

Yunus
Faziloglu/USA/VERITAS
02/26/2007 02:32 PM

To: Kathlene McQuaid/USA/VERITAS
cc
bcc
Subject: CS02432 Serco Geografix FCC ID: QYMFMU002 "Response to TCB.PDF"

---- Forwarded by Yunus Faziloglu/USA/VERITAS on 02/26/2007 02:28 PM ----



"Michael Gaukroger"
<mgaukroger@ktl.com>
02/26/2007 11:11 AM

To: Yunus Faziloglu/USA/VERITAS@VERITAS
cc
Subject: RE: FW: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB Questions

Hi Yunus,

Please find enclosed the FCC label with ID as requested plus photos of where the label is to be placed.

Regards

Mike

-----Original Message-----

From: yfaziloglu@curtis-straus.com [mailto:yfaziloglu@curtis-straus.com]

Sent: 23 February 2007 22:38

To: Michael Gaukroger

Subject: RE: FW: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB Questions

Hi Mike,

The label issue is still open. Please supply the FCC label, that shows the FCC ID and photo of where it is placed on the device. Drawings are acceptable. The latest label document we have has IC number on it, which is for Canada.

The other issues are OK.

Best Regards,

Yunus Faziloglu
Curtis-Straus LLC
Bureau Veritas

"Michael Gaukroger" <mgaukroger@ktl.com>

02/23/2007 07:01 AM

To Yunus Faziloglu/USA/VERITAS@VERITAS
cc
Subject RE: FW: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB Questions

Hi Yunus,

Please find attached the new Operational description as requested including the information needed and a photo with arrow highlighting the antenna.

Please let me know if we can proceed with the certificate.

Regards

Mike

-----Original Message-----

From: yfaziloglu@curtis-straus.com [mailto:yfaziloglu@curtis-straus.com]

Sent: 22 February 2007 19:42

To: Michael Gaukroger

Subject: RE: FW: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB Questions

Hi Mike,

We are only concerned about the signals transmitted from the device. As part of its receive function it can do anything and that is fine.

As part of its transmit function, if it only sends an alarm activation signal to the FMU when the alarm button is pressed, then it is an allowed control signal under 15.231(a). Operational description must be very clear on the purpose of the device and the types of signals it sends. I think at this point an exhibit from the applicant describing how it meets the operational limitations of 15.231(a) item by item, will be the best approach. Please advise your client.

And regarding the BNC antenna issue, it is OK that is for the receive antenna. Please show the location of the transmit antenna on a photo.

Best Regards,

Yunus Faziloglu
Curtis-Straus LLC
Bureau Veritas

"Michael Gaukroger" <mgaukroger@ktl.com>

02/22/2007 05:36 AM

To Yunus Faziloglu/USA/VERITAS@VERITAS
cc
Subject RE: FW: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB Questions

Hi Yunus,

The FMU2 is a tracker that is part of a human alarm tagging system. The FMU2 receives signals from transmitters (personal identification devices) on human body parts.

It also has the ability to transmit as part of control signal as an example if the user is being attacked he/she can press the panic alarm button that sends the special

message to the SMU which forces the SMU to make a call back to the base which is received as a distress signal.

Please advise

Regards

Mike

-----Original Message-----

From: yfaziloglu@curtis-strauss.com [mailto:yfaziloglu@curtis-strauss.com]

Sent: 21 February 2007 22:43

To: Michael Gaukroger

Subject: RE: FW: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB Questions

Hi Mike,

1. I am afraid not. The device's whole purpose must be to control a process or trigger an action in response to an event. Operational description states that it is intended for status monitoring and settings changing of SMU's and PID's. It may have the ability to activate and alarm at times, but that doesn't seem to be all it does or its main purpose.

2.

i. ok

ii. ok

iii. The antenna connector type BNC is considered standard and any other antenna with a BNC

connector can be substituted easily. This does not satisfy the antenna requirement of 14.203.

3. ok

4. ok

5. The label supplied does not show the FCC ID.

9. ok

Best Regards,

Yunus Faziloglu
Curtis-Straus LLC
Bureau Veritas

"Michael Gaukroger" <mgaukroger@kti.com>

02/21/2007 11:37 AM

To Yunus Faziloglu/USA/VERITAS@VERITAS
cc
Subject RE: FW: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB
Questions

Hi Yunus,

1. I have spoken to the manufacturer and the FMU2 has the ability to send a special message to the SMU which then dials out that there is a problem. So the FMU2 does control the SMU. Does this clear up the issue?

2, 3, 4 and 5 please find attached.

9 my client does not request confidentiality.

