Fe
e-Front runners

SOFT MONITOUCH
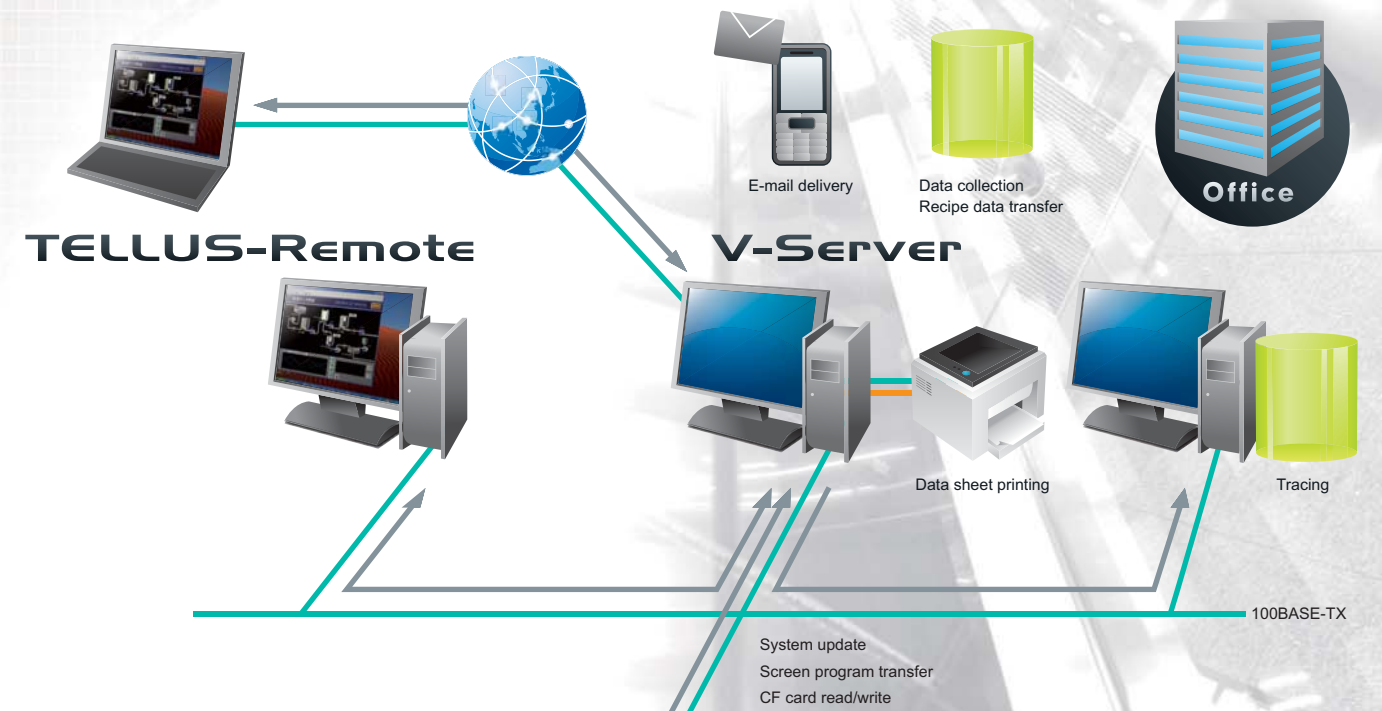# TELLUS and V-Server

Make your office the forefront of production

Hakko Electronics Co., Ltd.

TELLUS and V-Server

Monitoring the plant from the office enables quick response to changes, improving operating efficiency.

TELLUS and V-Server links Monitouch in a plant with a PC in the office, so that your PC can collect on-site data or monitor and control the equipment in the plant.
This combination enables efficient and low-cost production; immediate and appropriate responses to the condition of the line is possible from anywhere.
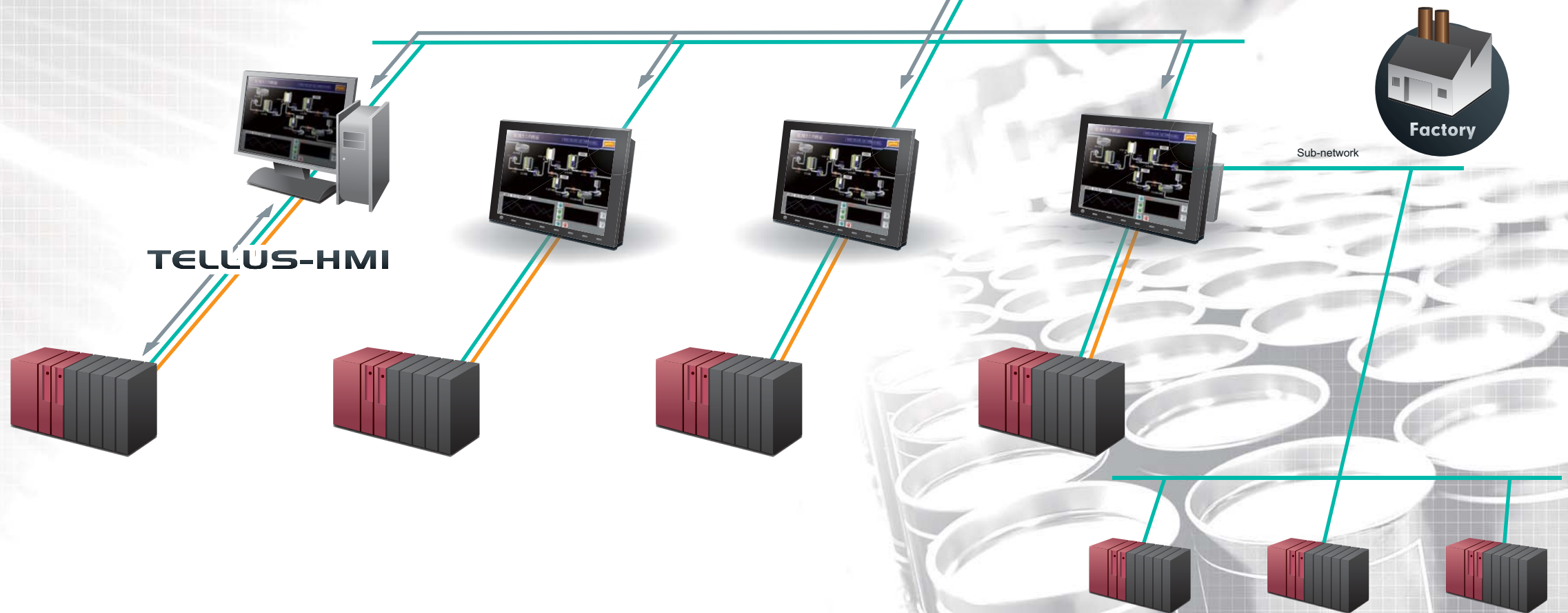
V-Server — P.03

Collection and saving of current data

Linkage of a PC and Monitouch via Ethernet enables collection and saving of on-site data in real time.

