

Quartix

Award-Winning Vehicle Tracking



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 **AUTHORISED
DISTRIBUTOR**

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MAIN FEATURES

Real-time vehicle tracking

Internet-based for easy access

Using the Quartix vehicle tracking system you can track your vehicles in real-time, anytime, using any internet-connected device. There is no need for proprietary software or maps - everything is accessed over the web. Our system uses GPS satellites to locate your vehicles, and GSM technology to ensure that their positions, routes and logs are constantly updated.

Google Maps, backed by Satellite, Street View and Traffic Integration, is used to pinpoint your vehicles. Our website gives you instant access to 12 months' worth of history for each vehicle. Older data is archived for easy retrieval.



Navigation between reports

All of the key features of the tracking system are available from the live tracking screen. Clicking on a vehicle gives you access to the following features:

Daily log - a timesheet of a day's activity, including jobs completed or deliveries made

Route map - a clear, colour-coded trace of the route taken between stops

Zoom and follow - locks the display on that vehicle, and follows its journey

Zoom to location - zooms to show the map detail around the vehicle, giving access to satellite, street view and traffic information (where available)

Registration Number	Description	Date/Time/Location
1. QX10 SDC	RP1 BMW 320D	Stationary with Ignition OFF at Beches Recovery since 07 Feb 2014 08:11.
2. QX10 SEB	Mercedes Alago	Stationary with Ignition OFF at Beches Recovery - Coventry Depot since 06 Feb 2014 17:58.
3. QX10 SNW	Demo - Fiat Ducato	Travelling SE at 29.2 mph at 07 Feb 2014 14:42.
4. QX11 LWP	SLS 2 BMW 350	Stationary with Ignition OFF at Parkwood Drive, HEMEL, HEMPSTEAD, Hertfordshire, HP1 2LD since 07 Feb 2014 12:14.
5. QX11 QQE	SLS 4 Citroen C5	Stationary with Ignition OFF at Farming Corner Motorway Services Area, M2, Rainham, GILLINGHAM, Kent, ME5 8PW since 07 Feb 2014 13:25.
6. QX11 QTX	SLS 1 BMW M3	Stationary with Ignition OFF at Harthead Moor (W) - 8 since 07 Feb 2014 14:17.



MAIN FEATURES

Daily logs

Daily logs are presented in a clear, easy-to-read format. The day is split into separate trips and the level of detail in the report can be specified for each vehicle. Stops with the ignition on and short movements around a site can either be shown or filtered out.

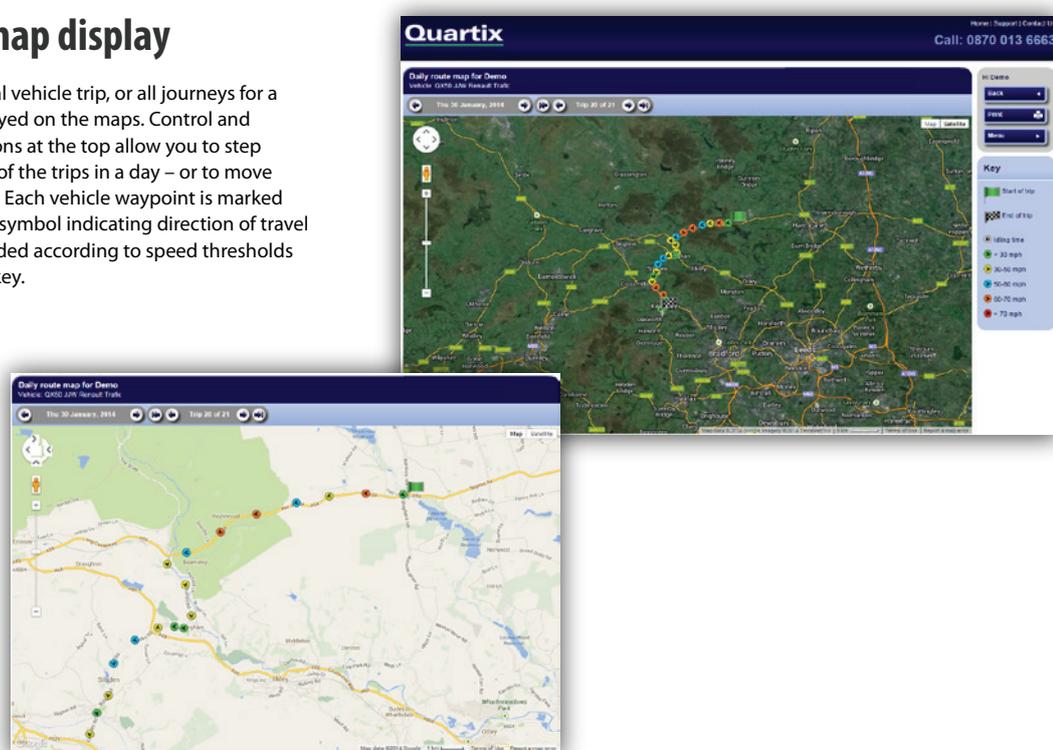
Custom Location Names and Job References - adding your own custom address location names is an easy task. (See the configuration section.) These names then replace the street addresses on your customised reports, making it easy to identify sites that you visit regularly.

Links to locations and routes – clicking on any place name takes you to a map showing that location, and the magnifying glass next to each trip takes you straight to the route display, described below.

