



DEEP
WATCHER

Deep Learning AI Based Electro-Optics
Forest Fire Detection System

Continuous Automatic Fire Detection 7/24/365



7 days 24 hours 365 days non-stop Motion detection and analysis with Deep Learning Artificial Intelligence.



Fire Monitoring and Early Warning

In our country: 24 hours human surveillance from 776 towers and 254 camera surveillance from 117 towers. Despite this, we have had serious losses in recent years.

Limited attention span, need for rest, distraction from constantly looking at the same area. Fixed camera and PTZ cameras require human use.

Existing solutions are not effective for such reasons.

The Biggest Forest Fires in World History

	Yangın	Ülke	Kapladığı alan (dönü)
1-	2003 Sibirya Tayga Yangını	RUSYA	47 MİLYON
2-	2014 Kuzeybatı Toprakları Yangını	KANADA	8,4 MİLYON
3-	1989 Manitoba Yangını	KANADA	8,1 MİLYON
4-	1939 Kara Cuma Yangını	AVUSTRALYA	5 MİLYON
5-	1919 Büyük Ateş	KANADA	5 MİLYON
6-	1950 Chinchaga Fire	KANADA	4 MİLYON
7-	2010 Bolivya Orman Yangını	BOLİVYA	3,7 MİLYON
8-	1910 Büyük Ateş	ABD	3 MİLYON
9-	1939 Kara Cuma Yangını	AVUSTRALYA	2 MİLYON
10-	2011 Richardson Backcountry Yangını	KANADA	1,7 MİLYON
11-	1871 Peshitgo Yangını	ABD	1,5 MİLYON
12-	2016 Fort McMurray Yangını	KANADA	1,4 MİLYON
13-	2008 California Yaz Yangını	ABD	1,3 MİLYON
14-	2005 Taylor Complex Yangını	ABD	1,3 MİLYON
15-	2009 Kara Cumartesi Yangını	AVUSTRALYA	1,1 MİLYON

TRT HABER
www.trthaber.com

Fire Monitoring and Early Warning

In 2010 the world had 3.92 Gha of tree cover covering 30% of the land area. It lost 24.2Mha of tree cover in 2019. Fires in Australia and the Amazon and California fires have a significant share in 2019.



New Forest Fire Monitoring System

- 360° Horizontal -45 to +45 Vertical Scan,
- 24/7/365 Uninterrupted Operation,
- Scanning and observation up to 15 km radius,
- Smoke, Fire and Motion Detection,
- Fast, Enhanced Deep Learning Based A-I Analysis,
- Local and Remote, Audible and Visual warning
- Logging with Video, Frame,
- ONVIF Bi-Spectral Camera kit Support,
- Off-grid low energy consumption, solar panel and wind vane,
- Mini Meteorological and Soil Sensor Kit (Optional)
- User, Admin, Service Level Authorization
- Wi-Fi, GSM, LT, network, satellite connection (optional)
- Working temperature between -30°C and +55°C
- IP 66 protection



