



INSTRUMENTS DIVISION:
SAT TV CATV OPTIC IP-TV Measurement Instruments

ROVER LABORATORIES

V1 20-1-15

*Made
to Measure*



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HD TAB 9

50Ω
"N"
CONNECTOR

DAB+

S2M

C2

T2



HD PROTAB

DOCSIS
CATV

INSTRUMENTS



HD TAB 7 eVo



OMNIA 7000

75Ω
"F"
CONNECTOR

ASI T.S.
ANALYZER

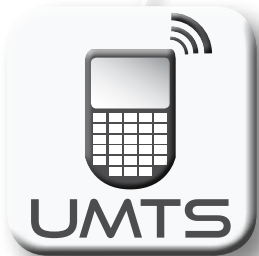
IPTV
ANALYZER

OPTIC
ST/SC/FC

 LTE

 DOLBY
APPROVED





GPS

HDMI

F



TOTAL CONNECTIVITY

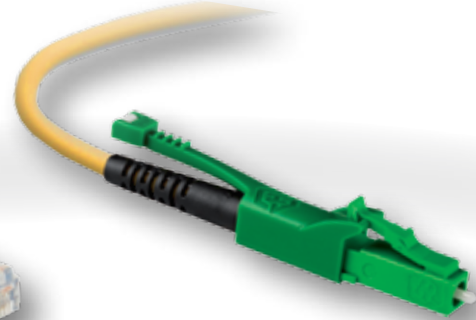


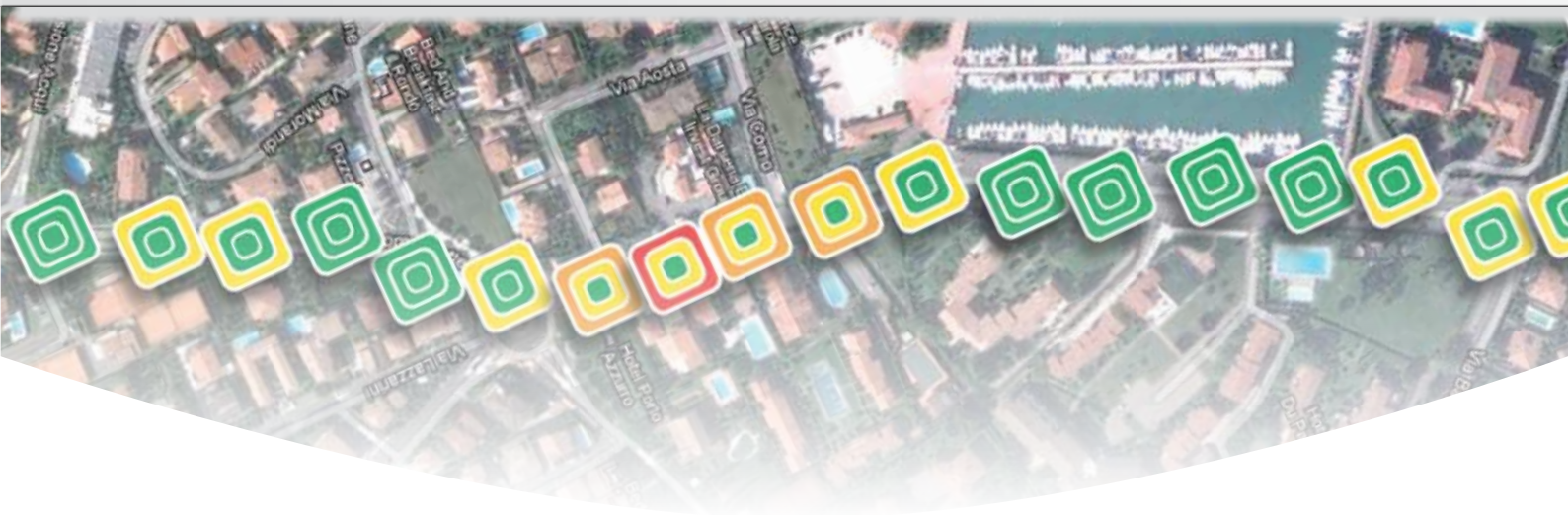
JACK

LAN

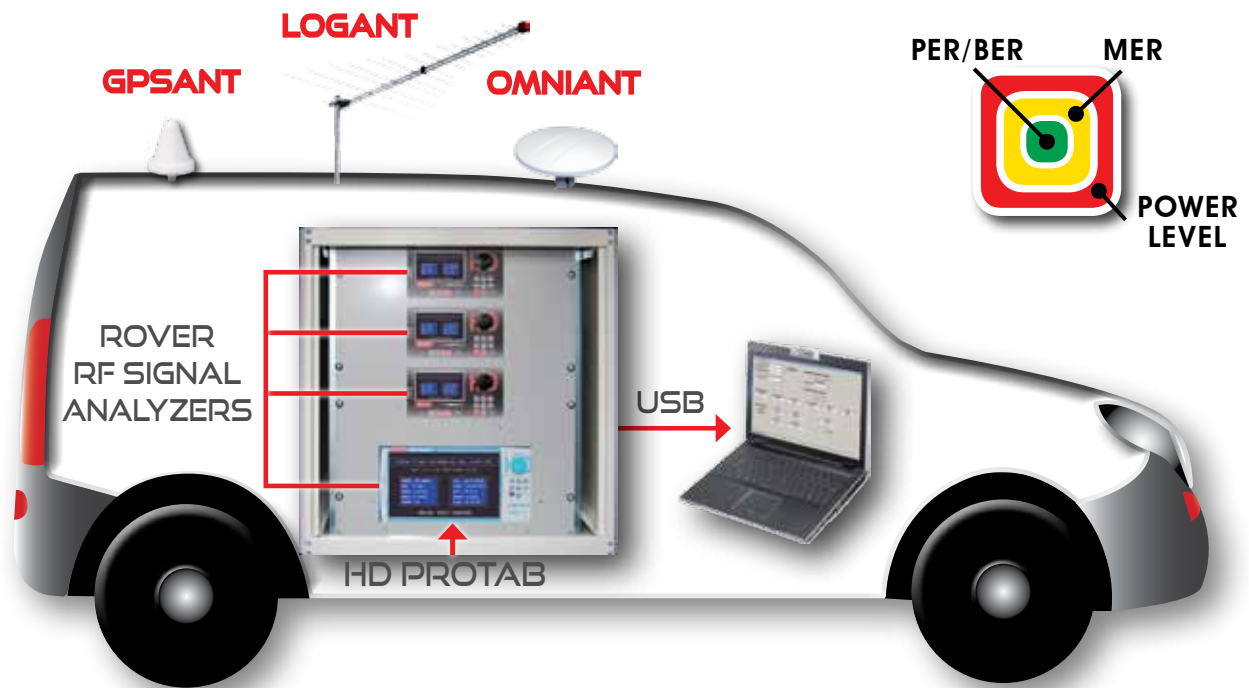
OPTIC

BNC





MOD. HD PRODRIVE TEST



Efficient Broadcast DRIVE TEST solution for cost effective, fast & accurate, terrestrial Broadcast networks coverage analysis.

EXCLUSIVE KIT for DVB-T2 mobile & stationary MULTICHANNEL measurements.