Trip	Depart	Arrive	Travel Time	Idling time	Distance (miles)	Average Speed (mph)
1	09:40 Rob Singer - HOME	10:50 Taboo Sports Bar & Grill - Lavender Bars Trading Ltd	1:02		45.4	43.9
2	11:18 Taboo Sports Bar & Grill - Lavender Bars Trading Ltd	12:24 Watford Gap (S) - RoadChef	1:06		58.0	52.7
3	12:29 Watford Gap (S) - RoadChef	12:51 Rob Singer - HOME	0:22		15.4	42.0
4	21:23 Rob Singer - HOME	21:29 Kettering Road, NORTHAMPTON, SE3 6AN	0:06		2.0	20.0
5	21:32 Kettering Road, NORTHAMPTON, SE3 6AN	21:40 Rob Singer - HOME	0:08		2.4	18.0
6	21:41 Rob Singer - HOME	22:55 Oxford Road, Chaveley, NEWBURY, Berkshire, RG288XX	1:14		67.9	55.1
7	23:36 Oxford Road, Chaveley, NEWBURY, Berkshire, RG288XX	23:52 Reading (W) - Moto	0:16		14.3	53.6
Totals			4:14	0:00	205.4	48.5

Route map display

Each individual vehicle trip, or all journeys for a day, are displayed on the maps. Control and calendar buttons at the top allow you to step through each of the trips in a day – or to move between days. Each vehicle waypoint is marked with an arrow symbol indicating direction of travel and colour-coded according to speed thresholds shown in the key.



Timesheet reports in Excel Delivered to your inbox

The weekly Microsoft Excel workbook provides a detailed sheet - per vehicle - for each day of the week, along with a summary sheet for the week as a whole. It is emailed to you automatically.

Key management information covered by the Excel report includes: mileage and fuel usage, maximum speeds, shift times, driving time and time spent at each site. The report is an invaluable tool for processing employee timesheets, pay and overtime. Private mileage can be entered in the report, providing a breakdown of business and private mileage for each day and the week as a whole.

Daily Summary									
Bradford delivery vehicle					Number of trips: 17				
AK54 QTB					Total travel time: 08:39				
24 hrs from Monday 30 April 04:45					Total distance (miles): 224.1				
to Tuesday 1 May 04:45					Average speed (mph): 25.9				
					Maximum speed (mph): 55.9				
					Nominal fuel consumption (mpg): 12.0				
					Expected daily fuel used (gall): 18.7				
					Overspend (pence): 84.8				

Trip Breakdown									
Trips	Start Location	Departure Time	End Location	Arrival Time	Travel Time	Distance (miles)	Average Speed (mph)	Max Speed (mph)	Time on Site
1	BRADFORD DEPOT	07:02	BRADFORD DEPOT	07:34	00:32	0.2	0.4	14.9	BRADFORD DEPOT 00:02
2	BRADFORD DEPOT	07:36	FLOOR DESIGN WETHERBY WAREHOUSE	08:29	00:53	33.7	38.2	55.9	FLOOR DESIGN WETHERBY WAREHOUSE 00:04
3	FLOOR DESIGN WETHERBY WAREHOUSE	08:33	HARRGATE HOUSE OF CARPETS	09:14	00:41	15.1	22.1	55.9	HARRGATE HOUSE OF CARPETS 00:22
4	HARRGATE HOUSE OF CARPETS	09:36	CALCHRA CARPETS	09:58	00:22	10.1	43.9	55.9	CALCHRA CARPETS 00:17
5	CALCHRA CARPETS	10:15	BUCKLEY FLOORING WAREHOUSE	10:30	00:15	9.7	38.8	49.1	BUCKLEY FLOORING WAREHOUSE 00:06
6	BUCKLEY FLOORING WAREHOUSE	10:36	RODGERS OF YORK LTD	10:51	00:15	8.3	33.2	50.9	RODGERS OF YORK LTD 00:11
7	RODGERS OF YORK LTD	11:02	CLASSIC CARPETS OF YORK	11:13	00:11	4.9	26.7	39.8	CLASSIC CARPETS OF YORK 00:04
8	CLASSIC CARPETS OF YORK	11:17	YORK ROAD SHIPSTHORPE, YORK, YO433PN	11:54	00:37	22.6	36.6	49.7	YORK ROAD SHIPSTHORPE, YORK, YO433PN 00:06
9	York Road, Shipsthorpe, YORK, YO433PN	11:59	HIGHGATE, CHERRY BURTON, BEVERLEY, NORTH HUMBERSIDE, HU177RT	12:14	00:15	7.9	31.6	39.1	HIGHGATE, CHERRY BURTON, BEVERLEY, NORTH HUMBERSIDE, HU177RT 00:53
10	Highgate, Cherry Burton, BEVERLEY, North Humberside, HU177RT	13:07	HORNSEA CARPETS	13:44	00:37	18	29.2	44.7	HORNSEA CARPETS 00:04

Weekly Summary for Quatrix										
Vehicle	AK54 QTB	Start location	BRADFORD DEPOT	End location	BRADFORD DEPOT	Arrival at start location	07:02	Departure from start location	07:34	Mileage
Day	Date	Start location	End location	Arrival at start location	Departure from start location	Arrival at start location	Departure from start location	Arrival at start location	Departure from start location	Mileage
Mon	20/11/2013	BRADFORD DEPOT	BRADFORD DEPOT	07:02	07:34	07:02	07:34	07:02	07:34	0.2
Tue	21/11/2013	BRADFORD DEPOT	BRADFORD DEPOT	07:02	07:34	07:02	07:34	07:02	07:34	0.2
Wed	22/11/2013	BRADFORD DEPOT	BRADFORD DEPOT	07:02	07:34	07:02	07:34	07:02	07:34	0.2
Thu	23/11/2013	BRADFORD DEPOT	BRADFORD DEPOT	07:02	07:34	07:02	07:34	07:02	07:34	0.2
Fri	24/11/2013	BRADFORD DEPOT	BRADFORD DEPOT	07:02	07:34	07:02	07:34	07:02	07:34	0.2
Sat	25/11/2013	BRADFORD DEPOT	BRADFORD DEPOT	07:02	07:34	07:02	07:34	07:02	07:34	0.2
Sun	26/11/2013	BRADFORD DEPOT	BRADFORD DEPOT	07:02	07:34	07:02	07:34	07:02	07:34	0.2
Total										0.2

