



CL-55 User Manual

Part Number: 1033350-01

Rev Number: 1.7

© Copyright Topcon Positioning Systems, Inc.

All contents in this manual are copyrighted by Topcon Positioning Systems. All rights reserved. The information contained herein may not be used, accessed, copied, stored, displayed, sold, modified, published, or distributed, or otherwise reproduced without express written consent from Topcon Positioning Systems.

Topcon Positioning Systems shall not be held responsible for possible inaccuracies due to misprints within this Manual; Topcon Positioning Systems reserves the right to modify the Manual and the devices in appropriate ways to generally improve the product, without prejudice to its performance.

Table of Contents

Foreword	3
General Information.....	3
Description.....	3
CL-55 variants	3
Hardware	4
Technical Specifications	9
Thermal characteristics.....	9
General environmental characteristics	10
Electrical characteristics	10
Installation – setup	16
CL-55 installation.....	16
Layout diagrams	17
Label Product.....	18
User interface.....	20
Product warranty	21
Assistance and repair.....	21
Use restrictions and warnings (RED).....	21
Use restrictions and warnings (FCC / ISED).....	22
RF Radiation Exposure statement	24
Use restrictions and warnings (Anatel)	24
Use restrictions and warnings (Australia/New Zealand)	25
Use restrictions and warnings UK (UKCA).....	25
Declaration of conformity	26

Foreword

The CL-55 adds cellular and Wi-Fi capability to the X-Family consoles. It allows access to the new Topcon Agriculture Platform (TAP), which is a cloud based integrated agronomic management platform. It also provides access to the XTEND feature in the Horizon console operating system.

General Information

Description

The CL-55 (Couldlink55) is proposed as a standalone box with a dedicated LINUX-based, ultra-low power, hi-performance processor. It will provide 3G global, LTE cat1 regional, Dual-mode Bluetooth v4.2, WiFi 802/11 b,g,n communication capability along with a multimode positioning system (a-GPS and telephone cell geo-referencing) and an hardware based, highly secure encryption engine, up to 4 CAN Lines and LAN Lines BroadR-Reach automotive and standard Ethernet. The CL-55 is also compatible with a 4G/LTE modem covering different geographical areas and operators (EU/AUS/VZW/JAP). The IP66 plastic box, the industrial grade working temperature range of the electronics and the rugged mechanics, allow the use of CL-55 on any kind of agricultural or construction machine and other on-road and off-road transportation means.

CL-55 variants

The CL-55 is available in different hardware versions with different MODEM characteristics:

- CL-55 3G
- CL-55 3G BG
- CL-55 LTE EU
- CL-55 LTE JPN
- CL-55 LTE AUS
- CL-55 LTE VZW

- CL-55 3G +RADIO
- CL-55 LTE EU +RADIO
- CL-55 LTE JPN +RADIO
- CL-55 LTE AUS +RADIO
- CL-55 LTE VZW +RADIO

- CL-55 3G SDF
- CL-55 LTE EU SDF
- CL-55 LTE AUS SDF
- CL-55 LTE VZW SDF
- CL-55 3G +RADIO SDF
- CL-55 LTE EU SDF +RADIO
- CL-55 LTE AUS +RADIO SDF
- CL-55 LTE VZW +RADIO SDF

- CL-55 LITE 3G
- CL-55 LITE LTE EU
- CL-55 LITE LTE JPN
- CL-55 LITE LTE AUS
- CL-55 LITE LTE VZW
- CL-55 GLOBAL
- CL-55 +RADIO GLOBAL
- CL-55 GLOBAL SDF
- CL-55 +RADIO GLOBAL SDF

The versions for European market are CL-55 3G and CL-55 LTE EU and the corresponding LITE and +RADIO versions and all GLOBAL models. CL-55 3G BG and all “SDF” are specialized versions for specific customers but identical to the standard at the technical point of view. CL-55 3G, CL-55 3G +RADIO models have the Anatel certification also. See “Electrical characteristics” for details on every modem.

