



**Federal Communications Commission  
Office of Engineering and Technology  
Laboratory Division**

October 23, 2015

**TRANSMITTER MODULE EQUIPMENT AUTHORIZATION GUIDE**

**I. INTRODUCTION**

A transmitter with a modular or limited modular grant<sup>1</sup> can be installed in different end-use products (referred to as a host, host product, or host device) by the grantee or other equipment manufacturer, then the host product may not require additional testing or equipment authorization for the transmitter function provided by that specific module or limited module device.

Modular approvals are for tangible, clearly-delineated devices that operate when installed within, or attached to, a host product in one of the following four physical configurations (i.e., modular type):

- **Single-modular transmitter:**<sup>2</sup> A complete RF transmission sub-assembly,<sup>3</sup> designed to be incorporated into another device, that must demonstrate compliance with FCC rules and policies independent of any host;
- **Limited single-modular transmitter:** A single-modular transmitter that complies with the § 15.212(a)(1) modular rules, only when constrained to specific operating host(s) and/or associated grants condition(s);
- **Split-modular transmitter:** An RF transmission system that complies with the requirements for a single-modular transmitter, that is separated into a radio front-end section and a control-element section, and can demonstrate compliance for a range of similar type hosts;
- **Limited split-modular transmitter:** A split-modular transmitter that complies with the definition and technical rules for split modules only when constrained to specific operating host(s), and/or associated grant condition(s).

The preceding modular types are described further in Clause III. In addition, the attachment KDB Publication 996369 D02 provides other guidance for modules in the form of questions and answers.

---

<sup>1</sup> FCC Public Notice DA 00-1407 initially established policies that allowed for Part 15 unlicensed transmitter equipment authorization certification for a modular device; DA 00-1407 is now replaced by rules in Part 15. The Second Report and Order FCC 07-56 (Docket No. 03-201) established rules under Part 15 (§ 15.212 Modular Transmitters), provided clarification for modular grants, and established a new class for modular devices called split modular transmitters. FCC Public Notice DA 08-314 is a guide to help small businesses; small organizations (non-profits), small governmental jurisdictions, etc., comply with the § 15.212 rules.

<sup>2</sup> Also called self-contained transmitter module (FCC DA 08-314).

<sup>3</sup> The definition as given in Item 3 of FCC DA 08-314 is: “A module generally consists of a completely self-contained transmitter that is missing only an input signal and power source to make it functional. A module is designed to be incorporated into another device, such as a personal computer, personal digital assistant (PDA) or utility meter.”

A host product itself is required to comply with all other applicable FCC equipment authorization regulations, requirements, and equipment functions that are not associated with the transmitter module portion. For example, compliance must be demonstrated: to regulations for other transmitter components within a host product; to requirements for unintentional radiators (Part 15 Subpart B), such as digital devices, computer peripherals, radio receivers, etc.; and to additional authorization requirements for the non-transmitter functions on the transmitter module (i.e., Verification or Declaration of Conformity) as appropriate (e.g., Bluetooth and Wi-Fi transmitter modules may also contain digital logic functions).

To ensure compliance for all non-transmitter functions, a host product manufacturer is responsible for ensuring compliance with the module(s) installed and fully operational. For example, if a host product was previously authorized as an unintentional radiator under the Declaration of Conformity procedure without containing a certified transmitter module, then a module is added, the host manufacturer is responsible for ensuring that the host continues to be compliant with the Part 15 subpart B unintentional radiator requirements after the module is installed and operational. Because this may depend on the details of how the module is integrated within the host, the module grantee (the party responsible for the module grant) shall provide guidance to the host manufacturer for ensuring compliance with the Part 15 Subpart B requirements.<sup>4</sup>

Single or limited-single modules, and the RF front-end section of a split or limited split-module, must be a separate physical assembly that can be installed into (or attached to) a host as a separate subassembly (e.g., daughter-board subassembly). The method used for input and output electrical connections<sup>5</sup> to the host may be soldered, cabled, wired, or use plug-in connectors.<sup>6</sup> A module cannot solely be the implementation of a design specification. Only the control-element section of a split-module device may comprise software, which is certified as companion code to a specific RF front-end (section).

