

# ENCELIUM® EXTEND Manager



The ENCELIUM® EXTEND Manager collects, processes and distributes lighting control information to sensors, wallstations and control modules over a network based on the GreenBus II® wiring protocol.

Each Manager features eight GreenBus II communication channels and typically controls 100 nodes per channel (8 x 100 = 800 nodes in total).

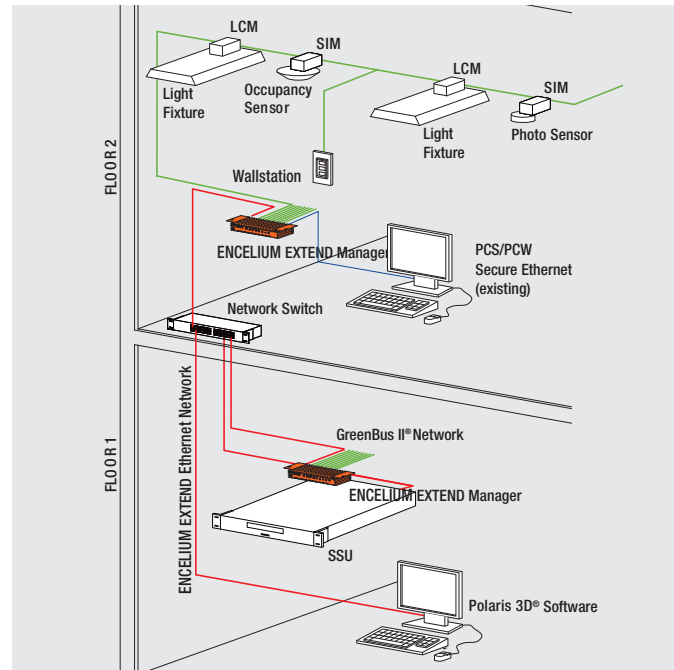
The Manager is the central intelligence point in the system for the wireless devices. It collects signal information from photo sensors (light levels), occupancy sensors (occupancy status) and wall mounted lighting controllers. It then determines appropriate brightness levels or ON/OFF status for each fixture and zone. Photo sensors do not directly control light levels but rather are connected to the ENCELIUM EXTEND Managers GreenBus II network and provide light level information to the Manager. The Manager then determines what action to take based on the status signals from the sensors.

Each Manager has one Ethernet and USB port for Network connections. The Ethernet port is for communication with other Managers and the SSU on the ENCELIUM EXTEND Ethernet Network. The USB port (using a USB to Ethernet adapter) can be used for communication with a facility or tenant's Local Area Network (LAN) to allow secure communication with ENCELIUM EXTEND Equipment for access to the Polaris 3D® or Personal Control Software (PCS) applications. Managers are typically located in the electrical room or communication closet on each floor of a building and are connected to a network switch using standard Ethernet connections.

## Key Features & Benefits

- Flexibility of design
  - Scaling system up for applications of any size
  - Can be combined with ENCELIUM® EXTEND Wireless Manager for combined wired and wireless solution
- Controls up to 800 wired nodes
- Sleek design for seamless installation
  - 19" Rack mount requires 1U slot
  - Optional 4U wall mounted rack

## ENCELIUM® EXTEND Networked Light Management System Architecture



### System Architecture

This illustration shows how each component is easily integrated into the ENCELIUM EXTEND Networked Light Management System (LMS). The GreenBus II wiring protocol is a two-wire communication topology for supplying data and power to the system. Each light fixture, sensor, and wall controller is daisy-chained back to the ENCELIUM EXTEND Manager using pre-terminated 'click & go' GreenBus II communication cabling. The Managers typically control individual floors and are linked via an Ethernet Network. Internet or LAN connection allows floor plan based control software to be operated anywhere on the network. For reference, the component shown on this data sheet is highlighted.