Hardware

Mechanical characteristics

The Mechanical components of CL-55 are:

- Back housing / aluminum carrier
- Plastic front cover with integrated LED-windows
- Mainboard
- Antennas (external & internal)
- Supporting parts (gasket, screws, M8-harness, venting membrane, Label, ...)
- GPS antenna connector: C TYPE BLUE CONNECTOR
- 3G/4G antenna connector: D TYPE BORDEAUX FAKRA CONNECTOR
- Diversity antenna connector: L TYPE CARMINE RED FAKRA CONNECTOR
- RP-SMA CONNECTOR Wi-Fi
- SATEL RTK
- Input connector J7
- LAN connector J6 (4 contacts)
- LAN connector J8 (3 contacts)

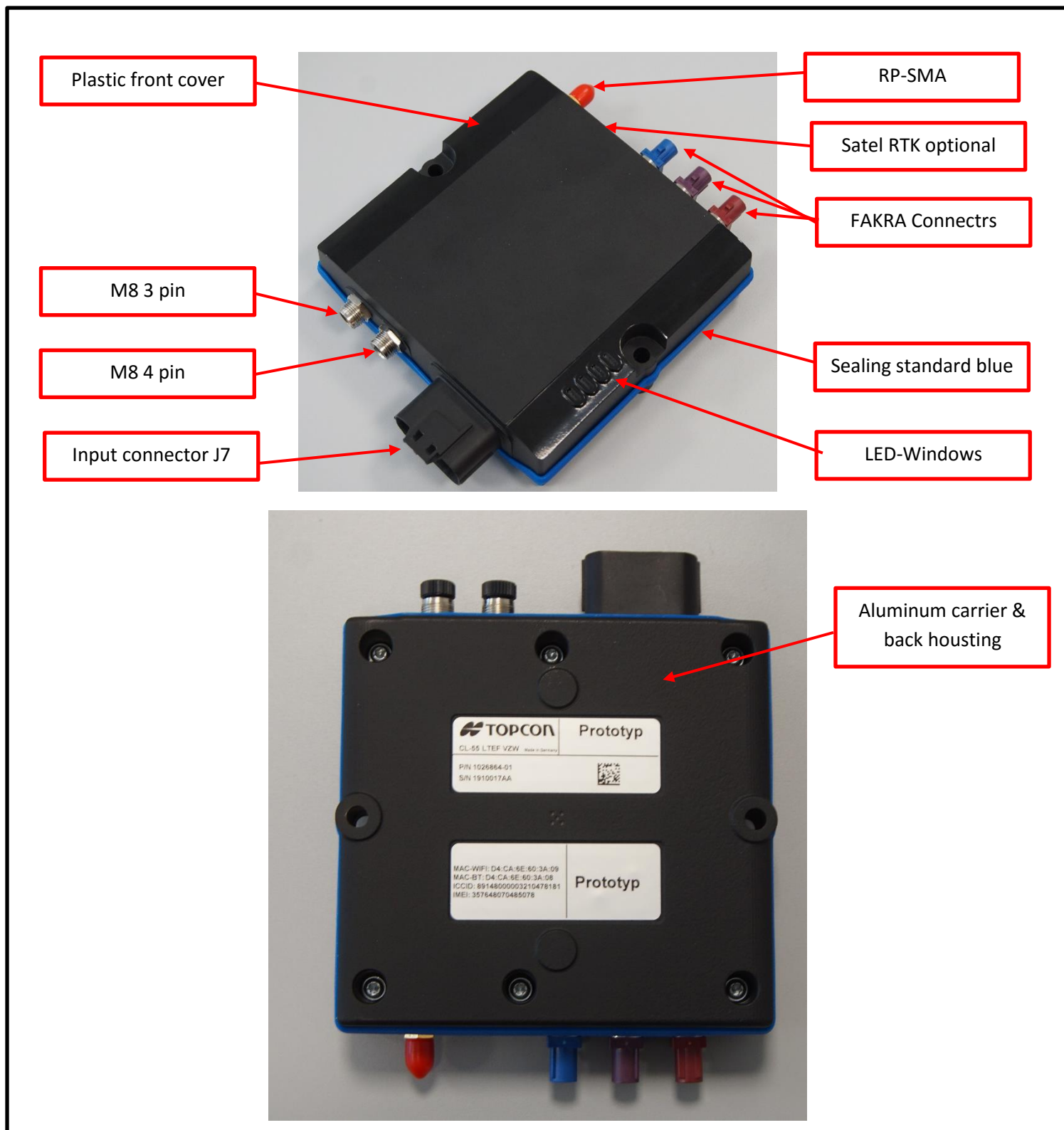


Figure 1



Figure 2



Figure 3

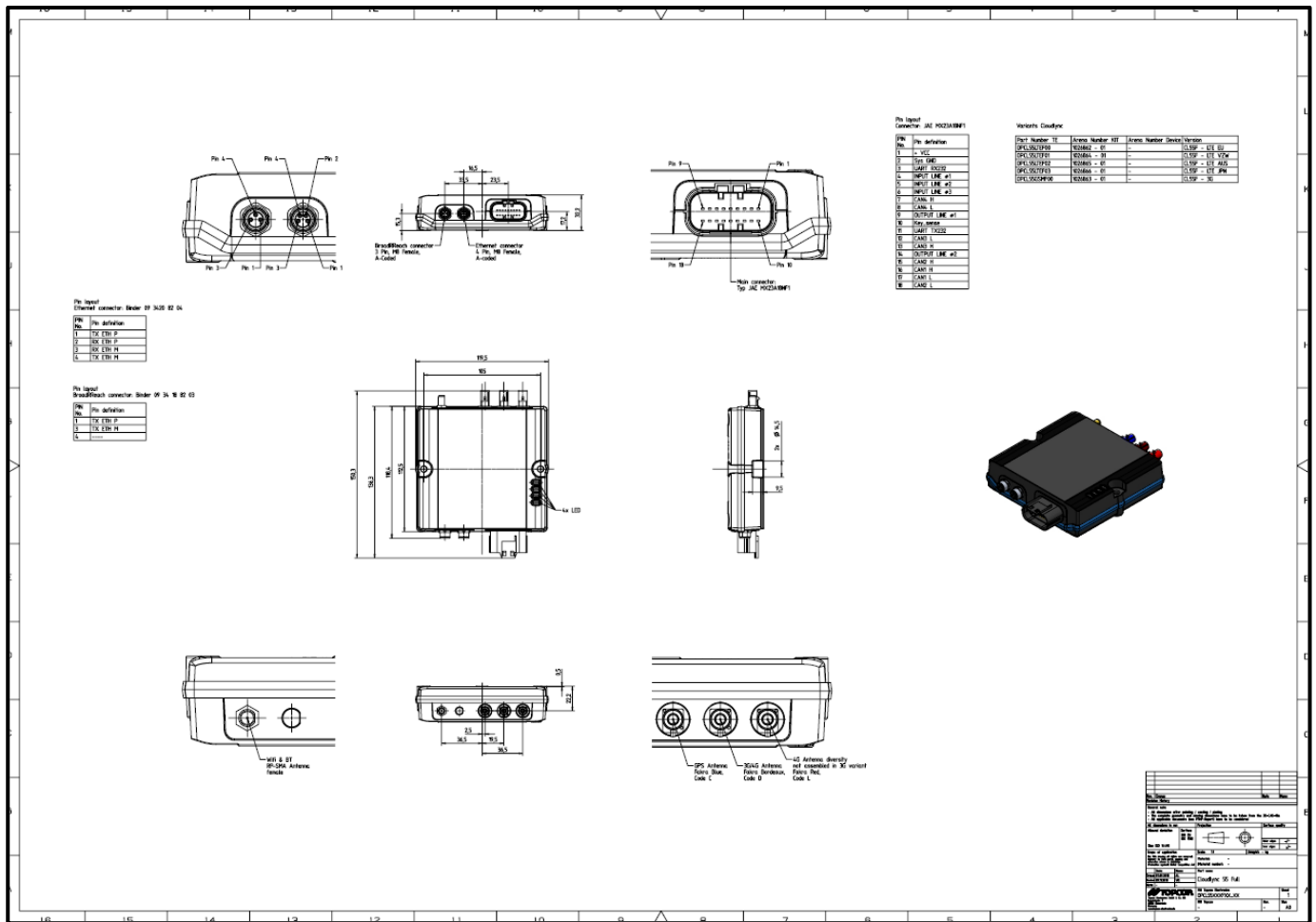
Cover characteristics

Back housing / aluminum carrier

- Aluminum die cast
- Supporting the venting membrane and the label field
- Powder coating with structure, matte, RAL 9005



- Plastic molded part, visible surfaces etched & polished, no painting
- 4 overmolded or assembled LED windows
- Supporting the external Satel RTK
- Supporting the external WiFi-Antenna
- Supporting the external GPS-Connector, 3G-4G Connector, Diversity-Antenna
- Supporting the M8 4 pin, M8 3 pin Main connector
- Plastic material color 9005, black
- Plastic material color GY7G086, light grey



The CL-55 3G versions operate in accordance with the specification while exposed to a still air environment at a temperature range of $-40\text{ }^{\circ}\text{C} < T_{\text{op}} < +85\text{ }^{\circ}\text{C}$.