A host product using a component that has been authorized as a module, subject to the requirements described below and the conditions of the grant, may be: (1) marketed and sold with the module built inside that does not have to be end-user accessible/replaceable, or (2) marketed with the module being end-user plug-and-play replaceable.<sup>7,8</sup>

A modular grant is obtained by requesting certification for equipment as a modular device, or requesting a permissive change to convert an equipment certification from a non-modular to a modular device grant; the FCC Form 731 application procedures (§ 2.1033, etc.) are used in both cases. An applicant for a modular filing must indicate on the Form 731:

---

<sup>4</sup> In some cases, a transmitter with an equipment authorization may be both a module and Class B personal computer peripheral, separately authorized under a Declaration of Conformity or a grant of certification, and marketed as both.

<sup>5</sup> Electrical connections to a module generally consist of input signal and power source to a completely self-contained transmitter module.

<sup>6</sup> When the antenna is not on board the module, the applicant must demonstrate how the antennas and/or use only in restrictive host environments that have been approved are ensured [e.g., §§ 15.204(b), 2.929(b)]. Appropriate testing, installation instructions, and grant conditions are required.

<sup>7</sup> A transmitter can be certified as a module, and also marketed as an end product to be used as a stand-alone device or a computer peripheral, as long as the module and the end product remain identical, and any control that will cause operation of the device in violation of the regulations is not provided.

<sup>8</sup> If a DoC or certified Class B personal computer peripheral is also certified as a transmitter that is not certified as a modular device and is used within a host and is not accessible, the host containing that transmitter must use this guidance to determine if further testing is required. See question 14 in attachment 996369 D02 Q&A.

- a) The appropriate modular approval type; and
- b) Submit the following additional exhibits:
  - 1) A cover letter requesting modular approval that includes an itemized list documenting compliance with the modular approval requirements in the § 15.212 rules for unlicensed modules, or the licensed module approval conditions in Clause IV of this document; and
  - 2) Clear and specific instructions describing the conditions, limitations, and procedures for third-parties to use and/or integrate the module into a host device (see Clause II below).
  - 3) For non-Software Defined Radio transmitter modules where software is used to ensure compliance of the device, technical description must be provided about how such control is implemented to ensure prevention of third-party modification; see KDB Publication 594280.
  - 4) For split modular transmitters, specific descriptions for secure communications between front-end and control sections, including authentication and restrictions on third-party modifications; also, instructions to third-party integrators on how control is maintained.
  - 5) For Software Defined Radio (SDR) devices, transmitter module applications must provide a software security description; see KDB Publication 442812.

When the grant is issued it, shall state the device-description modular type, and if applicable, the limiting conditions of the authorization.

## **II. COMPREHENSIVE INTEGRATION INSTRUCTIONS**

For proper integration of modules in end products, it is required that detailed and comprehensive instructions must be provided to the integrators, so that any subsequent associated party (grantee, host manufacturer, original equipment manufacturer (OEM), integrator, or end-user) can clearly understand the conditions and limitations for authorized uses of the modular transmitter. These instructions must be included as one of the Form 731 exhibits. While modules can provide great flexibility for third parties without requiring additional compliance demonstrations for the transmitter function, additional technical requirements may call for separate equipment authorization information for compliance demonstration (e.g., for RF exposure compliance and hearing-aid compatibility, for devices with specific antennas, or specific host/enclosure configurations). A host product incorporating a certified device cannot take advantage of the pre-existing certification of the component transmitter module without conformity with the specific requirements in the instructions. Also, a transmitter module grantee is responsible for including the necessary details for ensuring compliance for RF exposure requirements and the associated usage conditions for portable, mobile, and fixed-mount equipment configurations, as applicable.

## **III. MODULAR TRANSMITTERS SUBJECT TO § 15.212 RULES**

- a) A single-modular transmitter is a self-contained, physically delineated, component for which compliance can be demonstrated independent of the host operating conditions, and which complies with all eight requirements of § 15.212(a)(1) as summarized below. See § 15.212 for more detailed information, and § 2.901, et seq., for general certification requirements.
  - 1) The radio elements must have the radio frequency circuitry shielded. Physical components and tuning capacitor(s) may be located external to the shield, but must be on the module assembly;
  - 2) The module must have buffered modulation/data inputs to ensure that the device will comply with Part 15 requirements with any type of input signal;

