

SPECTRUM COMPLIANCE IN THE MIDDLE - & FAR EAST

RADIO SOLUTIONS

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Company Profile

Five Divisions with regard to SRD and RFID:

- **Retail: EAS (8.2 MHz) + UHF RFID**
- **Security: RFID + Access Control 120 kHz+13.56 MHz**
- **Cattle Code Identification and – management RFID: 134,2 kHz SRD 433 MHz**
- **Remote controls SRD 2,45 GHz for light dimming in buildings and offices**
- **Nedap Identification systems 868 MHz, UHF RFID, 2,45 GHz**
- **Library 13,56 MHz**

My responsibility: Radio -, EMC - and Safety Regulatory approvals worldwide



Spectrum Compliance Middle East & Far East for SRD & RFID

- **Devices are intended to operate in unprotected and shared frequency bands**
- **Its operation shall not cause interference to radio-communication services**
- **Tolerate any interference caused by other compliant radio-communication services, electrical or electronic equipment**
- **Devices shall be marked with the supplier/manufacturer's name**
- **Devices shall be marked with supplier/manufacturer's model or type reference**
- **The markings shall be legible and readily visible**
- **All SRDs intended to be manufactured and/or imported shall be type approved**
- **SRDs appropriately type approved are exempted from individual licensing**

Spectrum Compliance Middle East SRD & RFID

General

- **Type Approval granted on the basis of reports from accredited labs**
- **Type approval per product or product family**
- **EMC, Safety and Radio necessary**
- **Acceptance of FCC grant & test reports or CE DoC & EU R&TTE (ETSI) test reports**
- **Radio regulation as per the ERC REC 70-03:**
 - **Recommendation Relating to the Use of Short Range Devices (SRD)**
- **Always check the frequency and power in the relevant country maybe different from the REC 70-03 especially the UHF frequencies, see UHF_Regulations.pdf issued by GS1**
- **Certificates of Conformity issued by the lab**
- **All countries need local representatives**
- **No factory inspection**
- **Language documents English**
- **Not being certified can mean custom - or border stop**

Spectrum Compliance Middle East SRD & RFID General

Letter of support	Application Form	Antenna information
Bill of material	Circuit diagram	Block diagram
Photos Interior	Photos Exterior	Theory of operation
Telecom test report	EMC test report	Safety test report
Users manual	Brochure	Attestation of similarity
Harmonized standards list	DoC	Declaration lab is ILAC* accredited
List of Standards		

*ILAC=International Laboratory Accreditation Cooperation

List of standards:

1. **EMC** : ETSI EN 301 489-1, ETSI EN 301 489-3
2. **Radio** : ETSI EN 300 220, ETSI EN 300 330, ETSI 300 440, EN 302 208
3. **Safety:** : EN60950-1

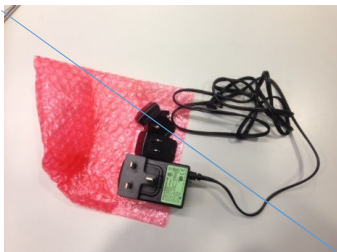
The list of standards shall mention the full name of the standard including the version eg:
EN 60950-1:2006 + A11:2009 +A1:2010 +A12:2011+ A2:2013 Information technology equipment. Safety.
General requirements

Spectrum Compliance Kingdom of Saudi Arabia

- Approval body CITC = Communications and Information Technology Commission
- Agency Website www.citc.gov.sa
- Regulations CITC Technical Specification
 - GEN001 General Requirements
 - RI050 Specification for Inductive application and Ancillary Equipment
 - RI054 Specification for Non-Specific short range devices and Ancillary Equipment
 - RI055 Specification for Radio Frequency Identification (RFID) Systems
 - RI082 Specification for Alarms
- Documents must be hand-delivered to CITC or one of its branches
- No fees
- No samples needed
- Leadtime up to 5 month
- Certificate valid one year, renew possible with letter confirming no revisions

