We Build the IoT Edge, You Build the Value

Sixfab ALPON™ X4

A complete edge computing solution designed to simplify IoT device management, boost operational efficiency, and enable seamless, scalable connectivity across industries.

1000+ Subscriber Companies	**110K+** Devices Deployed	**3** Global Offices	**100+** Sales Countries
TRUSTED BY INDUSTRY LEADERS WORLDWIDE	**PROVEN EXPERTISE IN SCALABLE IoT SOLUTIONS**	**SUPPORTING YOU WHEREVER YOU ARE**	**EXPANDING IoT POSSIBILITIES GLOBALLY**

Powered by
Raspberry Pi

Mechanical & Environmental

Dimensions	111.16 x 99.9 x 33 mm (4.37 x 3.93 x 1.30 inch) without antennas
Weight	Approx. 457 grams (1 lb)
Case Material	Full aluminum enclosure, top side passively cooled
Protection Class*	IP40
Operating Temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Storage Temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Max. Relative Humidity	Up to 95%, non-condensing
Environmental	Rugged, fanless design, suitable for industrial and harsh environments
Case Mounting Options	DIN Mount (Optional), Wall Mount (Optional)

System

Processor Generation	Raspberry Pi Compute Module 4
Processor	Broadcom BCM2711 Cortex-A72 (ARM v8) Quad-core ARM Cortex-A72 @ 1.5GHz
Memory	8GB LPDDR4 (optional: 2GB, 4GB)
Storage	32GB eMMC Flash storage (optional: 8GB, 16GB)
Real Time Clock	CR1220 Coin Cell Battery

Power

Input Voltage & Power	DC Input: 9-30V DC, 27W USB PD: 15V DC 1.8A, 27W
Power Options	USB-PD Type-C Input Screw Terminal Block (9-30V DC) PoE+ IEEE 802.3at (Optional)
USB Output Voltage & Power	USB 2.0 5V DC, 1A (Total)

Connectivity

Wi-Fi	2.4GHz and 5.0GHz IEEE 802.11 b/g/n/ac Wireless
Bluetooth	Bluetooth 5.0, BLE
Cellular Module	4G / LTE (Cat 4)*
Coverage	Global
Antennas	2x Cellular (Main + Diversity) 1x GNSS 1x Wi-Fi
Outdoor IP67 Antenna (Optional)	3-meter cabled combination antenna with surface mount
Positioning	GPS/GNSS, Cellular Geolocation
Frequency Bands	B1 / B2 / B3 / B4 / B5 / B7 / B8 / B12 / B13 / B18 / B19 / B20 / B25 / B26 / B28 / B34 / B38 / B39 / B40 / B41 / B66
Data Speed**	LTE-FDD (Mbps): Max. 150 (DL) / Max. 50 (UL) LTE-TDD (Mbps): Max. 130 (DL) / Max. 30 (UL)

*This product supports only 4G/LTE networks, with no fallback to 2G/3G, and its performance on non-4G/LTE networks is not guaranteed.

**The presented data rates are theoretical only, and the actual value depends on network conditions.

Input / Output

USB	2x USB 2.0 High-Speed Stack Port	**GPIO Port**	Access to 6x RPi GPIO Pins, GND, 5V DC Output (1A max.)
Button	2x User Programmable Push Button	**Display**	1x HDMI 2.0 port (up to 4Kp30 supported)
Ethernet	1x 100 Mbps LAN Port 1x 1 Gbps LAN Port*	**LED Indicators**	1x Programmable RGB 1x Connection Status 1x Cellular Status 1x Power Status
Switch	1x Boot/Burn, 1x Watchdog		

*In some variants, the ETH/G port replaces the PoE port.

Software

Pre-Installed OS	Pre-installed Official Raspberry Pi OS (Desktop 64-bit Bookworm Version) with ALPON™ Edge Software; visual platform and API-driven interaction with ALPON Cloud
ALPON™ Edge Software Features	Fleet Management, Device Management, Built-in Security, Multi-network support (Gigabit Ethernet, dual-band Wi-Fi, LTE Cat 4) with automatic failover

Security

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TPM	Infineon Technologies SLB 9670VQ2.0 TPM 2.0 module
Hardware Watchdog	Monitors device operation and resets it in case of failure

Expansion and Features

SIM Type	eSIM (eUICC) – Consumer Profile Management, Remote Download & Switch
Supported Modules	Supports ALPON™ Edge Add-on modules, multiple hardware expansions via GPIO and USB ports