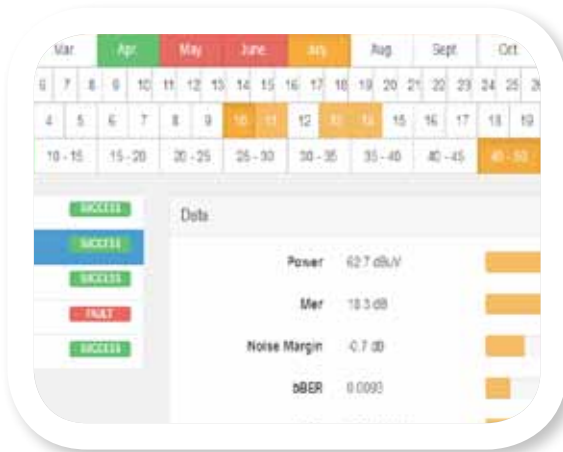


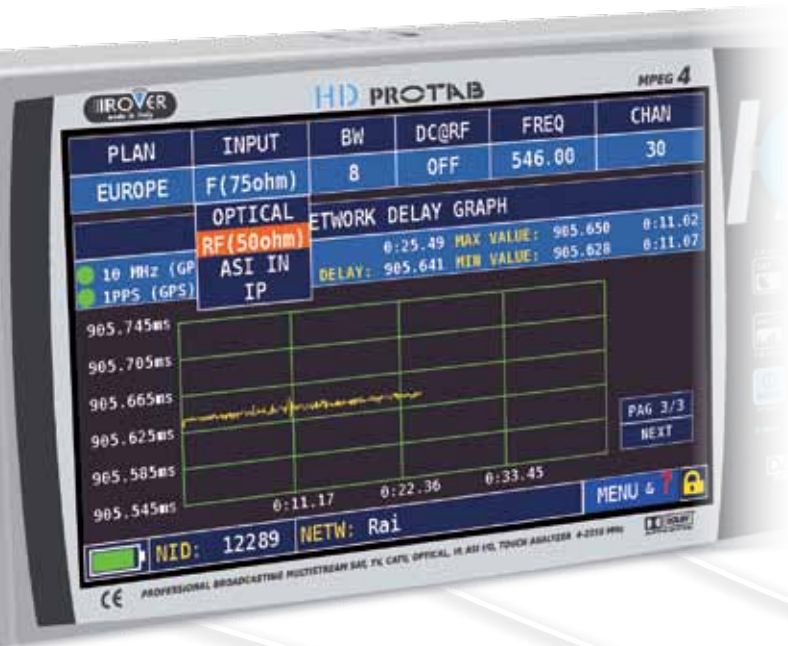
<30	Field Strength Power dB μ V	>50
<15	MER dB	>25
>10-2	PER	<10-7

EFFICIENT "QoS" REMOTE MONITORING

MOD. HD PROBE & NMS

Highly reliable, easy **Network Management System** to check the **Quality of Service** for Radio & TV signals through multiple HD ROVER meters/probe placed in your distribution network.





NETWORK DELAY

The Network Delay measurement is indispensable when operating in SFN environments. It measures the Transport Stream network delay and checks that it does not exceed the TS MIP packet maximum value.



ETR 101 290 T.S. ANALYZER

The meter has a built-in TS analyzer that provides complete ETR101290 priority 1–2–3 alarms monitoring. It analyses the transport streams, either demodulated from one of the RF inputs, injected via the ASI input connector or received via the GbE interface.

GPS



The meter has an internal GPS receiver. It allows you to carry out the analysis of a GPS reception antenna.

It also provides a reference for the network delay function and location data when performing on-field measurement loggers when driving in a car or standing on a roof.

This is practical for Network Operators because it allows signal verification coverage in specific areas and simultaneous comparison of several signals.

