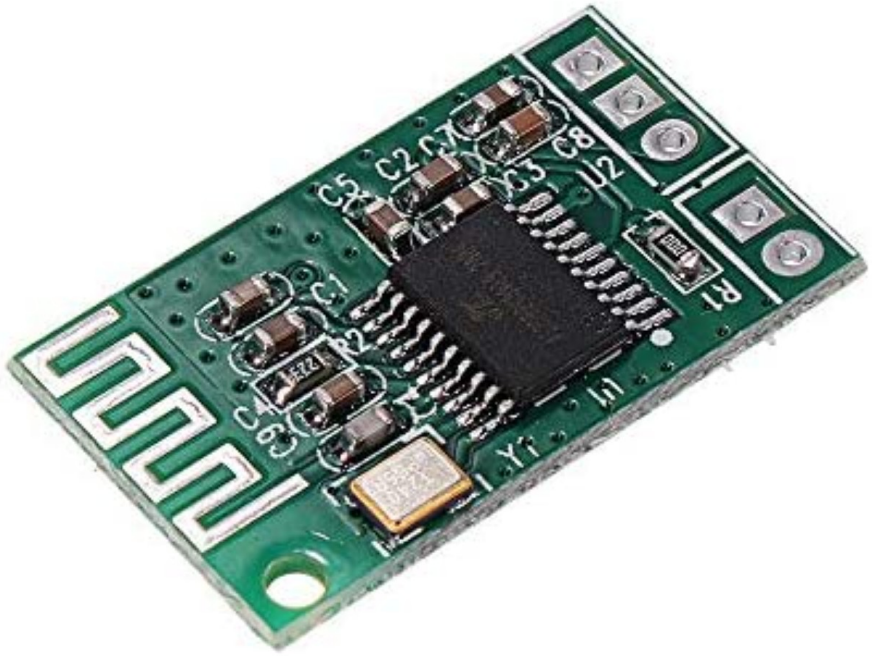
SMART IDQXMOD1 Bluetooth Radio Module Instructions

Contents

SMART IDQXMOD1 Bluetooth Radio Module



Product Information

Manufacturer	SMART Technologies ULC
Address	3636 Research Road NW Calgary, AB T2L 1Y1 CANADA
Phone	403.245.0333
Fax	403.228.2500
Email	info@smarttech.com
Website	www.smarttech.com
FCC ID	QCI-IDQXMOD1
IC	4302A-IDQXMOD1

Product Usage Instructions

To integrate the SMART QX Series BLE radio module Model: IDQXMOD1 into the host product, follow the instructions below:

List of Applicable Rules

The radio module complies with FCC Part 15.247 and RSS-247.

Antennas

Type	Gain	Impedance	Application
Flexible Printed Circuit (FPC)	4.0 dBi	50	Fixed

When integrated within the host product, the antenna is permanently attached and cannot be replaced.

Device Compliance

This device complies with Part 15 of the FCC Rules and RSS-247 of the Innovation, Science and Economic Development Canada Rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Information on Test Modes and Additional Test Requirements
The host product is tested with the IDQXMOD1 radio module installed. The radio operation and test modes are controlled by RF test software on a remote laptop connected via an interface board.

Additional Test, Part 15 Subpart B Disclaimer
The IDQXMOD1 radio module is only authorized for the specific rule parts (FCC Part 15.247 and RSS-247) listed on the FCC grant and ISED certificate. The host product, containing unintentional-radiator digital circuitry, complies with Part 15 Subpart B and ICES-003 with the radio module installed.

Note EMI Considerations
D04 Module Integration Guide has been considered as best practice for RF design engineering testing and evaluation of non-linear interactions which can generate additional non-compliant limits due to module placement to host components or properties. For the standalone mode, D04 Module Integration Guide was referenced, and the simultaneous mode was considered for the host product to confirm compliance.

How to Make Changes
Only the Grantee is permitted to make permissive changes. The Grantee may seek permissive changes to permit the use of the radio module within additional SMART host products following the same procedure as identified in 2.4. Each host product model will require AC Powerline Conducted Emissions, Spurious Radiated Emissions, and conducted output power verification. A C2PC will be completed for the integration into additional host models.

If you have any additional questions, please contact Sean MacKellar, Sr. Regulatory Specialist at SMART Technologies Inc.

