

# DIGITAL SENSE Data Centre Specifications

System	Description
<b>ELECTRICAL</b>	<p>With a 2N power solution from its own substation supplying diverse feeds and integrating Automatic Transfer Switches (ATS), Digital Sense has built the ultimate system that delivers reliable power with superior uptime levels.</p> <ul style="list-style-type: none"> <li>• Separate transformers to the existing building</li> <li>• N + 1 configuration of transformers</li> <li>• 2N UPS systems with monitored battery strings</li> <li>• 2N internal diverse power feeds down to power rail level, including switchboards</li> <li>• Diesel emergency backup Generators capable of 48 hour continuous run time</li> <li>• Dual redundant 32amp power rails delivery supply to each rack</li> </ul>
<b>MECHANICAL</b>	<p>Digital Sense has opted for a closed water loop rather than operating an open town water solution used by other similar operations. This is a responsible and forward thinking 'Green Approach' and is a more efficient and environmentally friendly way to cool data rooms.</p> <ul style="list-style-type: none"> <li>• 2N air condenser plant</li> <li>• Dual redundant A + B interlaced pipe work feed for air-conditioning</li> <li>• 2N air conditioning CRAC units in each room/sector</li> <li>• 100% standby Generator support to mission critical mechanical services</li> <li>• Modular and movable air-conditioning units for load balancing</li> </ul>
<b>SELF-SUFFICIENT</b>	<p>The Data Centre can run for 48 hours at maximum load with no mains power.</p> <ul style="list-style-type: none"> <li>• 48 hours onsite supply of diesel fuel in event of main's power failure</li> <li>• Contract arrangements with multiple fuel suppliers</li> <li>• Closed water circuits for mechanical load in the event of main's water failure</li> <li>• Cummins Generators that are serviced and tested every calendar month</li> </ul>
<b>FIRE SUPPRESSION</b>	<p>The HPCC raised floor space is protected against fire by employing 'Very Early Smoke Detection Alarms' (VESDA). The fire system has been designed to keep all fire zones separated in sectors, minimising the impact in the event of a severe event.</p> <ul style="list-style-type: none"> <li>• VESDA type smoke detection system</li> <li>• Leak detection in all rooms</li> <li>• Distributed audible air and alarm system</li> <li>• Fully security-monitored and alarmed fire escapes</li> </ul>
<b>NETWORKS</b>	<p>Internal Networks have been built to the TIA/EIA standard with cutting edge hardware selected after exhaustive research and consultation with multiple vendors.</p> <ul style="list-style-type: none"> <li>• Dual Force 10 Core E600i Router</li> <li>• Dual communications entry points</li> <li>• Force 10 Edge switches providing true 10GB backbone interfaces</li> <li>• Checkpoint firewalls</li> <li>• Reflex network security</li> <li>• Individual secure client interfaces for monitoring client racks</li> <li>• Secure portal for viewing data centre environment</li> </ul>
<b>SECURITY</b>	<p>Security is one of the highest priorities and is monitored 24/7/365 by CCTV systems. The systems are also monitored in real time by onsite staff and local police patrol the area regularly.</p> <ul style="list-style-type: none"> <li>• 24/7/365 manned security and monitoring</li> <li>• Motion detection throughout the facility, internally and externally</li> <li>• Separated biometric access and control zones between rooms/sectors</li> <li>• Each rack supplied is individually keyed</li> <li>• Video surveillance to all entries and exits</li> <li>• Video surveillance to each area of the entire building from two points</li> <li>• Bullet-proof Glass separating the Network Operations Centre</li> <li>• Separate secure foyer with access logging for entering the Data Centre security zone</li> <li>• Event recording of live data</li> </ul>
<b>DATA CENTRE FLOORS</b>	<p>Raised floor space is a critical aspect of the Data Centre. The environment is maintained at the highest standards by constantly sampling the air.</p> <ul style="list-style-type: none"> <li>• Double rated concrete slabs above and below</li> <li>• Average Temperature of 21 degrees C and Average Humidity of 50%</li> <li>• 300mm raised floor with only power services under floors</li> <li>• Overhead telecommunications and networking cabling in separate trays</li> <li>• Under Floor Power separated from Data</li> <li>• Emerson XD overhead high density cooling</li> <li>• Emerson PeX large frame under floor cooling (CRAC unit)</li> <li>• FM200 Fire suppression gas in each room/sector</li> <li>• Solid core filled block walls around the perimeter of each room/sectors</li> </ul>