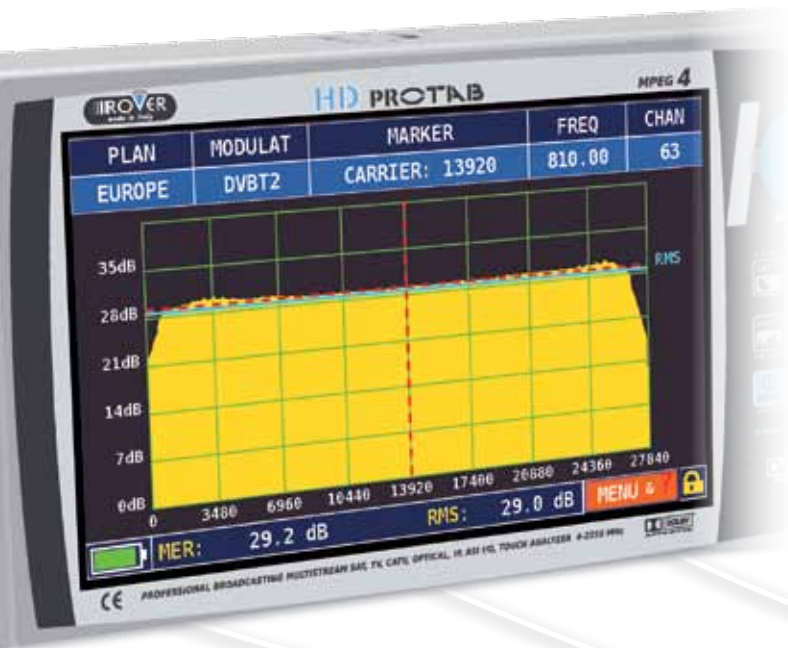


BARSCAN LEVEL GRAPH

Simultaneously check the level/power of all channels. In TV standard canalization the meter displays the level/power of all channels as a bar graph.

In AUTOMEMORY or MANUMEMORY PLAN the meter displays the memorized channels and distinguishes Analog and Digital signals using two different colours (shows audio level).

MER VS CARRIER



The MER measurement, performed for every single carrier in a COFDM mux, is an indispensable tool to spot the impairments on the received digital signal.

SAT EXPERT FUNCTION



The SATEXPRT SW function (guided satellite tracking function), is a valuable aid for fast satellite antenna pointing. The meter shows text messages telling you in which direction to move the satellite dish (east or west) in order to reach the satellite you require.



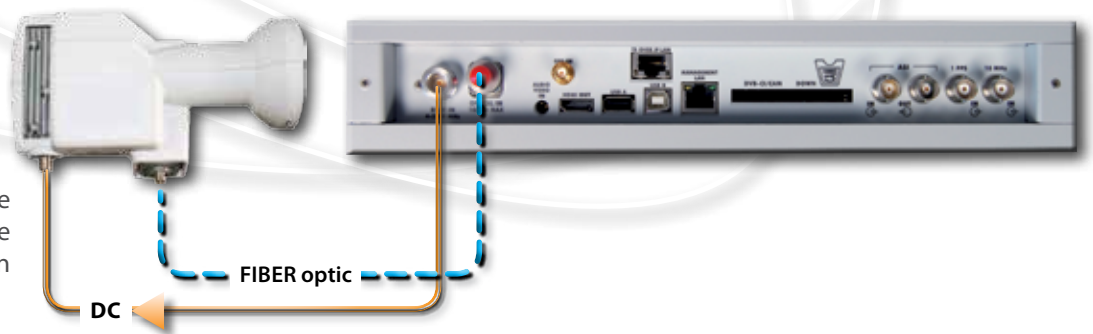
Satellite found.
The lower part of the display shows the following information: HBR13 FOUND! (the satellite that has been pointed is the chosen one)

OPTIC



The meter has an internal optical converter. This measures the POWER and OPTICAL ATTENUATION, carries out RF measurements from the optical input, decodes the services and visualizes the spectrum.

Fiber optic and remote power supply cable connection



LONG TERM CHANNEL LOGGER OR QOS



Record the Quality of Service (QoS) using the WEEKLY CHANNEL LOGGER SW application (supplied with the ROVER HD Series).

This useful tool monitors and records the trend of the main parameters of a digital signal over time (from 30 minutes to one week): TV, Cable, Satellite, Radio or FM (DAB option available for specific models).

It is excellent for reception problems that occur occasionally.

The application allows you to measure, store and display (locally or remotely*) the parameters of the digital signals under test: DVB-S/T/C = Power, MER, ERROR, bBer, aBer; DVB-S2/T2/C2 = Power, MER, ERROR, aBer, Lber, PER, Ldcp. Each recorded parameter is graphically represented on the display using different colors for easy identification.

