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March 12, 2004

Attn: Reviewing Engineer  
Federal Communications Commission  
7435 Oakland Mills Road  
Columbia, MD 21046

RE: LIMITED MODULAR APPROVAL FOR FCC ID: RAR20005001 AS PER FCC PUBLIC NOTICE DA 00-1407

To Whom It May Concern,

The module FCC ID: RAR20005001 is submitted for Limited Modular Approval (LMA) by BelAir Networks Inc. In keeping with FCC Public Notice DA 00-1407, Part 15 Unlicensed Modular Transmitter Approval, this letter affirms that BelAir Networks shall retain complete control over the final installation of the device and ensure compliance of the end-product to FCC regulations.

The module shall only be installed into a final product by technicians trained by BelAir Networks. The module shall not be distributed, marketed or sold to the general public. It will only be available installed in a complete BelAir Networks product.

The complete BelAir product shall only be sold by BelAir Networks directly or through a BelAir Networks-specified sales channel to authorized resellers, and will be installed by professional installers with training by BelAir Networks or authorized representatives.

As illustrated by the accompanying documentation, the application consists of two boards which make up the module. The interface between the two modules is proprietary and therefore the Antenna Switch Matrix cannot be used with any other vendor's equipment. The boards have their own RF shielding, contain the complete radio, provides its own power supply regulation, was tested in a stand-alone configuration, will be labeled with FCC ID and meets RF exposure regulations.

The following is a point-by-point response to the items listed in DA 00-1407:



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1. The module has its own RF shielding. It has been tested for radiated emissions with the module in a representative package for the product BelAir200 in which it will be sold.
2. The input to the module is an Ethernet interface. All modulation and 802.11 protocol elements reside within the module. There are no modulation or data inputs to the module which could alter the performance or behaviour of the modulator or radio which could cause it to exceed FCC limits.
3. The module has its own power supply filtering and regulation for all modulation and radio circuitry in order to avoid any issues with varying power supply inputs. The module is powered by several DC voltage rails. In order to test power line conducted requirements for the module, it was tested with the power supply and package as intended for the complete product which will be manufactured by BelAir Networks. BelAir Networks maintains complete control of the AC-to-DC power supply and packaging of the complete product and therefore ensures that compliance will be maintained.
4. The module incorporates MCX RF connectors and does not have an integral antenna on the module. The module was tested in conjunction with the intended antenna (BelAir Networks model BEL20007, 15 dBi directional antenna with 45 degree horizontal beamwidth, 50 ohm impedance). Considering our submission is seeking Limited Modular Approval, BelAir Networks will ensure professional installation of the complete product. In this manner we will ensure that only the approved antenna type is used in conjunction with this module.
5. The module was tested in a stand-alone configuration for conducted and radiated emissions. Since the module itself is not AC powered, power line conducted emissions were tested with the power supply and package in the configuration with which it will be installed in the product (BelAir200). This configuration is also tested to ensure the complete product will meet all Class B radiated and conducted emissions requirements.
6. The module will be labeled with its own FCC ID number. Since this label will not be visible when the module is installed in the complete product, the manual indicates that the final product shall include a permanent label which uses the wording "Contains FCC ID: RAR20005001". See the labeling information provided with this submission.



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7. The module operates under Part 15.407. Since all modulation and 802.11 protocol elements reside within the module, users will not have access to controls which may cause the module to operate outside its normal mode of operation. All timing and control for RF and modulator sections are inaccessible from outside the module.
8. The module has been evaluated with the intended antenna and complies with RF exposure requirements. The manual states that a distance of at least 20 cm shall be maintained between any person and the antenna. In addition, RF exposure has been evaluated to the same safety distance for the worst-case condition of maximum number of three 5 GHz radio modules with antenna matrix (FCC ID: RAR20005001) transmitting and co-located with BelAir Networks 2.4 GHz radio module (RAR20000001). As BelAir Networks or its authorized agents will retain control of the final installation through the requirement for professional installation, BelAir Networks shall ensure that this distance is maintained in all installations.

Sincerely,

A handwritten signature in blue ink, appearing to read "SR". It is written in a cursive, flowing style with a blue ink pen.

Stephen Rayment,  
Chief Technical Officer,  
BelAir Networks Inc.