Energy Saving & Carbon Reduction

Fan Coil Unit Control System Solution

AIRTEK®
We make buildings smart.

WEB Page Embedded Fan Coil Unit Control System

WEB page embedded fan coil unit controller WC-FB11 and WC-FB13 store multiple control pages inside. User can access these web pages to control the system from a remote location with internet browser by using a 3C device such as desktop PC, notebook (NB), tablet (iPad), smart phone (iPhone, HTC) etc..   These timely and efficiently control are benefits to make Energy Saving and Carbon Reduction come true.

An Embedded Web Page
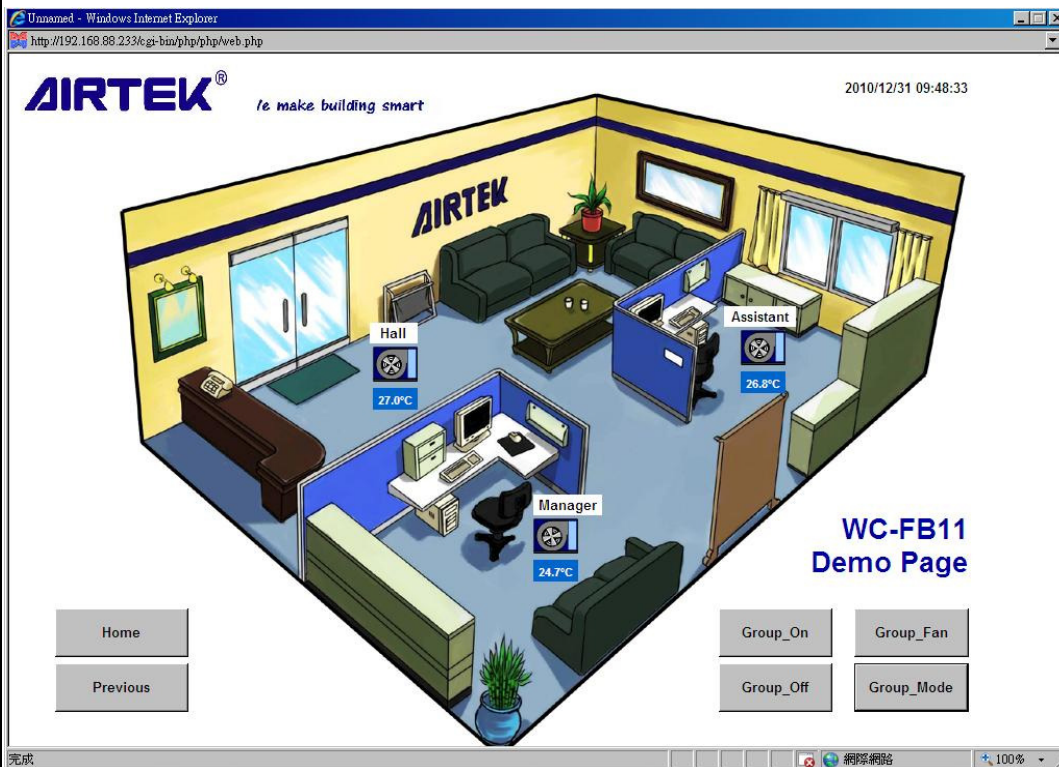
Browser

- IE, Fire fox
- Google (chrome)
- Apple(safari)
- Opera, Android

3C Device

- PC,NB
- Tablet
- Smart phone

Software function

- User password
- Group control
- Unitary control
- Timer
- Weekly schedule
  - Event
  - Energy saving
- Daily schedule
- Alarm message
  - Occupy/Unoccupy
  - Sleep mode
- Advance parameter
  - Time synchronism
  - Running information

AIRTEK WebKit – Web Page Embedded Development Software

Airtek provides a free web page embedded development software – WebKit.   User can edit, debug, upload, and download web pages online with an internet browser.   It has selectable standard function icon for user to save time to edit and test web pages.   Multiple pages setting and jump between these pages are available.   User can change layout and function setting of web pages online anytime.