The CL-55 LTE EU versions operate in accordance with the specification while exposed to a still air environment at a temperature range of $-40\text{ }^{\circ}\text{C} < T_{\text{op}} < +85\text{ }^{\circ}\text{C}$.

Storage temperature

The CL-55 can withstand an indefinite storage in an environment at a temperature range of $-40\text{ }^{\circ}\text{C} < T_{\text{s}} < +85\text{ }^{\circ}\text{C}$ (battery excluded). The storage limit with battery inside is $-20\text{ }^{\circ}\text{C} < T_{\text{s}} < +65\text{ }^{\circ}\text{C}$.

Altitude

The CL-55 meets the specification requirements if kept to an altitude up to 2500 m a.s.l.

Humidity

The CL-55 operates in accordance with the specification while kept in an ambient of RH included in the range 5% - 85% non-condensing.

General environmental characteristics

Protection degree

The CL-55, properly installed and connected, meets the IP66 protection level.

Electrical characteristics

Electrical architecture

TABLE 1 shows the main hw characteristics.

TABLE 2 lists the CL-55 Functional blocks.

TABLE 3 shows the microprocessor block diagram.

Features	Type	Notes
Modem (3G version)	SARA-U201(U-Blox) Global coverage Approvals: • RED • GCF • CE • FCC • RCM(Australia) • CCC (China)	Bands: • Five Bands UMTS (WCDMA/FDD) Bands: 800, 850, 900, 1900 and 2100 MHz • Quad-Band GSM Bands: 850, 900, 1800 and 1900 MHz • 3GPP Rel.7 Compliant Protocol Stack Data speed: • HSDPA Cat.8 / HSUPA Cat.6 data rates DL: max. 7.2 Mbps, UL: max. 5.76 Mbps • EDGE Class 12 data rates DL: max. 237 kbps, UL: max. 237 kbps • GPRS Class 12 data rates DL: max. 85.6 kbps, UL: max. 85.6 kbps • 2 W (33 dBm $\pm$ 2dB) – Class 4 @ GSM 900 • 1 W (30 dBm $\pm$ 2dB) – Class 1 @ DCS 1800 • 0.5 W (27 dBm $\pm$ 3 dB) – Class E2 @ EDGE 900 • 0.4 W (26 dBm +3/-4 dB) – Class E2 @ EDGE 1800 • 0.25 W (24 dBm +1,7/-3,7 dB) – Class 3 @ WCDMA
Modem (LTE Cat 1)	LARA-R204-Verizon(U-Blox) Local coverage: US Approvals: • FCC • GCF • ISED • Verizon certification • RoHS	LTE (FDD) 3GPP Rel.9 Compliant Bands: • Bands 4,13 (1700 AWS, 700 MHz) Data speed: • LTE Cat. 1 single layer DL-MIMO DL/UL max: 10.3Mbps / 5.2 Mbps

Features	Type	Notes
Modem (LTE Cat 1)	LARA-R211 (EU) LARA-R280 (AUS) LARA-R220 (JAP) Approvals: • CE • RED • GCF • RCM(Australia)	LTE (FDD) 3GPP Rel.9 Compliant Protocol Stack, RX-Diversity Bands • FDD 1800 (B3) / 2600 (B7) / 800 (B20) • Quad-Band LTE: Bands 2, 4, 5, 12 (700, 850, 1700/2100 (AWS) and 1900 MHz) • Tri-Band UMTS: Bands 5, 4, 2 (WCDMA/FDD 850, 1700/2100 (AWS) and 1900 MHz) Data speed • LTE Cat.1 DL: max. 10.2 Mbps, UL: max. 5.2 Mbps HSPA+ Cat.8 (ELS61-US) data rates DL: max. 7.2 Mbps, UL: max. 5.76 Mbps • GPRS Class 12 (ELS61-E) DL: max. 85.6 kbps, UL: max 85.6 kbps • SMS text and PDU mode support • 2 W (33 dBm $\pm$ 2dB) – Class 4 @ GSM 900 • 1 W (30 dBm $\pm$ 2dB) – Class 1 @ DCS 1800 • 0.5 W (27 dBm $\pm$ 3 dB) – Class E2 @ EDGE 900 • 0.4 W (26 dBm +3/-4 dB) – Class E2 @ EDGE 1800 • 0.2 W (23 dBm $\pm$ 2,7 dB) – Class 3 @ E-UTRA LTE