Daily and weekly summaries

Mileage and fuel usage - the detail and summary sheets provide a check on the estimated fuel usage for each vehicle which can be verified against fuel bills and compared across the fleet - helping you track and control running costs.

Maximum speeds - the maximum recorded speed for each trip - tallied across individual days and weeks - provides a useful way of monitoring driving habits and promoting safer use of your vehicles.

Shift times - the report automatically calculates the time from the first to the last movement of the vehicle in each day. Configuration options also allow you to specify shift times to be used in the reports.

Links to location and route maps - the location names and trip numbers provide direct links to maps on our website - so that you can quickly and easily check stop locations, speeds, routes driven etc.

Time-on-site report

The time-on-site report allows you to pick a location and compiles a report of each one of your vehicles that has visited that site in the period you choose, revealing the time spent there. It's a great help in analysing the cost of each job.

Time on Site Report for Demo									
Vehicle	AK54 QTB	Event	Ignition-Off	Location	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	Departure Time	19:11:2013	Time on site (hrs)	0:00
AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	19:11:2013	0:00					
AK54 QTB	Ignition-On	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	19:19:2013	0:08					
AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	19:29:2013	0:18					
AK54 QTB	Ignition-On	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	19:38:2013	0:27					
AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	19:48:2013	0:37					
AK54 QTB	Ignition-On	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	19:58:2013	0:47					
AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	20:08:2013	0:57					
AK54 QTB	Ignition-On	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	20:18:2013	1:07					
AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	20:28:2013	1:17					
AK54 QTB	Ignition-On	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	20:38:2013	1:27					
AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	20:48:2013	1:37					
AK54 QTB	Ignition-On	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	20:58:2013	1:47					
AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	21:08:2013	1:57					
AK54 QTB	Ignition-On	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	21:18:2013	2:07					
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AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	21:48:2013	2:37					
AK54 QTB	Ignition-On	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	21:58:2013	2:47					
AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	22:08:2013	2:57					
AK54 QTB	Ignition-On	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	22:18:2013	3:07					
AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	22:28:2013	3:17					
AK54 QTB	Ignition-On	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	22:38:2013	3:27					
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AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	23:08:2013	3:57					
AK54 QTB	Ignition-On	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	23:18:2013	4:07					
AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	23:28:2013	4:17					
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AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	01:08:2014	5:57					
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AK54 QTB	Ignition-Off	Acton Lane, Handsworth, BRIMINGHAM B23 3NF	03:08:2014	7:57					
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AK54 QTB	Ignition-Off	Acton Lane, Hand							

DRIVING STYLE

Driving style Saving fuel and reducing risk

The Quartix InfoPlus option includes a comprehensive range of reports and displays, helping you work with your mobile workforce to improve their driving, reducing their risk of accident and cutting fuel costs at the same time.

The reports available range from the daily driver briefing to the league table of driving scores which calculates total fleet performance during any period of time. The driver briefing shows speeds and utilisation for the day, together with the corresponding acceleration and braking profiles for the same periods. Links are provided from the graphs to the actual map location of any speeding, braking or acceleration incidents. The driver is given an overall score for the day based on the factors shown in the next section.



Acceleration and braking

The Quartix system monitors the speed of the vehicle every second, and the acceleration and braking indexes are calculated from the number of times per hour that the speed changes by more than a given amount between one second and the next. These are then weighted according to how severe they are, and averaged over a driving hour to calculate the Acceleration Index and the Braking Index.

This speedometer shows the 10 levels of acceleration and braking, and each level has a weighting based on its severity. As such, speed reaching 6 mph in a second is a level 3 acceleration. Speed which goes down by 9 mph equates to level 3 braking, and so on.

Calculating the driving-style score

The weighting of acceleration and braking events is shown in the table opposite.

The acceleration index is the sum of all the acceleration incidents, each multiplied by their severity and finally divided by the driving time in hours. The braking index is worked out in a similar way, except that the levels of speed change are slightly different, as are the severity weightings.

Example: If a vehicle is driven for 2 hours, and during that time there are 20 level 1 accelerations (severity 0.2) and 15 level 2 accelerations (severity 0.5) then the acceleration index is $(20 \times 0.2 + 15 \times 0.5) / 2 = 5.75$. This is a relatively low index, showing modest acceleration.

The Driving Style Score is the overall score out of 100 for a given period, typically a day, a week or a month. The system will add up all the weighted acceleration and braking events with their severities, calculate the total driving time and work out the Acceleration and Braking Indexes.

