

# Panasonic



## TOUGHBOOK

ToughBooks have been deployed at the track side to record the Panasonic Toyota Racing team's performance at practice sessions. Tough enough to endure the fast pace and harsh conditions of the world's most gruelling motor racing challenges, the solution has provided vital support to both drivers and engineers in preparation for race days.

# Case Study

ToughBook keeps up to speed with  
Formula One racing

Until recently, Toyota was using standard specification, non-ruggedised notebooks between the pit wall and garage to monitor car lap times and record all lap information during testing. However, with no extra protection built in, the equipment was prone to damage from rough handling, shock and bad weather conditions. To ensure the accuracy of data provided by the notebooks, the engineers were restricted to working in sheltered positions where the machines were protected from the prevailing weather and harsh conditions of the track side.

*With the backing and support of the Panasonic UK ToughBook team, the Panasonic Toyota Racing engineers were supplied with a total solution that provided a tougher, more reliable and enduring trackside companion*

### A time-tested solution

At the end of May 2002, Panasonic's Technical Account Manager, Russ Pickard, met with the Toyota team at Silverstone to introduce ToughBook technology to their armoury. As sponsors of the Panasonic Toyota Racing team, Panasonic made an obvious choice for the provision of track-side technology, but even so, it was ToughBook's unique features that sold the solution to the team.

One of the most compelling features was the use of separate, handheld units. These were not only completely rain proof, but offered the user a greater range of mobility. The fact that the tablets operated as far as 90 metres away from the CPU unit meant that they could be used virtually anywhere between the pit wall and the garage, unaffected by rain and water spray.

As a result, the versatile CF-07 Wireless LAN products were deployed for time-testing, while engineers working around the cars were equipped with the latest CF-M34 units for general pit use at practice sessions. Built to endure the harshest conditions while achieving the highest levels of performance, the ruggedised CF-07 and Mobile Data Wireless display has proved over the last few months that it can take anything the weather or track can throw at it.

*By deploying the Panasonic ToughBook PC solution for use at practice sessions, the Panasonic Toyota Racing Formula One Team has acquired a piece of advanced technology that has proved hard-wearing enough to be part of any race engineers tool kit.*





### How Toughbook helps out in the pit

The CF-07 Mini PC is docked in its multifunction port replicator in the pit garage area and connected into the team's back-end server infrastructure via a CAT5 network cable. The wireless display is then used by race engineers as a hand-held tablet to 'remotely control' from the optimal position and input crucial time data into the database.

At the car side, the M34 provides a small-footprint, ruggedised sub-notebook solution that allows engineers extra flexibility while making checks. All relevant pit information gathered is displayed in 3D graph-based diagrams for easy analysis. The Pentium III 700mhz processor and graphics card capability makes the M34 a very fast device, and, being proofed against water, oil and other chemicals, extremely

well-suited to the environment. In addition, the machines feature a touch-sensitive screen that enables users to load applications from the desktop quickly and accurately, even wearing protective gloves.



### Panasonic's high-level support

*"Meeting the team in their own environment proved very beneficial to our development of the project. We could see a need to extend the range of the hand-held devices further than the pit walls and added to the kit to achieve a new level of performance."* Russ Pickard, Technical Account Manager, Panasonic UK

The Panasonic UK team has worked closely with the Panasonic Toyota Racing team to overcome initial driver-based issues and develop the product to meet the specific demands of a competitive motor racing outfit preparing for race days.

Taking over full support and maintenance, Panasonic UK has ensured the project's success by providing engineers with a clear understanding of the fully configured notebooks, and supporting the acquisition with an on-going repair and replacement service.

All units carry a warranty against accidental damage to the screen or internal functioning, in which event data is salvaged and a swap-out provided. Panasonic also offers a 3 year warranty for replacement of non-functioning hardware with a fast turnaround guaranteed.

Customers also get an enhanced service from Panasonic's centre in Cardiff which deals with repairs, installations and logistics for customers throughout Europe. The Customer Services Centre has launched its own web-based service where customers can log on to get up-to-date information and feedback on the status of individual repairs and replacement activity.

### Long term benefits all round

*"Toyota Racing chose ToughBook for its unique benefits and ruggedised features. Now, having used the equipment for the last three months, they've not only found that it's up to the challenging tasks given, but that their cost of ownership has been reduced."* Russ Pickard

Keen to try out new ideas, such as introducing the ToughBook product, the team's early performance has been better than expected.

Accurately recording data at practice sessions is vital to the development to the Panasonic Toyota Racing team. The results help the drivers and their support engineers maintain a competitive edge and perform at their peak every time. With a range that covers the entire width of the pit lane and ability to withstand exposure to the elements, the Panasonic equipment can be relied upon to perform anywhere in the pit and in all weather conditions, providing the team with an essential tool to measure achievement.

*"ToughBook has proven itself tough enough to endure the fast pace and harsh conditions of the Formula One environment time and again. With the wireless display providing engineers with a completely mobile monitoring solution, we feel we've found a lasting formula for an increasingly challenging task."* Ossie Oikarin, Test Technical Engineer for Panasonic Toyota Racing



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