

COMPREHENSIVE
HMI
SOLUTION



BCH Xpanel
WINDOWS CE BASED OPERATOR TERMINAL

BCH TOUCH PANEL
PANEL MOUNTED OPERATOR TERMINAL WITH BUILT IN SCADA SOFTWARE

BCH SCADA
SUPPORT SYSTEM REDUNDANCY AND
CLIENT/SERVER CONFIGURATION



BCH ELECTRIC LIMITED

COMPREHENSIVE
HMI
SOLUTION

APPLICATIONS



Machine Control



Food & Beverage Industries

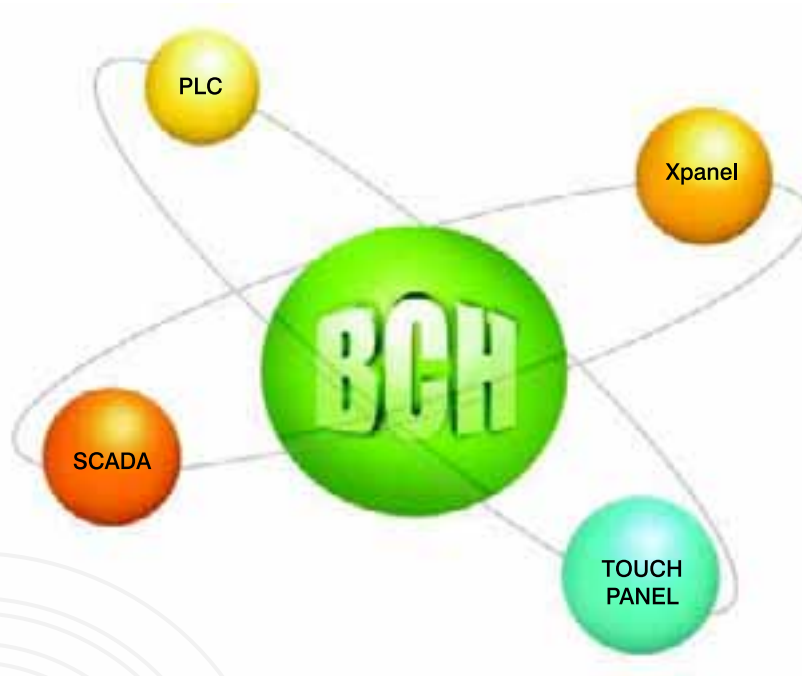


Textile Industries

BCH an ISO 9001-2000 company is one of the largest manufacturer of low voltage electrical and electronic products in India.

Our proven range of Industrial Control, Power Distribution, Automation, Enclosures, Brakes, Starters and Mass Market products have over the years become a benchmark.

BCH is already providing automation solutions with complete range of DC Drives, AC Drives, Soft Starters and Programmable Logic Relays.



BCH Automation Products ...

The high performance architecture that meets all your

Industrial Automation requirement.



Packaging machines



Steel Plant



Automobile Industries



Weighing

and many more...

COMPREHENSIVE **HMI** SOLUTION

BCH Xpanel

WINDOWS CE BASED OPERATOR TERMINAL



- 5.6" to 12.1" TFT displays.
- 64K Color TFT Display
- External data interfaces - USB, SD/MMC
- Device communication Via Ethernet, RS232/422/485
- Sufficient internal memory for large size application

BCH TOUCH PANEL

PANEL MOUNTED OPERATOR TERMINAL WITH BUILT IN SCADA SOFTWARE



- 12.1" & 15" TFT displays.
- High color/Resolution TFT
- Panel Mountable Structure
- All in one embedded board
- Connectivity with 4 serial ports and Ethernet ports

BCH SCADA

SUPPORT SYSTEM REDUNDANCY AND
CLIENT/SERVER CONFIGURATION



- 75 Tag's to unlimited Tag's Development & Runtime packages.
- Web version package for 2 user's to unlimited user's.
- Support system redundancy & client/server system.
- Connectivity to RDBMS
- Open system architecture
- Tag Database compatibility with various application software like Excel & Word

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BCH - Xpanel

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BCH - TOUCH PANEL

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BCH - SCADA

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Features of BCH-Xpanel

■ BCH - Xpanel opens a new era of HMI panel

- Embedded high speed mobile processor, (Intel PXA 255 400MHz)
- Provides sufficient memory space.
 - SDRAM : 64MB
 - Flash memory : up to 64MB (32MB standard)
 - Data storage : up to 40MB(8MB standard)
- High color LCD display (65536 colors)
- High resolution display (800 x 600 pixels)
- High resolution touch screen (4 wire resistive)

■ Easy operating Environment

- Windows CE based operation system
- Project data management by active-Sync.

■ Space saving size

- One of the most thin panel
- Thin panel size provides more freedom on space limited system.
(XT10CA : W280mm x H220mm x D47mm)

■ Easy Upgrade

- Operating system upgrade by Ethernet.
- Runtime application software upgrade by BCH-Xpanel Designer
- Automatic version check and message display
- Upgrade files can be downloaded by internet freely

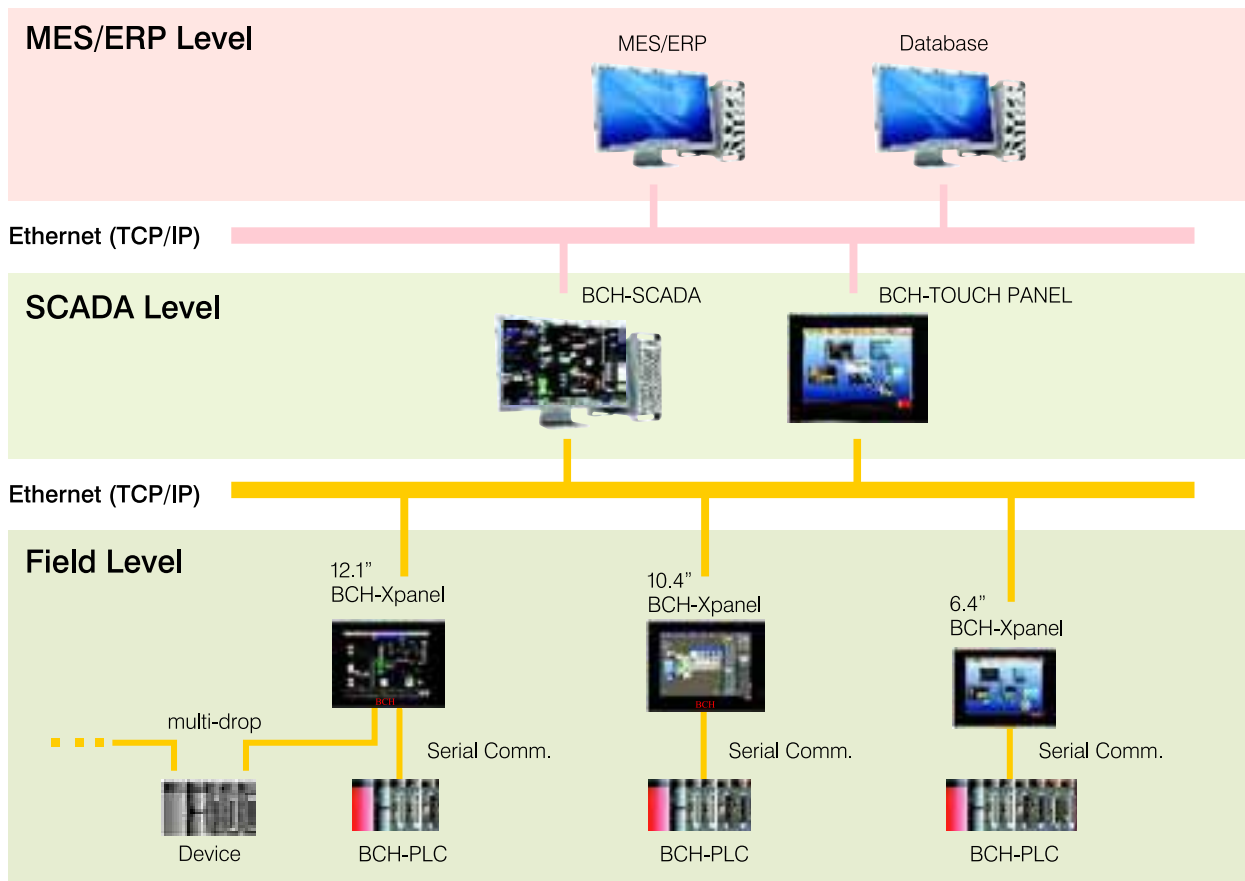
■ Other functions

- SD Memory slot provides additional storage space
- Various external devices will be utilized by USB
- Diagnostic tools make easy for trouble shooting

Features of BCH-Xpanel

Flexible network

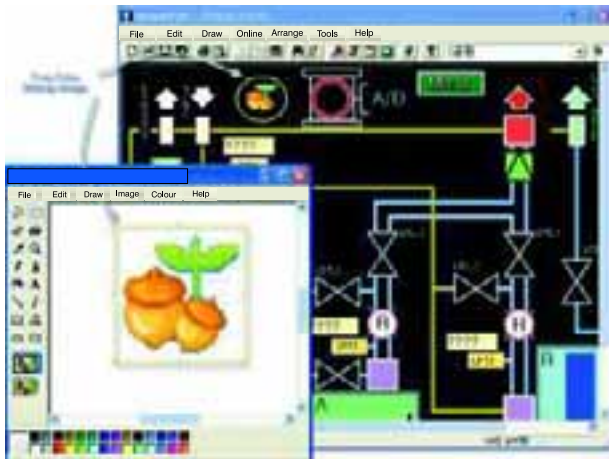
- Provides various device communication media
 - Ethernet 1 port
 - RS232C/422/485 1 port
 - Additional RS232C 1 port
 - USB Host interface for link with design tool software
- Provides network slave functionality for communication with BCH - SCADA
- Network Architecture
 - Maximum 3 ports can be utilized simultaneously for device communication (RS232C, 1RS422/485, 1 Ethernet)
 - Supports multi-drop topology (RS422/485, Ethernet)
 - Provides network slave function for communication with SCADA system