Spectrum Compliance Kingdom of Saudi Arabia

- Exporting to Saudi Arabia every shipment needs SASO certification/approval
SASO = Saudi Arabian Standards Organisation
- Accredited labs by SASO are eg Intertek, TÜV, Bureau Veritas
- Costs each time: € 220
- Test reports safety, EMC radio, certificates, brochures, manual, DoC
- Our experience every shipment new requirements are added
- Example of a requirement: Only British type mains connector shall be attached see pictures



Wrong



Right

- Under certain conditions company can be authorized to perform own shipment inspection

Spectrum Compliance United Arab Emirates

- Approval body TRA = Telecommunications Regulatory Authority
- Agency Website : <http://www.tra.gov.ae/>
- Regulations & Technical Specification
 - UEA – Short Range Devices
- This company shall be registered by the TRA
 - Costs Dirham 5500 (= € 1375)
 - Valid for 5 years
- No samples needed
- Documents must be uploaded to the TRA website
- Human Exposure requirements: EN 62369-1 (or EN50364)
- Fees Dirham 500 (= € 125)
- Lead time 4 weeks
- Certificate valid for 3 years, to renew certificate open new project

Spectrum Compliance Hashemite Kingdom of Jordan

- Approval body TRC =Telecommunications Regulatory Commission
- Agency Website : www.trc.gov.jo
- Regulations and Technical Specification: ETSI EN standards
- 1 sample needed
- Human Exposure requirements: EN 62369-1
- Documents are delivered to TRC by representant
- No TRC registration company
- Costs JD 35 (€ 46)/per model
- Lead time 2 weeks
- Validity 1 year, renew formal letter and stating no revisions

Spectrum Compliance State of Israel

- Approval body Ministry of Communications
- Agency Website : <http://www.moc.gov.il/130-en/MOC.aspx>
- Regulations & Technical Specification: ETSI EN standards
- This company is registered by first delivery
- No samples needed
- Human exposure not controlled
- MoC contact via consultant or other local representant
- Documents are delivered to consultant or representant in pdf
- Fees are € 750 for consultant, no fees for MoC
- Lead time 9 weeks
- Certificate valid for 5 years, renew possible

Spectrum Compliance People's Republic of China

- RF testing compulsory, in some cases CCC approval compulsory
- Approval body SRRC = State Radio Regulatory Commission
- Agency Website www.srrccn.org
- Regulations not so very clear most information is from an APT (= Asia-Pacific Telecommunity) document:
 - APT SURVEY REPORT ON OPERATION OF SHORT-RANGE DEVICES (SRDs)
- Type approval granted on the basis of local tests eg:
 - TJRMS = TainJin Radio Monitoring Station
 - SRTC = State Radio Testing Center
- Language documents: English
- Each model should apply for the certification, even if electronics same, but model name different
- Costs US \$ 4500 per first model, any additional model name: US \$ 4500 even when same electronics
- No factory inspection
- TCF: Manual, Schematic, Block diagram, Antenna spec, BoM, Photo internally/externally, Application forms, Label location
- Witness testing is possible and important together with representative who speaks Chinese
- Local representative applies for SRRC certificate
- Lead time 6 weeks
- 5 years expiration, can apply to renew for another 3 years after that new project.

Spectrum Compliance Republic of India

- RF approval compulsory. May 2016 Safety acc. to EN60950-1
- Approval WPC = Wireless Planning & Coordination
 - Ministry of Communications and Information Technology
- Agency Website www.wpc.dot.gov.in
- Regulations published “Gazette of India” as notifications.
- Reports are accepted from accredited labs
- Acceptance of FCC grant & test reports or CE DoC & EU R&TTE (ETSI) test reports
- WPC is located in New Delhi
- No samples needed
- Lead time 8 weeks
- TCF: Schematics, block diagram, BoM, internal/external photographs, application forms, test report, operational description
- Own representative located must be located in New Delhi costs: US \$ 1000/model
- Appointed representative located in New Delhi costs: US \$1100/model
- Comment: Attached photograph shows a heat detection system for cows. Electronics same, enclosure caps differ. Total approval costs: US \$ 7000 max US \$ 7700!!!
- Validity permanent, unless revisions



