

Application Note

pulseOne

Background:

Within the medical device industry few I/O cable assembly solutions are selected solely on industry-wide standards. Although industry standards can help guide the design, application-specific requirements generally take precedence. While commoditized assemblies such as those used in ECG leads or electrosurgical knives follow industry norms, those norms are not always prescriptive. In the medical market, many applications have unique and differentiated needs requiring device OEM designers to either develop a custom solution or design around commercially available connectors and cable bundles to achieve their products' specific needs.



Problem:

Creating a custom connector and cable assembly design to meet specific market requirements is often far from the skill set and focus of the design engineer at most medical device OEMs. Subtle differences in material selection, cable types, and termination techniques can greatly impact the reliability of the interconnect system. Options for standard cable assemblies designed specifically for medical devices have been limited, and designing around generic product offerings can add risk or limitations to the overall performance of the medical device.

Solution:

While conducting voice-of-customer research with many of our medical device OEM partners, we discovered common threads in the issues they faced, regardless of application. By amalgamating the needs of our various partners for commonly requested key product features, and building design specifications around their diverse requirements, we created a new standard medical cable assembly series called **pulseOne**. We designed **pulseOne** to be intuitive, ergonomic, aesthetically pleasing, and to be cost-effective in both single-and multi-use applications. Our D-shaped housing provides tactile confirmation of proper mating orientation and prevents mis-mating with other COTS connectors. Best of all, our **pulseOne** series is pre-terminated to cable and built to the length you need it to be in your application. Our off-the-shelf cable bundle performs to the electrical requirements frequently found in diagnostic, monitoring and home-healthcare applications. Offering multiple housing and contact termination options for the receptacle means we have the solution you need on our shelf. Furthermore, our optional fully shield plug cable assemblies and panel-mount receptacle connectors help ensure clean and clear data transmission with **pulseOne**, and we're able to provide all of these features and benefits to our medical OEM partners in a quick-turn, proven product that may help reduce the workload of the busy medical device Design Engineer.