- 3) The module must contain power supply regulation on the module;
  - 4) The module must contain a permanently attached antenna, or contain a unique antenna connector, and be marketed and operated only with specific antenna(s), per §§ 15.203, 15.204(b), 15.204(c), 15.212(a), 2.929(b);
  - 5) The module must demonstrate compliance in a stand-alone configuration;
  - 6) The module must be labeled with its permanently affixed FCC ID label, or use an electronic display (see KDB Publication 784748);
  - 7) The module must comply with all specific rules applicable to the transmitter, including all the conditions provided in the integration instructions by the grantee;
  - 8) The module must comply with RF exposure requirements (see Clause V below).
- b) A limited single-modular transmitter is a transmitter that does not meet all eight requirements listed in § 15.212(a)(1), and compliance can be demonstrated only for specific host(s) and the applicable operating conditions in which the transmitter will be used. For example, manufacturers have flexibility with respect to requirements such as module shielding, buffered modulation/data inputs, and power supply regulation. If one or more of these functions (shielding, buffered modulation/data inputs, power supply regulation) are provided by a specific host or hosts, then the module can be granted as a limited module that is limited to that specific host or hosts. The responsible party must demonstrate how it will retain control over the final installation of the device such that compliance of the product is ensured; for example, by limiting the installation to a specific host or hosts.

A limited modular approval is based on conditions established in the application such as: the host device(s) into which the module can be installed; documented requirements for professional installation; the antenna separation distance from persons; or, the locations where a device may be used (e.g., outdoor only).

- c) A split-modular transmitter is comprised of two basic components: (1) the “radio front-end” or radio elements, and (2) the transmitter control element (may be a firmware/software element). Split transmitter modules must comply with: the single modular requirements of § 15.212(a)(1), summarized in II a) above, with the exception of items 1) and 5); in addition, the split-module transmitter requirements of § 15.212(a)(2), as summarized below:
- 1) Only the radio front-end must be shielded. The physical components, crystal, and tuning capacitor(s) may be located external to the shielded radio elements. The interface between the split sections of the modular system must be digital, with a minimum signaling amplitude of 150 mV peak-to-peak;
  - 2) Control information and other data may be exchanged between the transmitter control elements and the radio front-end (see V below for further guidance on the type of information to be provided in a filing);
  - 3) The sections of a split-modular transmitter are installed for testing on a host platform that is representative of the platform(s) intended for use. It is the responsibility of the applicant to demonstrate the appropriateness of the test platform for compliance to a widespread range of common host platforms, i.e., not restricted to a specific host. For example, compliance may be demonstrated on an open (not within a specific host enclosure) reference-design circuit board, to demonstrate conformity independent of the host environment. Therefore, note that when compliance is tested with the module enclosed in a specific host, then the split module must be limited; see d) below.
  - 4) The radio front-end and transmitter control element must be certified as amalgamated elements by the responsible party. The responsible party must demonstrate the authentication method, to guarantee that only this coupling will operate the radio. Manufacturers may use means including, but not limited to, coding in hardware and electronic signatures in software, to meet these requirements, and the methods must be described in the application for equipment authorization.

- d) A limited split-modular is a transmitter that does not meet all the requirements of a split-modular device. As is the case for limited single-modular devices, compliance can be demonstrated under specific host and the applicable operating conditions in which the transmitter will be used.
- e) For guidance on FCC ID labeling for modules, see KDB Publication 784748.

#### **IV. MODULAR TRANSMITTERS SUBJECT TO LICENSED RADIO SERVICES RULES**

Licensed transmitter modules are not subject to specific modular approval rules as are Part 15 intentional radiators. However, applications for single or limited-single modules under the rules for licensed devices are permitted for the following conditions:

- a) Split-modular approvals or limited split-modular approvals are not permitted for licensed modular devices;
- b) Applicants may use § 15.212 provisions for additional guidelines, for good engineering practice. In this case, the modular approval cover letter must also include an itemized list documenting compliance with analogous conditions (see III a) of this document).
- c) The grantee is required to provide clear documented instructions (as described in Clause II) to other parties (e.g., host manufacturers, Original Equipment Manufacturers) and end users.
- d) The grantee is responsible for full compliance.
- e) Licensed modular grant conditions shall be listed on the grant:
  - 1) The maximum antenna gain to ensure compliance with rules, such as EMC (e.g., EIRP, PPSD limits),
  - 2) RF exposure requirements, and
  - 3) Host product limitations.
- f) For guidance on FCC ID labeling, see KDB Publication 784748.
- g) Licensed modular devices must be compliant to all specific applicable licensed radio service rules.