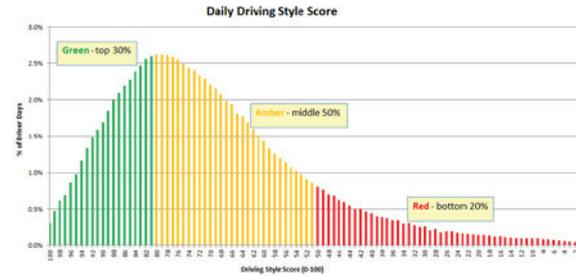
Level	Acceleration	Braking
1	0.2	0.5
2	0.5	2
3	2	4
4	4	10
5	10	20

Distribution of Daily Driving Style Scores

This graph shows an analysis of 830,000 journeys, giving scores for 64,000 'driver days':

As described on page 4, the calculation of the acceleration and braking indexes, and hence the driving style score, are based on a 'per hour' calculation. Calculating the average per hour means that no drivers are penalised for driving more or less than any other driver.

The system calculates the Daily Driving Style Score for each day, based on the amount of driving for that day or shift (excluding any parts of trips before the start or after the end of the day/shift). We apply colours to the Daily Driving Style scores as shown on the plot opposite. If the score is >80 it is green - this represents the best 30% of drivers. If the score is between 50 and 80 it is shown as amber, and this represents the middle 50% of daily scores. 50 or below is red, and that's the worst 20%.



Rank	Vehicle	Driving Time	Acceleration Index	Braking Index	Driving Style Score
1	Q119 TUC - BMW 520	21.42	145.5	128.4	8
24	Q101 NW - VAG/SHALL AST/RAV4	22.12	98.3	54.5	23.5
33	Q105 TUC - BMW 520	39.16	63.3	36.4	66.1
34	Q14 236 - ECIDE CRANVA	43.34	61.8	17.7	65.2
35	Q14 914 - FORD RANGER	43.34	61.8	17.7	65.2
32	Q111 963 - LAND ROVER FREELANDER	35.81	36.1	30.5	67.7
31	Q122 877 - CITROEN BERLINGO	59.16	40.7	21.6	68.9
38	Q111 073 - BMW 520	72.35	34.4	22.6	71.4
39	Q111 137 - BMW 520	38.24	29.3	27.8	71.4
36	Q111 174 - VOLKSWAGEN TRANSPORTER	72.17	31	32.2	71.9
37	Q111 056 - CITROEN C5	59.32	29.2	35.1	72.4
35	Q14 104 - ECIDE CRANVA	18.16	38.4	11.9	74.5
30	AD 177 84 - PEUGEOT 307 SW	81.87	25.6	29.5	76
37	CFP 374 - FORD RANGER	6.31	26.4	16.4	79.1
33	Q111 177 - PEUGEOT PARTNER	64.91	22.6	17.8	79.2
32	Q111 177 - PEUGEOT PARTNER	64.91	19.1	22.1	79.4
31	AC 335 CA - PEUGEOT EXPERT	87.98	17.3	22	79.9
38	Q110 339 - RENAULT FERRIC	127.51	25.8	16.3	79.9
19	Q111 077 - PEUGEOT PARTNER	69.45	17.2	21.2	82.5
18	Q110 339 - RENAULT FERRIC	146.31	26.6	16	81.7

Driving style league table reports

Driving style scores can be compared across groups of vehicles, or even the whole fleet. Driver ranking can be carried out on acceleration or braking indexes as well as the overall score, and can also be measured over any selected period.

Once the league table is compiled in the desired order and format, it can be exported to a csv file for further analysis in software such as Microsoft Excel.

Driving style league chart

The league table can also be displayed in graphical format, as shown.

Many of our customers have reported significant savings in fuel costs: an improvement in average driving style score from 50 to 80 could result in savings of between 8 and 14%. The two graphs shown highlight the typical difference to be achieved in the daily driver briefing.



MANAGEMENT INFORMATION

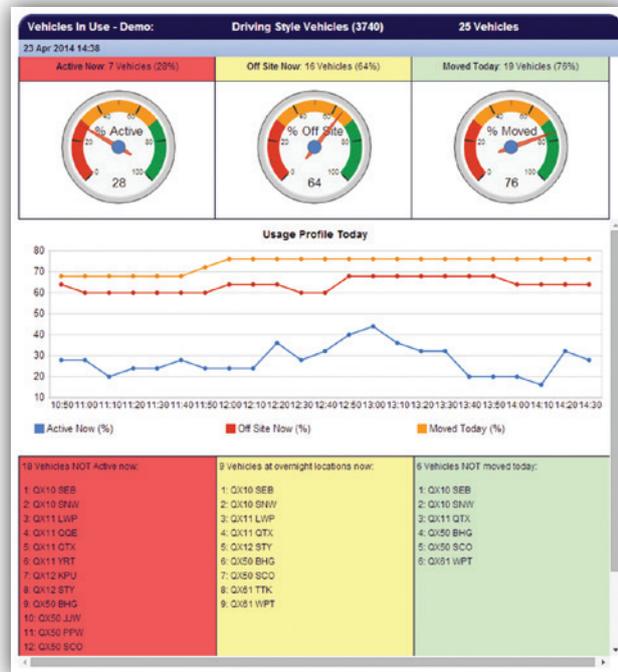
Real-time dashboards

Monitor fleet utilisation in real time

Performance dashboards put real-time business information at your fingertips. Available on the Internet from any location, they provide you with a snapshot of how your business is performing at any instant.

The example shown opposite provides an analysis in percentage terms of which vehicles have been used so far today, which ones are active currently and which vehicles have not been used. It can be viewed from any browser and automatically updates through the day.

At head office users can access dashboards which show the performance level at each depot, colour-coded to show utilisation levels at each location. This is an invaluable tool in monitoring fleet activity and vehicle usage patterns.



