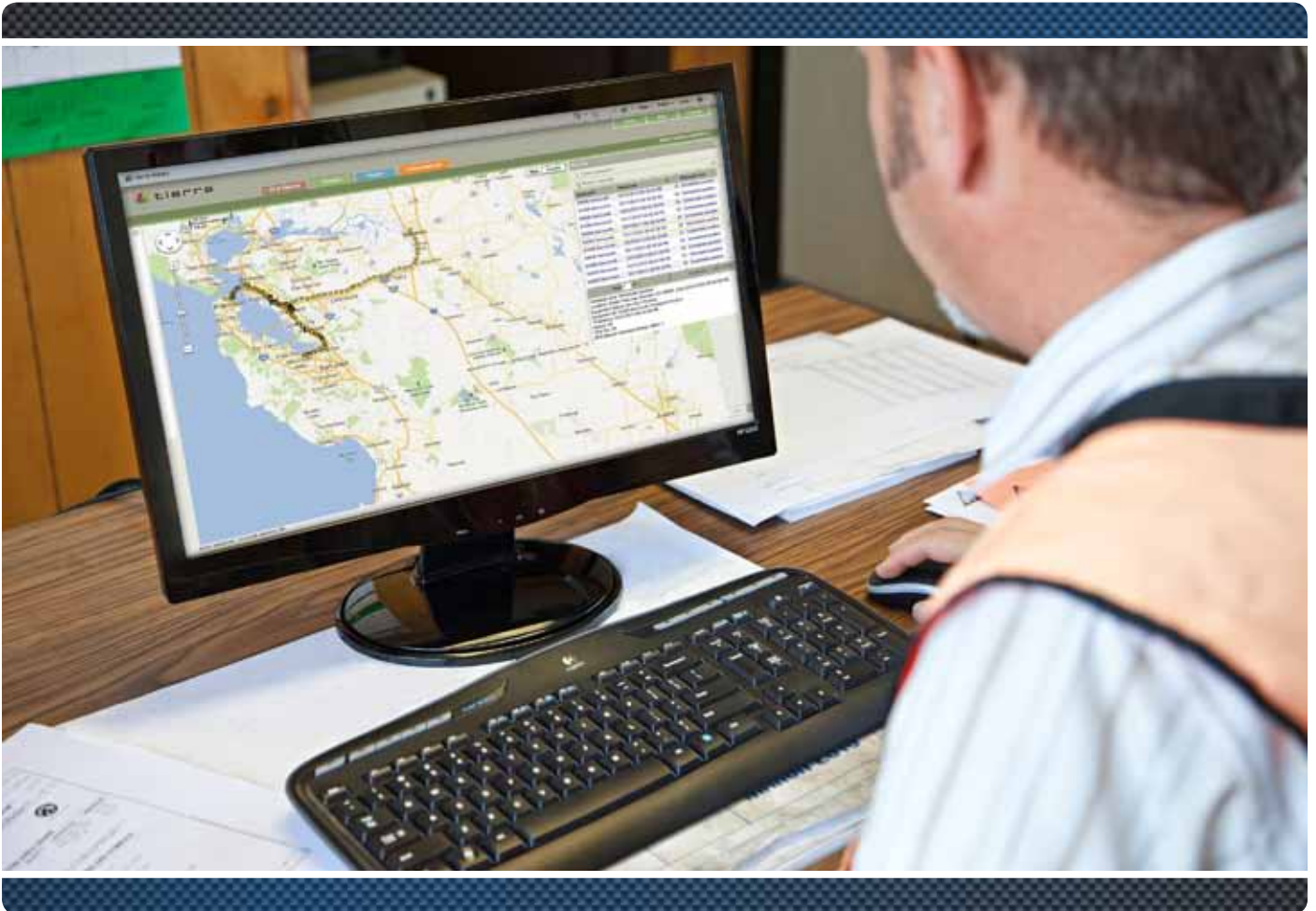


## Remote Asset Management



- Reduce Fuel Costs and Emissions
- Improve Machine Security
- Optimize Maintenance
- Manage Equipment Utilization

# Topcon Tierra™ Remote Asset Management

## Reduce Cost and Improve Productivity

Telematics has become the decisive factor for the future. Adopting and utilizing the best technology for your business will help you to increase your productivity and profitability like never before.