#### **V. PRE-APPROVAL GUIDANCE FOR SPLIT MODULAR TRANSMITTERS**

A split modular transmitter is subject to the Pre-Approval Guidance (PAG) procedure (KDB Publication 388624) prior to each original or permissive change application. The grantee must submit a separate attestation for addressing compliance of the final host configuration specifically for the following four topics.

- a) Demonstrate compliance for the authentication method used to ensure that the host and/or installed transmitter control elements will only operate the radio front end as granted together.
- b) Compliance of the host using a split module(s) is a shared responsibility between the module grantee and the host manufacture integrating the split module(s). The grantee must document in the filling their prescribed method of control used by both parties to ensure full compliance of the end product.
- c) Provide a detailed software security procedure and description, demonstrating that only the responsible parties (as defined in the shared responsibility description) have the ability to integrate, load, modify, and install

software that controls the operation in accordance with rules as granted. Applicants can use Clause II of KDB Publication 442812 D01 for additional guidance.

- d) Describe the test platform used to demonstrate compliance, and provide supporting justification that it is representative of the host systems. If compliance can only be tested with a specific host, then the PAG submission must state that the split module is limited and tested in a specific host. Also address in this section compliance with the applicable RF exposure requirements.

## **VI. RF EXPOSURE CONSIDERATIONS**

KDB Publication 447498 provides detailed guidance to determine RF exposure evaluation requirements for modular transmitters for use in mobile and portable devices. Generally, modules should be initially evaluated in as many configurations as possible, to minimize requiring further tests by host integrators. The following provides some guidance for common cases.

- a) When modules can be installed by an end-user in host products with pre-installed antennas, some type of bi-directional authentication function must be used to ensure that only the combinations of approved hosts and modules can be used together. This must be documented in the filing.
- b) Modular approvals for devices operating in mobile or fixed exposure conditions are not automatically considered to be limited modular approvals for RF exposure requirements; however, restrictions for specific host or particular product configurations may result in limited modular conditions for other reasons.
- c) See KDB Publication 616217 to determine conditions for a module to be used in various laptop and netbook configurations with minimal subsequent SAR evaluations in qualified hosts.
- d) In general, for modular transmitters for portable devices (hosts) that use trace antenna(s) implemented on third-party hosts, the approval will be limited to specific host platform depending on the operating conditions, to address the SAR test requirements. If the module design uses host trace antenna(s) and operates at power levels below the SAR exclusion thresholds and is intended for standalone use, it may be approved as single module if pre-approved by the FCC. This approval must be made through a pre-TCB KDB inquiry. See Question 11 in KDB Publication 996369 D02 for additional guidance.
- e) Transmitters which permit power management based on various sensor operations on the host, for example proximity sensors, orientation sensors, etc., can be approved only as limited modular transmitters under special restrictions on the host. Such application must be approved through a pre-TCB KDB inquiry.

## **VII. MULTIPLE TRANSMITTER MODULES USED IN A HOST**

Combining multiple modular approved transmitters within a host is permitted for modules which have been evaluated and granted authorization to cover such configurations; and all required and submitted test data must include compliance information for any simultaneous transmission configurations. Each module must have a unique FCC ID. A transmitter module capable of transmitting simultaneously with another transmitter can be granted as an original grant, or a Class II permissive change, by following the applicable simultaneous

transmission test procedures.<sup>9</sup> Additional tests for RF exposure and EMC are necessary for modules which have not been evaluated for such operation to demonstrate compliance with all the rules. This will require modification of simultaneous transmission restrictions through permissive changes for the modules in the host, unless it is determined that such evaluations are exempted. Applicability of such a policy must be explained within a filing when a justification for no testing is submitted. The OEM integrator or the host manufacturer is responsible for the overall compliance of the host products, and as discussed below, may work with the module grantees to ensure that proper test data for multiple transmitter operations are included in the application filings for the modules.

If the host device supports the installation by end-users of different modules or module-like transmitters that are independently approved, the host manufacturer must ensure that the host will continue to comply under the various configurations that may be possible with multiple transmitters.

For additional Guidance for Host manufactures see Section IX below.

## **VIII. PERMISSIVE CHANGES (FOR AN ORIGINAL RESPONSIBLE PARTY)**

Changes from a non-modular to modular certification, and from a full modular to a limited modular certification, are permitted if the changes meet the requirements for a permissive change in § 2.1043 (see also KDB Publication 178919), and the modular approval requirements discussed above.