Other

Regulatory Certifications	CE, FCC, IC, UKCA, ICASA*, RCM*, RoHS, WEEE, REACH	**Network & Carrier***	Verizon, AT&T, T-Mobile, PTCRB, GCF
Warranty	2 Year Limited Warranty	**Production Availability**	January 2034
Value-added Services	Hardware customization, Branding, labelling	Remote support Add-on module customization	Software containerization support Consulting services

*Certifications in progress.
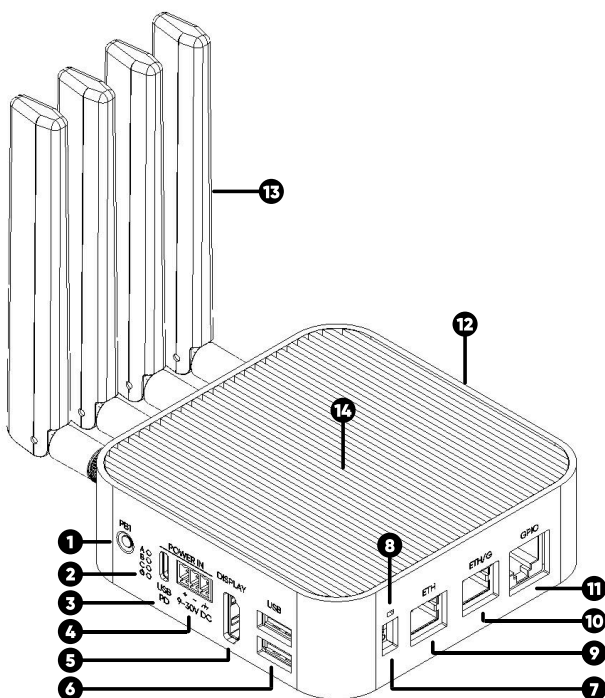
PHYSICAL LAYOUT

1	User Programmable Push Button (PB1)
2	4x LED
3	USB Type-C PD Power Input
4	Screw Terminal Power Input (9-30V DC)
5	Display Connector
6	2x USB 2.0 Port
7	Watchdog, Boot/Burn Switches
8	User Programmable Push Button (PB2)
9	100 Mbps Ethernet Port
10	1 Gbps Ethernet Port*
11	GPIO Port
12	Mounting Hole
13	Antennas
14	Passive Cooling Case

The ALPON™ Cloud platform is a powerful and scalable cloud-based solution designed to streamline the management, monitoring, and provisioning of IoT devices. It seamlessly integrates with edge computing hardware, including the ALPON™ X4, enabling real-time data analytics, secure communication, and efficient device control. With built-in support for OTA updates, multi-network connectivity, and robust security features, ALPON™ Cloud provides comprehensive tools for remote IoT fleet management. Designed for industrial and enterprise use cases, it offers high uptime, scalability, and flexible deployment options tailored to fit modern IoT infrastructures.

Feature	Details
Fleet Management	Zero-touch onboarding ready Role-based access control Device groups Bulk provisioning
Device Management	Software container management Remote Terminal OTA update, software, firmware provisioning Device real-time & historical data monitoring Remote reboot Hardware watchdog with self healing Hardware temperature sensor monitoring Power monitoring USB power control
Built-in Security	Remote access over VPN Tunnelling TLS encrypted diagnostics USB Drive Lockdown TPM 2.0 security chip
Network Management Redundancy	Network Configuration and Recovery eSIM Profile Management Network monitoring Global LTE coverage
Subscription Model	Flexible subscription plans based on the number of devices, data usage, and SLA agreements. Contact sales for details.

OVERVIEW

ALPON™ CLOUD

Device Management		Network Management		Container Management	
Monitor	Control	WiFi	LTE	Registry	Version
Access	Update	Ethernet	eSIM	Deploy	Batch

ENTERPRISE CLOUD
- Apache Kafka
- AWS IoT
- Azure IoT
- Domo
- Firebase
- Google Cloud
- IBM
- OneSignal
- Power BI
- Salesforce IoT
- Tableau

ALPON™ EDGE COMPUTER

ALPON™ EDGE	IoT Protocols		User Application	Cloud Communications	
Hardware Watchdog	Modbus	DAQ IO	Edge AI/ML	HTTPS	MQTT
Network Manager	CANbus	Bluetooth	Data Processing	Rest API	TCP/IP
Container Supervisor	BACnet	Serial	Data Synchronization	FTP	VPN

INDUSTRIAL INTERFACES, SENSORS, AND PERIPHERALS

PLC	RTU	Camera	Display	Thermal	Motor