Regards

Mike

-----Original Message-----

From: yfaziloglu@curtis-straus.com [mailto:yfaziloglu@curtis-straus.com]

Sent: 21 February 2007 14:39

To: Michael Gaukroger

Subject: RE: FW: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB Questions

Hi Mike,

Regarding the responses,

1. From the description of what the device does, it appears it is not intended for control of any end device as explained in 15.231(a). Meaning if SMU's are not controlling anything, then they are not control devices and the signals sent by the FMU's can not be considered as control signals. It needs to control something like an alarm or switch in the end. This device can not operate under paragraph (a), instead paragraph(e) is available, but it will require new test data to demonstrate compliance.

2. The descriptions provided must be in the operational description document.

3. Still open.

4. Still open.

5. The label shown in the photos does not have FCC ID on it. Please supply a label exhibit with all the label related information and photo or drawing.

6. OK

7. OK

8. OK.

9. Still open.

10. Section C4 of the report should include the justification you provided in your response.

11, 12 and 13 - A new report demonstrating compliance to 15.231(e) is needed as explained above.

Best Regards,

Yunus Faziloglu
Curtis-Straus LLC
Bureau Veritas

"Michael Gaukroger" <mgaukroger@ktl.com>

02/14/2007 11:32 AM

To Yunus Faziloglu/USA/VERITAS@VERITAS

cc

Subject RE: FW: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB Questions

Hi Yunus,

Regarding all the questions you had for the Serco Geographic's application please find the answers below:

2. An operational description is required. This document should explain

i. Intended application for the device

The FMU is a handheld device used to change the settings of and monitor the status of Site Monitoring Units (SMUs), Personal Identification Devices

(PIDs) and other SGL produced equipments.

ii. Modulation type, different transmit modes/packets and their corresponding ON-OFF times

The modulation scheme used in FMU2 is 2-FSK. FMU2 uses only one mode of transmission. FMU2 will transmit its status every 2 minutes + 15 seconds (random element) for an hour. Also if the panic button is enabled it will transmit a message for the next five seconds.

Message structure:

The transmitted message structure is shown below:

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
AA	AA	AA	AA	AA	AA	AA	FF	FF	55	PR H	PRL	ID 3	ID 2	ID 1	ID 0	Seq No	Stat	CRC L	CRC H

Message byte function

Bytes 7 - 8 are used to synchronize the receiving UART, i.e. to determine the start of the individual bytes in the actual message.

Byte 9 is always 0x55 for a PID message, i.e. this byte distinguishes regular PID messages from any other message in the system.

Bytes 12 - 17 inclusive are encrypted. Bytes 10 - 11 hold pseudo random code used to access the accelerator table when decrypting the message.

Bytes 12 - 15 inclusive hold the PID identification number.

Byte 16 holds the number of times the pseudo code table 'rolls over'.

Byte 17 holds the PID status.

Bytes 18 - 19 hold the cyclic redundancy check for bytes 10 - 17 inclusive.

The received PID message structure is assumed to be as shown below:

0	1	2	3	4	5	6	7	8	9	10
55	PRH	PRL	ID3	ID2	ID1	ID0	Seq No	Stat	CRCL	CRCH

iii. Antenna type and its connector. Please note the antenna connector can not be a standard type connector for a hand-held unlicensed device.

Reception antenna is a whip connected via a BNC, whilst transmission is via copper strips on the PCB and hence no connector.

5. A label document is needed that shows the placement of it on the device. A drawing is also acceptable if photographs are not available. This document must also specify the label and adhesive material to demonstrate permanency.

Label Specification:

Base material: CIL-8100HD

Adhesive Type: Permanent 'Heavy Duty' Solvent Acrylic

Please find the attached photographs for your kind reference.

7. Manual does not seem to include FCC related compliance statements - Could you please provide a user guide with this in.

Please find the modified user manual for FMU2 with compliance statement.(Please refer to page number no 3 and 12)

8. Agency letter must be on applicant's company letter. - I have reattached the letter for you to put on company letter headed paper.

Please find the attached document for your kind reference.

6. User's manual mentions 418MHz operating frequency in addition to 433.9 MHz. Is this device capable of being configured to 418MHz? If so, that configuration may require a separate FCC ID.

Please clarify with the applicant.

No. The FMU2 which is configured for US market is intended to use on 433.92 MHz. It cannot be configured to 418 MHz. The user manual mentions about the 418 MHz, because we use 418 MHz band for Electronics monitoring in UK market. Please refer to the updated FMU2 user guide for your kind perusal.

Regarding questions 11, 12, 13 these have been changed in the new test report which is attached.

10. Section C4 of the report states that, the ports on the device were not populated. Please clarify the reason

If you look at section C4 on page 29 the DC/RS232 input if connected would disable the transmitter and the External IR Wand port is not intrinsic to the transmitter operating.

1. This device needs to be used for transmission of a control signal such as those used with alarm systems, door openers, remote switches etc. as required by 15.231(a). If the device is not for that kind of operation it may still be operated under the provisions of 15.231(e). Please clarify the application for this device.