Program Edit Screen
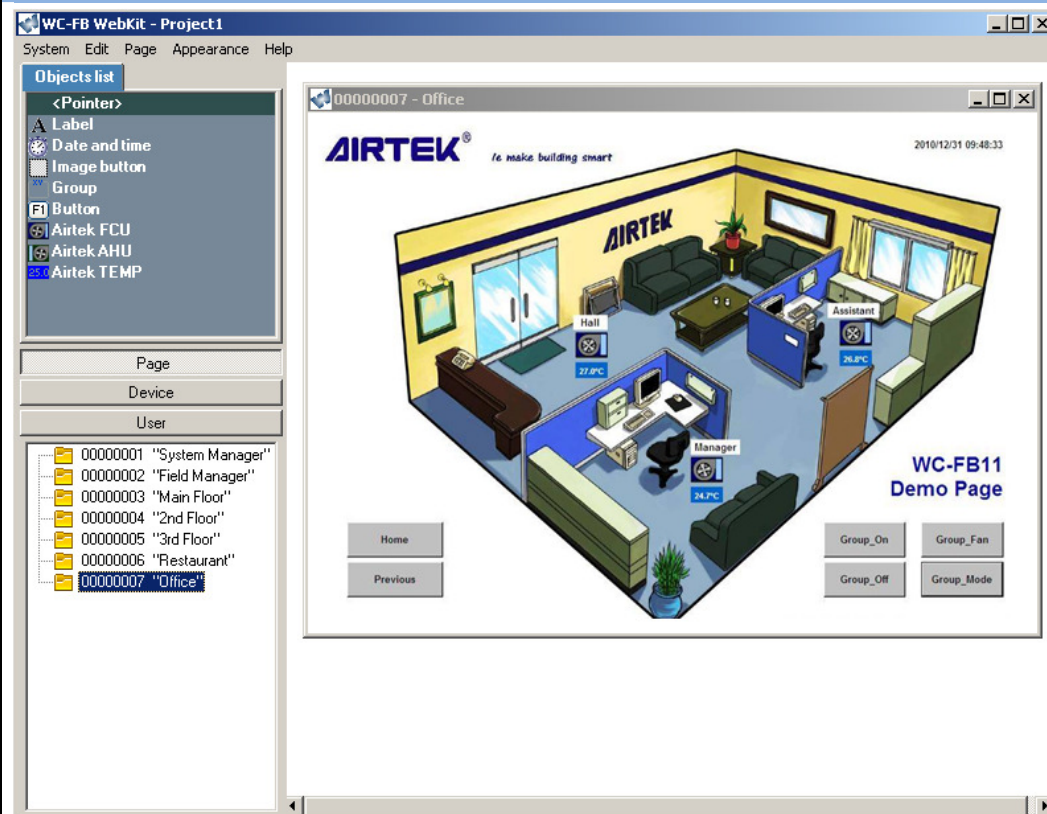
Computer requirements

- 2 GHz minimum
- 512 MB RAM
- 36+ GB HD
- Ethernet (10/100Mbps)
- Window XP or VISTA or Window 7

Development function

- System password setting
  - Administrator
  - All
  - Group
- IP address setting
- Web page management
- User group select
- Web page edit
- Software function block
- Device module standardize
- Background remittance
- Web page upload/download
- Device group select
- Logical programming
- Program upload/download
- Language select
- Advance parameter setting
- Project management

HARDWARE

NAME	BACnet Web Embedded FCU Controller		Modbus to BACnet Protocol Interface		Modbus to Modbus Protocol Interface		MOUBUS PID Temperature Controller	
PHOTO								
MODEL	WC-FB11	WC-FB13	PF-BM12	PF-PM11	PF-TM12	PF-MM11	DTC4211M	DT4211M
CPU	32-bit High Performance MCU						16-bit MCU	
BACnet DEVICE PROFILE	B-AAC	B-AAC	B-AAC	B-ASC	X	X	X	X
BACKUP MEMORY	●	●	●	●	X	X	●	●
PROGRAMMABLE	●	●	●	●	X	X	●	X
WEB SERVER	●	●	X	X	X	X	X	X
BACnet Ethernet/IP	●	●	●	X	X	X	X	X
MODBUS TCP/SEVER	X	X	X	X	●	X	X	X
MS/TP PORT	BACnet MS/TP RS485, transmission speed up to 76.8Kbps, maximum length 1200 meters.							
	X	X	X	1	X	X	X	X
FCnet PORT	MODBUS RTU RS485, up to 32 DFC's or DT's can be connected per loop, transmission speed 9,600 bps, maximum length 1200 meters.							
	O (1x32 DFC's)	O (3x32 DFC's)	O (2x32 DFC's)	O (1x32 DFC's)	O (2x32 DFC's)	O (1x32 DFC's)	X	X
SCnet PORT	MODBUS RTU RS485, connect to a NVC51V control panel.							
	X	X	X	X	X	●	X	X
MSnet PORT	MODBUS RTU RS485, connect to a DSP20U control panel.							
	●	X	X	●	X	X	●	X
BINARY INPUT(BI)	12VDC detective, dry contact or open collector input, 1,000VDC optical isolator.							
	0	0	0	0	0	0	4	4
ANALOG INPUT(AI)	12-bit resolution, 10KΩ NTC, 0~10VDC							
	0	0	0	0	0	0	2	2
BINARY OUTPUT(BO)	SPST dry contact.							
	0	0	0	0	0	0	1(5A/250VAC)	1(8A/250VAC)
ANALOG OUTPUT(AO)	0~10VDC output.							
	0	0	0	0	0	0	1(12-bit)	1(8-bit)
CALENDAR	2	2	2	X	X	X	X	X
SCHEDULE	20	20	20	X	X	X	X	X
NOTIFICATION-CLASS	4	4	4	X	X	X	X	X
EVENT-ENROLLMENT	100	100	40	X	X	X	X	X
ANALOG VALUE(AV)	100	300	100	100	X	X	X	X
BINARY VALUE(BV)	X	X	X	X	X	X	X	X
MODBUS/TCP CLIENT	X	X	X	X	X	X	X	X
GRAPHIC DISPLAY	X	X	X	X	X	X	X	●