THE MOST ADVANCED & ACCURATE **TAB**LET ANALYZER



- DVB-T2 / C2 / S2
- OPTICAL POWER METER opt.
- **LTE ANALYZER**
- 7" TOUCH DISPLAY
- **FULL MPEG2 & 4 SD & HD**
- 4h LI-ION POL. BATTERIES
- **LCN PROGRAM CODE**
- ECHOES, MICROECHOES & PREECHOES in REAL TIME
- **REAL TIME SPECTRUM with MAX HOLD**

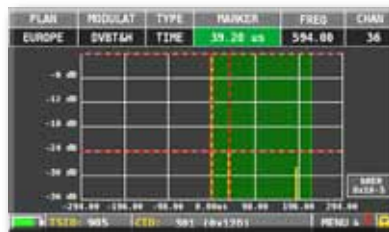
MAIN FUNCTIONS

- TV and CATV TUNER, extended band, 4-1000 MHz
- SAT TUNER, extended band, 930-2.250 MHz
- GSM extended band, 860-1.000 MHz for telephone repeater installation, see application note
- Exclusive patented **ROVER AUTODISCOVERY** system: auto-matically detects and selects analog and digital COFDM/QAM TV signals in both measurement and spectrum mode
- Spectrum in real time, fast and super fast with memory peak
- **Detects, measures and SHOWS pictures of MPEG 2 and 4 H264 HD High Definition programs**
- **All the measurements, program lists, A/V PIDs, NET ID, LCN, settings and pictures on one screen**
- **Automatic quality analysis: FAIL-MARG-PASS**
- Automemory, Manual memory & Datalogger functions
- HELP function automatically identifies all the signals with digital modulation SAT, TV and CATV
- USB storage memory stick
- OPTICAL POWER METER opt. with interchangeable FC-
- ST-SC connector for fiber optic testing (FTTH & FTTX) and troubleshooting
- MER versus CARRIER, MER measurement for DVB-T & T2 carriers opt.
- **Barscan TV & CATV function from 10 to 100 channels on one screen**
- TV & IF SAT test ICT FENITEL Spain
- **Audio, AAC supplied, DOLBY opt.**
- 7" TFT TOUCH display, 16:9, high resolution
- Weighs only 1.6 kg, dim: H 14 x L 24 x D 4 cm
- **LI-ION-POLIMER 4A battery with 4 hour battery capacity**
- Battery test function, to regenerate and measure the batteries and calibrate the battery indicator
- Supplied with transport padded bag, accessories, mains and vehicle battery chargers
- Free basic SW upgradeable on-line
- Remote monitoring
- Reflectometric measurements (opt.)

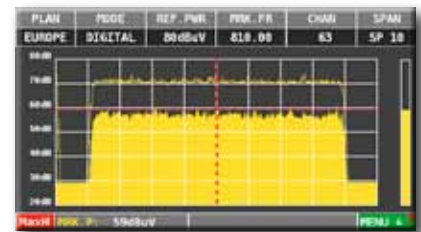
MEASUREMENT EXAMPLES



DVB-T2 rotated Constellation 256 QAM mod., on the right relative modulation parameters & M-PLP



ECHO MEASUREMENT in SFN networks, with impulse response in real time, green area shows the guard interval



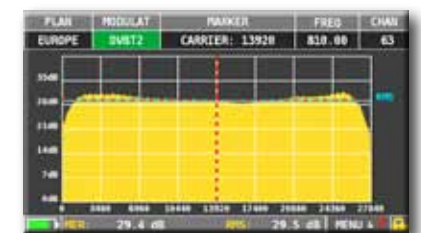
Spectrum in real time, fast and superfast with memory peak. **Detects and memorizes all the details for you.**







All the measurements, A/V PID, picture and settings on one screen



LTE Interference Autotest & TV BARSCAN



MER Versus CARRIER
MER measurement for carriers (optional)

