

AUTONOMOUS

PROTECTING | PEOPLE | ASSETS | ENVIRONMENT



SMART HUB

Powered by



CONNECT
SOFTWARE



AIOT pat. pending renewables system

- Solar Array
- Efficient Wind Turbine

C3 Comms Module

- LoRaWAN Gateway
- 4G Connectivity
- WIFI Hotspot & Router

Sensing System

- LED ring light for status indication and visual feedback
- PIR control for Lighting and feature activation

Pole Mounted

- Integrated
- Aesthetic
- Retro-fit or custom pole

C3 Connect Software

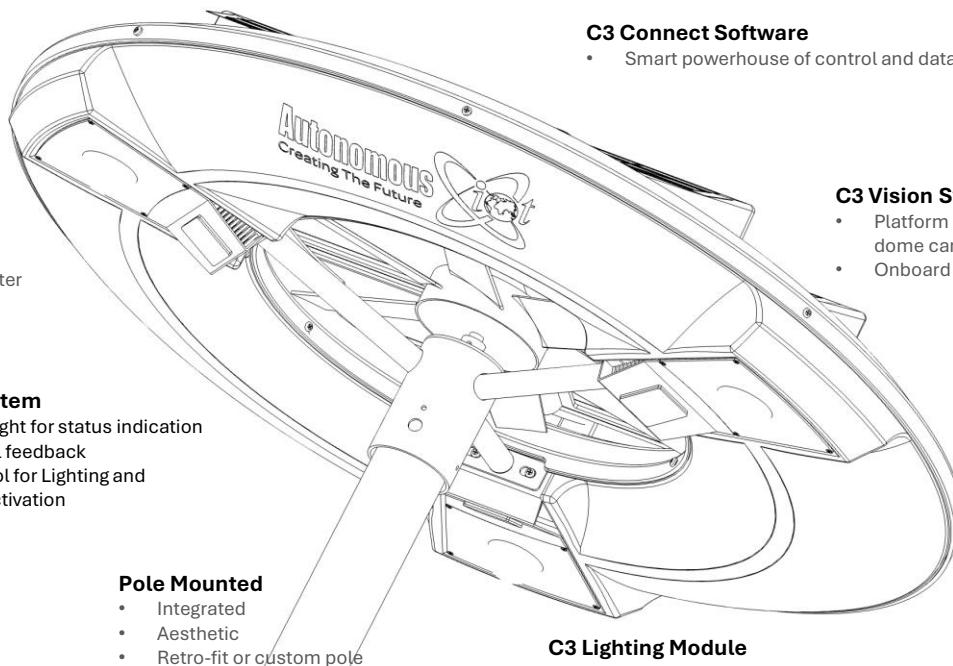
- Smart powerhouse of control and data analysis

C3 Vision System

- Platform for up to 3 integrated dome cameras
- Onboard AI and detection

C3 Lighting Module

- Up to 3 ultra bright LED Array Modules



AUTONOMOUS SMART HUB

Communications, Sensing systems, Renewable power, Security and Lighting



AIOT-C3 is a pole-mounted **MODULAR SMART HUB** that leverages AIOT's pat. pending technology harnessing renewable energy to reduce the reliance on power supplied from the grid. Our solution has a unique enclosure designed to maximise air flow and can house multiple IoT devices.

A remotely accessible and configurable smart controller is employed to monitor and control system functions and view data.

The platform offers a variety of adaptable solutions, including communications, security, environmental sensors, and lighting all managed through the AIOT 'C3 Connect' Software Platform.

CERTIFICATIONS

EN55032, EN55035, EN5015, EN61547,
EN301.489-1, EN301489-17, EN 301489-52
IP65, IK08

Technical Data

AiOt-C3 Base Specification

Dimensions	1030 / 270 mm (Φ / H) (incl. bracket)
Operating Temperature	-10 to 55 °C
Weight	28 kg
Base Equipment	Wi-Fi & 4G Router with LoRaWAN Gateway AIOT Control Board Renewables system Integrated 60Ah Battery
Renewables system	Integrated Wind Turbine – 80W peak Integrated Solar Cells – 56W peak
DC controller & Grid Connection	Smart hybrid wind and solar MPPT regulator 230V AC / 14.6V DC
AIOT Software	AiOt C3 Connect Cloud Based Platform
Battery	Integrated 60Ah Lithium Iron Phosphate Fast charge up to 146W
Pole Height	Up to 10 metres
Optional Enhancements	Grid-Tie system Environmental LoRaWAN Sensors PIR sensing system Auxiliary Battery Bank Auxiliary Solar PV up to 150W Up to 3 IP Camera w/ onboard storage & video analytics Up to 3 LED Lighting modules

