

UNIVERSAL FIELD PANEL

Zero Trust Architecture for Sensor (IDS) and Access Control (ACS) events



PRODUCT OVERVIEW

The **Universal Field Panel (UFP)** is a **cyber-native, Zero Trust platform** that unifies and protects data across access control, intrusion detection, and industrial/OT environments. The **UFP Gateway (UFP-GW)** is an open-architecture IIoT device delivering trustworthy, authenticated data from the far edge to the enterprise. Optional Expansion Modules (EMs) enable scalable deployments for high-density or distributed environments.

The UFP supports **digital and analog inputs**, allowing organizations to modernize legacy physical security equipment (PSE) without replacing existing sensors or wiring. By elevating analog systems to IT and cybersecurity standards, the UFP closes long-standing security gaps while preserving prior investments. Authenticated digital data enables **who, what, when, and where** - a prerequisite for reliable analytics and AI.

Zero Trust, Far-Edge-to-Enterprise Security

When paired with PSG's Digital Encrypted Security Interface (DESI), the UFP provides end-to-end encryption and authentication from far-edge devices, such as sensors, door hardware, and readers, to enterprise systems and the cloud. Built with Zero Trust at its core, all data is authenticated, verified, and encrypted before it is trusted or consumed.

Aligned with Executive Order 14028, the UFP supports Zero Trust requirements for government and critical infrastructure environments, delivering AI-ready, high-integrity data for real-time decision-making and advanced analytics.

Open Architecture Platform

The UFP is a secure, open-architecture platform supporting COTS and GOTS applications with integrated database, compute, and container services. It enables the modernization of intrusion detection, access control, fire, SCADA, and building control systems within a unified, cyber-secure framework.

KEY FEATURES

O1. UNIFIED ACCESS, INTRUSION & OT/IIOT PLATFORM

- Digital + Analog inputs supported (128 digital inputs + 16 doors per panel)
- Modular Open System Approach (MOSA), Non-Proprietary IOT device
- Reuses analog sensors and wiring and reduces cost per landed sensor and installation cost

O2. ZERO TRUST ARCHITECTURE & HARDENED CYBERSECURITY

- Secure boot, secure key storage, TPM 2.0
- FIPS-140 compliant TLS, FIPS-186, FIPS-198
- NIST SP 800-90B, SHA-256 OTP, ECC-P256
- UL294, UL2610, UL62638-2, ROHS

O3. DOCKER EDGE COMPUTING

- Executes containerized applications at the edge
- Allows virtual open-source S/W applications (MQTT) supporting IBDSS solutions at the edge enabling real-time analytics, AI/ML, and mission logic in the field
- Reduces IT server stack load and enterprise power consumption