This should be filed under 15.231(a).

If you have anymore queries do not the hesitate to contact me.

Regards

Mike

-----Original Message-----

From: yfaziloglu@curtis-straus.com [mailto:yfaziloglu@curtis-straus.com]

Sent: 07 February 2007 14:44

To: Michael Gaukroger

Subject: Re: FW: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB Questions

Hi Mike,

Please see attached.

Best Regards,

Yunus Faziloglu
Curtis-Straus LLC
Bureau Veritas

"Michael Gaukroger" <mgaukroger@ktl.com>

02/07/2007 05:01 AM

To Yunus Faziloglu/USA/VERITAS@VERITAS

cc

Subject FW: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB

Questions

Hi Yunus,

Mark has passed me on your list of requests in which I am gathering for you.

[Question 7](#), Manual does not seem to include FCC related compliance statements, have you got this statement so that my client can add this to his user manual? If

not where can I find this? Please advise

Regards

Mike

-----Original Message-----

From: Mark Howes

Sent: 04 February 2007 19:25

To: Michael Gaukroger

Subject: FW: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB Questions

[Serco](#)

From: yfaziloglu@curtis-straus.com [mailto:yfaziloglu@curtis-straus.com]

Sent: 02 February 2007 21:02

To: Mark Howes

Subject: CS02432 Serco Geografix FCC ID: QYMFMU002 TCB Questions

Hi Mark,

Please address the following issues for this application,

1. This device needs to be used for transmission of a control signal such as those used with alarm systems, door openers, remote switches etc. as required by 15.231(a). If the device is not for that kind of operation it may still be operated under the provisions of 15.231(e). Please clarify the application for this device.

2. An operational description is required. This document should explain
 - i. Intended application for the device
 - ii. Modulation type, different transmit modes/packets and their corresponding ON-OFF times
 - iii. Antenna type and its connector. Please note the antenna connector can not be a standard type connector for a hand-held unlicensed device.
3. Please supply additional external photos of the device from different angles to show all sides and any I/O port and the close-up of the antenna connector. Please provide a single exhibit (PDF) of all the external views of the device.
4. Please supply more detailed views of the internal boards (both sides of each) in addition to the internal photos we have as a separate exhibit. Internal photos and external photos must be separated from each other.
5. A label document is needed that shows the placement of it on the device. A drawing is also acceptable if photographs are not available. This document must also specify the label and adhesive material to demonstrate permanency.
6. User's manual mentions 418MHz operating frequency in addition to 433.9 MHz. Is this device capable of being configured to 418MHz? If so, that configuration may require a separate FCC ID. Please clarify with the applicant.
7. Manual does not seem to include FCC related compliance statements.
8. Agency letter must be on applicant's company letter.
9. Please clarify if confidentiality is requested for this application. If so a request on applicant's company letter is required. The FCC ID must be mentioned on the letter.
10. Section C4 of the report states that, the ports on the device were not populated. Please clarify the reason.
11. Please specify the calibration interval of the spectrum analyzer listed on Pg 31 of the report. The calibration dates look quite old.
12. Please note that the limit for 128MHz on page 11 of the report should be 43.5dBuV/m. And in this table the peak to average correction seems to vary for different frequencies and does not agree with 4.4dB listed in Appendix F of the report.
13. The worst case 100ms transmission pulse train must be shown closer with a plot.

Best Regards,

[\[Michael Gaukroger\]](#) Y Yunus Faziloglu
Curtis-Straus LLC
Bureau Veritas

KTL
Saxon Way, Priory Park West, Hull, HU13 9PB
Tel: 01482 801801 Fax: 01482 801806

Email: info@ktl.com Website: www.ktl.com

Disclaimer:

This e-mail may contain information that is privileged, confidential or otherwise protected from disclosure. It must not be used by, or its contents copied or disclosed to persons other than the intended recipient. However, the contents of this e-mail may be intercepted, monitored or recorded for training or compliance purposes. Any liability (in negligence or otherwise) arising from any third party acting, or refraining from acting, on any information contained in this e-mail is excluded.

Warning:

It is the responsibility of the recipient to ensure that the onward transmission, opening or use of this message and any attachments will not adversely affect its systems or data. Please carry out such virus and other checks as you consider appropriate. No responsibility is accepted by Laboratory Accreditation Solutions Ltd t/a KTL in this regard.

Registered in England No 5579538

This message has been scanned for viruses by McAfee Groupshield

KTL

Saxon Way, Priory Park West, Hull, HU13 9PB

Tel: 01482 801801 Fax: 01482 801806

Email: info@ktl.com Website: www.ktl.com

Disclaimer:

This e-mail may contain information that is privileged, confidential or otherwise protected from disclosure. It must not be used by, or its contents copied or disclosed to persons other than the intended recipient. However, the contents of this e-mail may be intercepted, monitored or recorded for training or compliance purposes. Any liability (in negligence or otherwise) arising from any third party acting, or refraining from acting, on any information contained in this e-mail is excluded.