TELLUS-Remote — P.05

Remote monitoring and control

Installation of the TELLUS and V-Server software package allows your PC to monitor and control the production site via Monitouch through Ethernet.

TELLUS-HMI — P.06

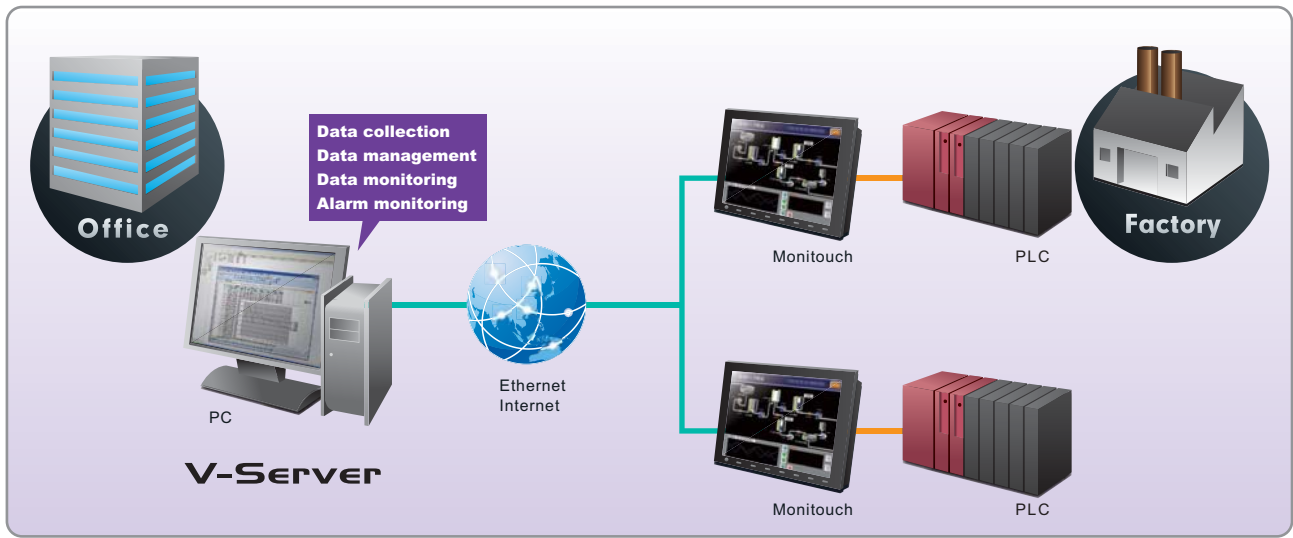**Monitouch functions available on your PC**

Equivalent functions of Monitouch are available on your PC by directly connecting to PLC after installing TELLUS software on your PC. It is possible to display an image of the entire line on a large screen display and link various Windows applications.

Monitouch	PLC	Internet
PC	Printer	Database
LAN	Serial	

TELLUS-Remote

V-Server

E-mail delivery
Data collection
Recipe data transfer

Office

Data sheet printing
Tracing

100BASE-TX

System update
Screen program transfer
CF card read/write

TELLUS-HMI

Factory

Sub-network

Linking your office and plant for collection of production data

V-Server

Office
Data collection
Data management
Data monitoring
Alarm monitoring

PC

V-Server

Ethernet
Internet

Monitouch   PLC

Factory

Monitouch   PLC

Data saving without programming
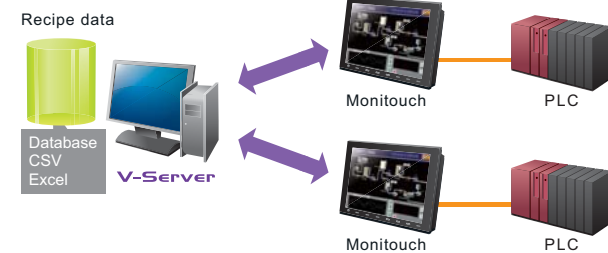

PLC   Monitouch   V-Server   Database CSV Excel

Data logging function
Production data can be regularly read out and saved in database or CSV/Excel format.

Readout of sampling data
Sampling data stored in Monitouch can be read out and saved in database or CSV/Excel format.
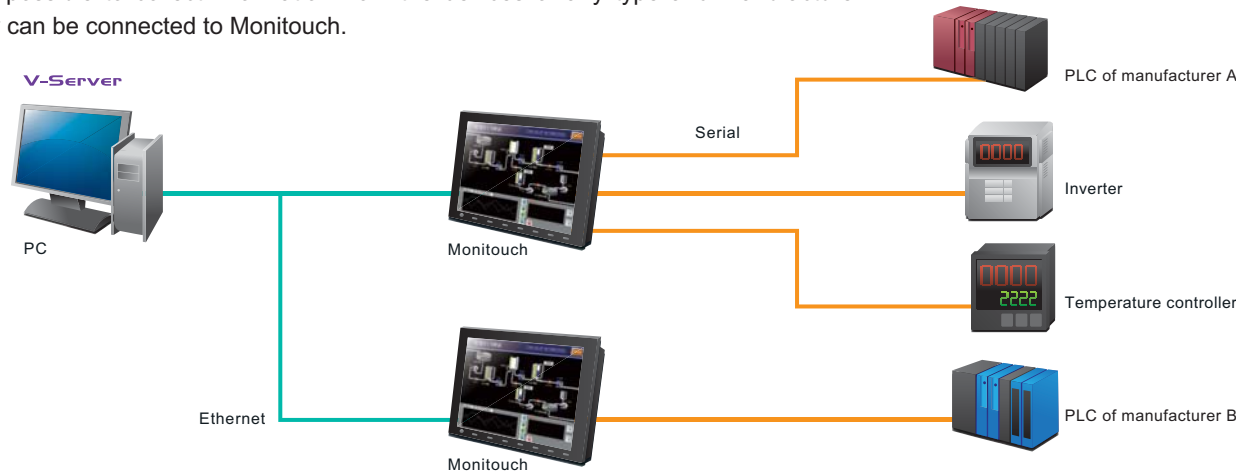
Consolidated recipe data management