Features of BCH-Xpanel

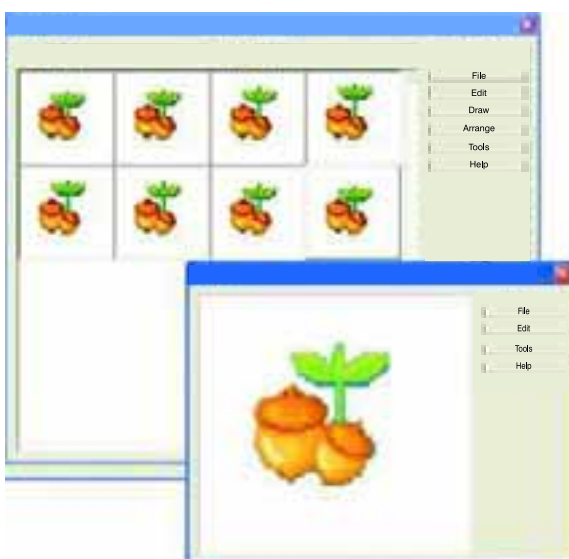
■ Easy and powerful design tool : BCH-Xpanel designer

- Provides easy and powerful design environment. Which is Similar to our BCH - SCADA.
- Fast data downloading by USB
 - Project data up/down-load by USB interface
 - Easy project data management by Active-Sync.
- Supports high color graphic image(up to 16bits)



- External graphic images can be imported/exported by using clipboard.
- Supports transparent color function.
- Supports high color(65536 colors)

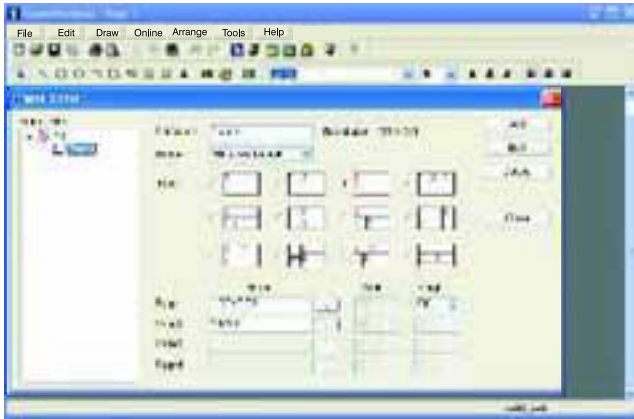
- Supports animation GIF format



- BCH - Xpanel supports animation GIF in runtime
- BCH - Xpanel Designer provides creating and editing tools for animated graphic object
- Provides simulation tool for animated graphic object
- Provides user modifiable graphic library

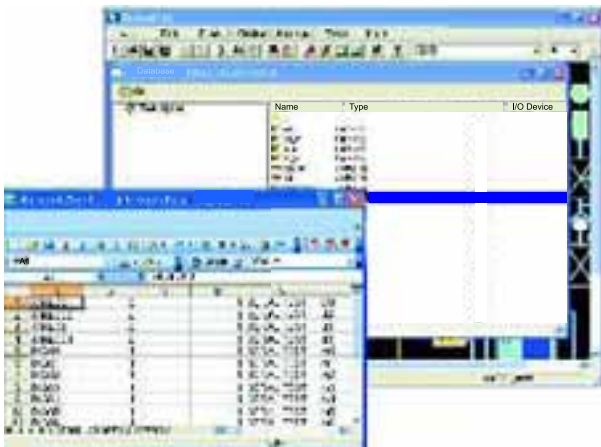
Features of BCH-Xpanel

- Frame function provides easy solution for simultaneous displaying multiple monitoring pages.



- Supports multi-windows monitoring by frame function
- Provides frame editor for positioning or sizing of each window.
- Provides various ready to use frame settings

- TAG database can be exported (imported) to (from) MS Excel



- Point data are managed by internal real-time database as TAG
- TAG DB can be imported/exported from/to Excel. sheet
- TAGs are managed in hierarchical structure by it's name

- Alarm function supports acknowledge mechanism and historical reviewing of designated group



- Supports 10 alarm groups
- Each alarm group stores max.100 latest alarms.
- Various Filtering function makes easy to analyze alarm event
- Provides alarm acknowledge functionalities
- Alarm action can be designated to each alarming point.

Features of BCH-Xpanel

- Provides various graphic wizard objects which make easy to link TAG and graphic object



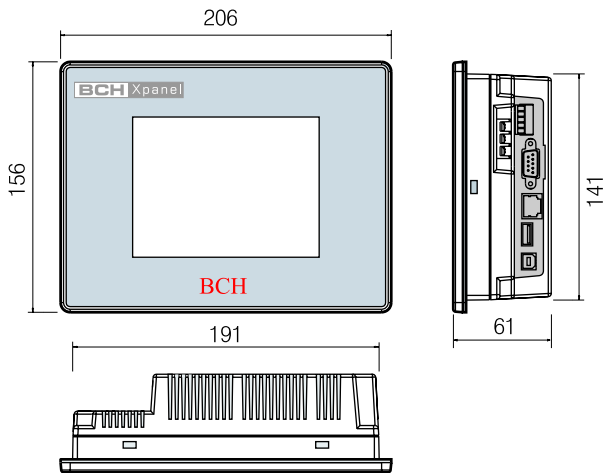
- Provides graphic control wizard
- Wizard makes the job easy and fast to assign control and TAG on graphic objects

- Logged data by data-logger function can be visualized by trend object
 - 0.1 Second minimum sampling rate.
 - TAGs are managed by logging group.
 - Trend function can be used for visualizing logged data
 - Trend can be zoom in or out
 - Historical trend function is available
- Provides C-style script language and various embedded sub-routines for flexible design
 - 'C' language style script is presented
 - Various internal subroutine function are provided for data manipulation
 - Scripts are activated to execution by event, time period or function call.
- Other function
 - Internal system activity log is presented for trouble shooting
 - Communication frame can be monitored

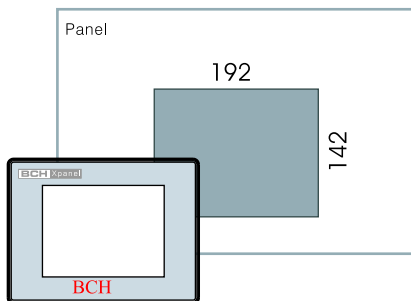
Product Specification

XT05MA / XT05MS

Dimensions



Panel cut



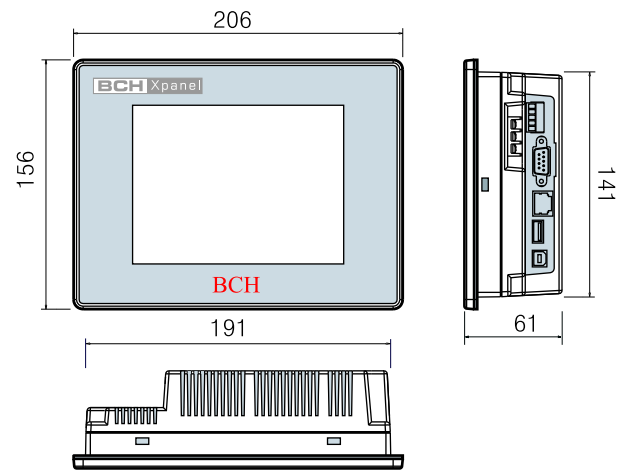
Specification

Items	CM1-XT05MA-A CM1-XT05MA-D	CM1-XT05SA-A CM1-XT05SA-D
Display	Mono LCD	CSTN LCD
LCD Size	5.6"	
Touch Screen	320X240 Resistive	
Colour	16 Gray	256
RAM	64MB SDRAM	
Storage	32MB Flash(up to 64MB)	
Operating System	Microsoft Windows CE	
Programming Tool	BCH - Xpanel Designer	
Interface	RS232/422/485 1 Port	
	485Auto Toggle Supported	
	Ethernet 10Base T, 100Base-TX 1Port	
	USB (Host) 1 Port (for Printer, external storage)	
	Tool Connector 1 Port(for Designer)	

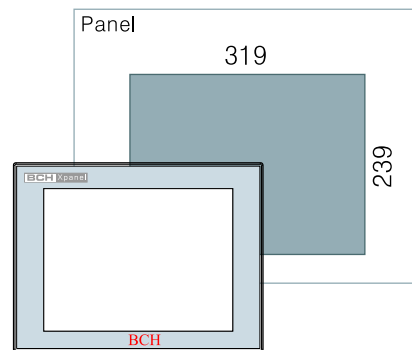
A: AC power input(90-240V AC) D : DC power input(24V DC)

XT06CA

Dimensions



Panel cut



Specification

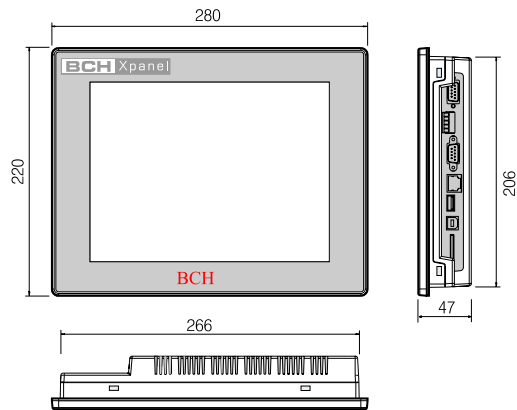
Items	CM1-XT06CA - A CM1-XT06CA - D	
Display	TFT Colour LCD	
LCD Size	6.4"	
Touch Screen	640 X 480 Resistive	
Colour	65536	
RAM	64 MB SDRAM	
Storage	32MB Flash (up to 64MB)	
Operating System	Microsoft Windows CE	
Programming Tool	BCH - Xpanel Designer	
Interface	RS232/422/485 1 Port	
	485Auto Toggle Supported	
	Ethernet 10Base T, 100Base-TX 1Port	
	USB (Host) 1 Port (for Printer, external storage)	
	Tool Connector 1 Port(for Designer)	

