AUTOEQUIPS
TECH AVTX24
Transceiver
Module

AUTOEQUIPS TECH AVTX24 Transceiver Module User Manual

Contents

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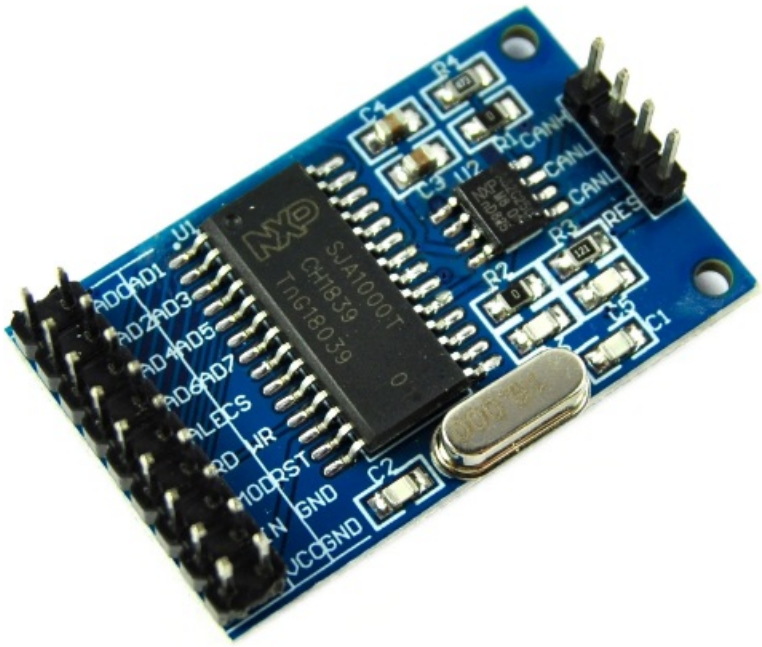

Specifications

- **Certification:** FCC, IC
- **RF Exposure Statement:** Included
- **Integration Instructions:** Provided for host product manufacturers
- **Compliance**: FCC / ISED rules

Product Usage Instructions

1. **Generally**
   The AVTX24 is a certified product that complies with FCC and IC regulations. It is designed for integration into host products by following the provided instructions.
2. **FCC Notes**
   The product adheres to FCC regulations, including Section 15.19, Section 15.21 Statement, and Section 15.105 (a) Statement.
3. **IC Notes**
   The AVTX24 also complies with IC regulations for usage.
4. **RF Exposure Statement**
   The product includes RF exposure statements to ensure user safety and compliance with exposure limits.
5. **Integration Instructions for Host Product Manufacturers**
   Manufacturers integrating the AVTX24 into their products must follow the guidelines outlined in KDB 996369 D03 OEM Manual v01. This includes:
   - List of applicable FCC/ISED rules
   - Specific operational use conditions
   - Limited module procedures
   - RF exposure considerations
   - Antennas usage
   - Label and compliance information
   - Information on test modes and additional testing requirements

- Additional testing, Part 15 Subpart B disclaimer
- Statements for host manual inclusion

Basic Info.

Attribute	Description
Model No.	USB to UART/I2C Module
Shape	DIP
Technics	Semiconductor IC
Transport Package	Factory Standard
Specification	Customization
Trademark	CARATAR
Origin	China

Packaging & Delivery

- Package Size 5.00cm * 10.00cm * 5.00cm
- Package Gross Weight 0.500kg
- Lead Time 10 days (1 – 1000 Pieces)
- To be negotiated (> 1000 Pieces)

Product Description

Part Number	UMFT260EV1A
Manufacturer	Original
Quality	Brand New

Product Overview

The UMFT260EV1A is a development module for FTDI's FT260 HID class USB to UART/I2C bridge IC. The FT260 is a single chip USB to UART/I2C bridge with standard human interface device (HID) class support. The HID class USB to UART/I2C module is ideal for development purposes to quickly prove functionality of adding USB to a target design. The UMFT260EV1A is a module which is designed to plug into a standard 0.8″ wide 24 pin DIP socket. An On-board Micro USB-B type connector allows modules to be connected to a host system via a standard USB A to Micro B cable. Many of the features of FT260 can be utilized with this module.

- USB2.0 compliant full speed device with entire USB protocol handled on the chip
- Support 2 USB HID interfaces, each corresponding to the on-chip physical interfaces, I2C and UART
- Pin configuration of enabling HID interface for variety of application
- HID over I2C specification support
- On-board I2C 2kbits EEPROM to contain FT260 configuration settings and vendor specific parameters
- Jumpers for selecting the FT260 HID interfaces configuration
- Solder jumpers for configuring the FT260Q to be in USB bus powered or self powered modes

Applications
Communications & Networking

Part No: UMFT260EV1A

FT260 DIP development module, standard 0.8″ wide 24 pin DIP socket. **USB to HID-class USB to UART/I2C Bridge IC Development Module for FT260**