NAME	Networking Fan Coil Unit Controller						
PHOTO							
MODEL	DFC212M	DFC222M	DFC242M	DFC312M	DFC342M	DFC412M	DFC442M
CPU	16-bit High Performance MCU						
FCnet PORT	MODBUS RTU RS-485, connect to WC-FB,PC-Fx controller, transmission speed 9,600 bps, maximum length 1,200 meters.						
SCnet PORT	MODBUS RTU RS-485, connect to NVC or MSC control panel, transmission speed 9,600 bps, maximum length 1,200 meters.						
BINARY INPUT(BI)	12VDC detective, dry contact or open collector input.						
	X	X	X	X	2	X	2
ANALOG INPUT(AI)	12-bit resolution, 10KΩ NTC thermistor.						
	1	1	1	1	2	1	2
BINARY OUTPUT(BO)	Adopt UL/CUL/TUV approved relay, 10A/250VAC, line voltage SPST contact for fan speed control use.						
	3	3	3	3	3	3	3
	Adopt UL/CUL/TUV approved relay, line voltage SPST or SPDT contact for valve control use.						
	1(7A/250VAC)	1(7A/250VAC)	2(7A/250VAC)	2(10A/250VAC)	2(10A/250VAC)	4(10A/250VAC)	4(10A/250VAC)
	Adopt UL/CUL/TUV approved relay, SPST dry contact for chiller or heat pump interlock control use.						
	X	1(7A/250VAC)	X	X	1(5A/250VAC)	X	X

Note: Symbol "O" in above tables means it has the function, "X" means it has no such function.

NAME	LCD Unitary Control Panel			LCD Group Control Panel	LCD Unitary Control Panel	
PHOTO						
MODEL	DSP20U	MST20V	MST20S	NVC51V	MSC20V	MSC20S

SPECIFICATION	CPU	32-bit MCU	16-bit High Performance MCU				
	TEMP. SENSOR	X	10KΩ NTC	10KΩ NTC	X	X	X
	HUMIDITY SENSOR	X	X	X	X	X	X
	MSnet PORT	MODBUS RTU RS485, connect to WC-FB11, PF-PM11, DAC, or DSC series controller.					
		O	O	O	X	X	X
	SCnet PORT	MODBUS RTU RS485, connect to a DFC controller.					
		X	X	X	O	O	O
	GRAPHIC DISPLAY	O	O	O	O	O	O
	TEXT DISPLAY	O	X	X	X	X	X
	PROGRAMMING	O	X	X	X	X	X