Consolidation of recipe data by the upper-level PC reduces the process of recipe registration and modification for each piece of equipment and provides consistent product quality.
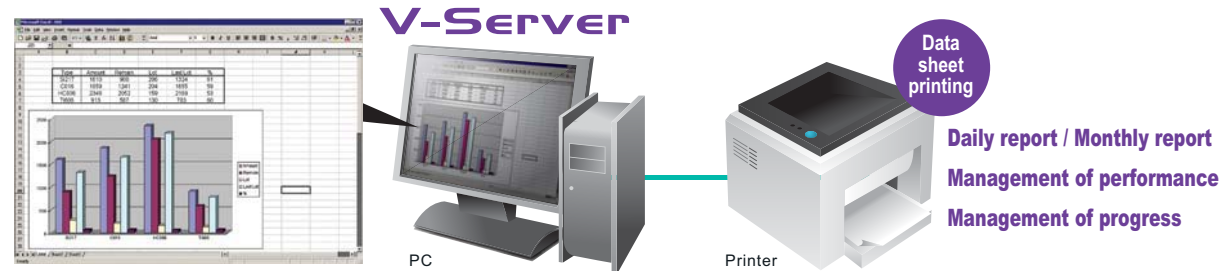

Recipe data

Database CSV Excel   V-Server

Monitouch   PLC

Monitouch   PLC

Consolidated management of data of PLCs of various types and manufacturers

V-Server collects information from peripheral devices through Monitouch as a gateway.
It is possible to collect information from the devices of any type and manufacturer if they can be connected to Monitouch.
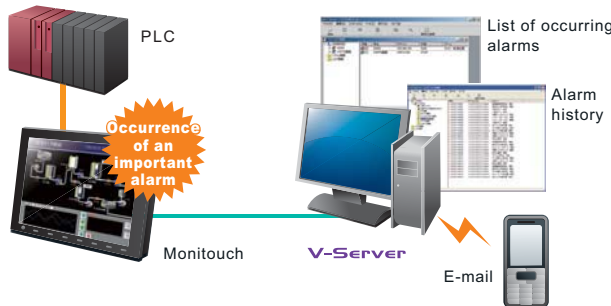

V-Server

PC

Monitouch

Serial

Ethernet

Monitouch

PLC of manufacturer A

Inverter

Temperature controller

PLC of manufacturer B

Easy to make daily and monthly reports (DDE function)

The tag data registered in V-Server can be pasted to Excel files in DDE format.
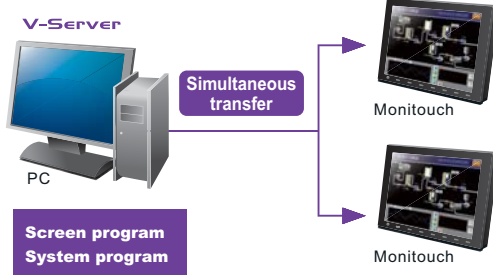This makes it easy to generate daily/monthly reports.

V-Server

PC   Printer

Data sheet printing

Daily report / Monthly report
Management of performance
Management of progress

Quick response to on-site problems

Alarm data can be monitored to display historical data or a list of alarms currently occurring. In addition, an e-mail alert can be sent immediately when a critical alarm occurs.
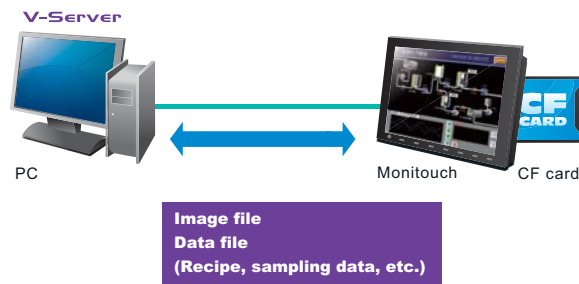

PLC

List of occurring alarms

Alarm history

Occurrence of an important alarm

Monitouch   V-Server   E-mail

Updating of Monitouch data from the office

You can update the system program of multiple Monitouch panels at a time or transfer the screen program to them all together.

V-Server

PC

Simultaneous transfer

Monitouch

Monitouch

Screen program
System program

Reading and writing of CF cards

Files on a CF card inserted in Monitouch can be read out to a PC, and files edited on a PC can be written onto a CF card via Ethernet.
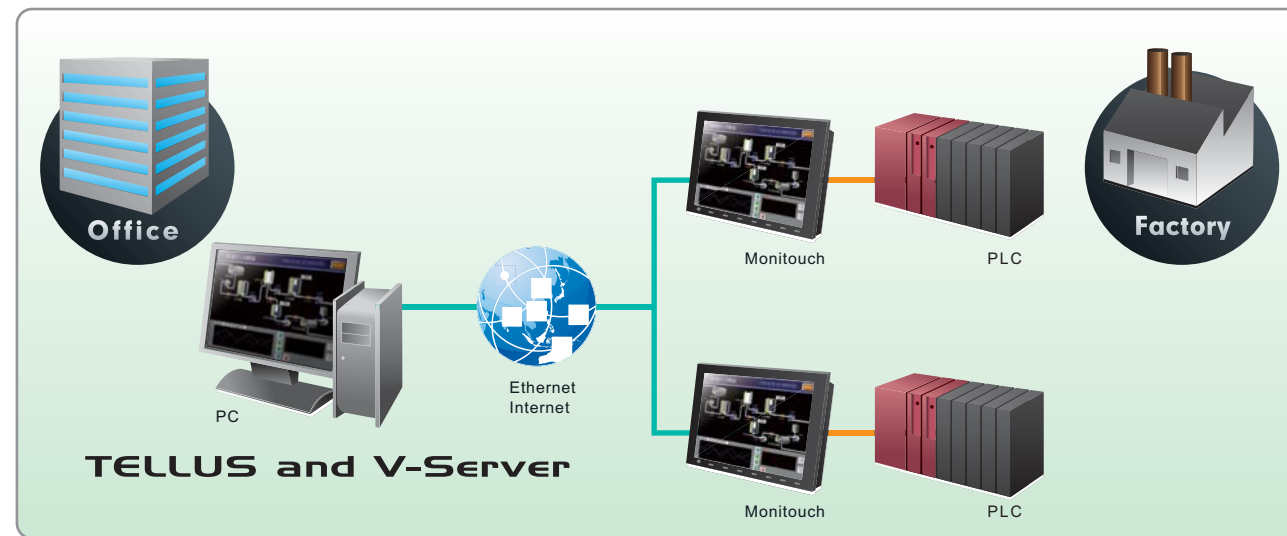