A: AC power input(90-240V AC) D : DC power input(24V DC)

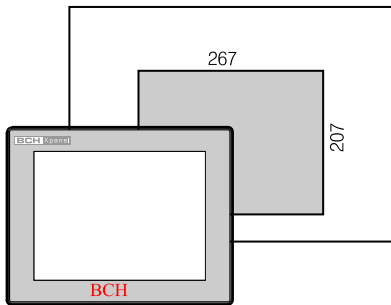
Product Specification

XT10CA

Dimensions



Panel cut



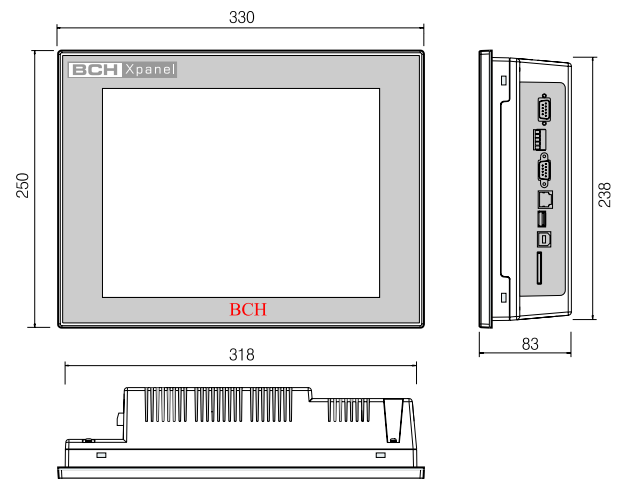
Specification

Items	CM1-XT10CA-A CM1-XT10CA-D	
Display	TFT	
LCD Size	10.4"	
Touch Screen	800 X 600 Resistive	
Colour	65536	
RAM	64MB SDRAM	
Storage	32MB Flash(up to 64MB)	
Interface	RS232/422/485	1 Port
	485Auto Toggle	
	RS-232C	1 Port
	Ethernet	10Base T, 100Base-TX 1Port
	USB (Host)	1 Port
	Tool Connector	1 Port
	SD Card Slot	SD Memory Slot 1ea

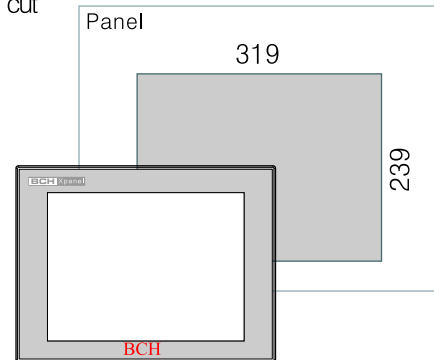
A: AC power input(90-240V AC) D : DC power input(24V DC)

XT12CA

Dimensions



Panel cut



Specification

Items	CM1-XT12CA-A CM1XT12CA-D	
Display	TFT	
LCD Size	12.1"	
Touch Screen	800 X 600 Resistive	
Colour	65536	
RAM	64MB SDRAM	
Storage	32MB Flash(up to 64MB)	
Interface	RS232/422/485	1 Port
	485Auto Toggle	
	RS-232C	1 Port
	Ethernet	10Base T, 100Base-TX 1Port
	USB (Host)	1 Port
	Tool Connector	1 Port
	SD Card Slot	SD Memory Slot 1ea

A: AC power input (Free Voltage)

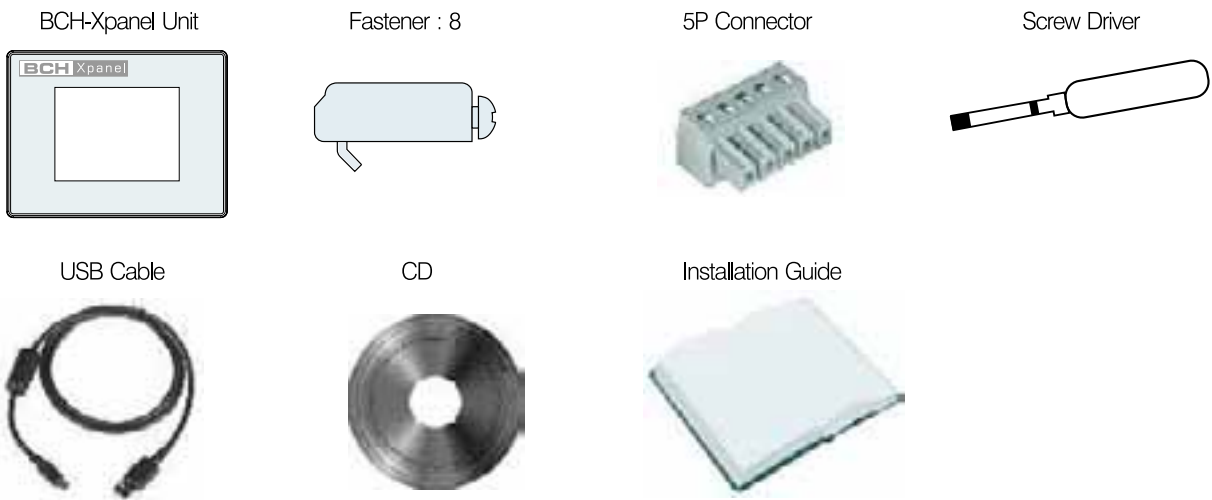
Product Specification

■ Example of model name

XT05/06/10/12	LCD Size
M / S / C	Initial character of Mono/STN/Color
A	Revision
-A/-D	AC/DC (AC: 100 ~ 240, DC: 24V)

XT05MA-D -> 5.6 Mono DC24V input
 XT10CA-A -> 10.4 Color TFT LCD AC input

■ Package Contents



Features of BCH-TOUCH PANEL

■ Features

- Fan-less cooling system
- Implements advanced touch mechanism using Windows XP Embedded.
- Enables to make various monitoring pages using the integrated BCH - SCADA
 - Provides the library and wizard
 - Supports various external OCX components
 - Supports BMP, GIF, and TIF format pictures, as well as Auto CAD images.
 - Supports customized gradation, texture, and pattern.
- Linkage with the upper-level systems and communication with the lower controls can be configured conveniently.
- One time purchase of HMI and PC saves the cost.
- Sufficient communication
 - RS 232C/422/485 : 4ch(max)
 - Ethernet : 2 ch (max)



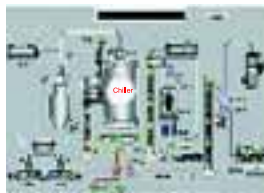
BCH-TOUCH PANEL that is integrated with the best network technology, which gives a top priority to the convenience of developer and users.



Features of BCH-TOUCH PANEL

■ BCH - TOUCH PANEL function

- Supports powerful internal script with a Visual Basic style
- Provides various graphic libraries
- Provides diverse network solutions
- Easy to make reports
- Open architecture software based on the OLE automation
- Supports zooming/panning of the online monitoring screen.
- Data compatibility with the universal purpose DBMS
- Simultaneous connection to PLC and various measurement/control equipments





Features of BCH-TOUCH PANEL

Real-time database management function

Provides easy management based on the layout and functions similar to Windows Explorer. Data compatibility with Excel allows for convenient editing. Additionally, the usages of tag variables enable online database editing.

Alarm function

Users can select various output methods at the time of an alarm occurrence such as alarm summary screen, file, print-out, voice, and short message, users can run specific operation when an alarm is generated or released.
(Up to 32,767 alarms can be saved online.)

Trend analysis function

Historical and real-time trend can be analyzed, and various trends can be selected such as Y-T, Multiple, and S-T trend. For the historical trend analysis, the time interval value can be increased, shortened, or filtered at the time of analysis.

Reporting function

The report can be saved in a file or printed out at every time when an event occurs or at the regular / appointed time point, using Microsoft Office Word or Excel forms. When used with a VB script, any type of report intended by users can be printed out.

Data logging function

The data can be logged at the regular/appointed time point or event occurrence, which can be saved in a file or printed out. The logged screen can be monitored through the trend function, or the logged data can be read using with the VB script.

Security function

Only users who are authenticated by the login function can access to the system, using the function of user registration based on 1 ~ 100 ratings. Additionally, the user history can be saved, and specific operation can be executed at the time of login and logout.

Schedule management function

Different system management can be configured by day, holiday, or specific date. Monitoring/Control can be performed smoothly by the designated schedule. (Holidays can be set by the user.)

Network function

Various types of network operation including standalone, peer-to-peer, 1 server + n clients, and n servers and n clients can be supported. Also, connection to the other upper/lower level BCH-TOUCH PANEL can be established using the BCH-Net protocol.

Monitoring function

Users can develop the system more conveniently using the object-oriented graphic tools. Various clipboards, and libraries are provided and the zoom in/out function is available in the editing and execution mode, and advanced graphic presentation can be provided using the integrated animation editing function and gradation function.

Macro function support

The powerful script language with a Visual Basic style is supported, which can be used any place inside BCH - SCADA, together with 500 internal functions provided by BCH - SCADA.

Communication function

Communication with various controllers can be established like the most PLCs. Various networks are supported, and communication can also be established with the communication and DDC equipment like OPC and Modbus.