Module Options



AIOT-C3	Smart Hub Base Communications, LoRaWAN, 4G, WIFI Read-only connect software access
AIOT-C3-S	Security Module up to 3x IP cameras
AIOT-C3-HL	High Power Lighting Module up to 3 LED Arrays
AIOT-C3-LL	Low Power Lighting Module 1 LED Array & no comms
AIOT-Connect Software	Enhanced AIOT C3 Connect Software Platform with Customised alerts, viewing & reports

Environmental Sensors (contact Sales Rep for latest sensors available)

MODULE SPECIFICATIONS OVERVIEW

Communications



CELLULAR INTERFACE

4G Cellular interface with 2 antennas and dual SIM slots for resilient cellular communications.

LoRa INTERFACE

EU868, US915, CN470, AU915 support
8 channel capacity

WIFI INTERFACE

802.11 b/g/n, supports AP and Clients modes
2.4GHz for long range
WEP, WPA, WPA2 security



Battery System

STANDARD SYSTEM

LiFePO4 BATTERIES
12.8V 60Ah 768Wh (25C)
> 4000 cycles
Up to 146W fast charge system
10-year lifespan
High energy density
Lightweight
BMS system
Fused circuit protection

OPTIONAL

Upgradable battery bank for power redundancy and maximised storage

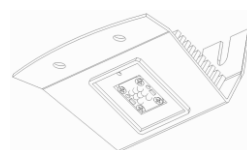
C3 Sense



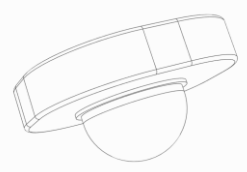
OPTIONAL PIR

Detect movement and activate lights.
10m / 110deg Horizontal / 93deg Vertical

C3 Lighting Module



Add up to three lighting arrays for a high-end 360-degree lighting output of up to 7290 lumens of light at 4500K. All lighting models can be paired with PIR activation to save more energy and only trigger on when required. Modularity is key and a lighting module can be added or removed at any time



C3 Vision System

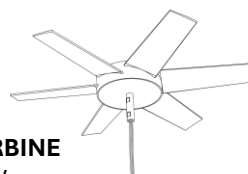
12V, 10A platform for up to 3 dome cameras

AIOT OUT OF THE BOX SYSTEM*:

Resolution 4MP(2688 × 1520)
Image Sensor 1/3" Progressive Scan CMOS
Lens 2.8 mm
Horizontal FOV 104.3°, vertical FOV 55.9°, diagonal FOV 123.8°
Wide Dynamic Range 120 dB WDR
IR: up to 30 m
Motion detection (human and vehicle targets classification)
Line crossing detection, intrusion detection, face detection
Built-in Microphone, record with audio
Alarm input and output line

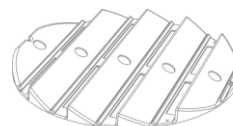
*Camera Manufacturer app to view video feed as standard

C3 Renewables System



TURBINE

80W
Automatic braking system
6 blade rotor w/ reinforced polyamide
Noise <28 db(A) at 25m @ 8m/s