V-Server

PC   Monitouch   CF card

Image file
Data file
(Recipe, sampling data, etc.)

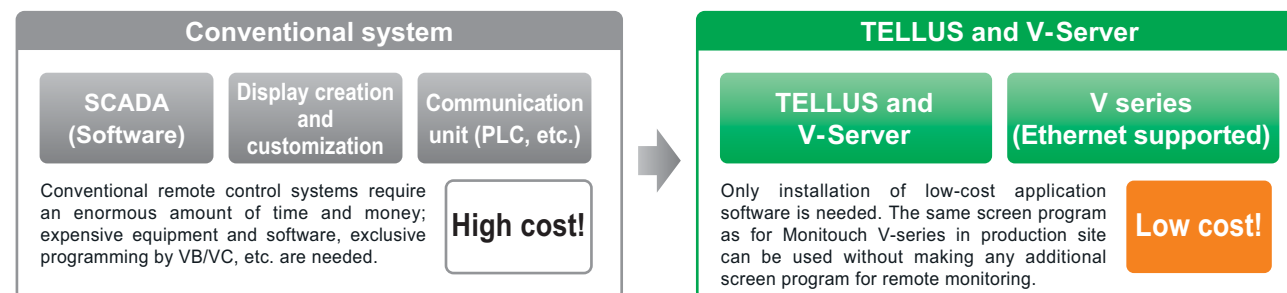## Automatic actions in response to events

Various kinds of events can be set depending on the requirements of the operation. Events allow for a high degree of flexibility, so you can adapt to the specifications of the production line.

Event (Trigger conditions)		
Bit ON/OFF	Setting of memory values	Time setting

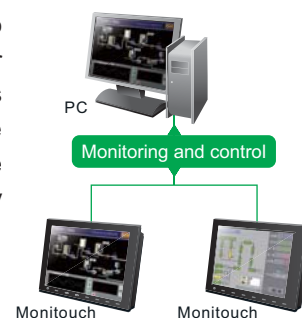| **Action** (Operations)		
Start/Stop of logging	Recipe read/write	Sampling readout
Application start-up	CF card read/write	

Remote monitoring and control

TELLUS-Remote

Office

PC

TELLUS and V-Server

Ethernet
Internet

Monitouch   PLC

Monitouch   PLC

Factory

Remote control with excellent cost performance

Conventional system	TELLUS and V-Server

SCADA (Software)	Display creation and customization	Communication unit (PLC, etc.)

TELLUS and V-Server	V series (Ethernet supported)

Conventional remote control systems require an enormous amount of time and money; expensive equipment and software, exclusive programming by VB/VC, etc. are needed.

High cost!

Only installation of low-cost application software is needed. The same screen program as for Monitouch V-series in production site can be used without making any additional screen program for remote monitoring.
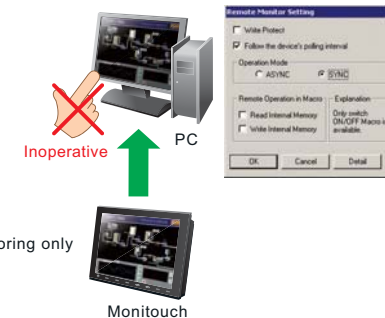
Low cost!

Monitoring and control of multiple units by one PC

TELLUS allows you to control and monitor multiple Monitouch panels and PLCs with a single PC, which helps improve the operating efficiency and the cost-effectiveness.

PC

Monitoring and control

Monitouch   Monitouch

Security functions against operation errors

Security functions such as write-protect are provided to ensure safe and secure system operation.