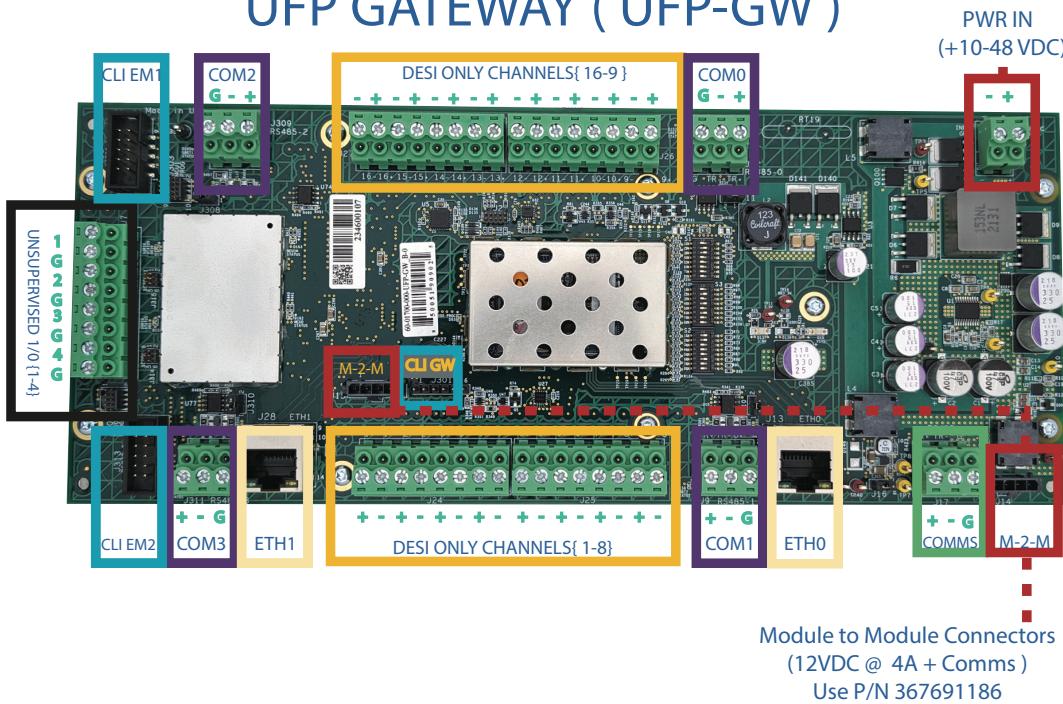
O4. PERIMETER EXTENSION CAPABILITIES

- Integrates with handheld devices, drones, and mobile kits extending secure sensing beyond fixed infrastructure

O5. FIELD PROVEN

- Tested and approved by DoD and DOE test laboratories
- Technology Readiness Level (TRL) 9: mature, tested, and field-ready

UFP GATEWAY (UFP-GW)



Key Specifications

- IDS - 16 digital (DESI) inputs
- 64 DESI 128 inputs
- ACS - 4, RS-485 serial ports
- 4 DESI per single channel is typical. (Some channels may have more)

Specification	Description
# of Gateways in a System	Unlimited
# of EMs Under a Single Gateway	16
Communications	(2x) 1000BaseT Ethernet
Operating System	Ubuntu [Core 22.04.5 LTS]
Open Architecture Integration Services	MQTT (Message Queuing Telemetry Transport) Open API & SDK available for 3rd party integrations
Open Architecture Database Services	PostgreSQL, TPM protected Secure Storage
Open Architecture Application Hosting	Docker container services for 3rd party edge applications
# of DESI Channels	UFP-GW [16 DESI Channels] supporting [64 DESI] any mix
# DESI Inputs/Outputs (Max)	UFP-GW [128] sensor inputs or [64] control relays
# of Serial Ports	[4x RS-485] with two field changeable to [RS-232] [1x RS-485] for expansion modules downlink* (* default at 1Mbit/s, 100m distance, can be set to 115k for 2000')
# of OSDP Readers	4 per RS-485 serial port
Power Input	[10 to 48 VDC]
Power Output (For EMs/Readers)	[12 VDC @ 4 A]
Power Consumption	UFP-GW [450mA @ 12VDC, 5.4 Watts] UFP-GW [350mA @ 24VDC, 4.2 Watts]
Cyber Security Features	TPM 2.0, Secure Boot, Secure Key Storage, Signed Firmware, Antivirus, Cyber Secured O/S (RMF STIG compliant)

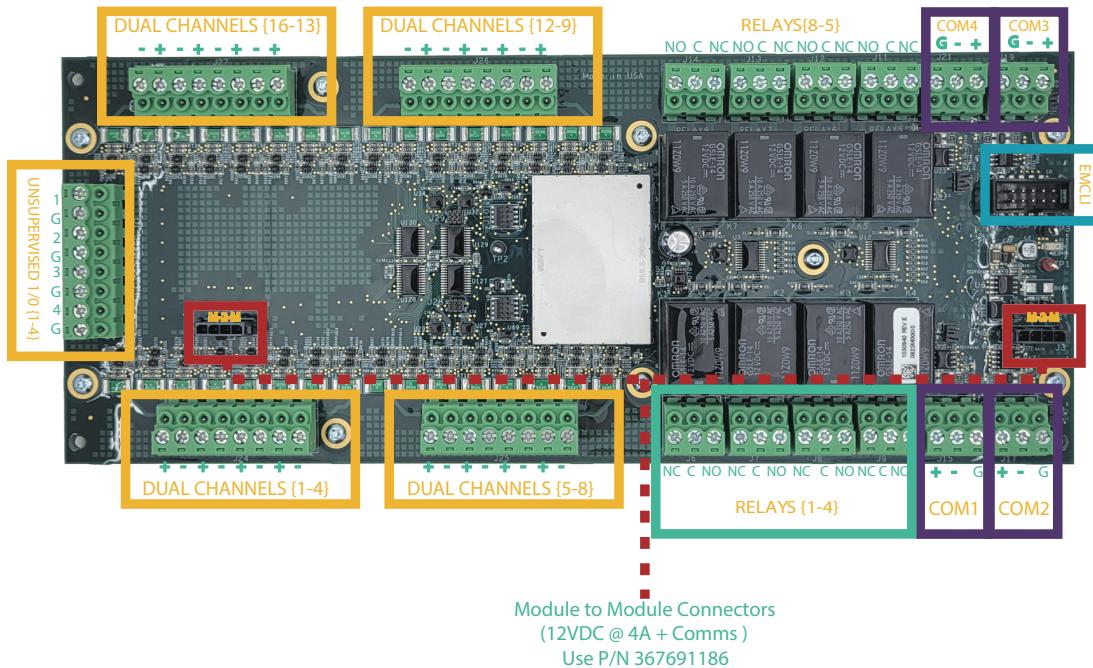
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UFP EXPANSION MODULE 1684 (UFP-EM16)