Spectrum Compliance Republic of Korea

- RF + EMC testing compulsory
- Approval body KCC = Korea Communications Commission
- Agency Website www.kcc.go.kr
- Type approval granted on the basis of local tests
- Language documents: English, only manual in Korean
- Regulations “Wireless Equipments Rules_KCC amendment Notice No. 2014-59” dd 30 Sept 2014 and KN documents based on EN 301 489, CISPR 22 and the IEC 61000 series
- Certification for family of products
- Costs US \$ 4500 per model family.

NOTE: If RF system: eg ESD acc. to KN 301 489 and if same unit connected via RS232, ESD repeated acc. to KN24

- No factory inspection
- TCF: Schematic, Antenna spec, BoM, Manual, Photo report internally/externally, application form
- Install systems, no witnessing of testing
- Local representative applies for KCC certificate
- Leadtime: 8 weeks
- Validity permanent



Spectrum Compliance Japan ($f < 30$ MHz and special cases)

- RF testing compulsory, but there are exceptions. Japanese regulations are rather difficult
- Regulatory/Approval body MIC = Ministry of Internal Affairs and Communications
- MIC Radio Use Website: <http://www.tele.soumu.go.jp/e/>
- Regulation: Radio Law (Law No. 131, 2 May 1950)
- Local representative is needed
- Type approval granted on the basis of local tests
- Language documents: English
- Certification for family of products possible under certain conditions
- No factory inspection
- Costs ¥520,000 (€ 4000)
- TCF: User manual, schematics, block diagram, antenna specification, ISO 9001 certificates, parts layout, BoM, internal/external photographs, application forms, label location, test report, operational description
- No witness of testing
- Local lab together with representative apply for MIC certificate
- Leadtime: 8 weeks
- Validity permanent

Spectrum Compliance Japan ($f > 30$ MHz)

- RF testing compulsory, but there are exceptions. Japanese regulations are very difficult
- Regulation: Radio Law (Law No. 131, 2 May 1950), Ministerial Ordinance No. 37, November 21, 1981 (Rules Concerning Technical Regulations Conformity Certification of Specified Radio Equipment), Ordinance Regulating Radio Equipment (Radio Regulatory Commission Regulations No. 18, November 30, 1950), MIC Notice 88, January 26, 2004 (test methods and appendix to Post of the Ministerial Ordinance No. 37, November 21, 1981)
- Various certification bodies (in Japan and outside of Japan) are available:
<http://www.tele.soumu.go.jp/e/sys/equ/tech/index.htm#4000052>
- A local representative is not needed
- Type approval granted on the basis of tests by laboratories of which the test results are accepted by the certification body of choice
- Language of documents: English
- Certification for family of products possible under certain conditions
- No factory inspection
- TCF: User manual, schematics, block diagram, antenna spec., ISO 9001 certificates, parts layout, BoM, internal/external photographs, application forms, label location, test report, operational description
- Validity permanent

Special case: UHF Spectrum Compliance Republic of Singapore

- Singapore approval UHF products
- Regulation TSSRD = Technical Specification Short Range Devices. Reference to:
 - FCC Part 15
 - EN 300 220
 - EN 302 208
- 866-869 MHz and 920-925 MHz 500 mW erp
- 920-925 MHz 2 W erp
- Translated Chinese reports are accepted because the frequency bands are the same BUT if type approved the 500 mW maybe installed but the 2 W systems must undergo additional testing and needs a site license.
Under supervision and control of the IDA interference tests have to be performed with Singapore Telco's: M1, Singtel and Starhub, because in past UHF RFID systems
 1. Have been set to the US frequency 902-928 MHz in Singapore
 2. The frequency drifted away from the band 920-925 MHz into the GSM band.