

# BEMG-4221/4222

Energy Data Concentrator  
with 6 x USB, 4 x COM/  
8 x COM, 128 Devices



BEMG-4221

BEMG-4222



## Features

- Onboard Intel® Atom™ N450/D510 1.67GHz processors
- 2 x 10/100/1000 Base-T RJ-45 port, 6 x USB 2.0 ports
- 2 x Mini PCIe slot with 1 x SIM slot support
- Isolation between chassis and power ground
- Supports wide operating temperatures from -10 ~ 70°C
- Supports 8 x COM ports (BEMG-4222)
- Built-in Windows® CE with WebAccess Energy Data Concentrator
- Configured through web browser
- Supports various protocol drivers to communicate with different devices
- Support data transfer to Advantech BEMS

## Introduction

The BEMG-4221 and BEMG-4222 are powerful data concentrators bundled with SCADA software - WebAccess. With Intel Atom N450/D510 1.67GHz CPUs, Gigabit Ethernet ports, rich I/O, and 2 x Mini PCIe socket. Both products have Energy Star certification, IP40 anti-dust ingress protection and wide operating temperatures (-10 ~ 70°C), providing high performance and high versatility with low power consumption.

WebAccess communicates with automation equipment used in manufacturing facilities, industrial plants and building automation systems. The software acquire, display, monitor and store real-time data and allows operators to change set-points, equipment status and other parameters in end-device.

## Specifications

### General

- Certification** Energy Star, CE, FCC Class A, UL, CCC, C-Tick Class A, BSMI
- Dimensions (W x D x H)** BEMG-4221: 255 x 152 x 50 mm (10' x 6.0' x 2.0")  
BEMG-4222: 255 x 152 x 59 mm (10' x 6.0' x 2.3")
- Enclosure** Aluminum +SECC
- Mounting** DIN-rail, Wallmount, VESA
- Industrial Grounding** Isolation between chassis and power ground
- Power Consumption** BEMG-4221: 12W (Typical)  
BEMG-4222: 16W (Typical)
- Power Requirements** 9 ~ 36 V<sub>DC</sub> (e.g +24 V @ 1.5 A) (Min. 36 W), ATX
- Power Suspend Mode** S3, S4
- Weight** 2.5 kg
- System Design** Fanless design with no internal cabling

### System Hardware

- CPU** BEMG-4221: Intel® Atom™ N450 1.67GHz  
BEMG-4222: Intel® Atom™ D510 Dual Core 1.67GHz
- Memory** 2 GB DDR2 SDRAM built-in
- Indicators** LEDs for Power, CF, LAN (Active, Status), Serial (Tx, Rx)
- Keyboard/Mouse** 1 x PS/2
- Storage** CF: 1 x front-accessible type I/II CompactFlash® slot  
HDD: 1 x built-in 2.5" SATA HDD/SSD bracket
- Display** DB15 VGA connector  
BEMG-4221 supports: 1400 x 1050  
BEMG-4222 supports: up to 2048 x 1536  
Programmable 256 levels timer interval, from 1 to 255 sec
- Watchdog Timer** 1 x Printer port (BEMG-4222)

### I/O Interface

- Serial Ports** BEMG-4221: 2 x RS-232/485 (COM1-2),  
2 x RS-232/422/485 w/ 128kB FIFO (COM A-B)  
BEMG-4222: 2 x RS-232/485 (COM1-2),  
2 x RS-232/422/485 w/ 128kB FIFO (COM A-B),  
4 x RS-232/485 from DB25 print port (COM3-6)
- Serial Port Speed** 50-115.2 kbps (COM 1-6 in RS-232/485 mode)  
50-115.2 kbps (COM A/B in RS-232 mode)  
50-921.6 kbps (COM A/B in RS-422/485 mode)
- LAN** 2 x 10/100/1000 Base-T RJ-45 port (Built-in boot ROM in flash BIOS)
- USB Ports** 6 x USB 2.0
- Audio** Line in, Line out, Mic in (5.1 channel HD audio)

### Environment

- Humidity** 95% @ 40°C (non-condensing)
- Operating Temperature** IEC 60068-2-2 with 100% CPU/I/O loading  
-10 ~ 70°C (14 ~ 158°F)
- Ingress Protection** IP40
- Shock Protection** IEC 60068-2-27  
CompactFlash®: 50 G @ wall mount, half sine, 11 ms  
HDD: 20 G @ wall mount, half sine, 11 ms
- Vibration Protection** IEC 60068-2-64 (Random 1 Oct./min, 1hr/axis.)  
CompactFlash®: 2 Grms @ 5 ~ 500 Hz,  
HDD: 1 Grms @ 5 ~ 500 Hz

## Ordering Information

- BEMG-4221-P21C-AE** Energy Data Concentrator, Atom N450 1.67GHz, 2GB RAM
- BEMG-4222-P31C-AE** Energy Data Concentrator, Atom D510 1.67GHz, 2GB RAM

### Accessories

- UNO-FPM21-AE** UNO-2000 series VESA mount kit
- 968EMW0021** Mini PCIe card for WLAN
- 1700001854** SMA/I-PEX cable 11CM
- 1750003222** 5dBi Dipole Antenna
- PCLS-DIAGAW10** Advantech Remote Monitoring & Diagnosis Utility