



Instant access to the highest level of test expertise, fully supported solutions tailored to suit your needs

- Instant access to the highest levels of expertise
- Fully supported solutions
- Tailored to suit your needs
- Working in partnership

In addition to providing standard production test programming capabilities and services, the IFR systems business unit is also able to deliver turnkey systems solutions for more specialized applications. The system group have been supplying customized test solutions for a wide variety of customers' special requirements for many years.

Expertise

Expertise and experience includes electronic circuit and mechanical design, software design and project management. The group's experience in hardware design includes the following areas.

- System analysis
- Requirement specification definition
- Circuit design – Digital, analog, mixed technology, microprocessor, communications
- FPGA design
- PCB layout and prototyping
- Prototype card manufacture
- Design validation and debug
- Full manufacturing drawing packages

Software

The software design expertise ranges from applications test programming to the design and development of executive software facilities. The group's experience



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- System analysis
- Requirement specification definition
- Graphical user interface design
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- C, C++, PASCAL code generation
- Visual C++, Microsoft, Quick C-development environments
- Visual Basic™
- LabWindows™, LabView™ and HPVee™ (IFR is a member of the National Instruments Alliance Program) Microsoft
- Windows, MSDOS, UNIX, Sun OS operating system support
- Code debug and validation
- Training

Mechanical

The system group is also able to offer mechanical design facilities. The group's experience in mechanical design includes the following areas :

- System analysis
- Requirement specification definition
- Design including CAD
- Prototype manufacture
- Prototype validation
- Full manufacturing drawing package
- Life test rigs

Experience of the integration of special to type solutions is vital when dealing with complex solutions. These solutions may comprise any one or a combination of automatic test equipment, electronic

instrumentation, special to type hardware and software.

Solution Definition

To ensure that a customer understands the solution which is being offered, IFR will discuss the detailed requirements with the customer. IFR will then analyze the customer's requirement in detail.

As a result of the analysis a quotation and the proposed strategy for the solution will be prepared. This provides the opportunity for the customer to agree the proposed solution or alter it as required. This will also ensure the provision of optimum solutions and ensure that the solution is tailored to the customer's needs.

The size and complexity of the project will determine whether a detailed proposal is required.

Solution Design

The choice of the correct hardware, software and other component parts which comprise the solution needs careful assessment. The basis of the solutions could be standard IFR products but where this is not appropriate third party equipment will be considered.

Requirements which necessitate the design of special to type circuits or hardware can be accommodated simply. The customized cards can be designed to the requirement and integrated, including software control, within the system.

The IFR test and measurement solutions can include the integration of VXI facilities with one of IFR standard products. Alternatively, if required, the test solution can be totally VXI based.

Turnkey Systems Solutions

Turnkey Systems

Successful Solutions

As well as the traditional in-circuit and functional test requirements IFR provides test solutions for test programming, building fixtures, telecommunications and radio communications solutions covering ISDN, CT2, GSM and PCN as well as analog telephones, and test area management.

Integration of VXI and GPIB instrumentation is also another area of IFR's expertise. Specialized software routines can also be written in IFR is proprietary test program generation language, TPG, or in industry standard languages such as Visual Basic, LabView, LabWindows, HPVVE, ATLAS and C/C++.

As a systems integrator with a wide range of commercial test experience IFR has supplied special test solutions to many areas of industry. These include:

- Test and manufacturing throughput and fault monitoring systems, including all software and hardware
- Test area management systems including paperless repair
- Avionics system support equipment, including ILS monitor testing
- VXI and GPIB based solutions
- Radio test systems for production and maintenance of private, cellular and military radios
- RF and microwave test systems for aircraft antennae and systems
- Broadcast communications and monitoring equipment
- Telecommunications, ISDN and analog, CPE and exchange equipment testing including digital communication analysis and monitoring
- Comprehensive test programming for both functional and in-circuit test, including IEEE 1149.1 boundary scan techniques
- Control software for avionics signal sources to test aviation authority instrument landing systems
- Development of special test solutions including executive and application software
- Testability consultancy
- Smartcard test applications
- Network monitoring applications
- ATLAS test language applications
- Specialized training
- Test Management
- Software drivers to VXIplug&play standards



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