Note: Symbol "O" in above tables means it has the function, "X" means it has no such function.
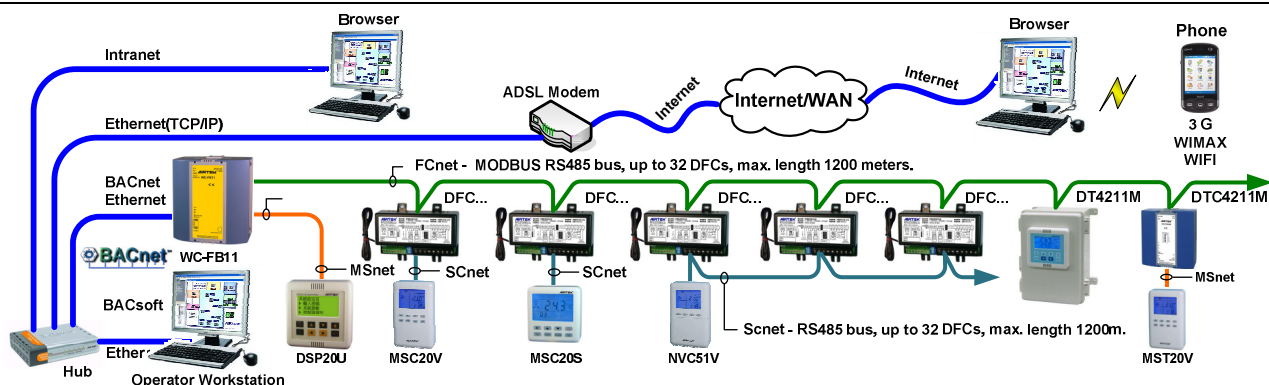
Networking Fan Coil Unit Management & Control System Architecture
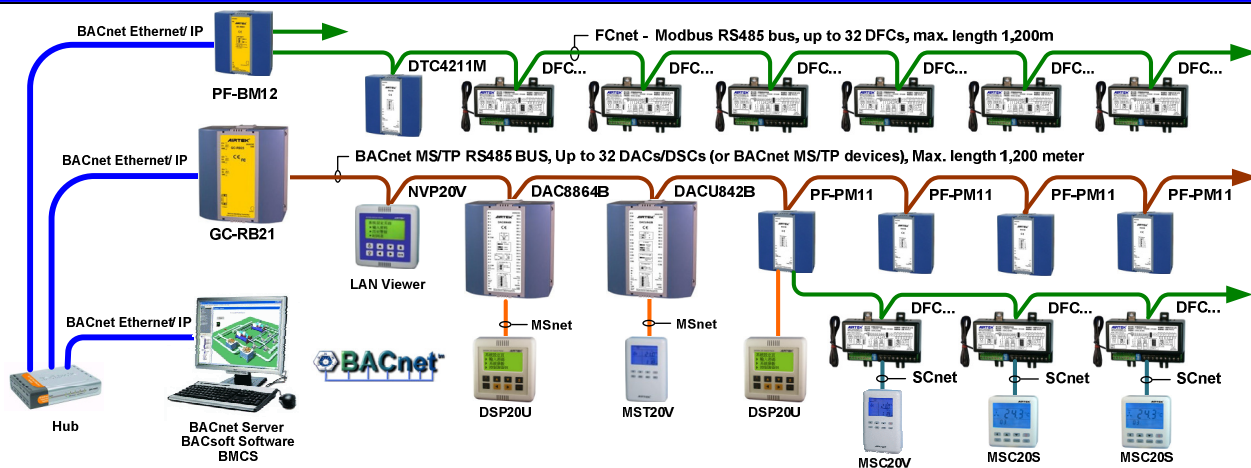
Building Management & Control System
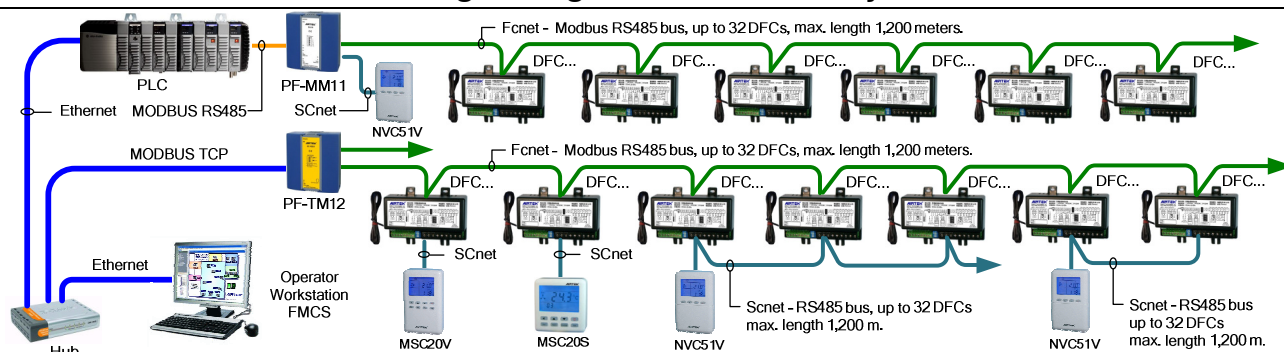
Facility Management & Control System

Web-Based Fan Coil Unit Management & Control System