

EXCEL 5000[®] System Architecture

EXCEL 5000 System Architecture

Designed for unmatched DDC control versatility and true, open system flexibility

Whether you're a contractor or a facility manager, the challenge has always been finding a DDC control system that matches a wide range of building applications. Not a patchwork of products that can be "made to fit," but a modular system of devices designed from the start to accommodate a wide range of sequencing activities, capacities, control points and budgets. Honeywell's EXCEL 5000 system answers the challenge. Featuring distributed control products that are scaleable, cost-effective and easy to install, the EXCEL 5000 system defines versatility.

Scaleable
The EXCEL 5000 system is a scaleable, cost-effective group of controllers and interfaces. It is custom made for your existing application and able to grow to accommodate your system in the future.

Easy
These devices are designed to save you startup and engineering time on the job. They can be easily installed by a local Honeywell technician or an EXCEL 5000 contractor or installer.

Open
Incorporating LonMark[™]-based open communications protocol, the EXCEL 5000 system provides the most efficient interoperability control at the network level, while spanning the broadest range of applications, from dedicated equipment control to intelligent sensors and actuators.

Comfort from Experience
You can feel comfortable choosing Honeywell. Honeywell is a technology leader in building control solutions, with more than 110 years of proven performance.



Excel Building Supervisor (XBS)
63-8907 Sales Brochure
74-2033 Specification Data
74-2039 Operators Manual
74-5022 Graphics Operator Manual
74-5024 System Engineering Guide

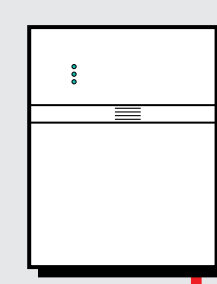
Excel Building Supervisor Capacities
• An intuitive operator interface for easy access to all system data
- Microsoft Windows[™]
- Optional Microsoft Excel[™]
- Optional Micrografx Designer[™]

Communications Configuration
• 30 peer-to-peer devices per C-Bus (Excel 600, 500, 100, 50, 20, Building Supervisor, OpenLink, Zone Manager, Excel Link, XM100)
• 4 Building Supervisors per C-Bus
• Multiple Excel 10 Zone Managers (up to 30) per C-Bus
• 120 Excel 10 controllers per E-Bus with a router
• Multiple Excel Links (up to 30) per C-Bus
• 254 controllers per CNAP Bus (W7600, W7620, Excel Link, Q7640) with repeaters

• Choice of "text" or "graphic" interface
• Text driven utilizes "Plug & Play" technology
• "Plug In" uploads data from controller
• English language point names are read directly from controller
• No PC engineering is required with text version
• Graphics option provides "point and click" operation and state-of-the-art graphic penetration and animation

Powerful Hardware Platform
• Pentium II
• 64 Mb of RAM memory minimum
• 6.4 GB hard drive minimum
• VGA or Super VGA monitor
• Bus or Serial Mouse
• Full Size Expansion Slot (for C-BUS interface)

XBS interfaces with three optional applications:
• Interactive voice response system-voice interface to read and command system points with a touch-tone phone. Software will also annunciate alarms through numeric or alpha pagers, and will provide detailed tenant billing based on after-hour usage.
• Real Time Pricing Control System-Interface with the electric utility company to initiate load shift and/or lone shed to take advantage of real time pricing for maximum energy savings.
• MAXIMO-allows maximum control of scheduling repair activities, tracking, labor & material costs, and equipment maintenance.



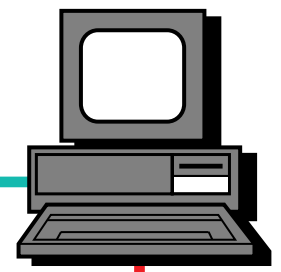
XM100A Modem Device
95-7540 Installation Instructions

The XM100A Modem Device provides a link between a remotely located C-Bus and up to three central operator workstations. The device can be configured to dial out to these centrals with a sophisticated priority scheme.
One of the main functions of the XM100A is alarm management. Critical alarms from the remote site are dialed out to the central immediately. Up to 99 non-critical alarms are buffered by the XM100A and sent on request.
The XM100A also buffers point trend information and sends it to an operator interface upon request.

Model Type: Standard CPU
No. of LED's: 3
Dialout Capacity: 3 Central Workstations
Modems Supported: Hayes MultiTech U.S. Robotics
Baud Rates Supported: Up to 9600
Approvals / UL Standards: 916PAZX and 864UDTZ when used in an enclosure

XM100 Modem Module
• Dial In/Out to remote C-Bus networks
• Auto dial of critical alarms into 3 remote Excel Building Supervisors
• Different alarms can be routed to different Building Supervisors
• Password required for access
• Buffers alarms and trend values

The XDM506 Modem Submodule allows modem communication to and from a standalone controller. This device attaches to the CPU device in the same socket as the XD505 or XD508 C-Bus submodules. The functionality is the same as the XM100 device.