## Ordering Information

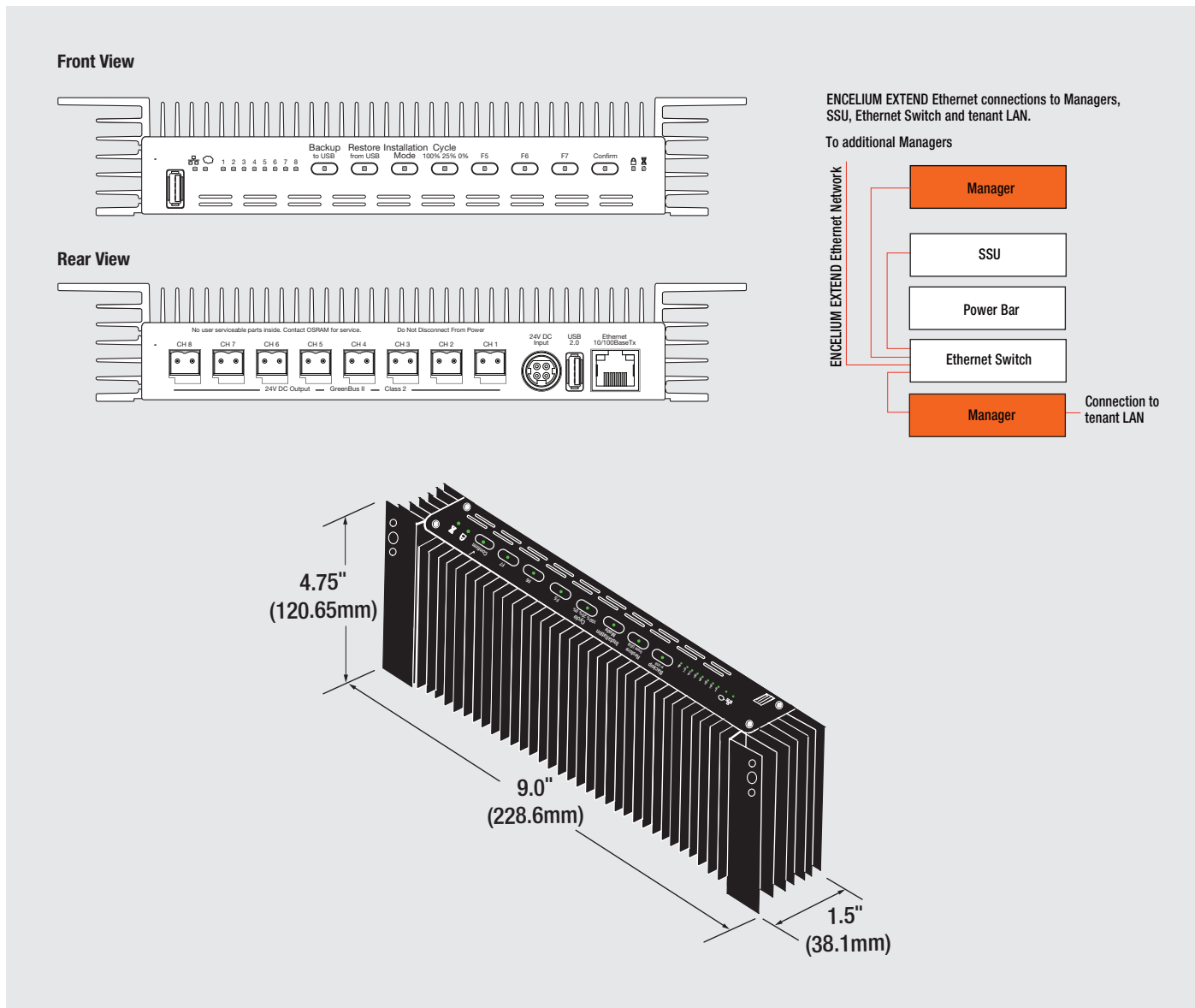
Item #	Ordering Description	Field Bus	Modifiers
45208	EN-ECU-G4-P3D	GB2	—

## Specifications

- Dimensions: 4.75" W X 9.0" L X 1.5" H (120.65mm W X 228.6mm L X 38.1mm H)
- Weight: 2.2lbs (1.02 kg)
- 8 GreenBus II® channel ports, 22.5Vdc, Class II
- Tenant LAN Access USB 2.0 Port
- ENCELIUM EXTEND Ethernet Network Port
  - Ethernet 1-/100BaseTx Cat. 5 RJ45 port
- Configuration stored in non-volatile flash memory
- USB 2.0 port on the front of the unit to restore or back up database from USB drive
- (should only be used with instruction from ENCELIUM EXTEND personnel)
- 8 channel communication status LEDs on the front of the unit
- For mounting on standard 19" rack (1U width), individual wall mount or optional 4U wall mounted rack
- Operating Temperature range: 0°C (32°F) to 40°C (104°F)
- External Power Supply: 100–240V<sub>AC</sub>/50-60Hz/1.8A (Power supply provided with ECU G4)
- Normal non-emergency circuit only. Do not connect to UPS or emergency power.
- cULus Listed
  - Energy Management Equipment (UL 916)
- Complies with the following electromagnetic requirements:
  - EN 61000-4-2
  - EN 61000-4-4
  - EN 61000-4-5
- FCC Part 15/ICES-003, Class A

Install in accordance with all applicable national and local electrical and building codes.