Monthly speed reports

Health and safety are of paramount importance in the management of a mobile workforce.

The monthly speed report complements the driving style tools by summarizing all speeding incidents for individual groups or the fleet as a whole, covering a whole month. It works in the following way:

- The menu allows you to select the group of vehicles, month and minimum speed threshold
- The report shows the speed, date and time of each incidence of excessive speed, together with the time spent at above the speed threshold
- Links to the route maps are provided for the location of the speeding incident and the day as a whole

Quartix Monthly Speed Report for Quartix
 Date: 01/08/2013 to 31/08/2013
 Vehicles from Group Quartix Demo Vehicles

For each day on which 55mph was exceeded, the maximum speed, and the date, time and location of that speed are given, together with the approximate number of minutes spent above 55mph that day.

Reg No	Description	Max Speed (mph)	Date	Time	Miss in day above 55mph	Click to view location of maximum speed	Click to view details of day
QTX 4567	Subaru	76.4	01/08/2013	11:50	192	View location	Expand day
QTX 4567	Subaru	65.9	02/08/2013	13:59	2	View location	Expand day
QTX 4567	Subaru	72.7	04/08/2013	15:30	199	View location	Expand day
QTX 4567	Subaru	70.2	07/08/2013	15:21	5	View location	Expand day
QTX 4567	Subaru	70.8	12/08/2013	05:44	24	View location	Expand day
QTX 4567	Subaru	71.5	13/08/2013	07:17	11	View location	Expand day
QTX 4567	Subaru	72.1	14/08/2013	17:14	6	View location	Expand day
QTX 4567	Subaru	69.0	16/08/2013	15:24	4	View location	Expand day
QTX 4567	Subaru	71.5	19/08/2013	05:44	21	View location	Expand day
QTX 4567	Subaru	68.4	21/08/2013	16:45	2	View location	Expand day
QTX 4567	Subaru	67.1	22/08/2013	13:51	2	View location	Expand day
QTX 4567	Subaru	75.2	25/08/2013	05:44	23	View location	Expand day
QTX 4567	Subaru	71.5	28/08/2013	14:59	3	View location	Expand day
QTX 4567	Subaru	69.6	29/08/2013	07:18	11	View location	Expand day
QTX 4567	Subaru	69.6	30/08/2013	10:11	9	View location	Expand day
QTX 6789	Chevrolet	72.1	02/08/2013	12:58	1	View location	Expand day
QTX 6789	Chevrolet	66.4	04/08/2013	17:40	3	View location	Expand day
QTX 6789	Chevrolet	67.7	05/08/2013	06:35	7	View location	Expand day
QTX 6789	Chevrolet	67.1	15/08/2013	07:29	6	View location	Expand day
QTX 7857	Ford	73.3	29/08/2013	13:28	12	View location	Expand day
QTX 8569	HHR	73.3	16/08/2013	09:18	2	View location	Expand day
QTX 8569	HHR	71.5	19/08/2013	15:20	4	View location	Expand day
QTX 8569	HHR	75.8	20/08/2013	16:35	3	View location	Expand day
QTX 8569	HHR	72.7	21/08/2013	07:21	5	View location	Expand day
QTX 8569	HHR	73.3	22/08/2013	16:36	14	View location	Expand day
QTX 8569	HHR	78.3	23/08/2013	18:04	33	View location	Expand day
QTX 4567	Subaru	70.8	12/08/2013	05:44	24	View location	Expand day
QTX 4567	Subaru	71.5	13/08/2013	07:17	11	View location	Expand day
QTX 4567	Subaru	72.1	14/08/2013	17:14	6	View location	Expand day
QTX 4567	Subaru	69.0	16/08/2013	15:24	4	View location	Expand day
QTX 4567	Subaru	71.5	19/08/2013	05:44	21	View location	Expand day
QTX 4567	Subaru	68.4	21/08/2013	16:45	2	View location	Expand day
QTX 4567	Subaru	67.1	22/08/2013	13:51	2	View location	Expand day
QTX 4567	Subaru	75.2	25/08/2013	05:44	23	View location	Expand day
QTX 4567	Subaru	71.5	28/08/2013	14:59	3	View location	Expand day
QTX 4567	Subaru	69.6	29/08/2013	07:18	11	View location	Expand day
QTX 4567	Subaru	69.6	30/08/2013	10:11	9	View location	Expand day
QTX 6789	Chevrolet	72.1	02/08/2013	12:58	1	View location	Expand day

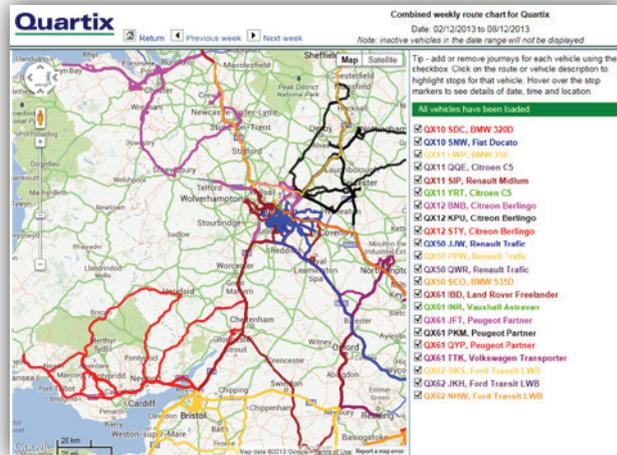
MANAGEMENT INFORMATION

Route reports

Available on either a daily or weekly basis, this key management tool is of particular value to fleets operating from multiple depots, or with groups of vehicles covering different areas. The Weekly Route Chart provides an overview of mobile workforce activity in any selected week, displayed clearly on a colour plot online. This can greatly assist you in optimising your fleet operations.