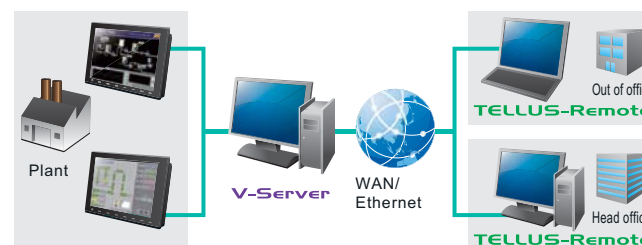Inoperative

PC

Monitoring only

Monitouch

Remote control by means of a simple system

The system is compatible with various systems such as in-house LAN, Internet, WAN, etc.
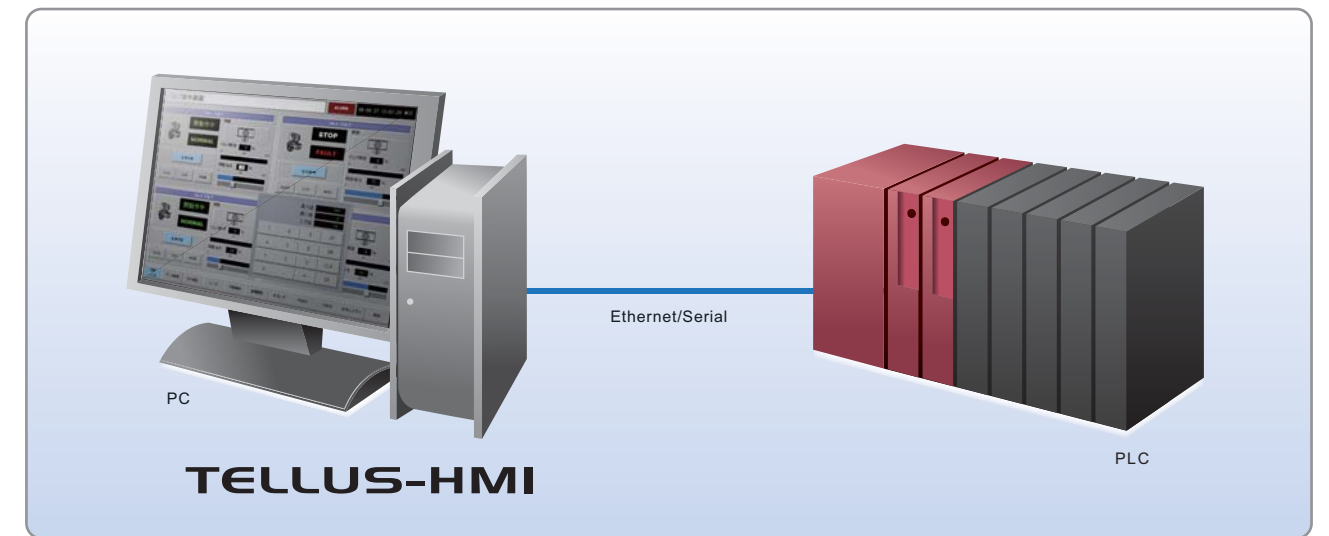
▶ **You can access the on-site screen via the Internet from a remote location.**

▶ **You can monitor overseas plants via WAN.**

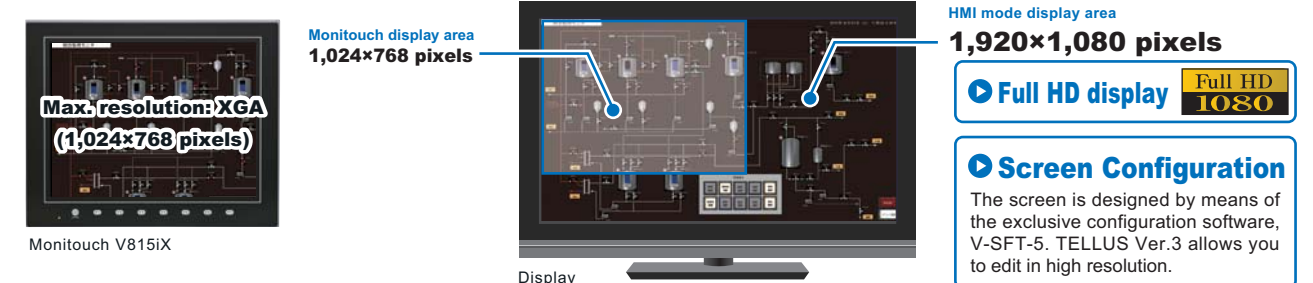*It is necessary to modify the setting of firewall and routing for Internet access.

Plant

V-Server

WAN/
Ethernet

TELLUS-Remote
Out of office

TELLUS-Remote
Head office

Integration of PC and Monitouch improves performance beyond Monitouch's capacity.
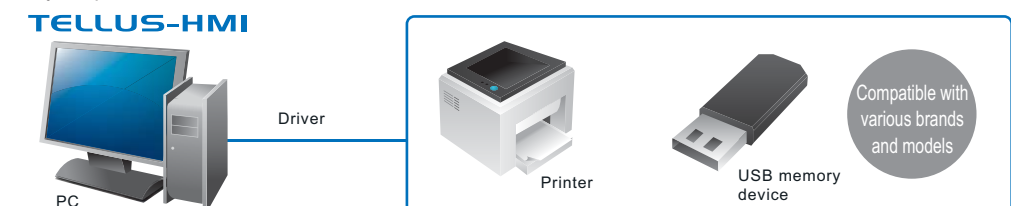
TELLUS-HMI

PC

TELLUS-HMI

Ethernet/Serial

PLC

A large screen display allows centralized monitoring of the entire plant.

TELLUS HMI supports full HD resolution.The entire image, which cannot be displayed on one Monitouch display, can be displayed on a large screen display.

Max. resolution: XGA
(1,024×768 pixels)

Monitouch V815iX

Monitouch display area
1,024×768 pixels

HMI mode display area
1,920×1,080 pixels

▶ **Full HD display** Full HD 1080

▶ **Screen Configuration**
The screen is designed by means of the exclusive configuration software, V-SFT-5. TELLUS Ver.3 allows you to edit in high resolution.

Display

Easy selection of peripheral equipment

It is possible to connect peripheral equipment such as printers and mass storage media that have Windows drivers so that the data can be easily output or saved.

