCADA, MES or ERP systems, calculations and data logging into SQL or NoSQL databases.

Industries

Oil & Gas

Pharmaceutical

Power Generation

Pulp & Paper

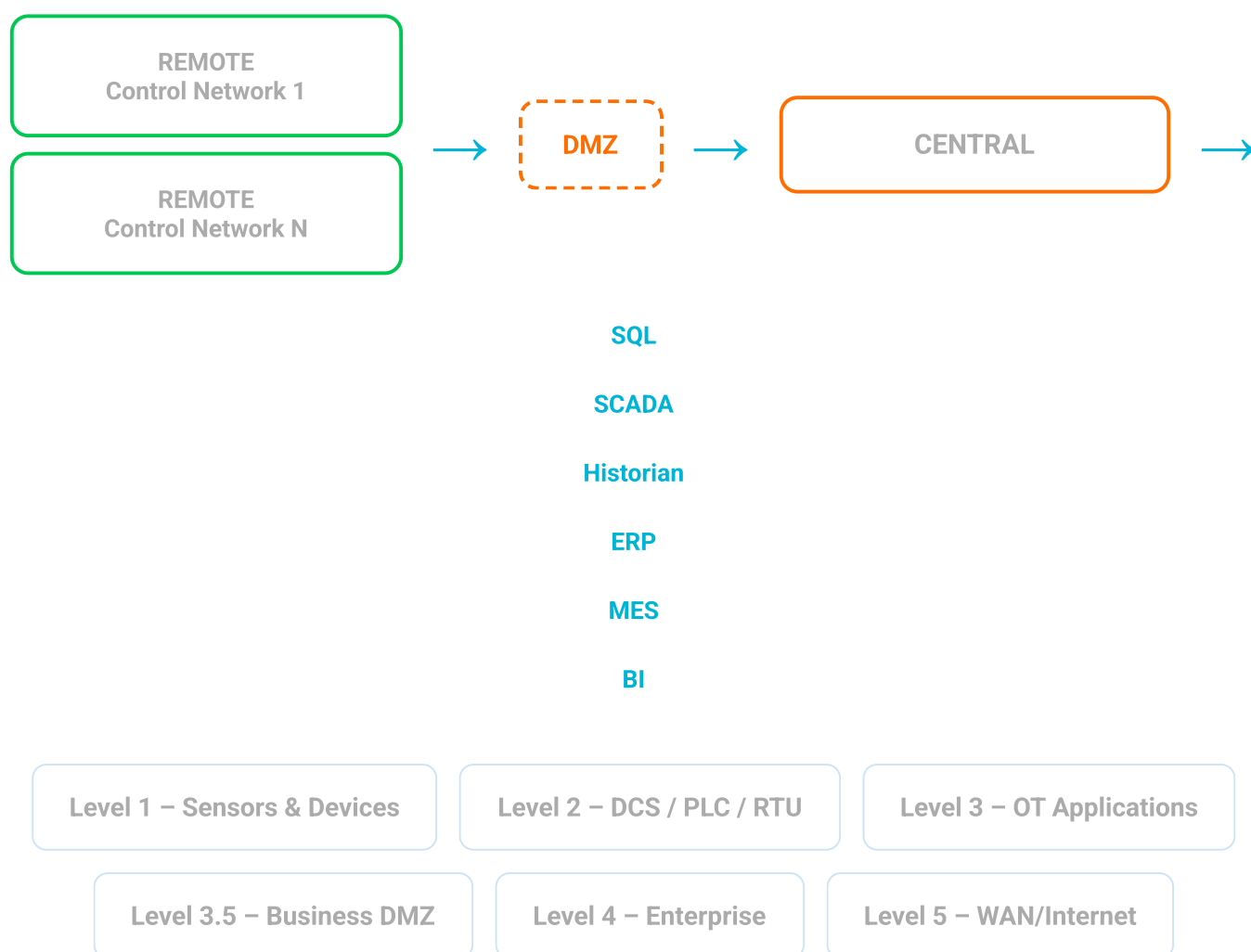
Chemical

Food & Beverage

Advantages

- Information exchange among different manufacturers
- Multiple connections, easy configuration
- **High security** (encryption, authentication, digital certificates)
- Never lose data → **Store&Forward**
- OPC UA, Industry 4.0 and IIoT

2. Distributed with DMZ



3. Solving Specific Needs

Collecting data from a very specific Data Source and delivering data to a specific application/destination.