If you want to be a leader in your market, Topcon Tierra™ should be your first choice. We work everyday to help companies just like yours to achieve tangible and measurable results by using the latest research, the smartest technology and the most secure systems on the planet.

## The Tierra™ Solution...How does it work?

The Tierra™ solution has 3 components.

- Tierra™ Hardware is the communications device installed on your machine.
- Tierra™ Subscription Plan enables the features you need, and configures how often the unit communicates.
- Tierra™ Web is the internet based user interface — where you'll go to configure alerts, generate reports, and more.

## Construction

"At a glance" you can view machine metrics, performance statistics and real time situations.

## Agriculture

Simply track everything with equipment maintenance and custom services.

## Fleet Management

Tierra™ provides you with critical data effortlessly, from and to on-board equipment. You will be able to see all of your assets on worldwide maps.

## The Tierra™ Value Proposition

Tierra™ is a tool for gathering remote machine location, operating hours and machine information. The Tierra™ solution allows managers to make more informed decisions, and eliminates slow, inaccurate, and labor intensive data gathering regimens. Tierra™ goes well beyond gathering large amounts of raw machine data. Tierra™ sifts through all that data and provides immediate alerts and useful reports. And that allows managers to focus on the things that are actionable, with minimal effort required to uncover those important pieces of information. The concept is pretty simple. We've designed Tierra™ so that it won't bother you with situations that are ideal. It will alert you when a situation is less than ideal, allowing you to take immediate steps to improve the situation.



## Productivity

- More accurate productivity measurement
- Utilization of the sensor or CAN Bus capabilities of your Tierra™ hardware shows which hours are productive and which hours are idle



## Maintenance

- Receive scheduled maintenance alerts



## Utilization

- Determine which machines are not being used
- Re-evaluate machine usage on jobsites
- Redeploy machines that are under utilized on different jobsites



## Security

- Multiple security options such as curfew, geofencing and motion detection
- Notification by text message or email
- Easy to track and recover
- Reduce theft related costs



## PRIMARY FEATURES



Topcon Tierra™ delivers a reliable, easy-to-use remote asset tracking and information management solution that provides clear visibility to remote assets 24/7 anywhere in the world.



### Recommended Systems

#### AM25 / AM50

The AM family has a powerful onboard processor with significant memory allowing up to 10 second logging of all parameters when the engine is running. All datum is stored with a UTC timestamp.

### Job Costing

Most contractors gather machine run time for job costing. The data gathering process is typically expensive, labor intensive, subject to clerical errors, and even more subject to fudging. Tierra™ provides this information daily, and reports are available with a few simple keystrokes. The data is reliably accurate, and not subject to human error or fudging. In addition, with integration into back office software, the cost of human data entry can be eliminated.

Equipment ID	Project	From	To	Total	Status	Mileage (km)
0001	Project A	2010-01-01 08:00:00	2010-01-01 08:30:00	00:30:00	Running	10.5
0002	Project B	2010-01-02 09:00:00	2010-01-02 09:15:00	00:15:00	Idle	5.2
0003	Project C	2010-01-03 07:00:00	2010-01-03 07:45:00	00:45:00	Running	15.8
0004	Project D	2010-01-04 06:00:00	2010-01-04 06:30:00	00:30:00	Running	8.1
0005	Project E	2010-01-05 08:00:00	2010-01-05 08:15:00	00:15:00	Idle	3.7
0006	Project F	2010-01-06 09:00:00	2010-01-06 09:30:00	00:30:00	Running	12.3
0007	Project G	2010-01-07 07:00:00	2010-01-07 07:15:00	00:15:00	Idle	4.9
0008	Project H	2010-01-08 08:00:00	2010-01-08 08:45:00	00:45:00	Running	18.6
0009	Project I	2010-01-09 06:00:00	2010-01-09 06:30:00	00:30:00	Running	9.4
0010	Project J	2010-01-10 09:00:00	2010-01-10 09:15:00	00:15:00	Idle	6.1
0011	Project K	2010-01-11 07:00:00	2010-01-11 07:30:00	00:30:00	Running	11.7
0012	Project L	2010-01-12 08:00:00	2010-01-12 08:15:00	00:15:00	Idle	4.3
0013	Project M	2010-01-13 09:00:00	2010-01-13 09:45:00	00:45:00	Running	16.2
0014	Project N	2010-01-14 06:00:00	2010-01-14 06:30:00	00:30:00	Running	7.8
0015	Project O	2010-01-15 08:00:00	2010-01-15 08:15:00	00:15:00	Idle	5.6
0016	Project P	2010-01-16 07:00:00	2010-01-16 07:30:00	00:30:00	Running	13.5
0017	Project Q	2010-01-17 09:00:00	2010-01-17 09:15:00	00:15:00	Idle	4.8
0018	Project R	2010-01-18 08:00:00	2010-01-18 08:45:00	00:45:00	Running	17.9
0019	Project S	2010-01-19 06:00:00	2010-01-19 06:30:00	00:30:00	Running	8.7
0020	Project T	2010-01-20 09:00:00	2010-01-20 09:15:00	00:15:00	Idle	6.3