TELLUS-HMI

PC

Driver

Printer   USB memory device

Compatible with various brands and models

Large expandability combined with various applications

Processing of production data such as summary and analysis can be easily conducted using external software.
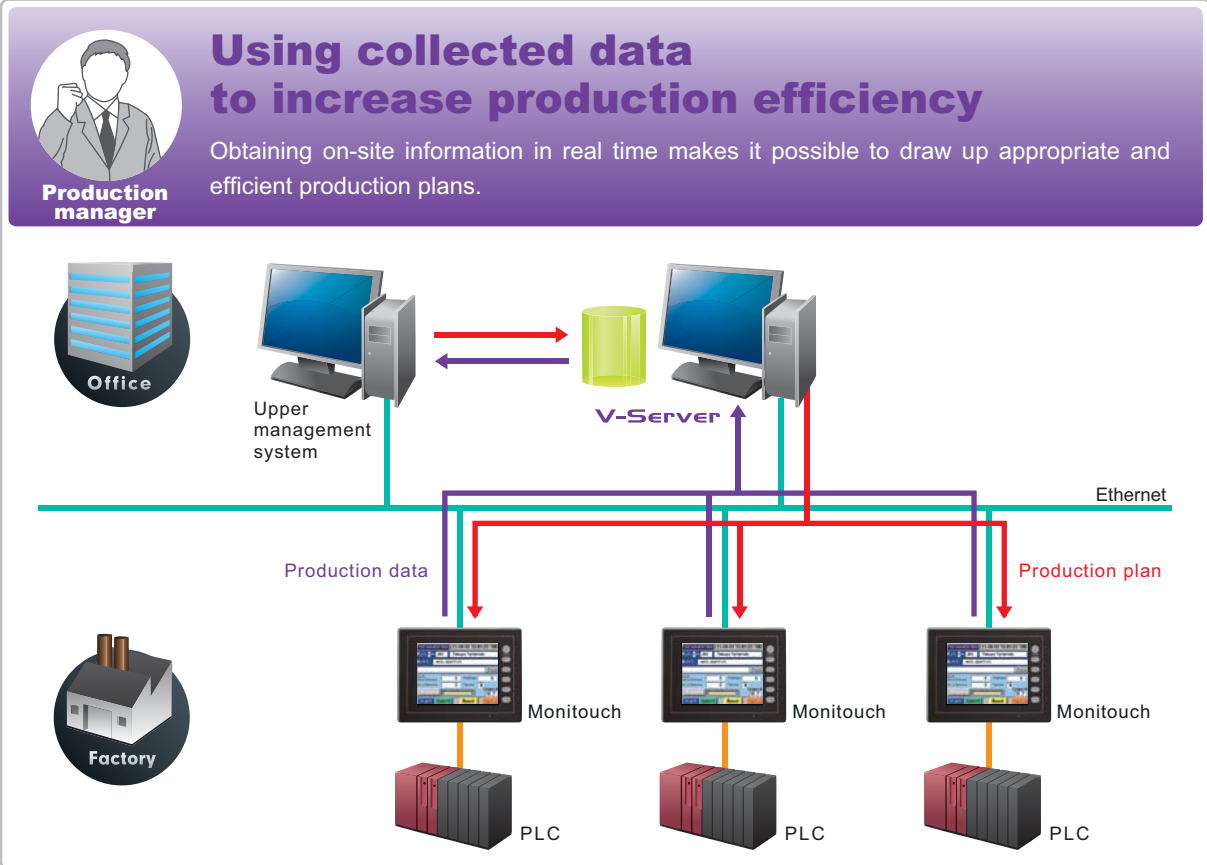
TELLUS-HMI

PC

Shutdown of OS
OS can be shut down on TELLUS without displaying the shutdown menu.

Start-up of application
Various applications can be run, including that for viewing a PDF of the troubleshooting manual.

Loading and execution of DLL functions
DLL functions that were made individually can be loaded and executed on TELLUS.

Advantages of using V-Server

"I don't have to bother collecting data any more."

Real-time collection of on-site production data

Production data can be collected in real time without burdening workers.
Collected data can be used for reviewing production plans and improving production facilities.

Production manager

Using collected data to increase production efficiency

Obtaining on-site information in real time makes it possible to draw up appropriate and efficient production plans.

Office

Upper management system

V-Server

Ethernet

Production data

Production plan

Factory

Monitouch

Monitouch

Monitouch

PLC

PLC

PLC

Worker

Sending reports upon completion of work

Daily reports are made automatically and accurately to reduce the burden on the production worker and errors.

Work complete!

Production data

V-Server

Maintenance worker

Producing a database of problems

Data on operation stops and errors are analyzed to improve production facilities.

Occurrence of error
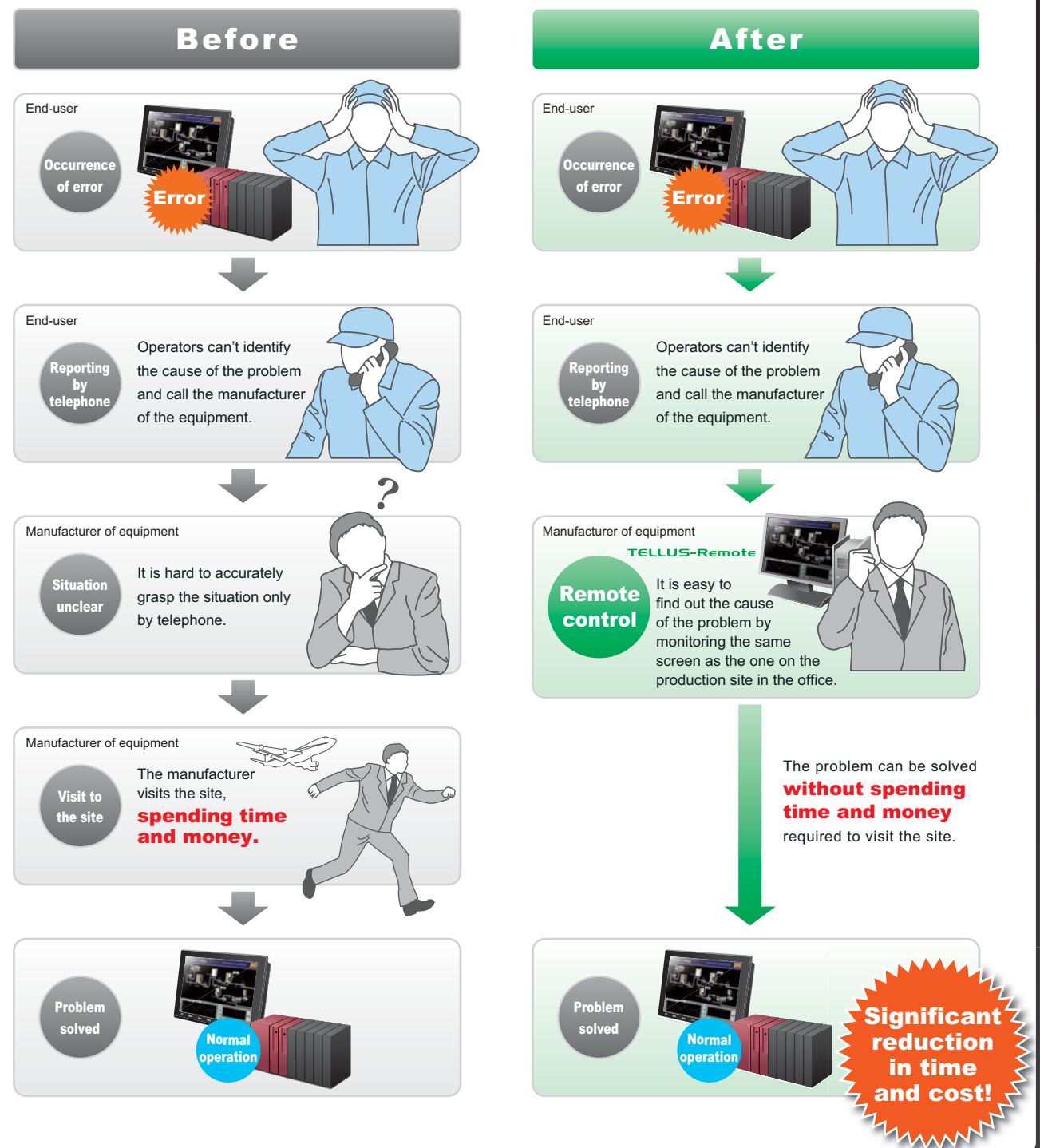
Input a cause of the operation stop

Monitouch

Advantages of using TELLUS-Remote

"We can shorten the downtime."