Dear Application Examiner:
SMART Technologies Inc. is seeking limited modular approval for SMART QX Series BLE radio module Model: IDQXMOD1, FCC ID: QCI-IDQXMOD1, IC: 4302A-IDQXMOD1. Per KDB 996369, the integration instructions for the radio module within the host product are described below:

- **List of Applicable Rules:** The radio module complies with FCC Part 15.247 and RSS-247

specific operational use conditions

Summarize the specific operational use conditions:
The IDQXMOD1 radio module is specifically designed and intended for mobile applications within the host product family: SMART QX Series Interactive Flat Panel (IFP) Display, Models: IDQX65-1, IDQX75-1, and IDQX86-1. The radio module is not intended for sale as a stand-alone product. The SMART QX Series IFP displays are intended for indoor use only in commercial and educational environments. The IDQXMOD1 radio module must not be co-located or operated in conjunction with any other antenna or transmitter.

Limited Module Procedures:
The IDQXMOD1 radio module does not include its own RF shielding. The radio has been tested in a stand-alone configuration and complies with FCC Part 15.247 and RSS-247. The radio has also been tested within the host product family: QX Series IFP Displays. Each host product model within this IFP series has undergone AC Powerline Conducted Emissions, Spurious Radiated Emissions, and conducted output power verification. The

results of the host product testing demonstrate compliance for the radio module when installed in the host product.

- **Trace Antenna Designs:** Not applicable.

RF Exposure Considerations

1. This equipment is intended for mobile RF exposure conditions. When integrated within the host product, the antenna is located within the pen tray of the display. The minimum separation distance between the antenna and the user's body is 0.5 cm when the user is in close proximity to the pen tray.
2. This equipment complies with FCC and ISED radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Antennas

Type	Gain	Impedance	Application
Flexible Printed Circuit (FPC)	4.0 dBi	50 Ω	Fixed

When integrated within the host product, the antenna is permanently attached and cannot be replaced.

Label and Compliance Information

The radio module is labeled with radio identifiers. Labeling requirements are also satisfied with a visible label applied to the exterior surface of the host product housing. The label will identify the host product model and include the following statements:

- **Contains FCC ID:** QCI-IDQXMOD1
- **Contains IC:** 4302A-IDQXMOD1

The following statements apply to the radio module and must be included in the user documentation for the host product:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Note:
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with RSS-247 of the Innovation, Science, and Economic Development Canada Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Additional test requirements

Information on test modes and additional test requirements:
The host product is tested with the IDQXMOD1 radio module installed. The radio operation and test modes are controlled by RF test software on a remote laptop connected via an interface board.

An additional test, Part 15 Subpart B disclaimer:
The IDQXMOD1 radio module is only authorized for the specific rule parts (FCC Part 15.247 and RSS-247) listed on the FCC grant and ISED certificate. The host product, containing unintentional-radiator digital circuitry, complies with Part 15 Subpart B and ICES-003 with the radio module installed.

Note EMI Considerations:
D04 Module Integration Guide has been considered as "best practice" for RF design engineering testing and evaluation of non-linear interactions which can generate additional non-compliant limits due to module placement to host components or properties.

For standalone mode, D04 Module Integration Guide was referenced, and the simultaneous mode was considered for the host product to confirm compliance.

How to make changes

Only the Grantee is permitted to make permissive changes. The Grantee may seek permissive changes to permit the use of the radio module within additional SMART host products following the same procedure as identified in 2.4. Each host product model will require AC Powerline Conducted Emissions, Spurious Radiated Emissions, and conducted output power verification. A C2PC will be completed for the integration into additional host models.

Please contact me if you have additional questions. Your attention to this matter is greatly appreciated.

Sean MacKellar/Sr. Regulatory Specialist
SMART Technologies Inc.

SMART Technologies ULC

- 3636 Research Road NW Calgary, AB T2L 1Y1 CANADA
- Phone 403.245.0333
- Fax 403.228.2500
- info@smarttech.com.
- www.smarttech.com.

Documents / Resources

	SMART IDQXMOD1 Bluetooth Radio Module [pdf] Instructions IDQXMOD1, IDQX65-1, IDQX75-1, IDQX86-1, IDQXMOD1 Bluetooth Radio Module, Bluetooth Radio Module, Radio Module

References

- EdTech, SMART Boards & Lumio Classroom Learning Software // SMART Technologies