Key Specifications

- IDS - 16 digital (DESI) inputs or analog
- 64 DESI or 128 inputs
- ACS - 4, RS-485 serial ports
- 4 DESI per single channel is typical. (Some channels may have more)

Specification	Description
# of Power Relays	EM-8 supports 4 / EM-16 supports 8 SPDT FORM C rated: [10 A at 120 VAC] / [8 A at 30 VDC] (Resistive) [5 A at 120 VAC] / [4 A at 30 VDC] (Inductive)
# of Supervised Inputs	EM-8 supports 8 legacy inputs (in lieu of DESI per port) EM-16 supports 16 legacy inputs (in lieu of DESI per port)
Supervision Ranges	Option W [100 ohm to 50k ohm] Option F *contact factory for OEM custom configurations
# of OSDP Readers	4 per RS-485 serial port
# of Legacy Wiegand Readers	1 Wiegand reader per serial port
Power Input	[12 VDC nominal] from UFP-GW or via PM-4
Power Consumption	EM-8 [350 mA / 4.8 Watts] / EM-16 [500mA / 6 Watts] @ 12VDC EM-8 [250mA / 3 Watts] / EM-16 [300ma / 3.6 Watts] @ 24VDC

UFP POWER MODULE 4 (UFP-PM4)

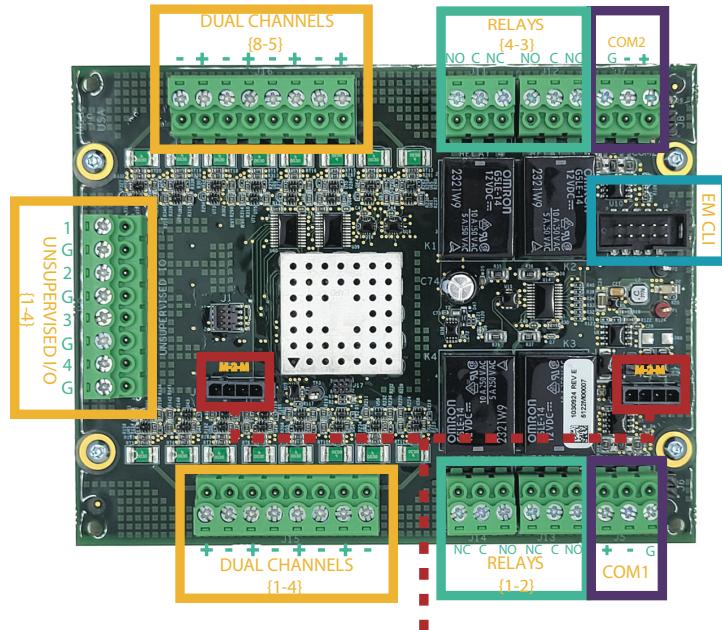


Module to Module Connectors
(12VDC @ 4A + Comms)
Use P/N 367691186

Key Specifications

- 4 amp, 1 serial bus for down stream UFP comm.

UFP EXPANSION MOUDLE 8 (UFP-EM8)



Module to Module Connectors
(12VDC @ 4A + Comms)
Use P/N 367691186

Key Specifications

- IDS - 8 inputs (digital or analog)
- 32 DESI up to 64 inputs
- ACS - 2 RS-485 serial ports
- 4 DESI per single channel is typical.
(Some channels may have more)

Specification	Description
Power Input	[10 to 48 VDC]
Power Output (for expansion modules)	[12 VDC @ 4 A]
Power Consumption	PM4 [20mA @ 12VDC, 15mA @24VDC]
# Serial Channels	1 RS-485 GW uplink* (1Mbit/s, 100m distance) 2 Module to Module EM connectors
Used for power expansion or remote deployment of EMs away from GW	(* default at 1Mbit/s, 100m distance, can be set to 115k for 2000')

(Specifications subject to change without notice)



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