Features of BCH-TOUCH PANEL

■ PC/Laptop function

Supports PLC loader program installation, and download/upload
Supports installation of office program and user application program
File-system damage protection



■ Supports installation of various programs

BCH - TOUCH PANEL can be used as a laptop to preserve the site, since the application program of various equipments can be installed. Users can experience the more advanced touch panel functions since the mobile CPU, which is more suitable for the industrial site, and the mass storage are used.

■ EWF : Enhanced Write Filter

C:disk drive volume is safeguarded by EWF function.
This function protects the disk volume from damage of file system.

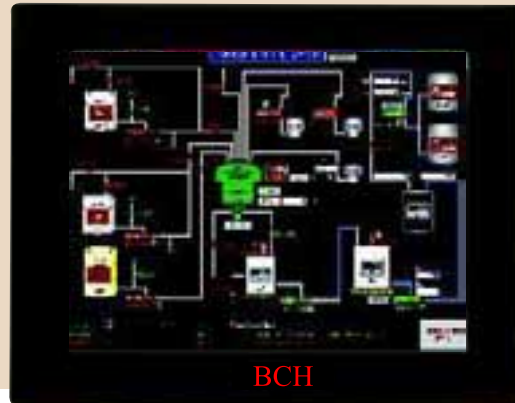
■ AMI Rescue

Utility 'Rescue' was installed for resetting disk image to factory default

Features of BCH-TOUCH PANEL

■ BCH TOUCH PANEL Function

- Reliable fan-less type
- Based on Windows XP Embedded
- Convenient project editing and transmission
- Implementation of the advanced system



[Panel mounting type provides more convenient functions than the current touch panels]



■ Reliable fan less type

No heat emission is required since Touch Panel has no fan installed inside. Therefore, the costs related with fan and cooler maintenance can be saved.



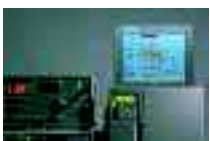
■ Based on Windows XP Embedded

Because Windows OS is installed instead of the proprietary OS adopted by the current touch panels, all functions provided by Windows XP Embedded.



■ Convenient project editing and transmission

The BCH-SCADA project file, which is used as a graphic tool, can be moved/transferred through the USB port or network. When the keyboard/mouse is connected, the project file can be edited without limitation on BCH-TOUCH PANEL.



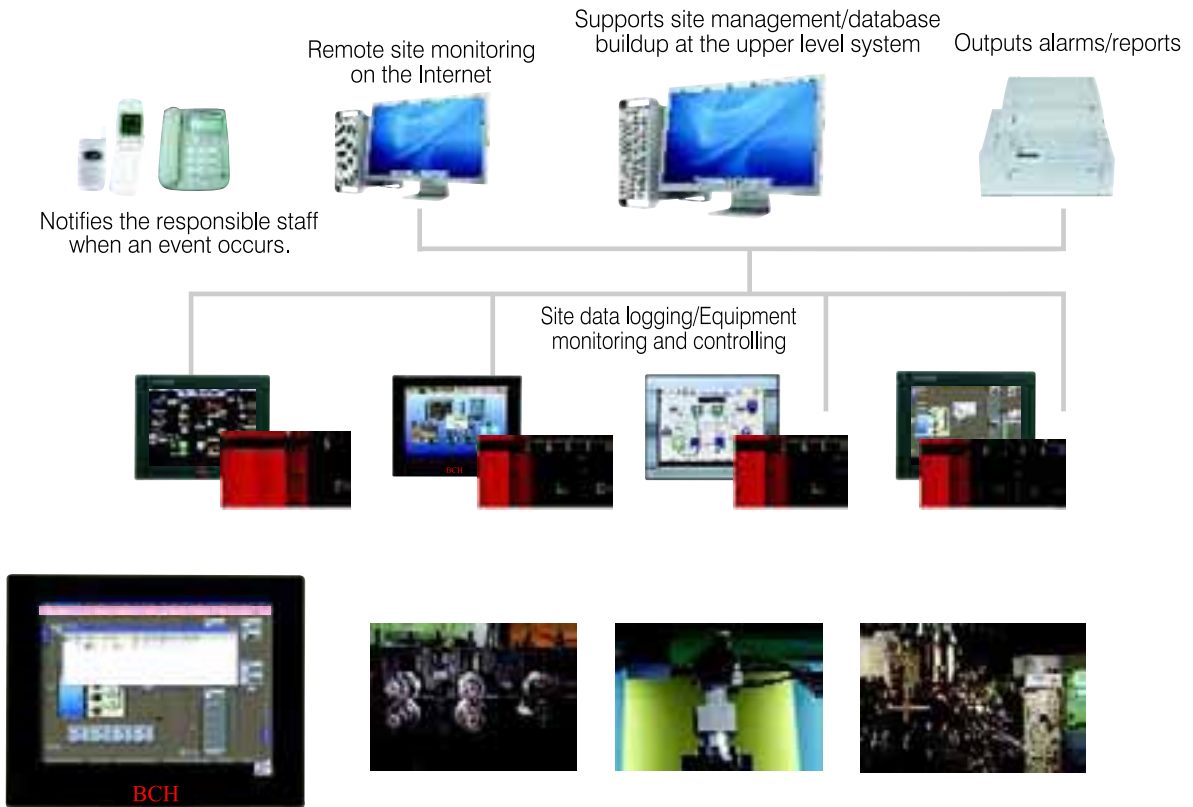
■ Implementation of the advanced system

The advanced system can be configured such as data operation, pre-processing manipulation, data storage, and interface with the upper-level system, not to mention of the simple monitoring and manipulation function.

Features of BCH-TOUCH PANEL

■ System Operation

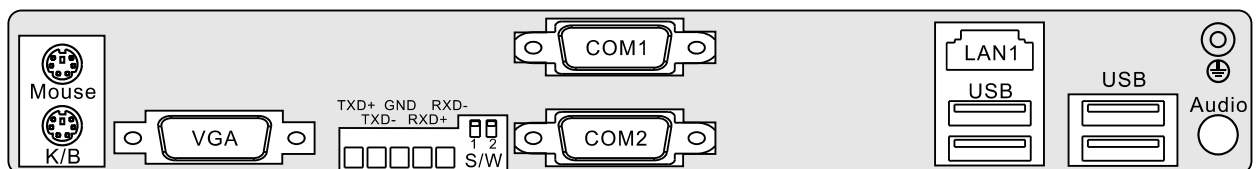
Integrated operation management system



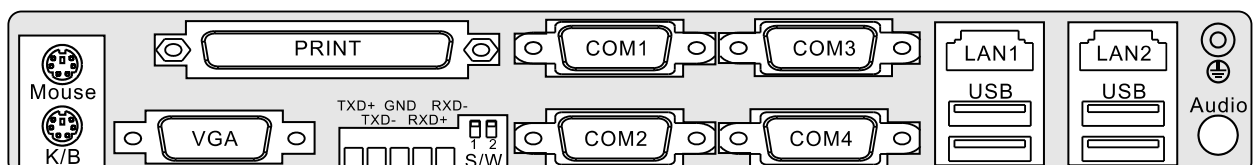
■ System Operation

External Interface Layout

T12CS / T12CH / T15CS / T15CH



T15CX / T15CP



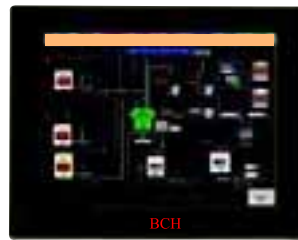
Product specification

Common specification

12.1 inch



15 inch



Item	T12CS	T12CH	T15CS	T15CH	T15CX	T15CP	
Touch Screen	1024 x 768 (5-Wire Resistive)						
CPU	VIA Eden ESP 10000 1GHz						
RAM	DDR 512 MB						
Storage	CF2GB	HDD49GB	CF2GB		HDD40GB		
Graphic Chip	Unichrome Pro IGP intergrated in VIA CN400 VT8625						
Display	12.1" TFT LCD CRT Output (15P DSUB)			15" TFT LCD CRT Output (15P DSUB)			
INTERFACE	Serial	RS 232/422/485 1 Port RS 232 1 Port			RS 232/422/485 1 Port RS 232C 3 Port		
	Ethernet	10 Base - T/100 Base - TX 1 Port			10 Base - T/100 Base - TX 2 Port		
	Parallel	None			1 Port		
	PS/2	Keyboard & Mouse					
	USB	USB V2.0 4 Port					
	Audio	1 Port					
CD-ROM				None		Yes	
PCI Slot				None		1 Slot	
Operating System	Window XP Embedded						
Utility Program	EWF / Rescue						
Power	100 ~ 240V AC						

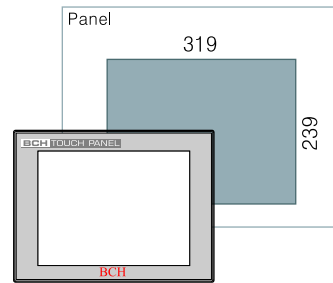
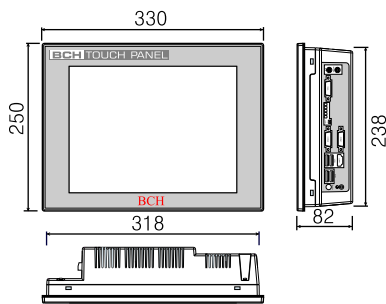
Product specification