Warning:

It is the responsibility of the recipient to ensure that the onward transmission, opening or use of this message and any attachments will not adversely affect its systems or data. Please carry out such virus and other checks as you consider appropriate. No responsibility is accepted by Laboratory Accreditation Solutions Ltd t/a KTL in this regard.

Registered in England No 5579538

This message has been scanned for viruses by McAfee Groupshield

KTL

Saxon Way, Priory Park West, Hull, HU13 9PB

Tel: 01482 801801 Fax: 01482 801806

Email: info@ktl.com Website: www.ktl.com

Disclaimer:

This e-mail may contain information that is privileged, confidential or otherwise protected from disclosure. It must not be used by, or its contents copied or disclosed to persons other than the intended recipient. However, the contents of this e-mail may be intercepted, monitored or recorded for training or compliance purposes. Any liability (in negligence or otherwise) arising from any third party acting, or refraining from acting, on any information contained in this e-mail is excluded.

Warning:

It is the responsibility of the recipient to ensure that the onward transmission, opening or use of this message and any attachments will not adversely affect its systems or data. Please carry out such virus and other checks as you consider appropriate. No responsibility is accepted by Laboratory Accreditation Solutions Ltd t/a KTL in this regard.

Registered in England No 5579538

This message has been scanned for viruses by McAfee Groupshield

KTL

Saxon Way, Priory Park West, Hull, HU13 9PB

Tel: 01482 801801 Fax: 01482 801806

Email: info@ktl.com Website: www.ktl.com

Disclaimer:

This e-mail may contain information that is privileged, confidential or otherwise protected from disclosure. It must not be used by, or its contents copied or disclosed to persons other than the intended recipient. However, the contents of this e-mail may be intercepted, monitored or recorded for training or compliance purposes. Any liability (in negligence or otherwise) arising from any third party acting, or refraining from acting, on any information contained in this e-mail is excluded.

Warning:

It is the responsibility of the recipient to ensure that the onward transmission, opening or use of this message and any attachments will not adversely affect its systems or data. Please carry out such virus and other checks as you consider appropriate. No responsibility is accepted by Laboratory Accreditation Solutions Ltd t/a KTL in this regard.

Registered in England No 5579538

This message has been scanned for viruses by McAfee Groupshield

KTL

Saxon Way, Priory Park West, Hull, HU13 9PB

Tel: 01482 801801 Fax: 01482 801806

Email: info@ktl.com Website: www.ktl.com

Disclaimer:

This e-mail may contain information that is privileged, confidential or otherwise protected from disclosure. It must not be used by, or its contents copied or disclosed to persons other than the intended recipient. However, the contents of this e-mail may be intercepted, monitored or recorded for training or compliance purposes. Any liability (in negligence or otherwise) arising from any third party acting, or refraining from acting, on any information contained in this e-mail is excluded.

Warning:

It is the responsibility of the recipient to ensure that the onward transmission, opening or use of this message and any attachments will not adversely affect its systems or data. Please carry out such virus and other checks as you consider appropriate. No responsibility is accepted by Laboratory Accreditation Solutions Ltd t/a KTL in this regard.

Registered in England No 5579538

This message has been scanned for viruses by McAfee Groupshield

[attachment "Operational Description.doc" deleted by Yunus Faziloglu/USA/VERITAS]
[attachment "Photo_of_Antenna.pdf" deleted by Yunus Faziloglu/USA/VERITAS]

KTL

Saxon Way, Priory Park West, Hull, HU13 9PB

Tel: 01482 801801 Fax: 01482 801806

Email: info@ktl.com Website: www.ktl.com

Disclaimer:

This e-mail may contain information that is privileged, confidential or otherwise protected from disclosure. It must not be used by, or its contents copied or disclosed to persons other than the intended recipient. However, the contents of this e-mail may be intercepted, monitored or recorded for training or compliance purposes. Any liability (in negligence or otherwise) arising from any third party acting, or refraining from acting, on any information contained in this e-mail is excluded.

Warning:

It is the responsibility of the recipient to ensure that the onward transmission, opening or use of this message and any attachments will not adversely affect its systems or data. Please carry out such virus and other checks as you consider appropriate. No responsibility is accepted by Laboratory Accreditation Solutions Ltd t/a KTL in this regard.

Registered in England No 5579538

This message has been scanned for viruses by McAfee Groupshield

[attachment "FCC art work.pdf" deleted by Yunus Faziloglu/USA/VERITAS] [attachment "CIMG1352.JPG" deleted by Yunus Faziloglu/USA/VERITAS] [attachment "CIMG1353.JPG" deleted by Yunus Faziloglu/USA/VERITAS]