Troubleshooting in the office for quick recovery

Prompt response to problems is possible by controlling the production equipment remotely.
Production efficiency is improved by shortening downtime, and there is no need to spend the time and money required to send a person to the production site.

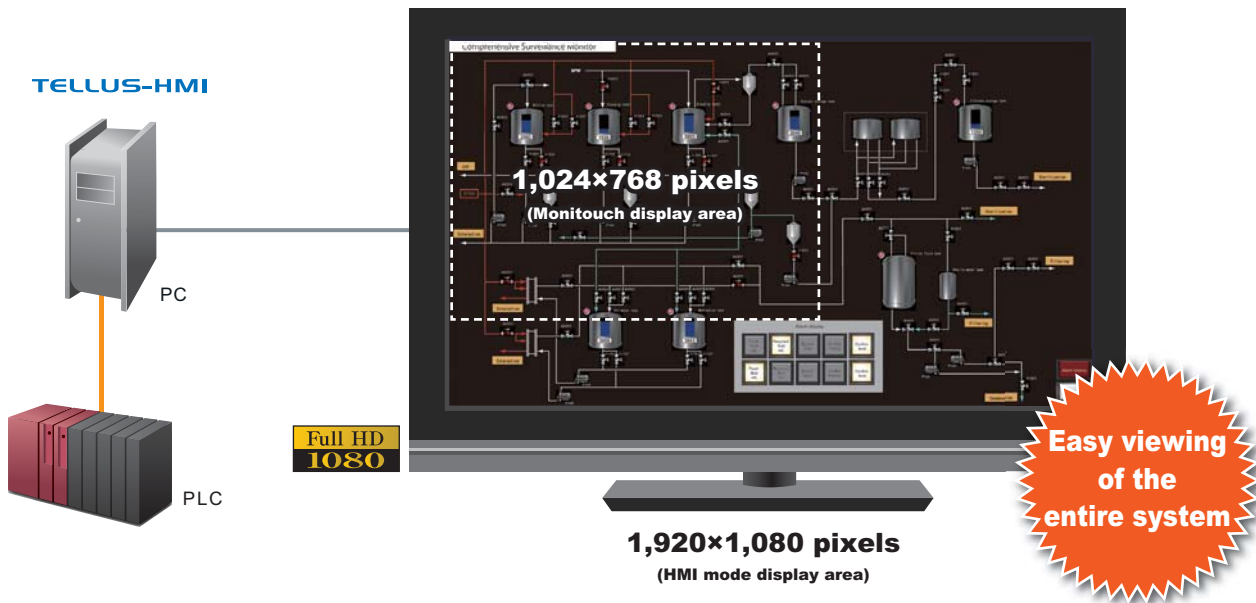| Before	After
End-user **Occurrence of error** Error	End-user **Occurrence of error** Error
End-user **Reporting by telephone** Operators can't identify the cause of the problem and call the manufacturer of the equipment.	End-user **Reporting by telephone** Operators can't identify the cause of the problem and call the manufacturer of the equipment.
Manufacturer of equipment **Situation unclear** It is hard to accurately grasp the situation only by telephone.	Manufacturer of equipment TELLUS-Remote **Remote control** It is easy to find out the cause of the problem by monitoring the same screen as the one on the production site in the office.
Manufacturer of equipment **Visit to the site** The manufacturer visits the site, **spending time and money.**	The problem can be solved **without spending time and money** required to visit the site.
Problem solved Normal operation	**Problem solved** Normal operation

Significant reduction in time and cost!

Advantages of using TELLUS-HMI

"I won't miss a problem in production."

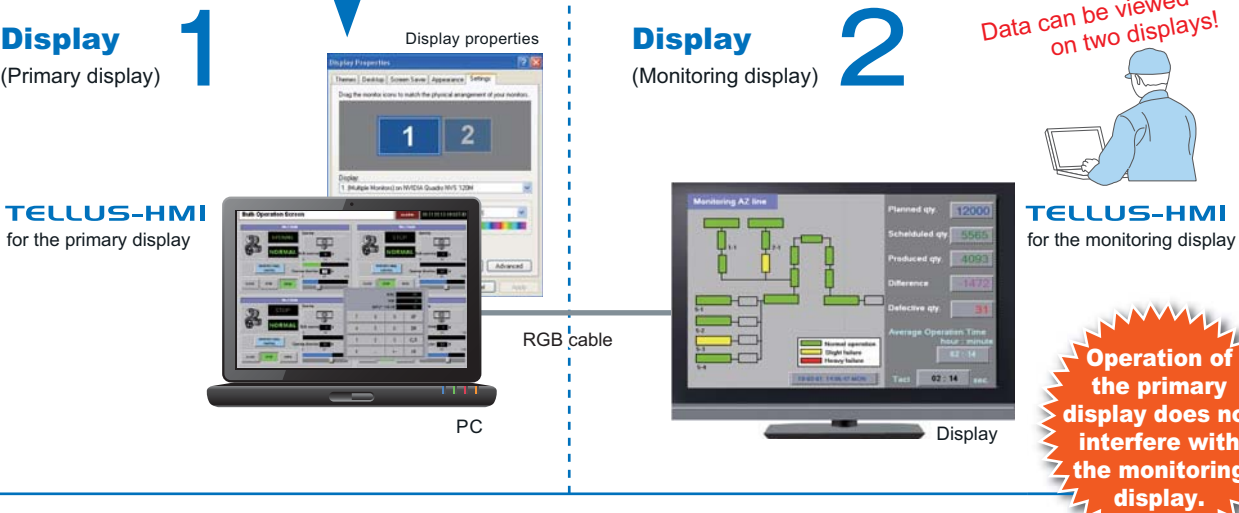### An image of the entire production line can be displayed on one large screen.

