

John Deere Connectivity Gateway Operator's Manual Additions

*Content to be added to vehicle User Manual (included with every mower
and available online)*

1. Component Overview
2. FCC, IC and CE Compliance Statements

REGULATORY AND COMPLIANCE INFORMATION

Federal Communication Commission Notifications to User

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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment 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 equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC 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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FOR MOBILE DEVICE USAGE (>20cm/low power)

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This module is intended for OEM integrators only. Per FCC KDB 996369 D03 OEM Manual v01 guidance, the following conditions must be strictly followed when using this certified module:

KDB 996369 D03 OEM Manual v01 rule sections:

2.2 List of applicable FCC rules

This module has been tested for compliance to FCC Part 15, 22, 24 and 27.

2.3 Summarize the specific operational use conditions

The module is tested for standalone mobile RF exposure use condition. Any other usage conditions such as co-location with other transmitter(s) or being used in a portable condition will need a separate reassessment through a class II permissive change application or new certification.

2.6 RF exposure considerations

This equipment complies with FCC mobile radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. If the module is installed in a portable host, a separate SAR evaluation is required to confirm compliance with relevant FCC portable RF exposure rules.

2.7 Antennas

The following antennas have been certified for use with this module; antennas of the same type with equal or lower gain may also be used with this module. The antenna must be installed such that 20 cm can be maintained between the antenna and users.

	WWAN	WLAN	GPS
Antenna Type	IFA Metal Stamping Antenna	IFA PCB	Ceramic patch
Antenna connector	NA (soldered on board)	MMCX	MMCX

*The max. allowed antenna gain for Metal stamp antenna is 1.16dBi for 850MHz band, 3.75dBi for 1900MHz band, 3.15dBi for 1700MHz band and 0.66dBi for 700MHz band. The max. allowed antenna gain for PCB antenna type is 3.68dBi.

2.8 Label and compliance information

The final product must be labeled in a visible area with the following: “Contains FCC ID: 2AAFX-JDCGNUS3110”. The grantee's FCC ID can be used only when all FCC compliance requirements are met.

2.9 Information on test modes and additional testing requirements

This transmitter is tested in a standalone mobile RF exposure condition and any co-located or simultaneous transmission with other transmitter(s) or portable use will require a separate class II permissive change re-evaluation or new certification.

2.10 Additional testing, Part 15 Subpart B disclaimer

This transmitter module is tested as a subsystem and its certification does not cover the FCC Part 15 Subpart B (unintentional radiator) rule requirement applicable to the final host. The final host will still need to be reassessed for compliance to this portion of rule requirements if applicable.

As long as all conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

IMPORTANT NOTE: In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

Manual Information to the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

OEM/Host manufacturer responsibilities

OEM/Host manufacturers are ultimately responsible for the compliance of the Host and Module. The final product must be reassessed against all the essential requirements of the FCC rule such as FCC Part 15 Subpart B before it can be placed on the US market. This includes reassessing the transmitter module for compliance with the Radio and EMF essential requirements of the FCC rules. This module must not be incorporated into any other device or system without retesting for compliance as multi-radio and combined equipment.

Industry Canada Notifications to User

This device complies with ISED's licence-exempt RSSs. 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.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

FOR MOBILE DEVICE USAGE (>20cm/low power)

Radiation Exposure Statement:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with greater than 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 20 cm entre le radiateur et votre corps.

This device is intended only for OEM integrators under the following conditions: (For module device use)

- 1) The transmitter module may not be co-located with any other transmitter or antenna.

As long as the condition above is met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

Cet appareil est conçu uniquement pour les intégrateurs OEM dans les conditions suivantes: (Pour utilisation de dispositif module)

- 1) Le module émetteur peut ne pas être coïmplanté avec un autre émetteur ou antenne.

Tant que les condition ci-dessus sont remplies, des essais supplémentaires sur l'émetteur ne seront pas nécessaires. Toutefois, l'intégrateur OEM est toujours responsable des essais sur son produit final pour toutes exigences de conformité supplémentaires requis pour ce module installé.

IMPORTANT NOTE:

In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the Canada authorization is no longer considered valid and the IC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate Canada authorization.

NOTE IMPORTANTE:

Dans le cas où ces conditions ne peuvent être satisfaites (par exemple pour certaines configurations d'ordinateur portable ou de certaines co-localisation avec un autre émetteur), l'autorisation du Canada n'est plus considéré comme valide et l'ID IC ne peut pas être utilisé sur le produit final. Dans ces circonstances, l'intégrateur OEM sera chargé de réévaluer le produit final (y compris l'émetteur) et l'obtention d'une autorisation distincte au Canada.

End Product Labeling FOR MOBILE DEVICE USAGE (>20cm/low power)

This transmitter module is authorized only for use in device where the antenna may be installed and operated with greater than 20cm between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains IC: 11137A-JDCGNUS3110".

Plaque signalétique du produit final

Ce module émetteur est autorisé uniquement pour une utilisation dans un appareil où l'antenne peut être installée et utilisée à plus de 20 cm entre l'antenne et les utilisateurs. Le produit final doit être étiqueté dans un endroit visible avec l'inscription suivante: "Contient des IC: 11137A-JDCGNUS3110".

