V93000 Configurable Solution for SoC Testing

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V93000 Smart Scale

V93000-L
- Large Digital
  - 5120 Digital Channels
  - 1536 Power Supplies
  - 1..2 Multi Band AWG/DIG

V93000-S
- GPU, MPU
  - 896 Digital Channels
  - 128 HS Digital Channels
  - 64 Power Supplies
  - 4 High current Power Supplies

V93000-C
- RF Connectivity
  - 256 Digital Channels
  - 32 Power Supplies
  - 1 Consumer AWG/DIG
  - 48 RF ports

RF Transceiver
- 512 Digital Channels
- 64 Power Supplies
- 2..3 Multi Band AWG/DIG
- 48 RF Ports

V93000-A
- MCU & Generic Probe
  - 512 Digital Channels
  - 32 Power Supplies
  - 1 Consumer AWG/DIG
  - Per Pin Analog

PA / FEM / BT / RF combo
- 128 Digital Channels
- 32 Power Supplies
- 1 Consumer AWG/DIG
- 24 RF Ports

DTV/STB
- 512 Digital Channels
- 32 Power Supplies
- Consumer AWG/DIG

Integrated SOC & RF
- 1280 Digital Channels
- 128 Power Supplies
- 2..3 Multi Band AWG/DIG
- 48 RF Ports

Widest application coverage on single scalable ATE platform
Device & Test Challenges
- Analog/RF: 4G (LTE-Advanced, …)
- Many parallel IP blocks
- Parallel trimming / eFuse
- Many clock domains & hsclock
- Scan coverage & high data volumes
- More power domains
- IP based test development
- High speed I/F (e.g. HDMI)

V93000 Smart Scale Solution
- Addresses technology challenges
  - LTE-A bandwidth and higher x-put
  - Advanced AC & DC features per pin
- System Like Test for higher test coverage
  - Fast setup of “native” protocols
- Superior Test Economics
  - Higher multi-site (x4 → x8)

V93000 Smart Scale powers 28 nm mobile wave
**RF Transceiver / RF Connectivity**

**Increased performance and higher complexity at lower cost**
- Analog/RF: 2.5, 3/4G
- Many parallel IP blocks
- Many clock domains & high speed clock
- Low phase noise clock source
- Direct probe RF for WL-CSP

**V93000 Transceiver Solution**

- **Zero Overhead Analog**
  - Smart calc and Multi threading

- **Smart Test Methods**
  - Libraries, sequenced measurements etc

- **Superior Test Economics**
  - Efficient octal site

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**OSAT standard for test of RF transceiver & connectivity devices**
Increased performance and higher complexity at lower cost
• RF: increasing number of bands and modes
• For 2.5G, 3/4G e.g. LTE/-A, WiFi .11ac
• Correlation to bench equipment

V93000 RF PA / FEM Solution

⇒ Scalability
  • Single, dual and up to octal site

⇒ Smart Test Methods
  • Dedicated test solutions

⇒ Superior Test Economics
  • COT optimized test (1.25s)

Repeatability and accuracy to drive test economics
High End Logic & MPU & GPU

Device & Test Challenges

- Economic test of high-speed I/F
- Performance WS test
- Scan coverage & high data volumes
- DC parametric & device trimming
- More clock and power domains

TTM & Test Coverage

V93000 Smart Scale

- Addresses technology challenges
  - Functionality to match device needs
- Reduced COT
  - Higher Multi-site solutions
- Faster TTM & Higher Test Coverage
  - Efficient TP Generation and Maintenance

Cost efficient HVM test of high end logic devices, staying ahead of technology wave
Consumer Mixed Signal

Higher device integration
- Increasing pin count (>512 pins)
- Higher multi-site
- Integrating MX, RF & HS digital

COT pressure, lower CAPEX, TTM
→ Breaking installed ATE

V93000 Low Cost Extension
→ Combines Low-Cost and High-Performance
  - Most advanced module set

→ Superior Test Economics
  - Higher multi site, true parallel functions

→ Zero risk solution
  - Proven Scalable and Flexible

V93000 Smart Scale available now @ right price for consumer devices

STB/DTV, DVD, Tcon

V93000-A
- DTV/STB 2..4..8 Sites
- 512 Digital Channels
- 32 Power Supplies
- 1 Consumer AWG/DIG

V93000-C
- High pin count MX / RF
- 2..4 Sites
- 896 Digital Channels
- 64 Power Supplies
- 1 Consumer AWG/DIG (Port Scale RF)
MCU & Sensor

MCU goes SOC
- Precision DC
- Performance Analog
- eFlash Memory Depth
- RF, High Speed I/O

Sensors go Consumer
- Integrated MCU
- Integration/Cost by MEMS
- Smart Sensors w/ ZigBee/Bluetooth

→ Breaking installed ATE

V93000 MCU Test Solution

→ Addresses technology challenges
  - Advanced instrumentation

→ Superior Test Economics
  - High site count, low operation cost

→ Zero Risk Solution
  - Proven V93000 platform

Testing the next generation of Microcontrollers / Sensors
V93000 Platform Scalability and Flexibility

Expandable

Expandable

From $150k

Widest application coverage on single scalable ATE platform

Walkthrough and Configuration

>7000 pins

V93000-L

V93000-S

V93000-C

V93000-A

Scalable & Compatible
Thank you!