Examples

- Reading a text file and sending the content to a SCADA
- Reading data from an OPC Server and converting data types
- Reading data from any source and creating CSV files for FTP upload
- Reading data from a PLC to make inserts into SQL Server
- Reading from Redundant OPC Server and sending to OPC UA Client
- Reading data from PLC, run logic and write a result back

Advantages

- **Cheap solution**
- Quick implementation by the end user
- Easy to **replicate**
- Unattended – no support or maintenance needed

3. itcyanbu Strengths

1

Store & Forward

2

Reverse Connection

3

Redundancy

4

High Security

5

Easy Integration

6

Min. Hardware

7

Data Acquisition

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Multi-Platform

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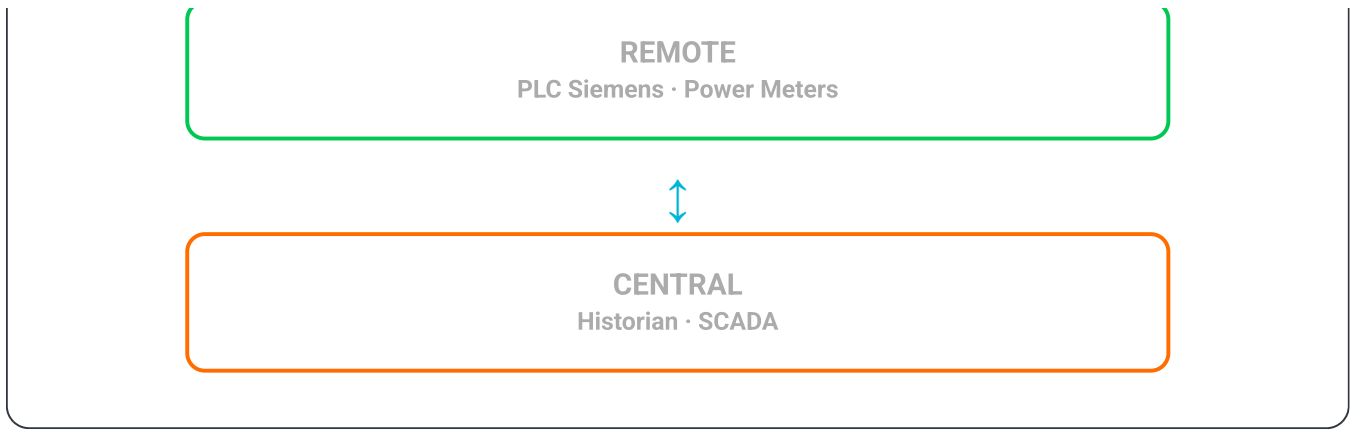
Strength 1: Store & Forward

itcyanbu always **guarantees data delivery**, even in scenarios with intermittent connectivity, low bandwidth or unstable networks.

How it works

REMOTE nodes collect and store data locally. When the connection to CENTRAL is restored, all buffered data is automatically forwarded — ensuring zero data loss.

Architecture



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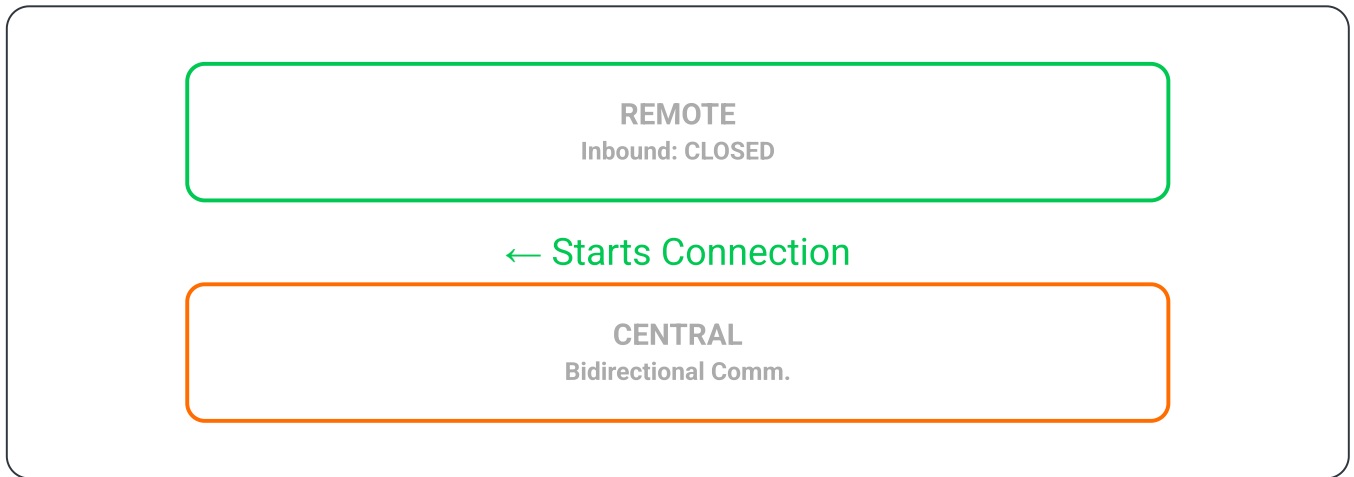
Strength 2: Reverse Connection

No open ports needed in remote locations because it is possible to set which node starts the communication.

Key Points

- ✓ **Outbound Port:** Open
- ✓ **Inbound Ports:** Closed
- ✓ Bidirectional communication
- ✓ itcyanbu can start connection from Remote to Central

IT Manager: Happy ✓



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Strength 3: Redundancy

Redundant Data Source

itcyanbu can perform TCP/IP redundant connections with data sources.