	HD PROTAB	HD TAB 9	HD TAB7 EVO	OMNIA 7000
				
RECEPTION STANDARD				
Freq. Range MHz	4 – 2250	4 – 2250	4 – 2250	4 – 1000
DVB-T2 / S2 / C	•	•	•	DVB-C J83B
DVB-T2 LITE	opt.	opt.	opt.	–
DVB-C2	opt.	opt.	opt.	opt.
DAB / DAB+	opt.	opt.	opt.	opt.
DOLBY audio AC3–DD+	•	•	opt.	opt.
ISDB-T	opt.	opt.	opt.	opt.
ATSC	opt.	opt.	opt.	opt.
GB20600 DTMB	opt.	opt.	opt.	opt.
MPEG & AAC audio	•	•	•	•
MEASUREMENTS				
ANALOG TV PICTURE & VIDEO INPUT	•	•	•	•
MPEG 4 HD Picture or AVS	•	•	•	•
Analog Level and Digital Power	•	•	•	•
Analog C/N (Carrier to Noise)	•	•	•	•
Analog V/A (Video/Audio Ratio)	•	•	•	•
Full Spectrum: SAT-TV-CABLE	•	•	•	TV & CABLE
100 CHs TV Barscan	•	•	•	•
MER - BER - PER - SCR	•	•	•	•
Constellation	•	•	•	•
Noise Margin	•	•	•	•
AUTO Quality test	•	•	•	•
ADVANCED FUNCTIONS				
GPS Receiver	opt.	opt.	–	–
Prodrive Test SW	opt.	opt.	–	–
ETR 101-290 T.S. Analyzer	opt.	opt.	–	–
Network Delay Measurement	opt.	opt.	–	–
LAN IPTV/ASI	opt.	opt.	–	–
Optic Input	opt.	opt.	opt.	opt.
TV Minispectrum	opt.	opt.	–	–
LTE Filter	opt.	opt.	opt.	opt.
2.700 MHz SAT Extension	opt.	–	–	–
Video Waveform Monitor	opt.	–	–	–
Advanced "FFT" Spectrum Analysis	opt.	–	–	–
SAT Expert Function	•	•	opt.	opt.
Coaxial Cable Reflectometer	opt.	opt.	opt.	opt.
OTHERS				
Display Color TFT Touchscreen	10.2"	9"	7"	7"
Data Logger	•	•	•	•
Auto Discovery	•	•	•	•
Auto Memory	•	•	•	•
Manu Memory	•	•	•	•
Battery type	LI-PO >6 hr	LI-PO >4 hr	LI-PO >4 hr	LI-PO >4 hr
Bag & Shoulder Strap	•	•	•	•
Hard Suitcase	•	–	–	–

N.B. = Options are only available for quantities to be agreed and must be specified when ordering. All technical features are subject to change without notice

HOW TO FIND US:

in Sirmione, Lake Garda, Italy.

Situated in one of the most beautiful tourist locations in Italy, on Lake Garda, ROVER can be easily reached from Milan, Bergamo, Verona and Venice airports.

Lake Garda is in the north of Italy, near the borders of Austria, Switzerland and Germany and is in the foothills of the Alps.

Lake Garda has a micro-climate, tropical in summer and temperate in winter, and where palms, olives, lemons, oranges, bouganville and even banana trees can grow.

Exploited by the Romans as long ago as 350 a.C., it is now one of the most important lakeside, spa and tourist resorts in Europe. Please find below photographs of some of the most important tourist attractions in the area.