**SPECIFICATIONS**

<b>On-Board Device</b>	<b>AM25 / AM50</b>	
Micro Processor	ARM7	
<b>Memory</b>		
RAM	58KB	
Flash NAND	128MB	
<b>Ports and Connectors</b>	(1) RS232 <sup>1</sup>	
CAN Bus	No	
Connector	GPS = SMA & GPRS = TNC	
<b>Components</b>		
Real Time Clock (Internal)	Yes	
GSM/GPRS Modem (Internal)	Quad Operating Bands: GSM850/900/1800/1900 & SMS capable	
Antennas (External)	1,000m	
GPS Receiver	2mm+2ppm (0.3-200m)	
Sensor	Fine: 0.9 sec	
Input Device	(2); Digital/ Frequency (software configuration)	(2); Digital/ Analog/ Frequency (software configuration)
Output Device	None	(1)
<b>Power</b>		
Power Supply	Ground battery 9 to 36V	
Batteries (Internal)	NiMH	
<b>Remote Capabilities</b>		
Configuration	Yes	
Firmware Update <sup>2</sup>	Yes	
<b>Environmental</b>		
Dust/Water Protection	IP67 <sup>3</sup> (with mating connector)	
<b>Physical</b>		
Dimensions (w/o mating connectors)	L: 5.2" x W: 4.7" x H: 1.4" (L: 133mm x W: 119mm x H: 36mm)	
Weight (with internal batteries)	11 oz. (324 grams)	

<sup>1</sup>Debug Software (flash & configuration)  
<sup>2</sup>With the exception of downloading time, updates are performed during normal usage.  
<sup>3</sup>Totally protected against dust and the effect of immersion between 5.9055" & 39.3701" (15cm & 1m).

For more specification information:  
[www.topcontierra.com](http://www.topcontierra.com)

**TOPCON'S ADVANCED TECHNOLOGIES**

**Machine Control**

Topcon's line of advanced machine automation technologies.



**3D-MC² Dozer**

Traditional finish grading with a dozer took multiple passes at slower speeds. Existing 3D-GPS machine control allowed operators to double their production. 3D-MC² uses revolutionary technology to reach an unbelievable new level of performance: four times faster than a standard dozer, two times faster than any 3D dozer! One dozer doing the work of two 3D dozers; think of the money you will save.



**X-63 Excavator**

X-63 combines the advantages of our industry leading GNSS technology together with our industry standard operator interface.

Topcon's X-63 consists of two GNSS antennas, four 360° tilt sensors that measure the angles between the cab, boom, stick and bucket, a GNSS receiver and Topcon's GX-60 color, touch screen control box.



**MAGNET™ Solutions**

MAGNET Field Site, MAGNET Office Site, and MAGNET Enterprise connect the field with the office. Design files for stakeout or 3D-MC files for machine control can be exchanged through the MAGNET solution. MAGNET Field Site also connects to Sitelink3D. Communicate with others logged into your job site within MAGNET solutions.



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