XI581/2
Portable or Panel Mounted Operator Interface
74-3551 Specification Sheet

• Reads English language point information resident in the C-Bus devices
• 8 keys, menu driven
• Access global point information
• Intuitive and easy to use
• Supports other languages

6 lines by 32 characters per line
Accesses controller status, trend information, time programs, setpoints, and alarms

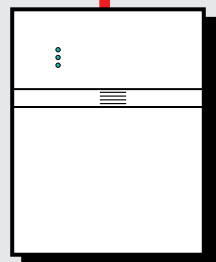
DDE Interface

C - Bus
Baud Rate: 9600, RS-485 using XD505
921.6K, RS-485 using XD508

"Plug and Play," no engineering required for text-based PC operator's station

LAN capabilities on a Windows NT or a Novell network

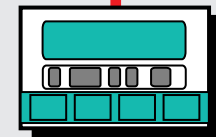
2000 graphics
Dialout capability
Points per system: 80,000
PC's per system: 32
C-Buses per system: 24
C-Buses per XBS: 3
Remote site capacity per XBS: 254



Q9200A Excel OpenLink
74-1825 Specification Sheet

A maximum of 768 CARE points (user addresses) can be configured in the OpenLink CPU.

• Allows communication between C-Bus networks and third party communications
• Complete programmability like Excel 600/500/100/80
• Allows third party communication level points to be accessed from the Excel Building Supervisor
• Multiple OpenLinks may be connected to the C-Bus network



Excel 500/600 Controller
63-8910 Sales Brochure
74-2036 Specification Sheet

Modular Design
• Add modules as needed for future expansion
• Input/output boards (16)
• Up to 128 physical points
• Up to 256 pseudo points
• Fully programmable using Excel CARE
• 916PAZX and 864UDTZ UL rating when used in an enclosure

Analog Input

XF521A
Module Type: Analog Input
No. of Inputs: 8
Type of Inputs: 0 to 10 volts
0 to 20 mA or 4 to 20 mA
NTC, -58 to 302F, -50 to 150C
PT1000_1, -58 to 302F, -50 to 150C

XF526
Type of Module: Analog Input
Number of Inputs: 8
Type of Inputs: 0 to 10 volts
0 to 20 mA or 4 to 20 mA
NTC, -58 to 302F, -50 to 150C
PT1000_1, -58 to 302F, -50 to 150C
PT1000_2, -32 to 752F, 0 to 400C
PT3000, -58 to 302F, -50 to 150C
Balco, -58 to 302F, -50 to 150C

XF521
Module Type: Distributed
Module Type: Analog Input
No. of Inputs: 8
Type of Inputs: 0 to 10 volts
0 to 20 mA or 4 to 20 mA
NTC 20k
PT1000

Accessories: 1 4 5 6

Analog Output

XF522
Module Type: Analog Output
No. of Outputs: 8
Type of Outputs: 0 to 10 volts +/- 1 mA each
Manual Override
Switches: 5
No. of LED's: 8

XF527
Module Type: Analog Output
No. of Outputs: 8
Type of Inputs: 0 to 10 volts +/- 1 mA each
Manual Override
Switches: 0
No. of LED's: 5

XFL522
Module Type: Distributed
Module Type: Analog Output
No. of Outputs: 8
Type of Outputs: 0 to 10 volts
No. of LED's: 8

Accessories: 1 2 4 5 6

Digital Input

XF523
Module Type: Digital Input
No. of Inputs: 12
No. of LED's: 12
Inputs 1 and 2: Digital Input or Fast Totalizer
Inputs 3-12: Digital Input or Slow Totalizer

XFL523
Module Type: Distributed
Module Type: Digital Input
No. of Inputs: 12
No. of LED's: 12

Accessories: 1 4 5 6

Three Position Output

XF525
Module Type: Three Position Output
No. of Outputs: 3
Type of Outputs: Floating Control
Manual Override
Switches: 3
No. of LED's: 3 Pairs of 2

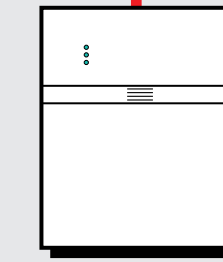
Accessories: 1

Digital Output

XF524
Module Type: Digital Output
No. of Outputs: 6
Type of Outputs: 5 Changeover Contacts
1 Normally Open Contact
Manual Override
Switches: 5
No. of LED's: 6

XF529
Module Type: Digital Output
No. of Outputs: 6
Type of Outputs: 5 Changeover Contacts
1 Normally Open Contact

Accessories: 1 3 4 5 7



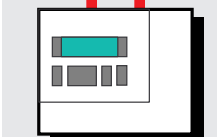
Excel 100 Controller
63-8911 Sales Brochure
74-2035 Specification Sheet

Medium Point Density Controller
• Ideally suited for small mechanical room applications
• Single board construction

Flexible Point Mix
• 12 universal inputs (analog or digital)
• 12 universal outputs (analog or digital)
• 12 digital inputs