■ Dimensions

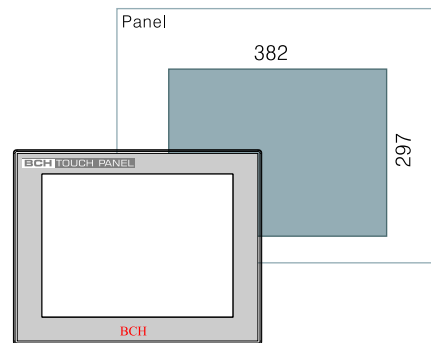
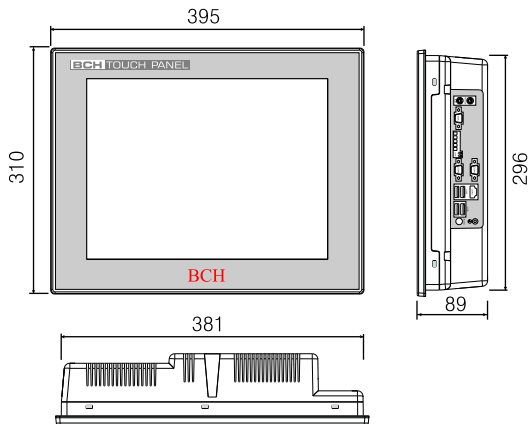
■ Panel Cut

12.1 inch - T12CS/T12CH

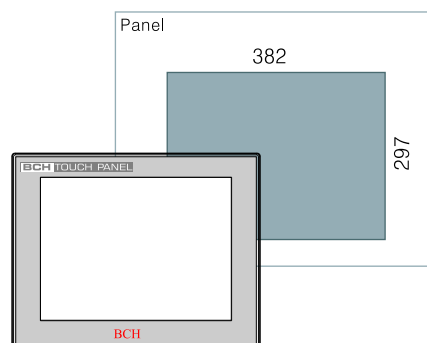
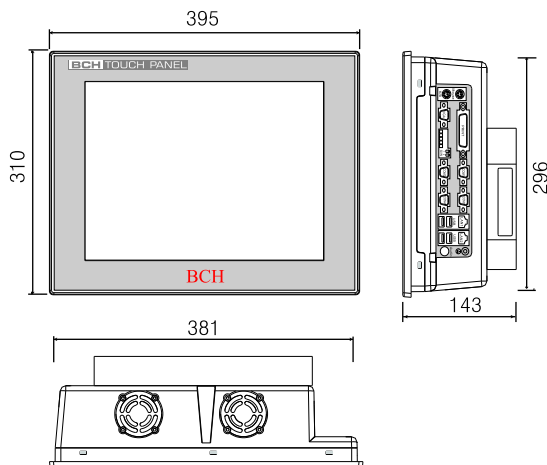
Unit : mm



15 inch - T15CS/T15CH/T15CX



15 inch PCI type - T15CP



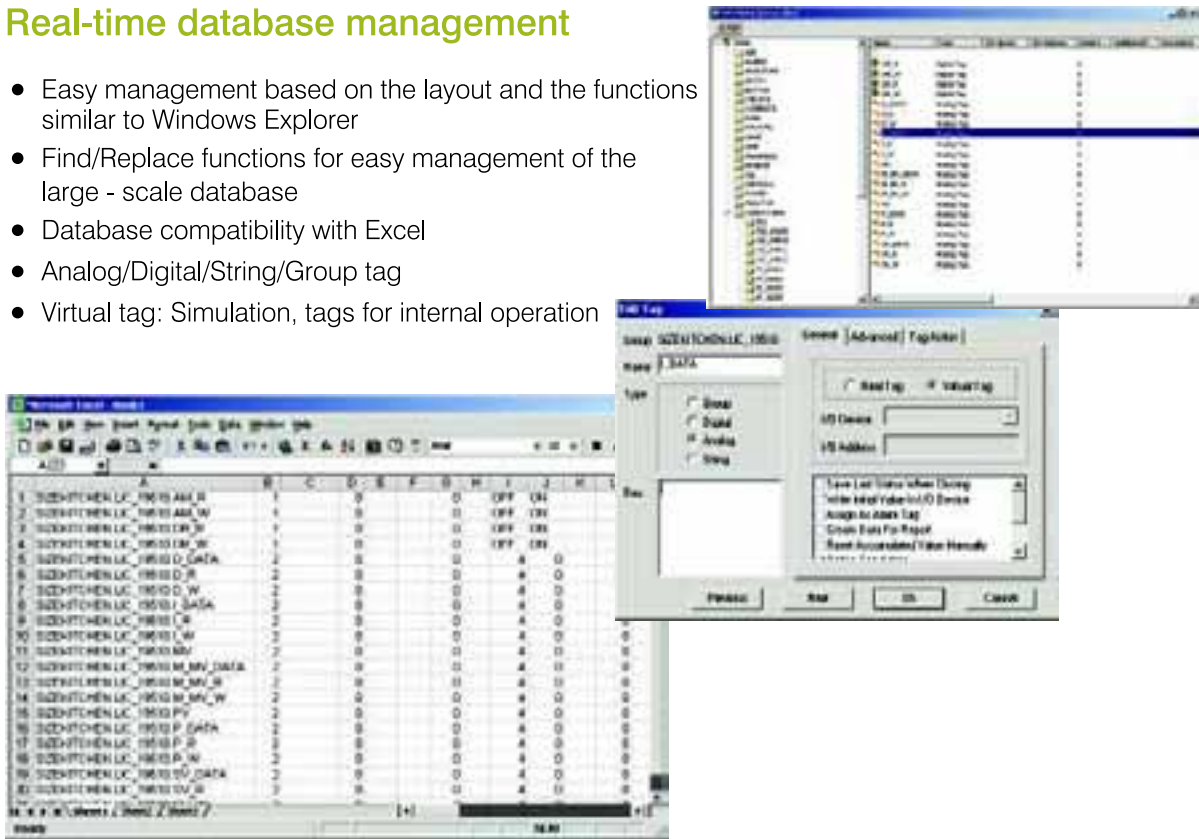
Characteristics of BCH-SCADA

<p>Open architecture</p>	<p>BCH-SCADA, which has the open system architecture, can satisfy various user's unique requirements, and provides easy interface with other softwares.</p>
<p>Supports various networks</p>	<p>Supports system redundancy, which is essential to guarantee reliability of the large scale system.</p>
<p>Connection to the RDBMS</p>	<p>ODBC enables easy connection to various RDBMS products, and standard SQL support enables all database operations such as record browsing , retrieval, modification, addition, and deletion.</p>
<p>Internet support</p>	<p>With BCH-SCADA on the Internet web server, the facilities can be monitored/controlled from the remote site using the web browser.</p>
<p>Convenient graphic works</p>	<p>Users can easily configure the system using various types of wizard and symbol library. User-defined objects can be registered in the symbol library and used at any time.</p> <p>Additionally, the 3rd party OCX components can be used as an object in BCH-SCADA, which allows for easy system expansion.</p>
<p>VB Script</p>	<p>Since Visual Basic Script language is supported, users can use the software without the special training, and about 500 functions are provided, including file I/O and OLE object connection. Especially, SQL support functions allows for data retrieval or search with the RDBMS.</p>
<p>Data compatibility with various application software</p>	<p>Tag database is compatible with MS Excel. Report forms created by Excel and Word can be used without modification. Additionally, the data can be exchanged with the graphic tools such as AutoCAD, Adobe Photoshop and Corel Draw.</p>

Basic functions

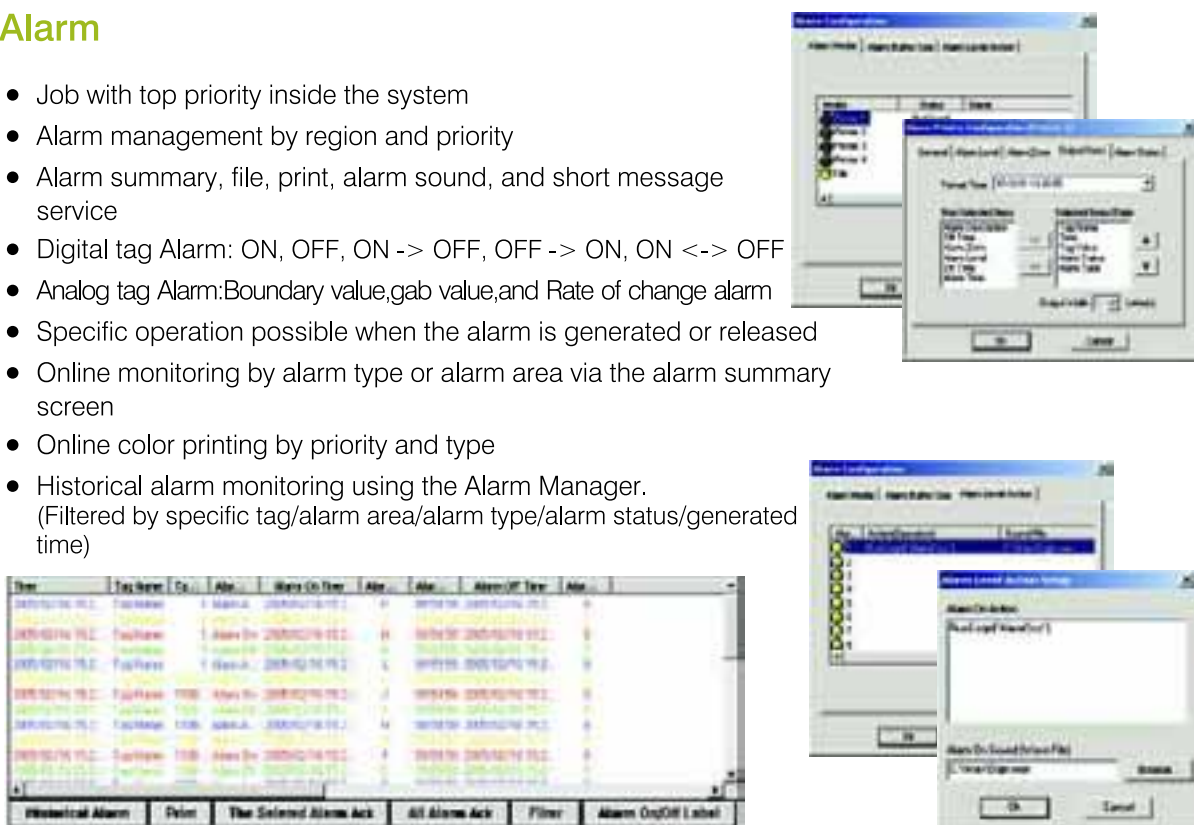
Real-time database management

- Easy management based on the layout and the functions similar to Windows Explorer
- Find/Replace functions for easy management of the large - scale database
- Database compatibility with Excel
- Analog/Digital/String/Group tag
- Virtual tag: Simulation, tags for internal operation



