When Off-The-Shelf Won't Work

Off-the-shelf temperature measurement products do what they do very well. If they do what you want, by all means, use them. If they don't do exactly what you need, take a look at the integrated thermal sensor tutorial and application pages that Microstar Laboratories [1] just posted on the web. The company's website now includes a direct link to a section that shows you how to implement high-performance temperature measurement systems when off-the-shelf solutions won't work. You used to have to put in both the time and effort to pull this information from various places, but now you can find it quickly and easily in one virtual location. (You can also download the material formatted as a PDF to print or read off-line whenever you'd like.) According to the company, the new reference material describes what may make an off-the-shelf temperature measurement product less than ideal for your application. Possible issues are cost, packaging, display, integration, diversity, accuracy, speed and noise.

DAP Boards & DAPservers

Microstar Laboratories produces data acquisition processor (DAP) boards and network-ready DAPservers, however, which it feels can combat those issues. The company says its DAPs and DAPservers are highlighted by:

- Explanations to accompany all solutions, so you know how to resolve the aforementioned issues.
- An onboard processor running a real-time operating system on the DAP board.
- The ability to contain and control more than one DAP board with the availability of a PC or rack-mountable
- DAPserver system package-Windows applications that support DLL calls can also control DAP boards by communicating with this onboard operating system.
- The option to choose to control your DAP board from DAPstudio-a free, downloadable Windows application Microstar Laboratories delivers-as well as from third-party (or your own) software.
- The capacity to hook up a single DAPserver to any PC with an Ethernet connection, or attach a keyboard and screen to the DAPserver for direct control using software preloaded at the factory (for smaller systems only).

Temperature Measurement Details

Details covered in the new material consist of discussions on three main topics:

- The appropriate class of sensor for each type of temperature measurement and given environment.
- Calibration and linearization.
- Applications, which may include thermocouple, thermistor and RTD examples.

The application discussions specify typical hardware configurations and software routines that implement required system behavior at runtime. Hardware details cover signal-conditioning products that conform to the company's channel architecture, and fit into standard 19-inch industrial enclosures with factory-installed backplanes or even directly into DAPserver system packages, which can be ordered with all required signal-conditioning boards pre-installed.

Conclusion & Next Step

When off-the-shelf temperature measurement products fall short of your requirements, you no longer have to invest the time and effort into going through various PDF documents or white papers to determine what to do. The information you need is all in one place, online or ready for download.

Source URL (retrieved on *10/08/2015 - 2:07pm*):
http://www.chem.info/news/2008/07/when-shelf-wont-work

Links:
[1] http://www.mstarlabs.com/