Same Power of the Excel 500
• Same processor
• Same operator interface
• Same software
• Same bus communication
• Fully programmable using Excel CARE

Model Type: Standard CPU
I/O Point Capacity
- Up to 256 pseudo points
- 36 physical points
Engineering Tool: Excel CARE
No. of LED's: 3
Engineering Tool: Excel CARE
Approvals / UL Standards: 916PAZX and 864UDTZ when used in an enclosure



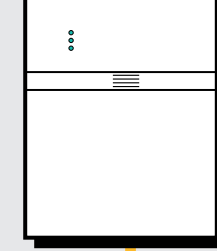
Excel 50 Controller
63-8603 Sales Brochure
74-3029 Specification Sheet

I/O Point Capacity
Analog Inputs: 8
0 to 10 Vdc
0 to 20 mA (W 499 Ω resistor)
NTC 20k ohm
Digital Inputs: 4
0 to 10 Vdc
3 of 4 fast totalizer
Digital Outputs: 6
Triac 800 mA
(all 6 Triacs max 2.4A)

Same Power of the Excel 500
• Similar operator interface
• Same software
• Same bus communication
• Fully programmable using Excel CARE

Model Type: XL50 UPC-without operator interface
XL50 UMMIPC-with operator interface

I/O Point Capacity
- 22 physical points
- Up to 256 pseudo points
Application Module: Flash-EPRM
Engineering Tool: Excel CARE
Approvals / UL Standards: 916PAZX
Remote communication:
Direct dial In/Out to remote front end or remote C-Bus network



Q7750A Excel 10 Zone Manager
74-2950 Specification Data
74-1392 User Guide

• Access between E-Bus and C-Bus
• Full DDC programmability using Excel CARE
• LEDs for troubleshooting
- E-Bus communication
- C-Bus communication
- 24 VAC power (Echelon, C-Bus, power)

Excel 10 Q7751A Router
74-2952 Specification Data
• Allows use of up to 120 controllers per Zone Manager

Lonworks[®] Bus



VAV Box Controller
63-9041 Sales Brochure
74-2942 Specification Data
74-2953 Specification Data

• Pressure-independent or pressure-dependent VAV box control
• Single-duct/dual-duct VAV box control solutions
• Reheat and peripheral radiation control (selectable "first on" sequencing)
• Series/parallel fan
• Supply/return air tracking

W7751B, D, F
• Pressurized/depressurized smoke control

Inputs
• 1 T7770 wall module input
• 2 Resistive inputs
• 1 Voltage input
• 3 Dry contact inputs
• 1 Bypass button input

Outputs
• 8 relay outputs
• 1 LED output

W7751H

Inputs
• 1 T7770 wall module
• 1 Resistive input
• 1 Voltage input
• 1 Bypass button input

Outputs
• 4 triac outputs
• 1 LED output



Constant Volume AHU Controller
63-9034 Sales Brochure
74-2956 Specification Data

• Proven PID space temperature control algorithm
• Integral or packaged economizer control
• Separate intelligent recovery rates for heating and cooling
• Demand limit control temperature setpoint in energy saving direction

W7750A Constant Volume AHU Controller

Inputs
• 1 T7770 wall module
• 1 Resistive input
• 2 Dry contact digital inputs
• 1 Bypass button input

Outputs
• 3 relay outputs
• 1 LED output

W7750B Constant Volume AHU Controller

Inputs
• 1 T7770 Wall module
• 4 Resistive inputs
• 2 Voltage inputs
• 4 Dry contact digital inputs
• 1 Bypass button input

Outputs
• 8 triac outputs
• 1 LED output



Unit Ventilator Controller
63-9037 Sales Brochure
74-2962 Specification Data

• Space or return air temperature control
• ASHRAE cycles 1, 2, 3
• Up to 4 stages of heating
• Up to 4 stages of cooling
• Packaged or floating damper control

Inputs
• 1 T7770 wall module
• 1 Resistive inputs
• 2 voltage/current inputs
• 4 Dry contact digital inputs
• 1 Bypass button input

Outputs
• 3 relay outputs
• 1 LED output
• 1 Electric heat relay (F type only)



Fan Coil Unit Controller
63-9035 Sales Brochure
74-2959 Specification Data

• 2 pipe, 4 pipe fan coil unit control
• Up to 3 speed fan control
• With or without electrical reheat
• Space freeze protection

Inputs
• 1 T7770 wall module
• 1 Resistive inputs
• 2 Voltage inputs
• 4 Dry contact digital inputs
• 1 Bypass button input

Outputs
• 8 triac outputs
• 1 LED output



Remote Input/Output Device
63-9036 Sales Brochure
74-2698 Specification Data

• Generic I/O for lighting, exhaust fans, pumps and more
• *LonMark[®] standard objects for sensors and actuators

Inputs
• 4 Resistive inputs
• 2 Voltage inputs
• 4 Dry contact digital inputs

Outputs
• 8 triac outputs

*LonMark is a trademark of Echelon Corporation