- **Data Rates:** 3MBaud
- **USB Speed:** Full Speed (12Mbps)
- **Interfaces:** UART/I2C
- **USB Connector:** Mini B
- **Packages:** N/A
- **Channels:** 1
- **I/O Connector:** 0.8″ wide 24 pin DIP
- **I/O Voltage:** 3.3V
- **USB Class:** HID
- **Virtual Com Port:** No
- **FTDI Internal IC:** FT260

The UMFT260EV1A is a development module for FTDI's FT260, HID-class USB to UART/I2C Bridge IC. The UMFT260EV1A is ideal for development purposes to quickly prove functionality of adding USB to a target design. The UMFT260EV1A is a module which is designed to plug into a standard 0.8 wide 24 pin DIP socket. The USB connection to a host system is via a Micro USB-B connector. All components used, including the FT260 are Pb-free (RoHS compliant).

Generally

- The module is only used in professional industrial radio applications.
- For integration in host device this integration instructions define requirements for installation, safety instructions written in host manual and the labeling requirements.
- Changes or modifications made to this module not expressly approved by the party responsible for compliance may void the authorization to operate this equipment.
- The module is exclusively approved for the integration into host devices by the Grantee, HBC-radiomatic or authorized OEM integrator (hereinafter called "integrator"). The installation of the module must be done by

professional installers. The integrator must observe that only the approved antennas are used or antennas that are in accordance to FCC rule §15.204.

- This device meets the government's requirements for exposure to radio waves. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons regardless of age or health. This device AVTX24 (FCC ID: 2AGPOAVTX24) is evaluated for a separation distance of 5 mm.
- To maintain compliance with FCC RF exposure requirements, the use of accessories that may not comply with FCC RF exposure requirements, must be avoided.
- This device meets the IC RF exposure guidelines with a minimum separation distance of 5 mm. Noncompliance with the above restrictions may result in violation of RF exposure guidelines.

FCC STATEMENT

1. **Section 15.19**
   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.
2. **Section 15.21 Statement**
   Changes or modifications to the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
3. **Section 15.105 (a) Statement**
   This equipment has been tested and found to comply with the limits for 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.

IC notes

RSS-GEN – User Manual Statements (English/French)
This device complies with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference; and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

RF exposure statement
This module will be integrated with internal and external antennas in different host devices. For each final host device, the RF exposure conditions to comply with FCC / ISED requirements will be individually defined and the user instructions of the host device will have appropriate installation or usage instructions. In general, the final host device will be used in such a manner that the potential for human contact including by-standers during normal operation is minimized.

Integration instructions for host product manufacturers according to KDB 996369 D03 OEM Manual v01

List of applicable FCC / ISED rules

- **FCC**: 47CFR Part 15C
- **ISED**: RSS-247

Specific operational use conditions

- Depending on the used antenna type (internal / external) the RF Module can be either integrated in portable or mobile/fixed categorized host devices.
- The maximum allowed antenna gain is 6,0 dBi.
- RF Exposure considerations must be done for each individual host type/antenna combination.

Limited module procedures
This module is exclusively approved for the integration into host devices by integrators.

RF exposure considerations
For all final host devices, the RF exposure is observed in integration process in accordance to the MPE calculation.
For any application the necessary separation distance between the radiating part (antenna) and the human body incl. bystander will be calculated based on the module output power in combination with the antenna gain of the used antenna and position with respect to FCC KDB447498 and ISED RSS-102.

Antennas
The antenna that is used in connection with AVTX24 depends on host device.

Label and compliance information
The AVTX24 is marked in accordance with applicable rules.
The host device will be labelled as follows:

- **Contains FCC ID: 2**AGPOAVTX24
  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.
- **Contains IC**: 33278-AVTX24

Information on test modes and additional testing requirements
The integrator is responsible for the compliance of the final product that incorporates with this transmitter module.

Additional testing, Part 15 Subpart B disclaimer
The module itself is not a subpart B device. The host device in which the module will be installed has to be observed under applicable requirements of §15.101 – §15.123.

Statements for host manual

- **Statement FCC §15.105 for host manual**
  This equipment has been tested and found to comply with the limits for 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.

- **Statement ISED for host manual**

  This device complies with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

  1. This device may not cause interference; and
  2. This device must accept any interference, including interference that may cause undesired operatio of the device.

- **Modification statement, FCC §15.21**

  In the host manual the following statement will be included: "Changes or modifications made to this equipment not expressly approved by the party responsible for compliance may void the FCC authorization to operate this equipment."

FAQ

Q: Can the AVTX24 be used standalone?
A: No, the AVTX24 is designed for integration into host products following the provided integration instructions.

Q: What certifications does the AVTX24 have?
A: The AVTX24 is certified by FCC and IC authorities for compliance with regulations.

Q: Are there any specific RF exposure guidelines to follow?
A: Yes, the product includes RF exposure considerations that should be adhered to during integration and usage.

Documents / Resources

	AUTOEQUIPS TECH AVTX24 Transceiver Module [pdf] User Manual AVRX24, AVTX24 Transceiver Module, AVTX24, Transceiver Module, Module

References

- User Manual