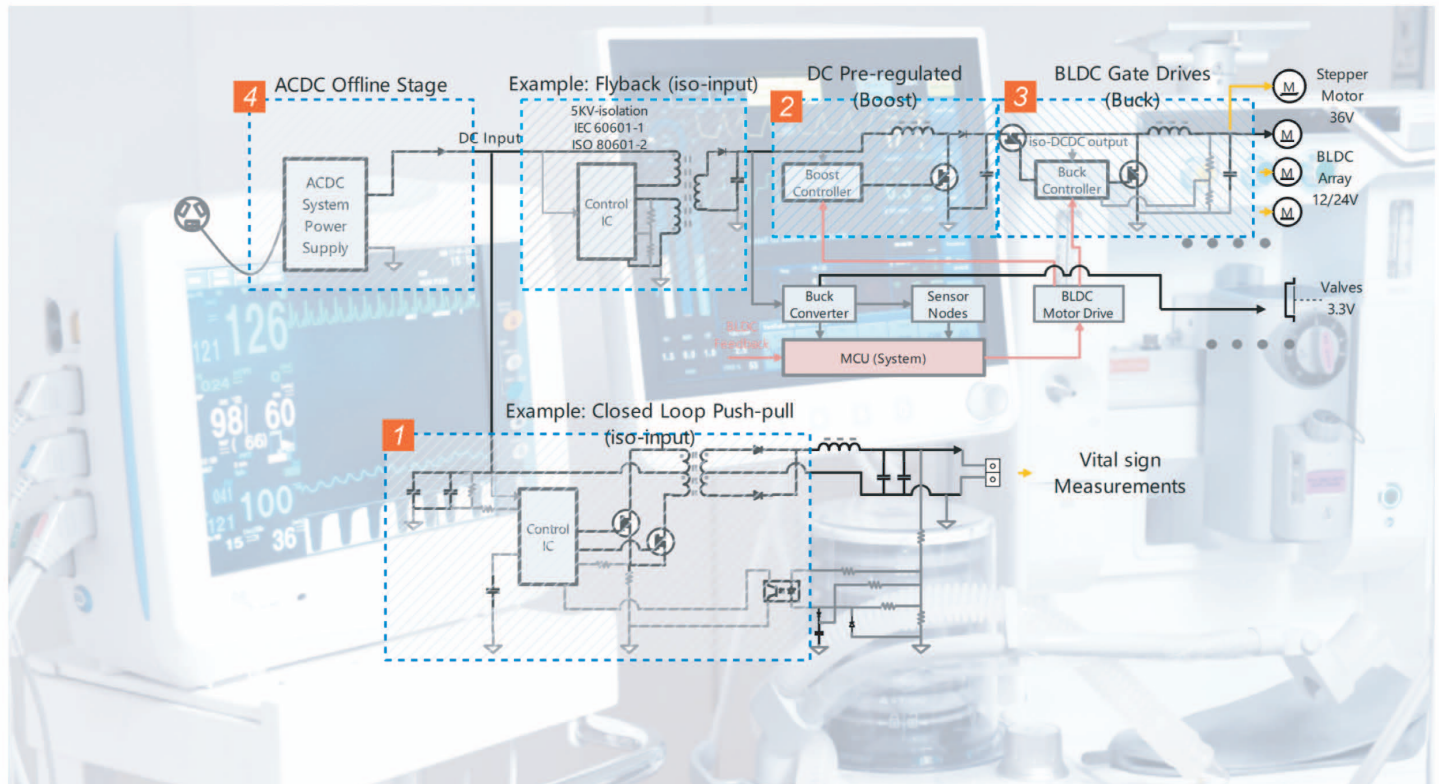


Application Segment - Medical



Medical electronics mainly present by major categories as:

1. care or cure or treatment equipment (CPAP – Continuous Positive Airway Pressure, Surgical assist, infusion pump, dialysis machine, defibrillator(AED), anesthesia equipment etc.);
2. diagnostic or vital sign measurement or imaging equipment (CT – Computerized Tomography, MRI – Magnetic Resonance Imaging, X-ray, Ultrasound, ECG – Electrocardiogram etc.);
3. healthcare measurement (clinical thermometer, blood pressure, blood glucose, pulse oximeter, invitro diagnostic etc.);
4. fitness or wellness (air purifier, hospital beds and chairs, breath and grooming, wearable health monitor etc.).

Among these equipment or devices the hospital appliances have specific requirements that determines electronic components inside have to be with strict quality or design approaches to overall make sure system compliant with medical standards.

By functionality, electronic units inside are mainly supporting power supply (such as imaging machines, diagnostic measurements or analyzers), motor drive (such as ventilators, dental or surgical tools). It is specially important for motor control applications that patients' life and health should be carefully and precision under control to avoid any risky malfunctions or hurts. BLDCs with both unipolar or bipolar operation modes are mainly working by low voltage drives such as 12V or 24V, and normally being with functionally combination of array. Further precision application uses stepper motor or micro stepper motors in order to control shaft angel accurately. In this kind of machines several separately drivers needs low ripple and quiet power supplies which is normally following an isolated DCDC input and been boosted as preregulated then down stepped to specific motor demands.

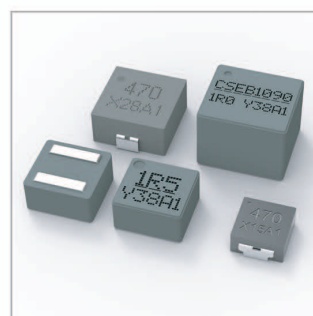
Segmentation



1 Power Supply for Vital Sign Measurements



2 DC Pre-regulation (Boost stage)



3 BLDC Drives (Buck stage)



4 ACDC System Power Supply (Offline stage)