seeed studio

INDUSTRIAL PRODUCT DATASHEET

Hazard Response Mission Pack - All-in-one Compact Kit, Open-source AIoT Solution, Meshtastic-powered, No/Low-code

All-in-one compact kit for disaster response with Meshtastic off-grid communication and no/low-code edge AI.

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Overview



The Hazard Response Mission Pack is an all-in-one compact kit providing an open-source AIoT solution for disaster response, configurable with additional sensors to meet specific needs. It integrates a Meshtastic-powered digital off-grid communicator, a Node-RED basecamp computer, and SenseCraft AI for no/low-code edge AI deployment.

Key Features

Disasters affect individuals and communities in varied ways, and we at Seeed feel a strong need to contribute positively. A one-size-fits-all approach is insufficient; hence, we provide a **basic configuration as the minimum unit** for purchase, enabling users to **add sensors based on their specific requirements**.

Note

Early Access Purchase: The Hazard Response Mission Pack (basic configuration) is available for just **$600** during the early access phase, making it more accessible for those who need it most (limited availability). **Click here to apply** for early access to the Mission Pack.

- **Sustainable Return Program**: Users can keep the pack if they find it useful. If not, we have a unique "drift program" where users can return the pack not to us, but to another individual or organization who purchased it. Once we confirm that the next recipient has received the pack, we will process a refund.
- **Please note that only the basic configuration can be drifted.** Any customs duties (if applicable) will be the responsibility of the recipient. If you wish to refund the additional sensors, please refer to the standardized policy.
- **Support for Disaster Prevention Professionals**: If you are already working in the disaster prevention sector, we encourage you to reach out as we may consider providing donations of the Mission Pack to your organization. Contact us at **solution@seeed.cc**
- **Community Contributions**: We invite everyone to join us in enhancing the Mission Pack to make it more effective in addressing various needs. Explore the various ways you can contribute on our GitHub repository, and we will provide rewards in return!

1. **Digital Off-grid Communicator**: A **Meshtastic**-style long-range network device that operates on an open spectrum, ensuring that your team remains coordinated and informed, even in the most challenging environments.
2. **Powerful Basecamp Computer**: An onsite edge computing powerhouse with a comprehensive communication gateway and a user-friendly human-machine interface, leveraging **Node-RED** to speed up the creation and deployment of reproducible solutions
3. **No-code Multi-scene Classification**: No/Low-Code to build datasets, train, deploy and fine-tune models with **SenseCraft AI** to run on your edge device.
4. **Intelligent Hazard Sensors:** Harness the power of smart sensing with precision; collect and store crucial data over long distances; keep track of assets, personnel, and hazardous materials.

Note:

The Hazard Response Mission Pack is not a market-ready product, but an on-going, collaborative effort between Seeed and a global community of practitioners. We invite everyone to join us in this ongoing development!

Product Gallery



















Specification

Hardware Spec	
CPU	Raspberry Pi CM4, Quad-core Cortex-A72@ 1.5GHz
RAM	4GB
eMMC	32GB
Display	1 x 10.1 inch 1024x600 60Hz IPS Capacitive Touch Screen
Indicator	1 x RS485 RGB Indicator
Keyboard	1 x mini keyboard with trackpad
Communication	
RS485	3 x 3-pin Terminal Block (isolated)
LoRaWAN	Built-in SX1302/SX1303 module with antenna, supporting LoRaWAN communication on US915 or EU868 bands.
Meshtastic	Includes a Meshtastic device with antenna, supporting multi-band LoRa communication.
Wi-Fi	Includes a built-in Wi-Fi router, supporting 300 Mbps (2.4GHz), 867 Mbps (5GHz), IEEE 802.11 a/b/g/n/ac.
Ethernet	3 x Extra 10/100/1000 Mbps Ethernet ports. one for external network, one for internal network (via router) one for IP devices (via R1000)
Standards	

EMC	ESD: EN61000-4-2, Level 3
	EFT: EN61000-4-4, Level 2
	Surge: EN61000-4-5, Level 2
Certification	CE, FCC
	TELEC
	RoHS
Others	
Security	ATECC608A
Dimension / Weight	345 x 270 x 138 mm / 7 kg
Input Voltage	DC 12V - 2A
Operating Temperature	-20°C to +55°C
Relative Humidity	0% - 85% (non-condensing)
Warranty	2 years
Production Lifetime	Until at least December 2030

Hardware Overview





Part List

Waterproof Carrying Case, includes:	x1
reComputer R1025-10	x1
SenseCAP T1000-E	x4
Charging Case for SenseCAP T1000-E	x1
Meshtastic Device	x1
Wi-Fi Router	x1
RS485 RGB Indicator	x1
LoRa Antenna	x2
10.1 inch screen	x1
Mini Keyboard with trackpad	x1
User Guide	x1
12V Power Adapter	x1

Resource Links

- https://www.seeedstudio.com/Mission-Pack.html
- GitHub - Seeed-Studio/Hazard-Response-Mission-Pack: Field Digital Solution for the Worst Scenarios

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