Alarm

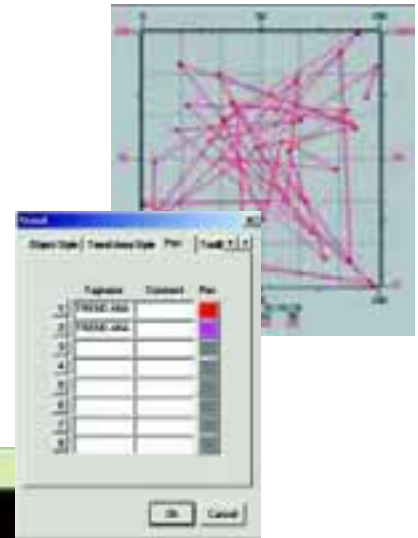
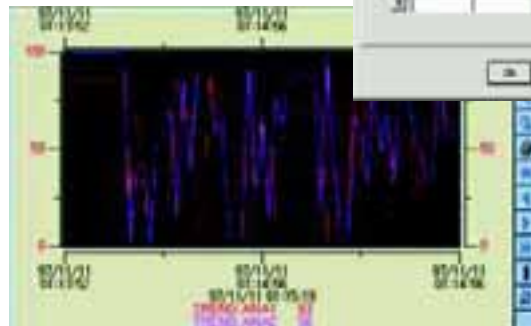
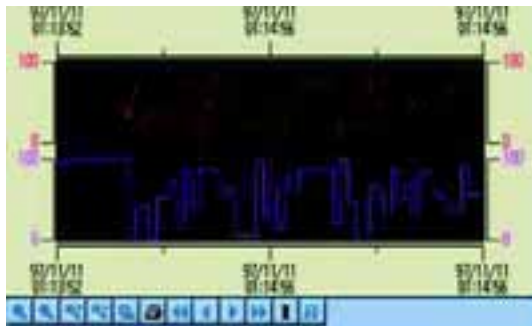
- Job with top priority inside the system
- Alarm management by region and priority
- Alarm summary, file, print, alarm sound, and short message service
- Digital tag Alarm: ON, OFF, ON -> OFF, OFF -> ON, ON <-> OFF
- Analog tag Alarm: Boundary value, gab value, and Rate of change alarm
- Specific operation possible when the alarm is generated or released
- Online monitoring by alarm type or alarm area via the alarm summary screen
- Online color printing by priority and type
- Historical alarm monitoring using the Alarm Manager.
(Filtered by specific tag/alarm area/alarm type/alarm status/generated time)



Basic functions

Trend analysis

- Historical Trend / Real-Time Trend
- Data trend analysis through enlargement and reduction
- Simultaneous monitoring of a number of the tags by entering several trend objects in one page.
- Easy data trend monitoring through a variety of tool bar buttons
- YT trend, Multiple trend, XY trend, ST trend.
- Supply of a series of trend types and data monitoring with respect to the trend type of user's choice



Making a report

- Excel or Word forms can be used.
- Output by time, and event.
- Report can be saved as a file.
- Output by designated time or with user's request



Data logging

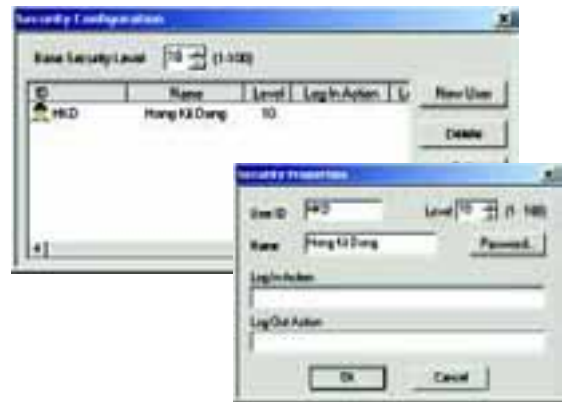
- Data is logged at a regular interval or when the value is changed.
- Data can be saved as a file or printed.
- Files can be separated by size or logging period when saved.
- Monitors the logging data on the Trend screen.
- The logging data can be read by the Script function.



Basic functions

Security

- 1 User registration based on 100 ratings
- Storing user's login/logout history
- Access to the system allowed only for the authorized user
- Online password change.
- Specific operation possible at the time of login and logout



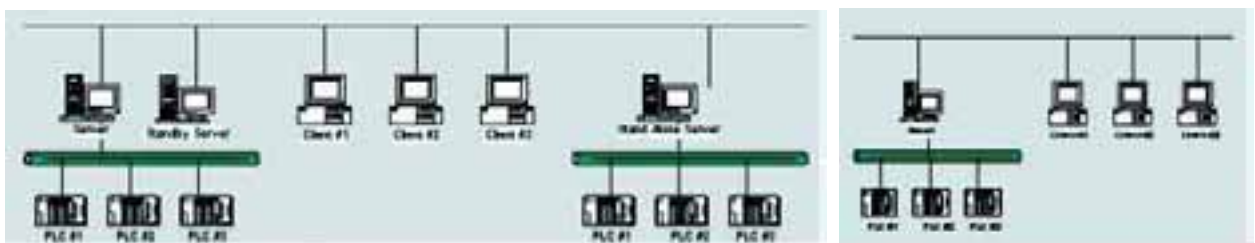
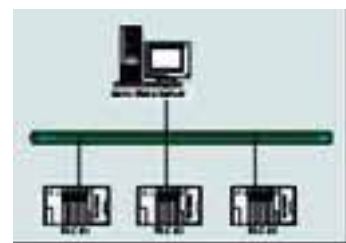
Scheduler

- Action and control by schedule
- Used for the system that has different management and control methods for the data collected on weekday or holiday.
- Automatically execution on a designated date, through registering the work details on the specific date (solar calendar, lunar calendar), holiday, or weekday.



Network

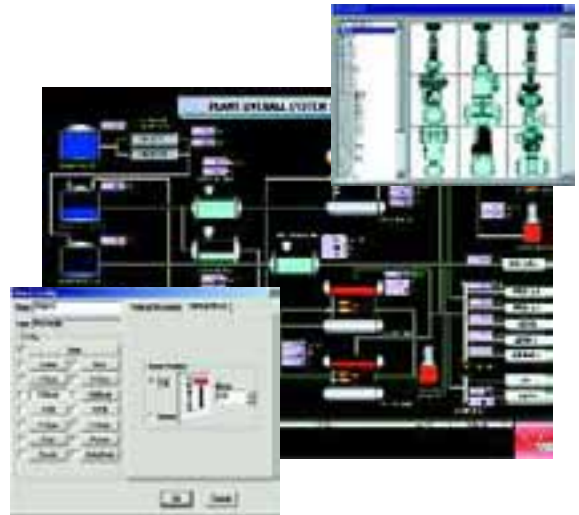
- Supports various types of network operation including stand alone server, 1 server plus n clients and n servers plus n clients.
- Connects to other workstation at the upper/lower level using TCP/IP or RS232C/modem through BCH-Net protocol.



Basic functions

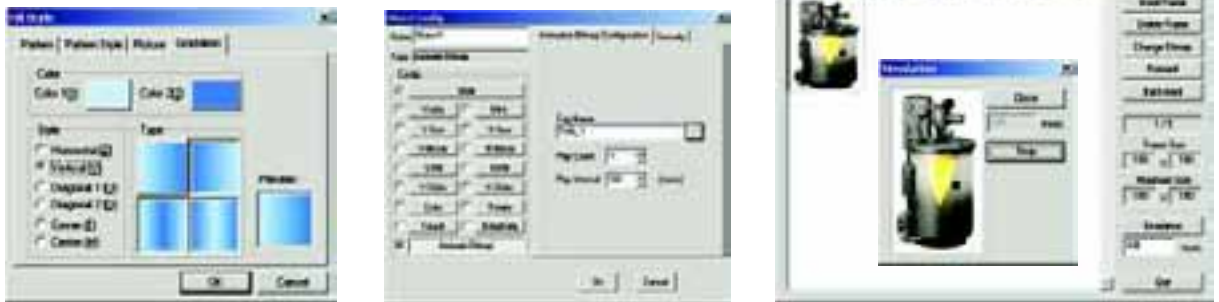
■ Creating monitoring/control screen

- Supports object-oriented graphic
- Supports the easy-to-use tool bars
- Supports various types of control function
- Links to the objects in other application program
- Several screens can be set as one layout and opened at once.
- Provides zoom in/out function in the editing/execution mode.
- Provides various types of clip arts and library, and enables to make a screen layout using drag and drop.