Key features of the reports:

- 7 days' routes are summarised on a single map
- Each vehicle or group is shown in a different colour for clarity
- The entire UK map is accessible, including all regional and urban routes
- Choice of available map scales
- An omit option is provided to limit viewing (where required) to designated vehicles
- Six months' historical fleet activity data is readily available from our servers



Business benefits

These daily and weekly reports are an invaluable business tool, offering numerous financial benefits:

Cost Savings with the easy identification of journey duplication and overlap by vehicles from adjacent depots. Removing these inefficiencies will result in greatly reduced fuel expenditure and maintenance costs.

Streamlining of fleet whilst retaining excellent standards of customer service through raised levels of operation.

More Efficient Allocation of service/delivery calls through improved insight into longer term fleet activity.

Optimum Allocation of new clients to specific depots, based on a graphical overview of current routes.



FLEET MANAGEMENT

Fleet Maintenance

Managing service schedules in a large fleet is an onerous task. The Quartix system helps to automate the process by letting you manage service schedules, vehicle inspections, insurance and tax, as well as allowing you to set custom milestones and reminders.

To use this tool you simply enter the vehicle odometer reading and key milestones in the screen shown opposite (accessible through the configuration menu item). The Quartix system then accumulates the mileage from that date and notifies you when the vehicle needs servicing. Notifications are sent as emails or you can review the whole fleet in an online report.

Quartix application menu

- > Daily Vehicle Logs
- > Daily Route Maps
- > Live Tracking
- > Driving Style
- > Extended Reporting
- > Configuration
- > Click here to Log Out

Edit vehicle management data for demo

Change the required details below and click 'Update' to save

VehicleID	449216
Registration Number	SM01 QTX
Units for odometer readings	<input checked="" type="radio"/> Miles <input type="radio"/> Kms
Quartix odometer estimate	135498 Miles
Quartix estimate date/time	28/08/2013 13:54
Manual odometer reading	114500 Miles
Manual reading taken (date)	13/03/2013 Today
Next service due (date)	01/09/2013
Next service due (odometer)	140000 Miles
Insurance renewal (date)	01/03/2014
Road tax renewal (date)	01/09/2013
Next MOT due (date)	01/09/2013
Milestone 1 Name	D L Check
Milestone 1 (date)	01/02/2013
Milestone 2 Name	Tyres
Milestone 2 (odometer)	135000 Miles

Update Cancel

Weekly Spreadsheet F.363 BLF w.e 2014-01-18.xls attached

FA63 BJF, Mercedes Sprinter

Week ending: 18 January 2014

Manual odometer reading :	3591 miles
Manual reading taken (date) :	21 September 2013 00:00
Quartix odometer estimate :	13551 miles
Quartix estimate date/time :	29 January 2014 11:21
Next service due (date) :	01 January 2015 *** WARNING: OVERDUE ***
Next service due (odometer) :	20000 miles
Insurance renewal (date) :	07 August 2014
Road tax renewal (date) :	31 August 2014
Next MOT due (date) :	31 August 2016

Notes:

- The above status report is based on information entered into the Quartix system by the user.
- The Quartix odometer estimate is based on distances monitored since the last manual reading.
- To ensure consistency with the vehicle's odometer, the manual reading should be updated on a monthly basis.
- While every attempt is made to ensure accuracy, Quartix Limited cannot accept liability for any errors or omissions.
- Excel 2010 has a new 'Protected View' which is used if you open a file from sources such as the Internet or an e-mail attachment. You can get Excel 2010 to open files from trusted sources but we do not advise the complete disabling of this feature. When protected view is displayed there is an option to 'Enable Editing'. If you click this, the Quartix spreadsheet will open normally so you can view the data. Alternatively you will get a 'Security Alert - Office File Validation' pop box. Please click on 'Open' and again the Quartix spreadsheet will open normally so you can view the data.

Email alerts & Service date reports

The fleet maintenance system generates automated alerts by email, which are attached to the weekly vehicle workbook reports. Items for attention are coloured amber, and anything which is overdue is shown in red.

For example, custom reminders can be generated to inspect tyres at a certain mileage.

As well as the email alerts, the service date reports provide a summary of the status of the entire vehicle fleet, including data on:

- Vehicle safety inspection
- Emission tests
- Service schedules
- Registration fee
- Insurance
- Custom milestones such as tyre inspection etc.

Driver identification

Driver identification comes as an additional option and provides information on which driver is operating each vehicle. A small receiver is wired into the dashboard of each vehicle at the time of installation and each driver is equipped with their own magnetic key fob. Upon being placed onto the receiver, the unit will then register which driver is in the vehicle, and record all trip data specific to that driver.

A further option can be added so that a high-pitched buzzing sounds until the key fob is placed on the receiver.



Geofencing & out-of-hours

Real-time alerts by email

The Quartix system offers complete flexibility in setting up real-time alarms to inform you of unauthorised vehicle movements and other exceptions. The system allows you to set up a series of geographic zones together with the time-based rules of when vehicles should be inside or outside each zone.



Zones and modes of use

Two zone types are possible:

Named locations - comprising a named building or area, such as a depot, the driver's home address or a customer location.

Geographical zones - these can be set up to encompass any shape on a map and are intended to show the boundaries of a territory, city or similar. (London's Congestion Charge Zone, for example.)