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

Manuel d'information à l'utilisateur final

L'intégrateur OEM doit être conscient de ne pas fournir des informations à l'utilisateur final quant à la façon d'installer ou de supprimer ce module RF dans le manuel de l'utilisateur du produit final qui intègre ce module.

Le manuel de l'utilisateur final doit inclure toutes les informations réglementaires requises et avertissements comme indiqué dans ce manuel.

CE Compliance Statement

This device complies with **Directive 2014/53/EU** issued by the Commission of the European Community.

A minimum separation distance of **24 cm** must be maintained between the user's body and the device, including the antenna during body-worn operation to comply with the RF exposure requirements in Europe.

- Frequency bands and Powers

- a. Frequency band(s) in which the radio equipment operates:

Cellular:

Region Variant	2G	HSPA+	LTE FDD	LTE TDD	TD-SCDMA
LE910C1-EU	3, 8	1, 3, 8	1, 3, 7, 8, 20, 28A	-	-

WiFi:

2.4 GHz – IEEE 802.11b/g/n					
20 MHz Channels			40 MHz Channels		
Channel	Frequency	Unit	Channel	Frequency	Unit
1	2412	MHz	1-5	2422	MHz
2	2417	MHz	2-6	2427	MHz
3	2422	MHz	3-7	2432	MHz
4	2427	MHz	4-8	2437	MHz
5	2432	MHz	5-9	2442	MHz
6	2437	MHz	6-10	2447	MHz
7	2442	MHz	7-11	2452	MHz
8	2447	MHz			
9	2452	MHz			
10	2457	MHz			
11	2462	MHz			
12	2467	MHz			
13	2472	MHz			

- b. Maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates

Cellular:

Typical values for Max output level are as follow:

- **2G:**
 - LB: 33dBm
 - HB: 30dBm
- **3G/TD-SCDMA:** 24dBm
- **4G (FDD & TDD):** 23dBm @1RB.

WiFi:

802.11b 2.4GHz 20MHz BW

Parameter	Condition	Min.	Typ.	Max.	Units
Transmit output power			+16		dBm

802.11g 2.4GHz 20MHz BW

Parameter	Condition	Min.	Typ.	Max.	Units
Transmit output power	6 Mbps ~ 36 Mbps		+16		dBm
	48 Mbps ~ 54 Mbps		+15		dBm

802.11n 2.4GHz 20MHz BW

Parameter	Condition	Min.	Typ.	Max.	Units
Transmit output power	MCS0 ~ MCS2		+15		dBm
	MCS3 ~ MCS4		+15		dBm
	MCS5 ~ MCS7		+14		dBm

802.11n 2.4GHz 40MHz BW

Parameter	Condition	Min.	Typ.	Max.	Units
Transmit output power	MCS0 ~ MCS2		+14		dBm
	MCS3 ~ MCS4		+14		dBm
	MCS5 ~ MCS7		+13		dBm

The maximum antenna gain for frequency 900 MHz is 1.54 dBi; for frequency 1800 MHz is 3.15 dBi and the antenna separation distance is 20cm.

John Deere Connectivity Gateway

Technical Manual Additions

Content to be added to vehicle Technical Manual (only accessible for service purposes by appropriate personnel)

Component Overview

Connectivity Gateway (CG) Characteristics

Requirements	Conditions
Operating Temperature	-30° C to 70° C (-35° F to 158° F)
Operating Voltage	12- or 24-Volt DC
Operating Current	500mA max @ 12V
	250mA max @ 24V
Sleep current	10mA max @ 12V

Connector Pinouts

J1 - 12-pin Main Connector 0430451219

Pin #	Function	Pin #	Function
1	DISABLE	7	UI_STOP_B
2	REST	8	UART4_TX
3	VBAT	9	UART4_RX
4	GND	10	GND
5	VSP	11	VP
6	UI_STOP_A	12	GROUND

J11 - USB OTG Connector 104004-0501

Pin #	Function
1	VCC
2	CONN_USB_N
3	CONN_USB_P
4	OTG_ID
5	GND

J5 – User Interface Connector 52746-1671

Pin #	Function	Pin #	Function
1	4V2	9	UI_LED1
2	KEY_COLO	10	UI_LED2
3	KEY_COL1	11	UI_LED3
4	KEY_COL2	12	UI_LED4
5	KEY_COL3	13	UI_LED5
6	KEY_ROW0	14	NC
7	KEY_ROW1	15	GND
8	KEY_ROW2	16	GND

J6 – LCD Connector 52746-1871

Pin #	Function	Pin #	Function
1	VLED+	10	LCD_CSB
2	VLED-	11	GND
3	GND	12	3V3
4	TP11	13	CAP1
5	NC	14	CAP1
6	LCD_MOSI	15	CAP2
7	LCD_SCLK	16	CAP2
8	LCD_NRST	17	CAP3
9	LCD_A0	18	GND

Mounting :

Mounting Screw Locations.

There are a total of 4 mounting screw holes as pointed to by the red arrows below.