Data Source 1



Data Source 2

High Availability

Two nodes can be synchronized to guarantee maximum availability.

Primary

Watchdog ⇌

Stand by

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Strength 4: High Security

- Encryption through **SSL protocol**
- Node authentication based on **digital certificates**
- **Firewall Friendly:** No open ports needed in remote locations
- **Data-Diode** functionality for secure UDP unidirectional communication



Strength 5: Integration & Configuration

- ✓ **IIoT out-of-the-box:** Not an SDK — it's a ready-to-use solution: Plug and Play
- ✓ **Object oriented configuration:** Web-based templates save integration hours
- ✓ **Scalability:** 100% efficient from small local to large distributed architectures
- ✓ **Unlimited:** No limit of tags or connections



Unlimited Tags & Connections

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Strength 6: System Requirements

One of the most outstanding features of itcyanbu is its **high performance using low resources**.

Hardware

ARM · Intel x86-64 · AMD x86-64

Operating System

Windows: XP through Server 2022

Linux: Ubuntu, CentOS, Debian 6-10

Virtualization

VMware · VirtualBox · Hyper-V · Docker

Tested Embedded PCs

OnLogic
CL200 series

VS Vision
FlexRunner
3435

Techbase
NPE X500

Advantech
UNO 2173AAF

XmartEdge
EG1001 DIN

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Strength 7: Data Acquisition

Drivers for protocols and standards:

Collection Protocols

- Modbus TCP (and RTU over TCP)
- Siemens S7
- ABB AC400/450/500/800
- D&A signals and frames
- Text files (historical & real time)
- BACnet
- Modbus RTU
- SNMP
- OPC UA & OPC DA & XML DA
- REST API Client
- DNP3, IEC 102, IEC 104, DLMS
- SQL Client (SQL Server, MySQL, PostgreSQL)

→ Pharmaceutical machinery

→ Solar Power Inverters

→ Food & Beverage Machinery

Built-in Capabilities

→ Edge Scripts

→ Calculations

→ Historian

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Strength 8: Multi-Platform Delivery

Connectors for delivering data to client applications:

→ OPC UA Server

→ Modbus Slave

→ REST API Server

→ SQL Databases

→ NoSQL (MongoDB)

→ MQTT for AWS, Google, Azure

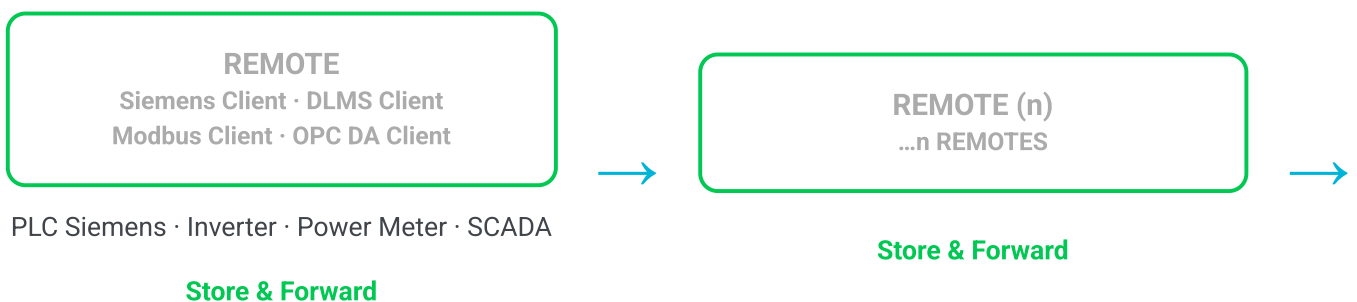
- DNP3 Slave
- CSV, XML or TXT files
- SCADA Apps
- UFL for OSIsoft PI

Local or FTP

File delivery options

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4. Architecture Example



CENTRAL

SQL Database · Cloud Platform

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5. itcyanbu vs Competitors

Software, not hardware

- Install in the SCADA PC → No extra hardware to maintain
- Install on an embedded industrial computer with 4G/WiFi → No need for a router
- Install in any Virtual Machine or Docker → Use existing resources

Key Differentiators

- Runs in Linux and Windows
- Includes **Store&Forward** — no lost data
- Adds **Cyber-security** to OT/IT infrastructure
- Remote configuration via http/https
- Real-time and historical data accessible via web browser

6. References by Industry

Products working in plants all over the world for more than 17 years.



Pulp &
Paper



Chemical &
Petrochemical



Pharmaceutical



Power



Oil &
Gas



Water &
Recycling



Mining &
Cement



Food &
Beverage



Automation
Vendors



Iron &
Steel

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Partner Program

A commercial alliance model for all integrators who want to increase projects and obtain greater profitability.



Joint Marketing & Sales



Specialized Training



Discounts



New Opportunities



Work Plan Execution



Brand Awareness



Industrial IoT Communication Platform

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