Geofencing is used in one of two modes:

Mandatory mode - the vehicle must be inside the chosen zone for the times specified.

Prohibited mode - the vehicle must not enter the zone during the times specified.

The zones and times applied to them can be different for each vehicle and each day of the week, if required. The screen opposite shows how zones may be set to any shape or size – including polygons of unlimited complexity.

Alert types

Alarm messages can be sent to one or more email addresses. Alerts can include:

- Out-of-hours: if the vehicle ignition is activated outside preset working hours, or
- If a geofence rule is broken, either a mandatory or prohibited zone rule.

Here are some examples of how our geofence system is used in practice:

1. A housing maintenance manager needs to know that all his vehicles are available on call inside the boundaries of the city.

Solution - Specify the boundary of the city as a 'Mandatory Zone' between the hours of 8.00am and 6.00pm, Monday to Friday (or as required).

2. For insurance purposes, a transport manager has to be sure that trucks are not left outside drivers' homes overnight but are instead parked in the depot.

Solution - Specify the depot as 'Quartix Named Location: Mandatory Zone' between the hours of 8.00pm and 8.00am (or as required).

3. A business owner wants to be sure that his employees are not returning home from site during the working day.

Solution - Designate the driver's home as a 'Quartix Named Location: Prohibited Zone' on weekdays between 8.00am and 6.00pm; emailed notification will be given if the vehicle does return home during the day.

In summary, geofencing can help you manage your business by alerting you to exceptional or prohibited behaviour - keeping you one step ahead.



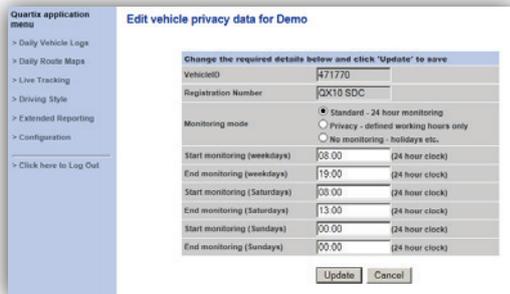
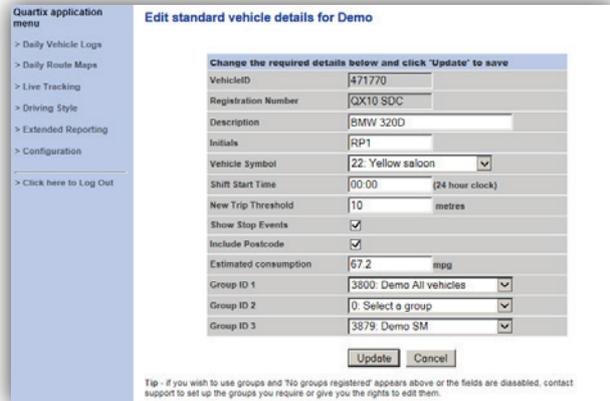
CONFIGURATION

Configuration

A customisable tracking solution

Each vehicle can be configured in order to tailor the reports to your needs, either by us or by you. This can also be carried out using the administrator login.

The screen example opposite shows the main parameters that can be changed, including: whether the report is to show periods of idling, the new trip threshold (which, if required, can be set to eliminate short trips, such as movements around a parking lot or yard, for example), the shift start and stop times to be used in compiling the reports and the way in which the vehicle is to be displayed on the real-time tracking display.



Private vehicle usage

The Quartix System has two important features which help in respecting the requirements of employee privacy and relevant legislation for vehicles which are used for private, as well as business, journeys:

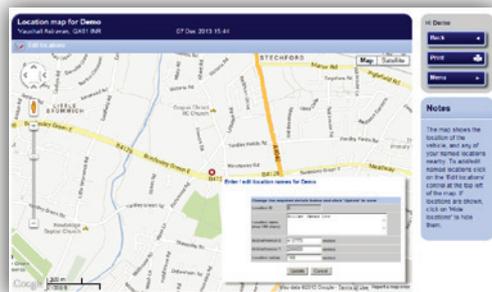
Disabling of vehicle monitoring - by using the configuration screen (shown here) it is possible to disable the monitoring and storage of vehicle movement information for non-business hours. The system will report the mileage covered during this period, but not the locations visited.

Access privileges - each user account can be set to provide access to just the information required to carry out that person's job. For example, service or support centre staff may need to know where all operatives are in real-time in order to locate the nearest person for a job (please see live tracking section), but they would not need to have access to the driver's working hours or timesheets.

Customising location names

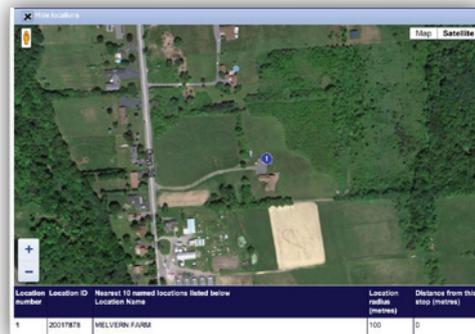
All vehicle logs and reports produced by the system, including Excel worksheets and real-time locations, highlight your custom location names. These can either be entered by you or by Quartix.

Using an administrator login you can access the "Edit Location" screen directly from the map linked to each stop point on the log. This shows all the existing named locations on that screen by highlighting them in blue.



Modifying or adding a location

A list of custom locations is provided immediately beneath the map screen - the number corresponds to the number in the blue circles on the map. By clicking on the name of the location its position and radius can be modified. Adding a new location is just as straightforward: clicking on the link at the top of the table opens the edit location dialog box with a new entry in it, which can then be named and modified to suit.