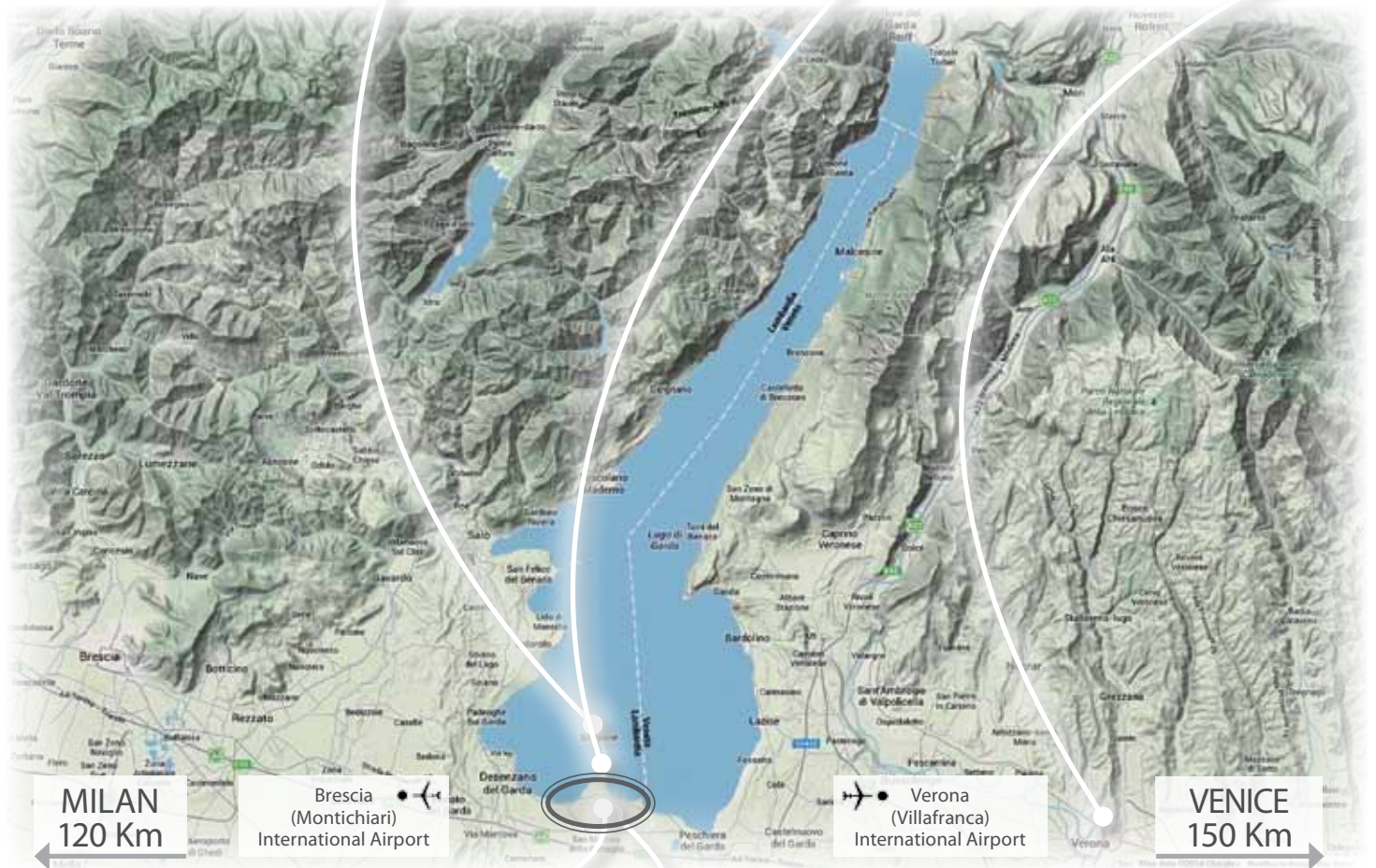
Catullus roman ruins, 350 b.C.



Sirmione Castle, 1.500 a.C.



Verona, roman Arena 120 b.C.



MILAN
120 Km

Brescia
(Montichiari)
International Airport

Verona
(Villafranca)
International Airport

VENICE
150 Km

GPS COORDINATES:
45° 27' 47"N, 10° 36' 24" E



ROVER Goods entrance & production



ROVER Laboratories and offices

CERTIFICATES N°
1263 ISO 9001
1264 ISO 14001
1265 BS OHSAS 18001