Thermal-Starlite
PTZ

Meteo-Agri
Sensor

Switch-Data
UPS-Power
System

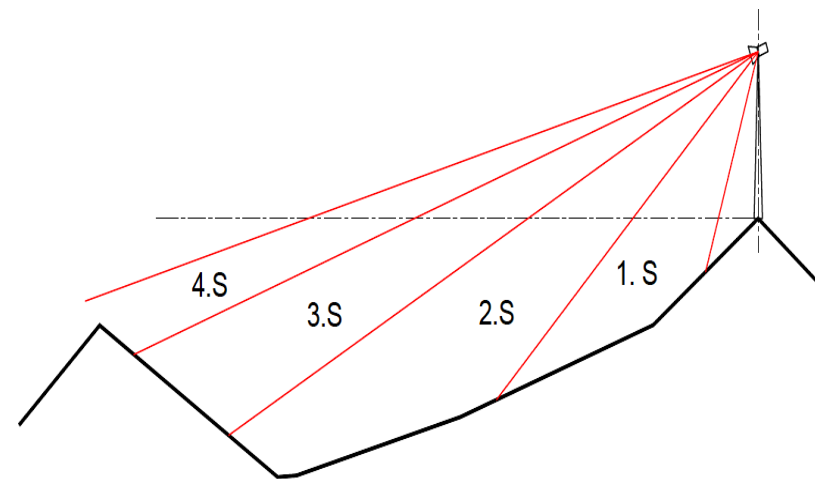
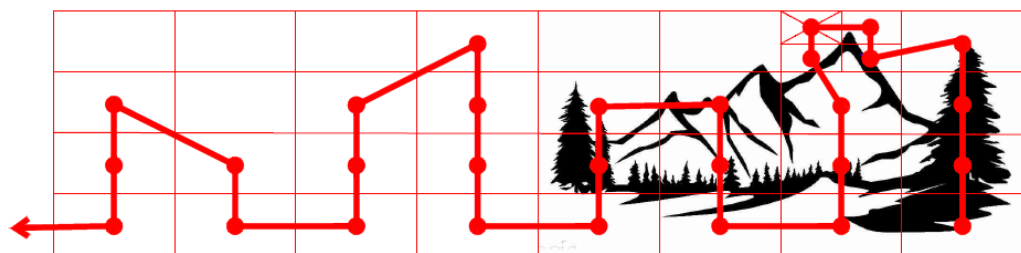
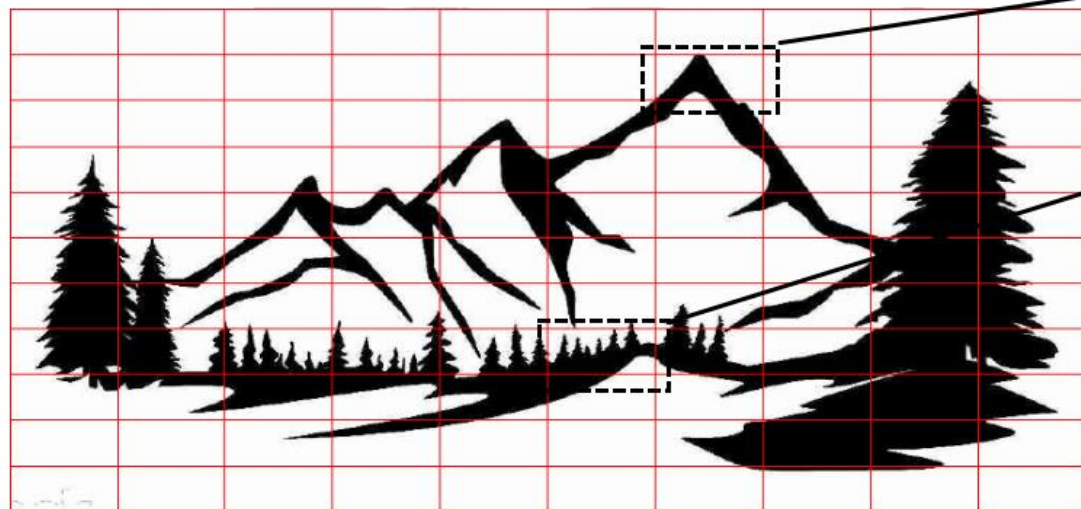
Local Analysis
Monitoring and
Recording

Remote Central Server

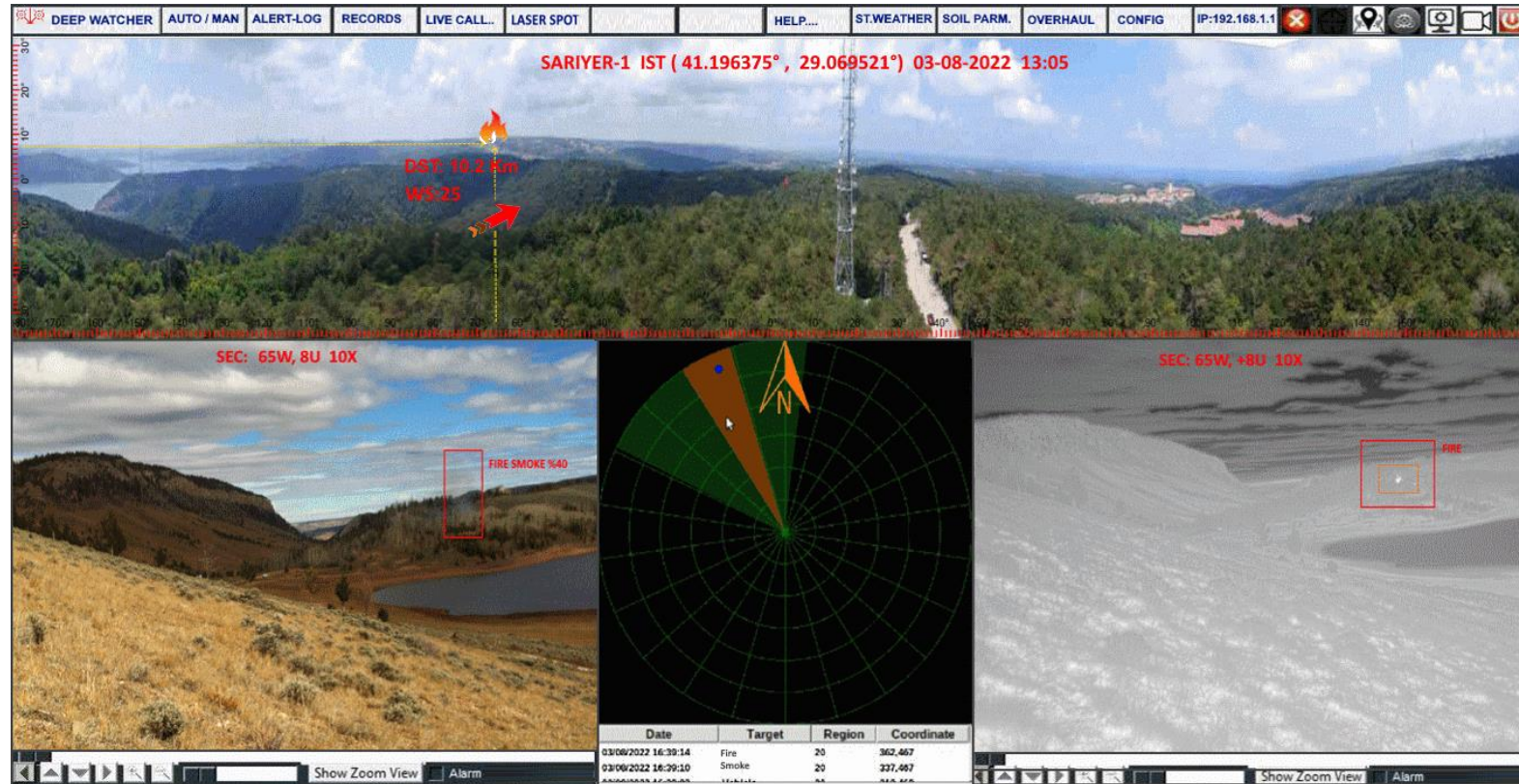
Basic Bi-Spectral Fire Monitoring System