Product design 15 years of telematics excellence

Quartix has been developing industry-leading telematics technology since early 2001, and more than 200,000 Quartix "Tripcounter" terminals have been installed since then. The latest generation in that product history is the TCSV10 product.

Measuring 3.5" x 2.2" x 0.8", and weighing just 129g, the unit is completely hidden from view following installation, which typically takes just 30-40 minutes. The TCSV10 is compatible with 12V and 24V vehicle systems without modification, includes both GSM and GPS antennae and is fully compliant with EMC, Radio Transmission and safety legislation in Europe and the USA.

The TCSV10 is manufactured in ISO9001 certified manufacturing facilities.



Outstanding performance in a compact design

The key performance capabilities of the TCSV10 include:

- Up to 50 channel, high-sensitivity GPS receiver, providing second-by-second monitoring
- Quad band GSM modem - GSM 850/1900 (United States) and GSM 900/1800 (Europe)
- Flexible, low noise power supply, input from 8V to 30V
- Optional driver identification using iButton tag input
- Optional general purpose 'active high' digital input for monitoring (door opening, sweeping, spreading etc.)
- Battery voltage sensing capability for tamper detection
- Tri-axis accelerometer – sensing and recording impact data at 32 samples/ second
- Robust M2M-SIM - for connection to the cellular network



SYSTEM ARCHITECTURE & MOBILE APP

System architecture

A system built on fault tolerance and active redundancy

Everything about the Quartix vehicle tracking system has been developed by our own engineering teams, from the telematics terminal and firmware through to the database systems and user applications. Our customers access vehicle, management and business reports from any internet-connected device, and many of the exception and management reports are delivered directly by email, without the need to monitor the system or log in.

Key to the system's reliability is an architecture which has been built on fault tolerance and active redundancy – giving you peace of mind that your vehicle tracking system will be reliable and available for use from anywhere.

The key features of the system design include:

- GPS vehicle tracking, using the latest generation of GPS chip technology
- Real-time GPRS communication, with fault tolerance and backup built in
- Dual-redundant vehicle tracking servers and database systems based in separate physical locations
- Access to your data through either www.quartix.net or www.quartix.co.uk



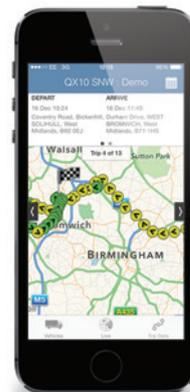
Mobile app

The Quartix mobile app enables users to view the real-time location of their vehicles and access the core features of the system whilst on the move. The app is free to download and can be used by all Quartix customers.

The Quartix app offers three key features:

- **Vehicle List** – a summary of all the vehicles to which the user has access, and their present location.
- **Live Tracking** – shows the latest location of a chosen vehicle in real time, as well as other vehicles in the area. The vehicle can be selected to be 'followed' by the app, and the map screen will automatically be updated.
- **Trip Data** – shows the trips carried out on any day over the previous 6 months.

The app is available to download for free on the **App Store**, **Google Play** and **Windows Phone Store**.



About Quartix

Key facts about Quartix:

- Founded in 2001 by four industry professionals
- Over 200,000 units installed
- More than 7,000 fleet customers, and 12 major insurance clients
- Over 200 installers in the UK

What we offer:

- **Ease of access through the Internet from anywhere** - whether at home, work, or on the move.
- **Speed and ease of use** - quick web access and clear controls making the system extremely simple to use.
- **No hidden costs** – our prices are published on the web and there are no hidden warranty, software or service charges.
- **Short-term direct rental agreements** – no third-party finance or long-term contracts.
- **Service** – we pride ourselves on our service levels and the long-term relationships we keep with our clients.
- **Price** - we want to deliver just what you need, and no unnecessary extra features. By keeping our costs low, we aim to provide a superior level of service at a competitive price.

Our customers:

Today, more than 7,000 customers across almost all sectors of the UK economy use the system – including government organisations, housing associations, construction firms, hospital trusts, the emergency services, SMEs and large British brands.

"We're really happy with the Quartix tracking system – it's efficient, easy to use and competitive on price."

John Foster, Director, JR Foster Haulage Ltd.

"Real-time tracking from Quartix helps us answer passenger queries quickly and efficiently."

Michael Morris, Director, Tanat Valley Coaches

"The Quartix system has helped reduce our fuel usage and improve our customer service through increased productivity and better response times to repairs."

Rob Thomas, Head of Property Services, Valleys to Coast Housing Ltd.

"Quartix tracking plays a very important role in our day-to-day management – it has become a vital tool for us to run the fleet effectively!"

Danny Alborough, Deputy Group Facilities Manager, Gratte Brothers Ltd.



More than 100 new fleet customers choose Quartix each month.



Over 200,000 Quartix systems have been installed.



A new Quartix system is installed every one minute and forty seconds of the working day.



"WE HAVE SEEN IMPROVED DRIVING STANDARDS UTILISING THE QUARTIX DRIVING STYLE REPORTS, RESULTING IN REDUCED VEHICLE INCIDENTS AND AN 18% IMPROVEMENT IN FUEL CONSUMPTION."

ANDREW GIBBONS, FLEET CI MANAGER, GINSTERS LTD

Specifications are subject to change without notice. This document is not intended to form any part of a contract.

Quartix

Award-Winning Vehicle Tracking

VEHICLE TRACKING APP

Available for **free** to all Quartix users