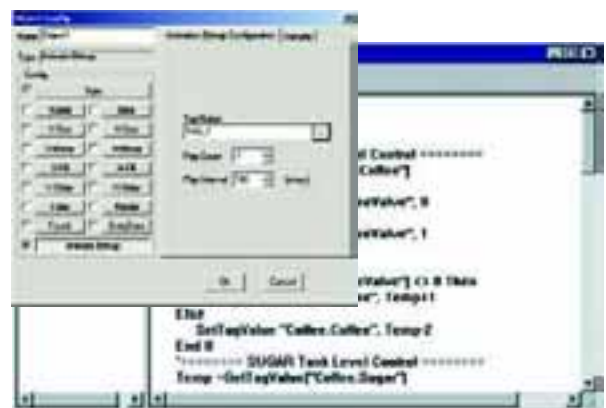
■ Graphic effect

- Provides the animation editing function.
- Presents the actual image of the industrial site with dynamic effects, through framing various picture files
- Texture expression using the gradation effect



■ VB Script

- Supports Basic type script language.
- Supports about 500 internal functions.
- Execution possible at any command Entry of BCH-SCADA



Basic functions

I/O device

- Supports various networks such as RS232C/422, LAN and wireless communication.
- Supports the standard protocol such as OPC and MODBUS.
- Communication with most PLCs.
- Connection with various DDCs and special equipments, instead of PLC



I/O Driver LIST

Manufacturer	Product name
Allen Bradley	SLC500 DF1 / Ethernet / RsLinx
	PLC5 DF1 / Ethernet / RsLinx
	Control Logix 5000 (Ethernet/IP)
Mitsubishi	MELSEC Computer Link (AJ71UC24, AJ71C24)
	MELSEC Ethernet (AJ71E71)
	MELSEC FX Series, NET
BCH	BCH-Net Ethernet/ RS232/MODEM
	BCH-PLC RS232C/422/485/Ethernet / Loader
Dongyang Industrial System	MaxCom
Samsung Electronic	FARA 700 Ethernet SECTOCOLCOM
	Brain Series/FARA N Plus CPU
	FARA PLC N Series
Hanyoung Electronic	Digital thermometer NX,PX Series
Hyosung	Digital protection relay(HPR Series)
Advantech	ADAM4000/5000 Series, PC-Lab Card
CAS	CAS electronic scale AD-2.5, EXP5500, S2000 Series
DNP30	Dnp30 TCP / RS232C
Echelon	LonWorks DDE Network
Eurotherm	800 Series
Fuji	MICREX-F Computer Link (FFU120B) / Ethernet(FFU170B)
	MICREX-F P-Link(CNVAD020-01) / PE-Link PCI / T- Link(FFU080A)
	SX PLC CPU Board
	MICREX-SX Computer Link / Ethernet
GE	Total Lightning
Hitachi	HIDIC COMM-2H, EH-150 Ethernet,
	Loader

Manufacturer	Product name
LG Industrial System	GIPAM/GIMAC/Urtu(INET)
	GLOFA-GM Computer Link / Ethernet / FNET / Loader / Mnet
	GIPAM/GIMAC/Urtu(GMPC)
	Solar Inverter UPS
	PMU Series
	MASTER-K H Series Computer Link / DLU / S Series Loader Port
MODICON	Modbus RTU Mode / TCP
National	Lighting apparatus(WR3381-82 , WR3385-891)
OMRON	SYSMAC C-Series RS232C/422 , CS Series Ethernet
OPTO22	OPTOMUX protocol RS232C/422
POSCON	POSFA PLC Ethernet / Serial
Proface	GP Computer Link / Ethernet
SIEMENS	3694@ Procedure , RK512 Protocol S7 Ethernet , TI505 Series TCP/IP
TOSHIBA	Lighting controller(MESL-REMOCON)
YOKOGAWA	FA-M3 Series RS232C/422/485 / Ethernet
OPC	OPC Server / Client
NAiS	NAiS PLC
Join	Join Motor
Our equipment list includes about 120 common drivers	

Web version system

■ What is BCH-SCADA Web?

This product enables the user to monitor the status of the site equipment using the Internet browser at any time and from any place without installing any program.



Internet remote monitoring and control.



At home, Internet cafe, or even abroad

■ Features of BCH-SCADA Web

- Homepage style configuration for site monitoring.
- Prevents unauthorized access through complete security on the Web.
- Control via the Internet
- Immediate response is possible by real-time alarm monitoring
- Retrieval and search of the history data using the Internet browser

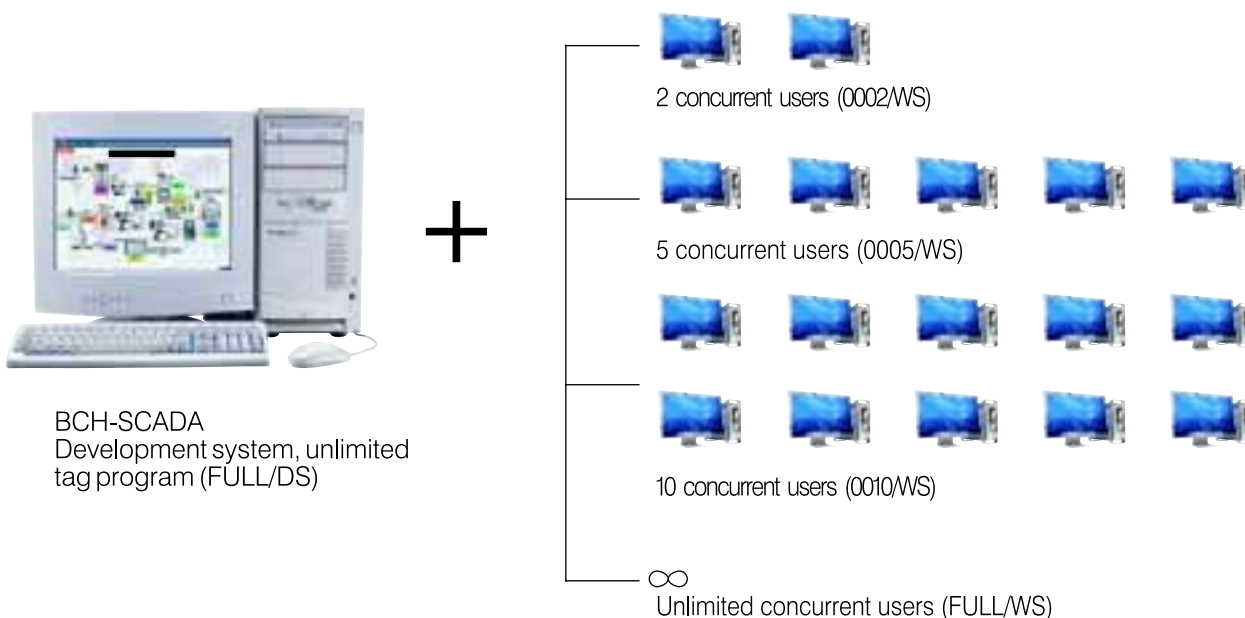
■ Advantages of BCH-SCADA Web

- **Easy site monitoring on the client PC**
The site status can be monitored from any place if the client PC is connected to the Internet.
- **Prompt decision making**
Faster decision making is supported through the distribution of the entire as well as global process data.
- **Cost saving**
Various costs such as additional S/W investment, installation and operation, and maintenance and upgrade can be saved considerably.
- **Improved management efficiency**
Real-time decision making of top managements through supplying data for instant judgment

Web version system

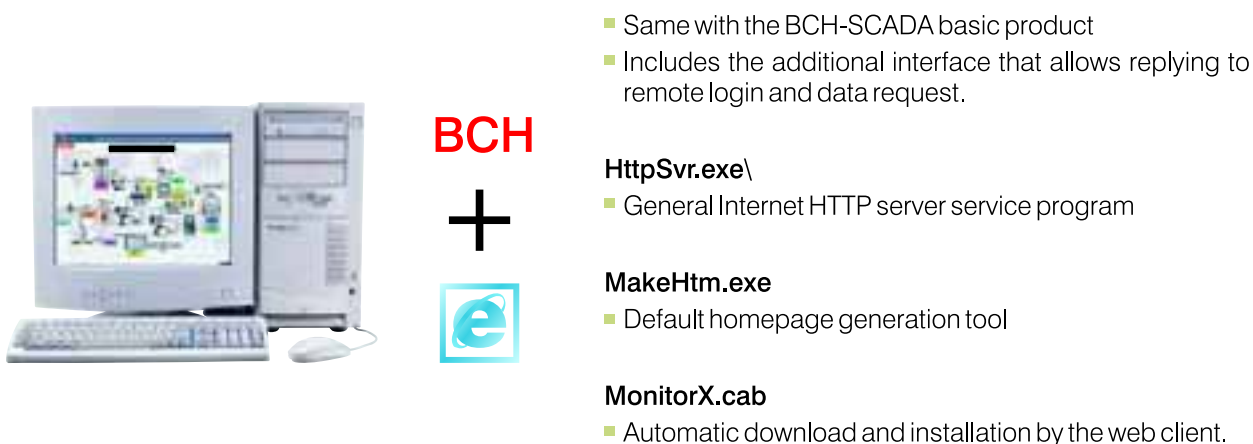
■ Composition of BCH-SCADA Web

- Products are listed by the number of the concurrent users



■ Internal components of BCH-SCADA Web

- Products are listed by internal web server components



BCH-SCADA ACS & SMS

■ What is BCH-SCADA ACS?

BCH ACS is the voice message invocation system, optional for BCH-SCADA. If an emergency situation occurs at the site, the pre-recorded voice (*.wav file) is sent to the designated phone number.