The original grantee may submit new test data to modify the existing limitations of the grant as permitted under the permissive change rules (§ 2.1043). For example, modifying simultaneous transmission restrictions for EMC and RF exposure can be done under a Class II permissive change, typically for specific end-use or product configuration. Evaluation requirements include:

- a) All transmitters must have the required simultaneous transmission test data;
- b) Simultaneous transmission evaluation requirements for RF exposure are described in KDB Publication 616217 for laptop and tablet computers, and KDB Publication 447498 for other mobile and portable devices.

## **IX. GUIDANCE FOR HOST MANUFACTURERS USING MODULES <sup>10</sup>**

A module or modules can only be used without additional authorizations if they have been tested and granted under the same intended end-use operational conditions, including simultaneous transmission operations. When they have not been tested and granted in this manner, additional testing and/or FCC application filing may be required. The most straightforward approach to address additional testing conditions is to have the grantee responsible for the certification of at least one of the modules submit a permissive change application (as discussed in Clause VIII above).

---

<sup>9</sup> For examples and discussions, see Questions 12 and 13 in KDB Publication 996369 D02. Also, KDB Publications 447498 and 662911 provide guidance for evaluation of multiple transmitters. EMC see requirements under § 15.31(k) for simultaneous transmission.

<sup>10</sup> This clause is adapted from a portion of the FCC-TCB conference presentation entitled “Modular Transmitters,” April 2013, available at: (<https://www.fcc.gov/oet/ea/presentations>). The same document is also available as an expired presentation on draft publication, at: (<https://apps.fcc.gov/oetcf/kdb/reports/ExpiredDocumentList.cfm?eyr=2013>).

When having a module grantee file a permissive change is not practical or feasible, the following guidance provides some additional options for host manufacturers.

Integrations using modules where additional testing and/or FCC application filing(s) may be required are: (A) a module used in devices requiring additional RF exposure compliance information (e.g., MPE evaluation or SAR testing); (B) limited and/or split modules not meeting all of the module requirements; and (C) simultaneous transmissions for independent collocated transmitters<sup>11</sup> not previously granted together.

**Table 1—Authorization options for host manufacturers and grantees**

		Host Manufacturer Procedure Options			Grantee Procedure
		Verification Evaluation Approach	Change in ID & Class II Permissive Change	NEW FCC ID	
A	RF exposure evaluation required	Not Applicable	For situations to address RF exposure.	Permissive Change	
B	Limited Module	Not Applicable	For situations to address RF the limitation	Permissive Change	
C	Simultaneous Transmission	If no additional filling is required, Host Mfr. can use an evaluation see C below.	For situations to address RF exposure or when additional filing is required.	Permissive Change	

**A. RF exposure evaluation (e.g., SAR) required**

When additional RF exposure compliance demonstration is required (e.g., for § 2.1091 mobile devices or § 2.1093 portable devices), the host manufacturer may file a Change in ID application, or use a new FCC ID (see Question 1 in KDB Publication 996369), in lieu of having the grantee file a Class II permissive change.

**B. Limited module**

When the host manufacturer is using a limited, split, or limited-split module, they must comply with the requirements-of-use as instructed by the module grantee. In this case, the module grantee is responsible to provide detail instructions for the alternative means approved under the certification that ensure compliance under the operating conditions in which the transmitter will be used. In these cases, the module grantee is required to review and approve use of the limited/split module in the host employing testing or the acceptable alternative means as covered by the grant.

When the host manufacturer cannot comply, or is not given clear direction(s) to address the limitation(s), the only procedure available to the host manufacturer is to have the module grantee approve the use of the module through either a Class I or Class II permissive change under the existing FCC ID or the host manufacturer may file a Change in ID application, or use a new FCC ID (see Question 1 in KDB Publication 996369). For example, when

<sup>11</sup> Independent of whether the grant notes explicitly state collocation restrictions or not, compliance for simultaneously-transmitting transmitters contained in an end product not previously tested together must be addressed, as described in this document.



the module is limited because it is not shielded, only the module grantee can make the test evaluation that the module is compliant in the host. When the module grantee either refuses to make this evaluation, or does not think it is necessary, the module certification is rendered invalid for use in the host, and the host manufacturer has no choice other than to use a different module, or take responsibility (§ 2.929) and obtain a new FCC ID for the product.

