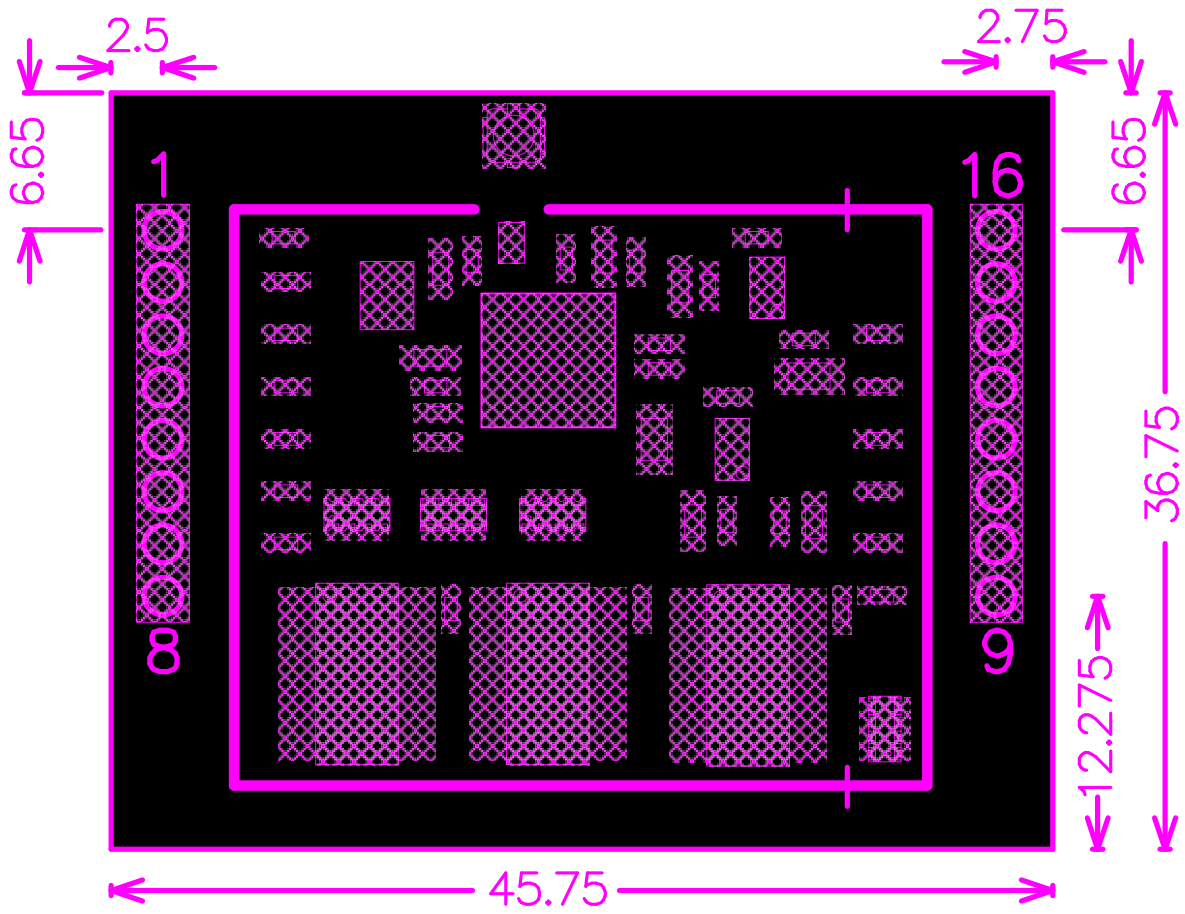
L221AY User Guide

Pin function and Description (Clockwise from top left):

1. PCM Data in – NOT USED
2. PCM Clock Out – NOT USED
3. PCM Sync Out – NOT USED
4. SPI MISO – FOR PROGRAMMING/DEBUG ONLY
5. SPI MOSI – FOR PROGRAMMING/DEBUG ONLY
6. SPI !CS – FOR PROGRAMMING/DEBUG ONLY
7. SPI CLK - FOR PROGRAMMING/DEBUG ONLY
8. VEE – Connect to host system 0V/GND
9. LED OUT 0- Red status LED signal, active high
10. LED OUT 1 – Blue status LED signal, active high
11. LED OUT 2 – NOT USED
12. ASSOCIATE SWITCH IN – Push button switch input to initiate pairing with other devices, should be pulled up with 10k on host system
13. SPDIF OUT – SPDIF audio data output
14. VCC – Connect to +5V
15. VEE – Connect to host system 0V/GND
16. VEE – Connect to host system 0V/GND

Dimensions and Pin Position:



Host System Connection:

The L221 module used Samtec TLW series 0.1” pitch headers for connection to the host system. Samtec SLW series 0.1” pitch low profile sockets are recommended for connection to the L221AY.