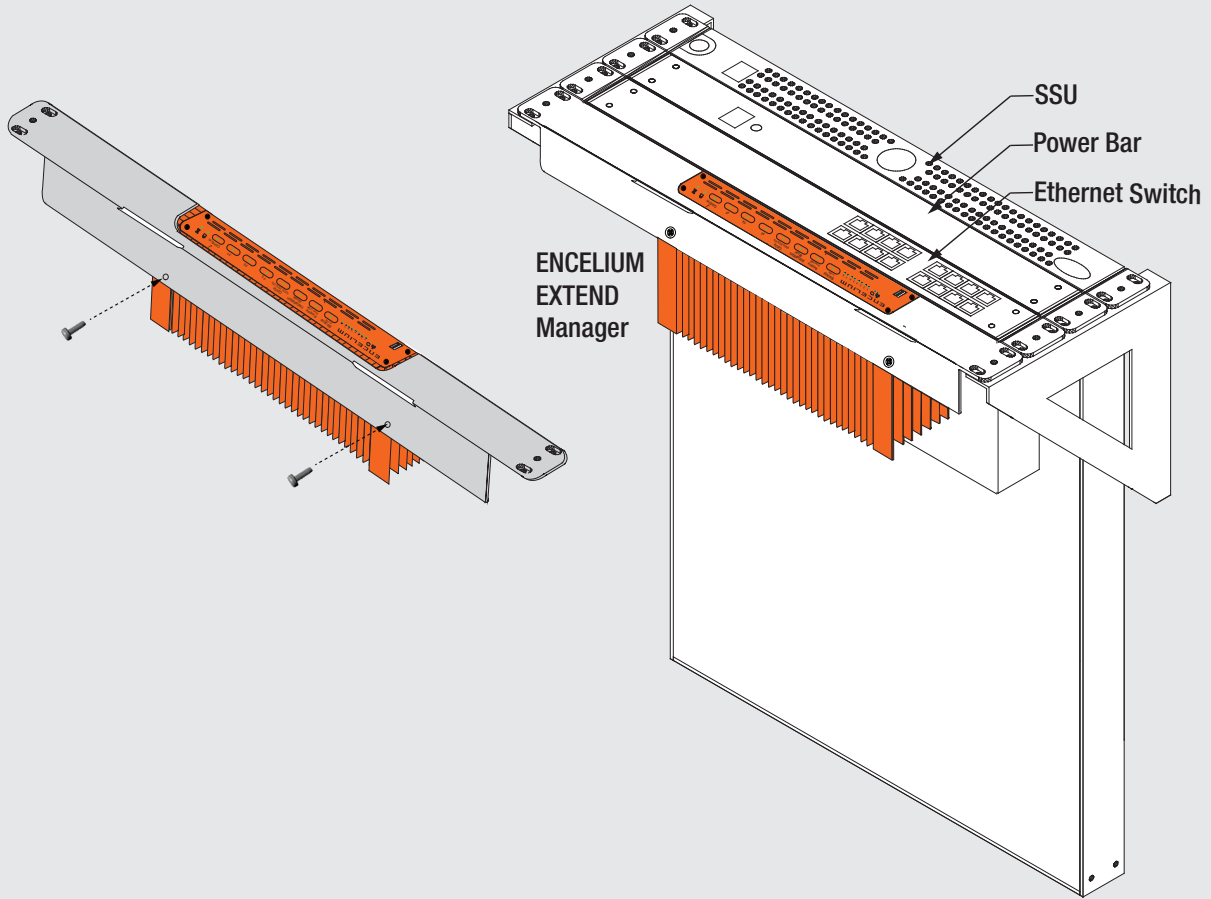
## Dimensions and Installation Diagrams



## Mounting Details

The mechanical construction allows the Manager to be attached to a 19" wide bracket, for simple installation on standard 19" IT rack (1U width), or optional 4U wall mounted rack (as shown below). The 19" wide bracket is provided along with the Manager. For individual wall mount, the

mounting ears on the Manager can be used to secure against the wall without needing an external mounting bracket. Refer to the ENCELIUM® EXTEND Contractor Installation Manual for detailed mounting and wiring instructions.



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