Thermal, Starlight Zoom Camera set Joystick use,
Integrated Meteorology and Soil sensor Set,
Alarm sending and access to Remote Server

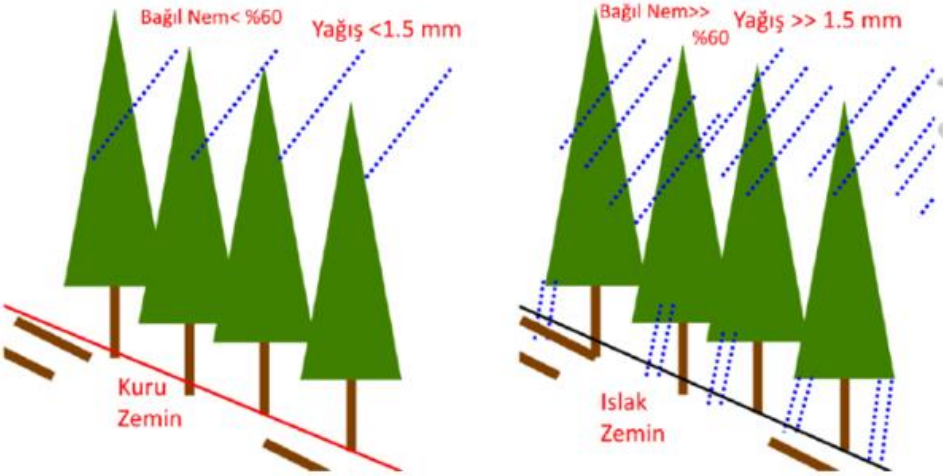
Configuration by Terrain



User Interface



Scan, Day and Night Live View,
Monitoring Atmospheric data,
Wind speed and Direction
See Alarm Points on Radar
screen and Panoramic
screen.
Ability to follow multiple
alarms.



SMART METEO-AGRI SENSOR KIT



Smart Meteo-Agri:

Meteorological and Soil Data -Option-:

- Temperature, Humidity, Pressure, Wind etc. During Fire. values are transmitted instantly.
- Meteorological and Soil data are used to develop Forest Property as long-term real local data.

Critical Atmosphere and Soil Data:

Atmospheric Properties				Soil Properties			
	Actual	Critical			Actual	Critical	
Wind Speed:	20	<input type="checkbox"/>	m/s	Temperature (-30cm)	22	<input type="checkbox"/>	°C
Wind Direction:	20	<input type="checkbox"/>	°	EC (-30 cm)	4.1	<input type="checkbox"/>	mS/cm
Atmospheric Temp.	35	<input type="checkbox"/>	°C	pH (-30 cm)	0.1	<input type="checkbox"/>	pH
Atmospheric Humi.	35	<input type="checkbox"/>	%	Salinity (-30 cm)	6.2	<input type="checkbox"/>	mol/L
Atmospheric Press.	35	<input type="checkbox"/>	Pa	Humidity (-30 cm)	0.1	<input type="checkbox"/>	%
Solar Radiation:	35	<input type="checkbox"/>	W/m ²	Humidity (-60 cm)	0.2	<input type="checkbox"/>	%
Dust Concantration:	35	<input type="checkbox"/>	ug/m ³	Humidity (-120 cm)	0.3	<input type="checkbox"/>	%

An alarm is generated in atmospheric and soil values exceeding possible limit values.