More info at http://www.samtec.com/

LED OUT Signals

Module State	Not connected	Connected & paused	Connected & playing	Pairing
LED OUT 0	High	High	Low	Oscilating @ approx 2HZ
LED OUT 1	Low	High	High	Oscilating @ approx 2HZ
LED OUT 2	Low	Low	Low	Low

Module Operation:

To associate/pair the L221YA module with a Bluetooth source apply a 0V signal to the ASSOCIATE SWITCH input pin for more than 2 seconds. This will put the module into discoverable mode and will enable Bluetooth sources to connect to it.
In order to force a connection to the previously connected Bluetooth source apply 0V to the ASSOCIATE SWITCH input for less than 1 second.

PSU requirements:

5.5VDC absolute max, 5VDC nominal, 4.5VDC minimum, 100mA max

Antenna Connection

Supplied antenna should be fitted to SKT1 as shown. Antenna type to be used is a Wanshih WSS002, 2dBi passive dipole antenna with a unique antenna connection (reverse polarity SMA).

FCC INFORMATION (FOR US CUSTOMERS)

1. PRODUCT

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

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

2. IMPORTANT NOTICE: DO NOT MODIFY THIS PRODUCT

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modification not expressly approved by ARCAM may void your authority, granted by the FCC, to use the product.

3. NOTE

This product has been tested and found to comply with the limits for a Class B digital device, persuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This product generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the product into an outlet on a circuit different from that to which the receiver is connected.

Consult the local retailer authorized to distribute this type of product or an experienced radio/TV technician for help.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment shall be installed and operated with a minimum distance of 20cm between the antenna and the user.

Antenna type:
Wanshih WSS002, 2dBi passive dipole with unique antenna connector (reverse polarity SMA).

The antenna is not to be co-located or operated in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

INDUSTRY CANADA INFORMATION (FOR CANADIAN CUSTOMERS)

This Class B digital apparatus complies with canadian ICES-003

1.“This device complies with Industry Canada licence-exempt RSS standard(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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement”

2.“This radio transmitter 10792A -DNW101020 has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio 10792A -DNW101020 a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.”

Antenna type / type d'antenne

Wanshih WSS002, Antenna Gain +2dBi

3. “This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the antenna and your body.
Cet équipement est conforme aux limites IC RSS-102 d'exposition aux rayonnements définies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à distance minimale de 20 cm entre l'antenne et votre corps.

End Product Labelling

The L221AY module is labelled with its own FCC ID and IC Certification Number. If the FCC ID and IC Certification Number are not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. In that case, the final end product must be labelled in a visible area with the following:

"**Contains Transmitter Module FCC ID: YONDNW101020-00**"

"**Contains Transmitter Module IC: 10792A-DNW101020**"

Or

"**Contains FCC ID: YONDNW101020-00**"

"**Contains IC: 10792A-DNW101020**"

If these conditions cannot be complied with then the OEM integrator is responsible for re-evaluating the host product with integrated module and obtaining a new FCC ID.

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module or change RF related parameters in the user manual of the end product.

Étiquetage du produit final

Le module L221AY est étiqueté avec sa propre identification FCC et son propre numéro de certification IC. Si l'identification FCC et le numéro de certification IC ne sont pas visibles lorsque le module est installé à l'intérieur d'un autre dispositif, la partie externe du dispositif dans lequel le module est installé devra également présenter une étiquette faisant référence au module inclus. Dans ce cas, le produit final devra être étiqueté sur une zone visible avec les informations suivantes:

"Contient module émetteur identification FCC: YONDNW101020-00"

"Contient module émetteur IC: 10792A-DNW101020"

Ou

"Contient identification FCC: YONDNW101020-00"

"Contient IC: 10792A-DNW101020"

Dans le guide d'utilisation du produit final, l'intégrateur OEM doit s'abstenir de fournir des informations à l'utilisateur final portant sur les procédures à suivre pour installer ou retirer ce module RF ou pour changer les paramètres RF.

Si ces conditions ne peuvent être respectées lors de l'intégrateur OEM est chargé de réévaluer le produit hôte avec module intégré et d'obtenir un nouvel identifiant FCC.