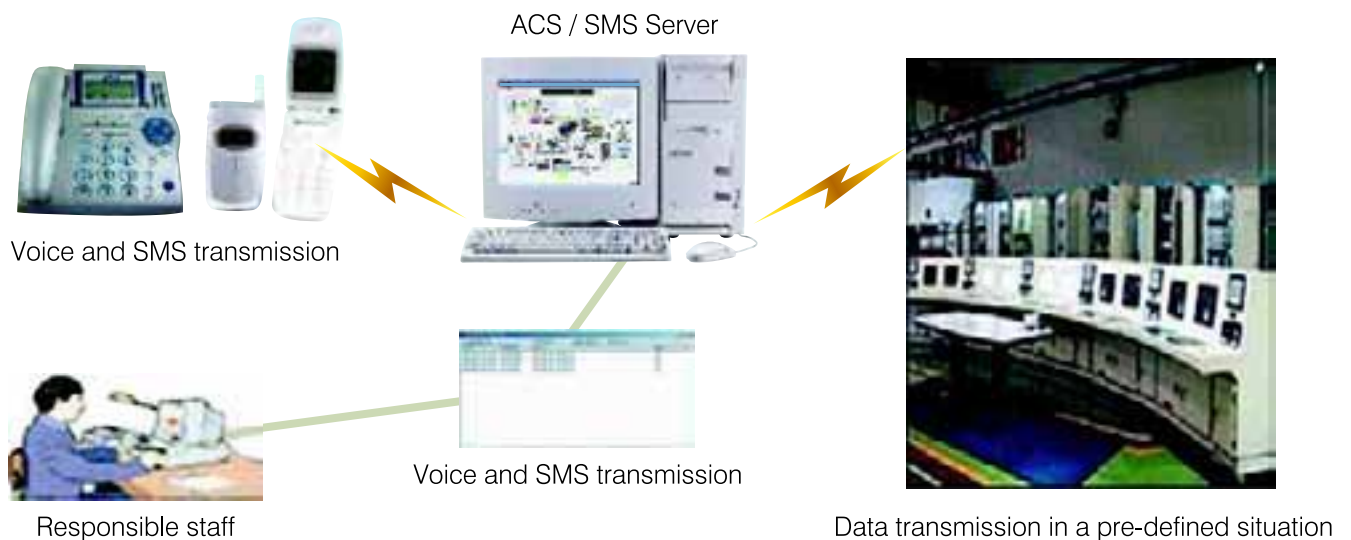
- Allows for addition/deletion/modification of the call recipient
- Log file management
- Provides call analysis data, call results, recording service, and call statistics



■ What is BCH-SCADA SMS?

Sends the specific SMS(Short Message Service) to the designated person in an emergency situation, optional for BCH-SCADA.

- Sends the SMS with limited length in an alarm situation (78 characters at maximum)
- Enables to save and retrieve the SMS transmission history.
- Transmission by one person or group

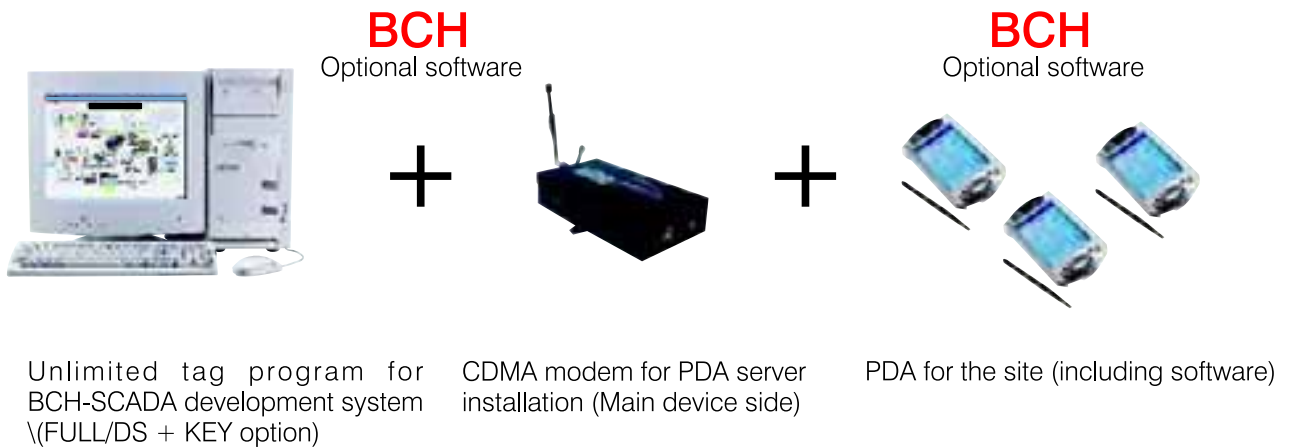


BCH-SCADA PDA

■ What is BCH-SCADA PDA?

BCH-PDA, optional for BCH-SCADA, is an industrial remote monitoring PDA system. Any person with PDA can monitor and control at any time and from any place through connection to BCH-SCADA. Additionally, if the pre-defined alarm occurs at the site, the alarm can be notified on PDA.

- Control and monitoring of the site situation using the PDA.
- Provides alarm screen, sound, and history in a pre-defined alarm situation.
- No limitation on configuration of the alarm display item.
- User security on the PDA
- PDA screen layout configuration using the animation function

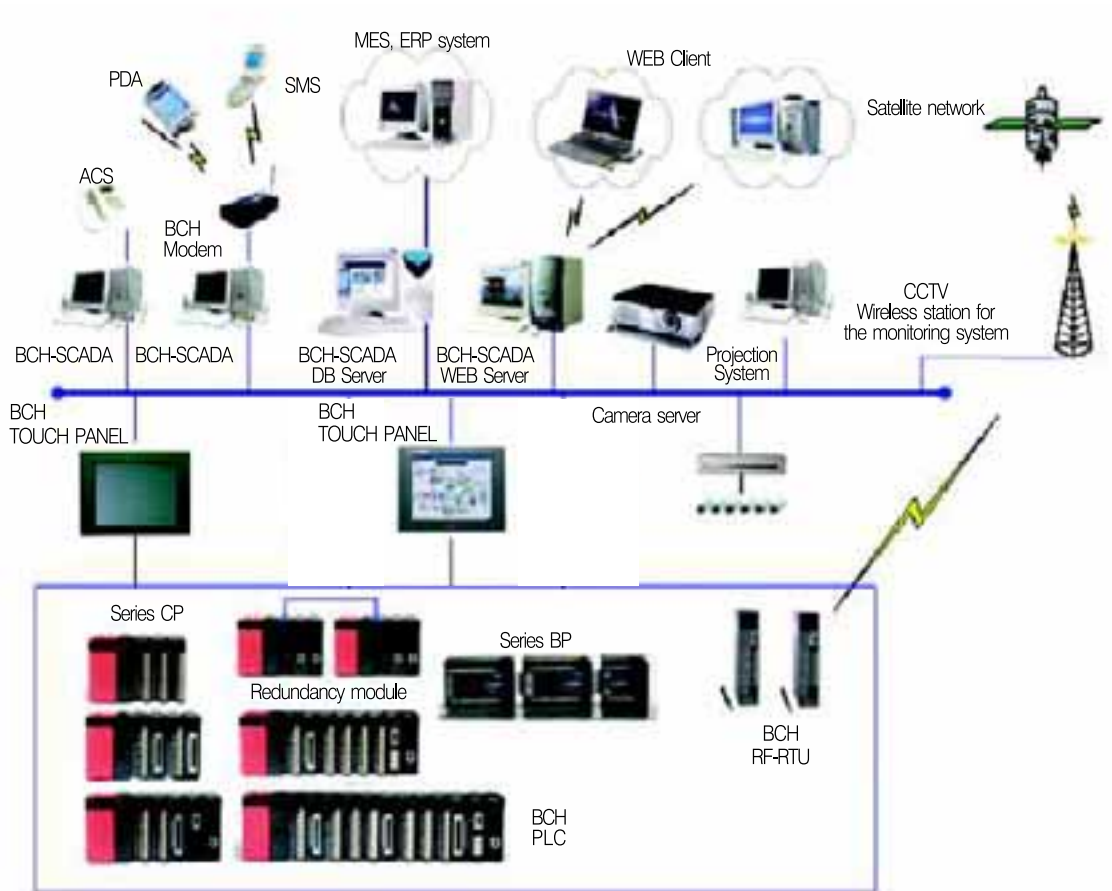


■ Expected effect of BCH-HMI PDA

- Performs multiple functions and unmanned site monitoring through implementation of mobile site monitoring and control.
- Solves the problem in real time in an emergency situation.

Application cases

■ Features of BCH-SCADA Web



Product composition

CM 01 - □ □ □ □ / □ S

DS : Development system / RS : Run-time System / WS : Web version

Maximum allowable number of real tags: 0075 / 0150 / 0500 / 1500 / FULL (unlimited)
 WS: maximum allowable number of concurrent connection users: 0002 / 0005 / 0010 / FULL(unlimited)

Development System

No	Model name	Item	Specification
1	CM01-0075/DS	75 Tag	Development+Runtime+Keylock+Manual
2	CM01-0150/DS	150 Tag	Development+Runtime+Keylock+Manual
3	CM01-0500/DS	500 Tag	Development+Runtime+Keylock+Manual
4	CM01-1500/DS	1500 Tag	Development+Runtime+Keylock+Manual
5	CM01-FULL/DS	Unlimited Tag	Development+Runtime+Keylock+Manual

Run-time System

No	Model name	Item	Specification
1	CM01-0075/RS	75 Tag	Runtime+Keylock
2	CM01-0150/RS	150 Tag	Runtime+Keylock
3	CM01-0500/RS	500 Tag	Runtime+Keylock
4	CM01-1500/RS	1500 Tag	Runtime+Keylock
5	CM01-FULL/RS	Unlimited Tag	Runtime+Keylock

Web Version System

No	Model name	Item	Specification
1	CM01-0002/WS	2 User	2 concurrent users (Including Full/DS)
2	CM01-0005/WS	5 User	5 concurrent users (Including Full/DS)
3	CM01-0010/WS	10 User	10 concurrent users (Including Full/DS)
4	CM01-FULL/WS	Unlimited user	Unlimited concurrent users (Including Full/DS)

Options

DS : Development system / RS : Run-time System / WS : Web version

No	Model name	Item	Specification
1	CM01-ACS	Voice	Including voice board and additional software functions
2	CM01-SMS	Short Message	Including wireless model/subscription fee (011), and additional software functions
3	CM01-PDA/SP	PDA	Main device - wireless model/subscription fee (011), and additional software for PDA
4	CM01-PDA		Industrial PDA/subscription fee (011), and additional software

Key type

LPT	Print Port	USB	For USB port
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