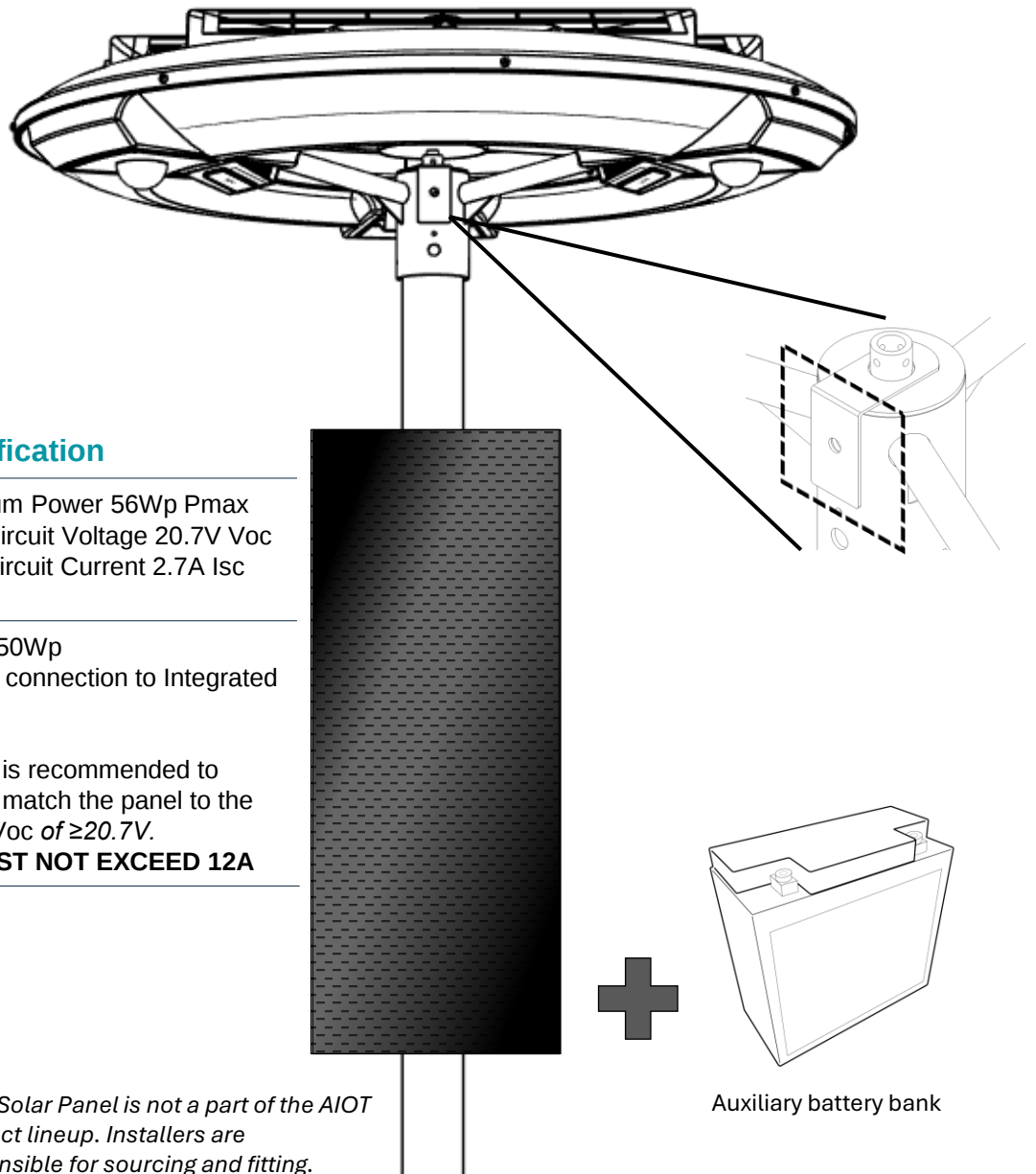


SOLAR CELL

n-type, monocrystalline Si
>22%Ef
Smart MPPT Solar Charge Controller
56W (peak)

Auxiliary Renewables – PV

Add modular solar PV up to 150W to the system using the C3 fast mount bracket plate.
 Add charging capacity to the integrated battery or combine with an **Auxiliary Battery Bank** to maximise energy storage.



Our included base Autonomous Software Platform is the AIOT Cloud Software that manages and monitors the C3 Smart Hub, where users can customise control of the C3 hub and access read-only and exportable data. This is for customers who want to use the data that comes from the platform to make informed business decisions.

Upgradable to C3 Connect Software System:



Our upgraded, fully integrated and scalable cloud-based platform designed to monitor, manage, and analyse IoT devices, including the **Autonomous C3 Smart Hub**. It offers a complete end-to-end solution beginning with device connectivity and data ingestion, extending to real-time monitoring, alerting, and reporting.

Key features

- **Cloud-Based Architecture** Data is processed and stored securely in the cloud.
- **Device Data Ingestion** Device data is ingested over secure channels.
- **Visualisation** Visualise real-time and historic data to identify device status, trends, and performance.
- **Alerting** Configure user preferences and custom thresholds to trigger notifications via Email.
- **Reporting** Generate periodic CSV reports for analytical purposes.

Locations/Sites

Sensors

Alerts settings

Mute Alerts Page

Alerts

Reports

Browser Compatibility	Optimised for the latest versions of Chrome, Firefox, and Edge.
Device Compatibility	Supported on desktops, laptops, tablets, and smartphones running Windows 10+, macOS 10.15+, iOS 14+, Android 10+.
Security Considerations	Leverages a third-party authentication service, to provide enterprise-grade security features such as Multi-Factor Authentication (MFA) and Single Sign-On (SSO) , ensuring only <i>authorised users gain access to the platform's</i> cloud-hosted resources. All user sessions and API calls within C3 Connect are secured via HTTPS with TLS 1.2+ encryption, guaranteeing data-in-transit confidentiality and integrity.
Performance Recommendations	A stable 5 Mbps internet connection and 1920×1080 display resolution are recommended.

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