Equipping a PC with Monitouch functions makes it possible to have a large, full HD display.
All operation processes can be displayed on one large screen.

TELLUS-HMI

PC

PLC

1,024×768 pixels
(Monitouch display area)

Full HD 1080

1,920×1,080 pixels
(HMI mode display area)

Easy viewing of the entire system

Additional displays only for monitoring is available.

Connection of a large display enables easy viewing of the image data.

Run two TELLUS-HMIs and indicate the data on separate displays.

Display 1
(Primary display)

Display properties

TELLUS-HMI
for the primary display

PC

RGB cable

Display 2
(Monitoring display)

Data can be viewed on two displays!

TELLUS-HMI
for the monitoring display

Display

Operation of the primary display does not interfere with the monitoring display.

Compatible Models & Operation Requirements

●Compatible Models

V8i series
V8 series with CU-03-3 (Ethernet unit)
V715/V7i series
V7 series with CU-03-3 (Ethernet unit)
V706 and DU-01
V612/V610/V608/V606i with CU-03-3 (Ethernet unit)

●Recommended Operating Environment
Please ensure the following conditions are in place for the operation of TELLUS and V-Server.

PC	IBM PC/AT compatibles operable with Windows
OS	Windows 98SE / Me / NT Ver.4.0/2000 / XP / Vista 32bit / Vista 64bit / Windows 7 32bit / Windows 7 64bit
CPU	Pentium III 800MHz or more
Memory	**TELLUS**: 256MB or more **V-Server**: 128MB or more
Hard disk*	**TELLUS**: 80MB or more **V-Server**: 200MB or more
Display	Resolution: 640×480 or more Colors: High Color 16-bit or more

*When installed

●Configuration Software

V-SFT-5 : configuration software for Monitouch V series and TELLUS. You can easily create your own screen program as desired.
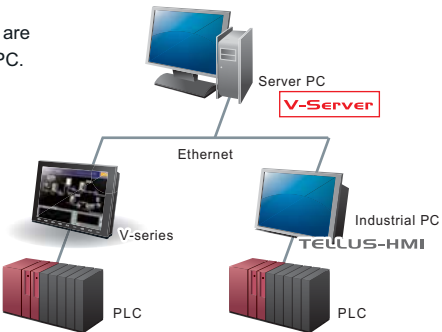
License Types
One license is required for each computer. There are four types of licenses depending on the function. (Licenses are framed in red as below.)
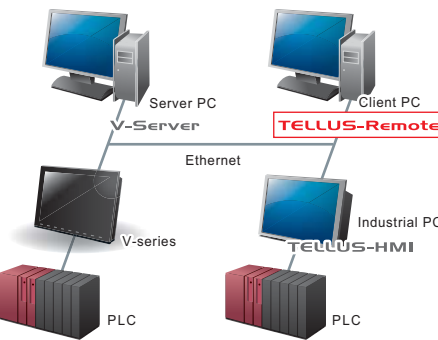
1 V-Server

The functions of V-Server are carried out by the server PC.

●Readout/Writing of the recipe data for V-series (or TELLUS HMI)
●Alarm monitoring
●Event action
●Screen data transfer (excluding TELLUS-HMI)

Server PC
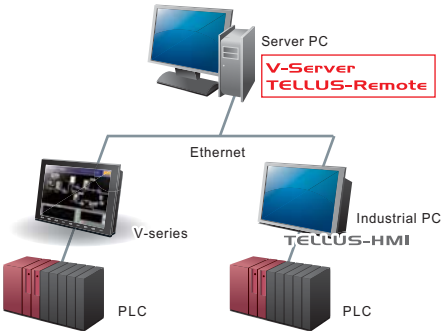V-Server
Ethernet
V-series
Industrial PC
TELLUS-HMI
PLC
PLC

2 TELLUS-Remote

●A client PC equipped with TELLUS accesses V-Server on a server PC via Ethernet and operates the panels of V-series (or TELLUS HMI) remotely.
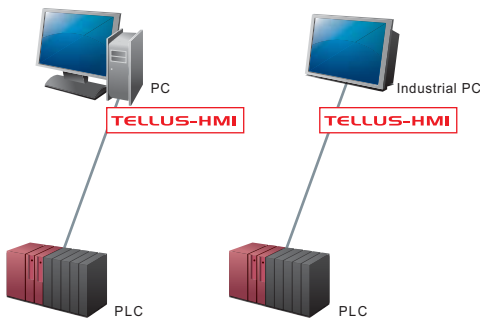●HMI communication is also possible.

Server PC
V-Server
Client PC
TELLUS-Remote
Ethernet
V-series
Industrial PC
TELLUS-HMI
PLC
PLC

3 TELLUS and V-Server

●A server PC equipped with TELLUS and V-Server can remotely control the panels of V-series (or TELLUS HMI) while conducting V-Server functions.
●HMI communication is also possible.

Server PC
V-Server
TELLUS-Remote
Ethernet
V-series
Industrial PC
TELLUS-HMI
PLC
PLC

4 TELLUS-HMI

●A PC (or Industrial PC) equipped with TELLUS-HMI and connected with a PLC functions as a V-series panel.

PC
Industrial PC
TELLUS-HMI
TELLUS-HMI
PLC
PLC

License Validation
There are two types of licenses: Password type and USB license type.

USB license key

TELLUS-HMI USB Key
TELLUS-Remote USB Key
TELLUS and V-Server USB Key

Password validation

TELLUS-HMI
TELLUS-Remote
TELLUS and V-Server
V-Server

License Validation

License validation is restricted to one license per computer. There are four types of licenses, one for each function (See above).
Check the type of license for the function(s) you wish to use it for.

Notes: When reinstalling the application software on the same computer, the same password is valid. If you initialize the OS or change the computer on which the application software is installed, the password becomes invalid. In this case, you must go through the license validation procedure again to get a new password.