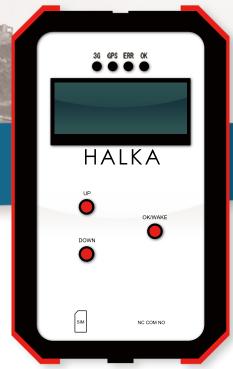


# 多HALKA

### Functions \*\*Patent Pending

- Automatically upload measurements from attached sensors to cloud server
- Check measured data from a smartphone or PC
- Remotely configure data send frequency from the web (frequencies are set in 10 min. intervals)





#### **Connectivity**

Option to choose from a wide range of sensors (i.e. temperature, humidity, barometric pressure, vapor pressure, electric permittivity, water level, etc.)



#### **Global Ready**

Mobile connectivity in 120 countries around the globe



#### Relocatable

Observation points can be easily altered because units can be setup effortlessly (Units are light weight, and operates with regular dry cell batteries)



#### Origin

The name HALKA is taken from the Chinese proverb "路遙知馬力 日久見人心" which professes that it takes a long distance travel to know a horse's strength, and it takes time to understand a person's heart.



#### **HALKA Use Case**

#### Observation of lightnings at Mt. Fuji summit

Proposed ideas to utilize the meteorological station at Mr. Fuji summit

Install HALKA connected to a lightning, temperature, humidity, and barometric pressure sensors

Collect and analyze data from HALKA to verify whether lightning occurrences can be monitored









## Functionality comparison chart

		HALKA	Field Router
Manufacturer		X-Ability	X-Ability
Unit Price		¥ 50,000 JPY	¥ 198,000 JPY
Connection cost		¥ 10,000 JPY (120 countries)/Year	¥ 36,000 (Japan)/Year
System Configuration		All-in-one	Base unit w/connectivity + sensor unit
	Max. number of sensors	None	256
Camera		None	1920x1080
	Sensor unit	None	BT2.0
Connectivity	Range between base and sensor units	None	100m
	Internet	2G / 3G / 4G	2G / 3G / 4G
	Base unit	3 AAA batteries + Solar	Solar powered
	Sensor unit	_	_
Power supply	Battery life	6 months with AAA batteries	_
Sensor		Meter Co. ATMOS41 etc. SDI-12 sensors & analog sensors (via multiplexer)	Decagon data logger Campbell data logger Davis data logger etc.
Management		Web base UI (IFTTT compatible)	None

#### **HALKA Use Cases**











Mt. Fuji summit, Japan