### **C. Simultaneous-transmission operations**

To date, very few modules have been tested together and granted for operation in simultaneously-transmitting (collocated) end product configurations. Evaluating compliance for a host using certified modules and/or a standalone end product requires addressing EMI requirements under § 15.31(k) for simultaneous transmission and for RF exposure (§ 2.1091 mobile devices and § 2.1093 portable devices). In either case, the filing requires demonstrating that all transmitters designed to operate simultaneously have been evaluated under simultaneous-transmission conditions.

When a host product supports simultaneous-transmission operations, and the associated transmitters have not been evaluated for the specific combination, the host manufacturer can first determine if there are additional RF exposure filing requirements due to the simultaneous transmissions (see Clause VI above, and KDB Publication 447498). If additional filing is required, either have the grantee file a Class II permissive change, or the host manufacturer may file a Change in ID application or new FCC ID (see Question 1 in KDB Publication 996369 D02).

When additional application filing for RF exposure compliance demonstration is not required, the host manufacturer may do their own evaluation without any filing, and using reasonable engineering judgment and testing based on the requirements of § 15.31(k) and with the procedures outlined for verification (i.e., §§ 2.953 and 2.948), for confirming compliance with out-of-band, restricted band, and spurious emission requirements in the simultaneous-transmission operating modes. See question 12 in Publication 996369 D02 for additional guidance.

## **X. SELECTED RELATED KDB PUBLICATIONS**

- KDB Publication 178919 Permissive Change Policy
- KDB Publication 388624 Pre-Approval Guidance procedures and list
- KDB Publication 442812 SDR Apps (Application) Guide
- KDB Publication 447498 RF exposure in equipment authorizations
- KDB Publication 594280 Software Configuration control
- KDB Publication 616217 RF exposure for laptop and tablet computers
- KDB Publication 784748 Labeling requirements

## **Change notices:**

**02/03/2011:** 996369 D01 Module Equip Auth Guide v01 has been changed to 996369 D01 Module Equip Auth Guide v01r01.

1. Minor editorial changes have been made to correct spelling and grammar.
2. Answer to Question 1 B has been changed - Change in ID Certification (Section 2.933) - to clarify that an applicant can only file for a change in ID for a certified module if they have written permission from the original grantee.
3. Question 10 has been added - must the shield enclose the entire module.
4. Question 11 has been added – a device that uses a micro-strip trace in the antenna design.

**06//17/2011** 996369 D01 Module Equip Auth Guide v01r01 has been changed to 996369 D01 Module Equip Auth Guide v01r02.

1. Clarification added in the filling requirements for software configuration controls for [non-Software defined radios](#) and [software defined radios](#).
2. Changes made [IV. RF Exposure](#) Considerations to for RF exposure requirements for modules.
3. Changes made [to question 11](#) to reiterate and clarify question 11 for RF exposure and OEM instructions.

**07//12/2011** 996369 D01 Module Equip Auth Guide v01r02 has been changed to 996369 D01 Module Equip Auth Guide v01r03

996369 D01 Module Equip Auth Guide v01r02 was mislabeled in the footer as 996369 D01 Module Equip Auth Guide v01r01. This version 996369 D01 Module Equip Auth Guide v01r03 updates the footer to agree with the current posted version and revision. No other changes have been made.

**10//31/2013:** 996369 D01 Module Equip Auth Guide v01r03 has been changed to 996369 D01 Module Equip Auth Guide v01r04 . Split Module applications were removed from the exclusion list (KDB 628591) and added to the Permit but Ask (PBA) list (KDB 388624 ). Section VII Permit but Ask Guidance for Split Modular Transmitters above was added for providing PBA guidance.

**10/23/2015:** 996369 D01 Module Equip Auth Guide v01r04 has been changed to 996369 D01 Module Equip Auth Guide v02.

1. The module Q&A section of 996369 D01 Module Equip Auth Guide v01r04 has been moved to a separate attachment 996369 D02 Module Q&A.
2. Questions 12 and 13 are added to 996369 D02 Module Q&A about misc. multi-transmitter operations.
3. Question 14 added about USB dongles as example integrated within end products.
4. Clause I modified by moving the first bulleted list to end of the clause.
5. Footnote 1 amended to remind that DA-00-1407 obsolete because it is superseded by 15.212.
6. Change notation from PBA to PAG.
7. Misc. basic editorial cleanups.
8. Clause numbering adjusted after adding number for integration instructions clause.
9. Clause IX added about host product considerations.