ULTRASMART™ SOLUTIONS FOR CARD AND CHIP MODULE TEST IN PRODUCTION ENVIRONMENT

Based on longterm relationship with silicon manufacturers, Smartware has developed a complete open and configurable product range dedicated to the test of card and chip module.

Contact testing solution

CMT 4 heads
- Based on US-CORE V5 and 2x US-CMT2
- Test and personalization of card and module
- Robust design for industrial environment
- Special test & measure library for R&D usage

US-Rack 4U/63F
- 5 slots for double-size assembly
- PCB Europe format up to 220mm
- Integrated GB Ethernet switch
- Integrated power supply 320W
- Width: 342 mm
- Height: 177 mm
- Depth: 349 mm
- Weight: 7.7 kg

Contactless testing solution

CLT 2 heads
- Based on US-CORE V5 and 2x US-CLT
- Test and personalization of card and module
- Robust design for industrial environment
- Special test & measure library for R&D usage

US-Rack 5U/84F
- 10 slots for double-size assembly
- PCB Europe format up to 220mm
- Integrated GB Ethernet switch
- Integrated power supply 640W
- Width: 482 mm
- Height: 221 mm
- Depth: 480 mm
- Weight: 14.2 kg

<table>
<thead>
<tr>
<th></th>
<th>3U/8F</th>
<th>6U/16F</th>
<th>4U/63F</th>
<th>5U/84F</th>
</tr>
</thead>
<tbody>
<tr>
<td>US-CLT Assy 2 heads</td>
<td>1 (2 heads P)</td>
<td>4 (8 heads P)</td>
<td>5 (10 heads P)</td>
<td>10 (20 heads P)</td>
</tr>
<tr>
<td>US-CMT2 Assy 4 heads</td>
<td>1 (4 heads I)</td>
<td>4 (16 heads I)</td>
<td>5 (20 heads I)</td>
<td>10 (40 heads I)</td>
</tr>
</tbody>
</table>

X: number of assembly (I: number of contact head, P: number of contactless head)
ULTRASMART™ HARDWARE MODULES FOR CARD AND CHIP MODULE TEST IN PRODUCTION ENVIRONMENT

All our hardware modules are based on UltraSmart™ modular architecture proven platform that consistently demonstrate superior productivity and reliability.

**US-CORE V5 - CPU Board**

- 32bit 240 MHz processor
- 256MB SDRAM for applications and data
- 8MB Flash memory for OS and resident applications
- Ethernet 10/100 Mbps (UDP & TCP/IP)
- RS-232
- Support up to 2 test-dedicated daughter boards

**US-CMT2 - 2 contact testing interfaces**

- FPGA-based contact interfaces
- ISO 7816 (T=0 and T=1)
- Memory chips (SLExx, ATxx, ST13xx)
- Adjustable communication parameters (Frequency, ETU, Timings)

Parametric test features
- Open Short & Leakage Test on all contacts
- Static and dynamic power consumption (FIMV, FVMI)
- C7 level monitoring
- Special Test & Measurement library (Tearing generation, accurate timing measurement)

**US-CLT - 1 contactless testing interface**

- FPGA-based contactless interface
- ISO 14443 A/B up to 848 Kbps
- ISO 15693
- Mifare™, Mifare+™
- FeliCa™, I•Code™
- Adjustable signal and communication parameters (Carrier amplitude, Modulation index)

Parametric test features
- Resonance frequency and quality factor measurement
- Chip input capacitor measurement
- Antenna coil inductance measurement
- Retro modulation voltage measurement
- Static power consumption (FIMV, FVMI)