Features	Type	Notes
Modem GLOBAL (LTE Cat 1)	LARA-R6001D Approvals: • CE • RED • GCF RCM(Australia)	Bands • LTE FDD: 12 (700 MHz) 28 (700 MHz) 13 (700 MHz) 20 (800 MHz) 18 (850 MHz) 19 (850 MHz) 26 (850 MHz) 5 (850 MHz) 8 (900 MHz) 4 (1700 MHz) 3 (1800 MHz) 2 (1900 MHz) 1 (2100 MHz) 7 (2600 MHz) Power Class 3 (23 dBm) • LTE TDD: 39 (1900 MHz) 40 (2300 MHz) 41 (2600 MHz) 38 (2600 MHz) Power Class 3 (23 dBm) • WCDMA: 5 (850 MHz) 8 (900 MHz) 2 (1900 MHz) 1 (2100 MHz) Class 3 (24 dBm) • GSM: GSM 850 E-GSM 900 DCS 1800 PCS 1900 GSM/GPRS (GMSK) Power Class • Class 4 (33 dBm) for 850/900 band • Class 1 (30 dBm) for 1800/1900 band EDGE (8-PSK) Power Class • Class E2 (27 dBm) for 850/900 band • Class E2 (26 dBm) for 1800/1900 band
SIM	Global Coverage SIM on Chip (KPN) Verizon SIM on Chip for US	Lock on local provider possible
GPS	EVA – M8M(uBLOX)	• 72-channel u-blox M8 engine GPS/QZSS L1C/A, GLONASS L1OF, BeiDou B1I, Galileo E1B/C, SBAS L1C/A: WAAS, EGNOS, MSAS, GAGAN • FA-GPS and SBAS compliant • PPS available
Multi Radio WiFi/BT	EMMY-W161 (uBLOX) Approval for EU(RED), US (FCC), Canada (IC) and Japan (MIC)	• IEEE 802.11 a/b/g/n/ac compliant • Wi-Fi 2.4 GHz channels 1-13 Max power: 18 dBm • Wi-Fi 5 GHz channels 36-165 (5470-5725 MHz) Max power: 16 dBm • Station and micro access point operation (up to 8 clients) • 802.11 PHY data rates up to 72 Mbps • LTE coexistence BAW filter included • Dual-mode Bluetooth v4.2 with BR/EDR and Bluetooth low energy Max power: 10 dBm

Features	Type	Notes
Radio UHF	SATELLINE-M3-TR49	65 MHz tuning range (410-475 MHz and 902-928 MHz) Channel Bandwidth:12.5 and 25 kHz RF Output Power: 10-1000 mW
Processor	iMX6 UL (NXP)	ARM Cortex A7 core (see below the iMX family block diagram)
Flash memory	8 GB in Total	e-MMC
RAM memory	512 MB / 1 Gb	DDR3
RTC	External device (PCF8563T)	Wake-up capability
CAN Interface	Up to 4 independent lines	2 Flex CAN, transceiver UJA1162 with wake-up capability + 2 external controller MCP2517FD (CAN FD), transceiver TCAN1042
Serial Line Interface	RS232	115,2 kbps max
Digital I/O	3 in + 2 out programmable I/O lines	Input: • pull-up • pull down • digital with hysteresis • analog 8 bit • Frequency/duty cycle (1 lines) Output: • 3 x open collector (150 mA max)
Key on line	1 input line	With wake-up capability
LAN	1 x BroadRReach/100BASE-T1 and 1 x Ethernet 100BASE-TX	With wake-up capability on BroadRReach
Accelerometer + Gyro	LSM6DS3 3-axis	With wake-up capability
Battery	3,2V LiFePO4 1500mAh Rechargeable	On board recharger
Power supply	12V – 24V SMPS Automotive grade	ISO 7637 compliant as design goal

TABLE 1 – Main hw characteristics

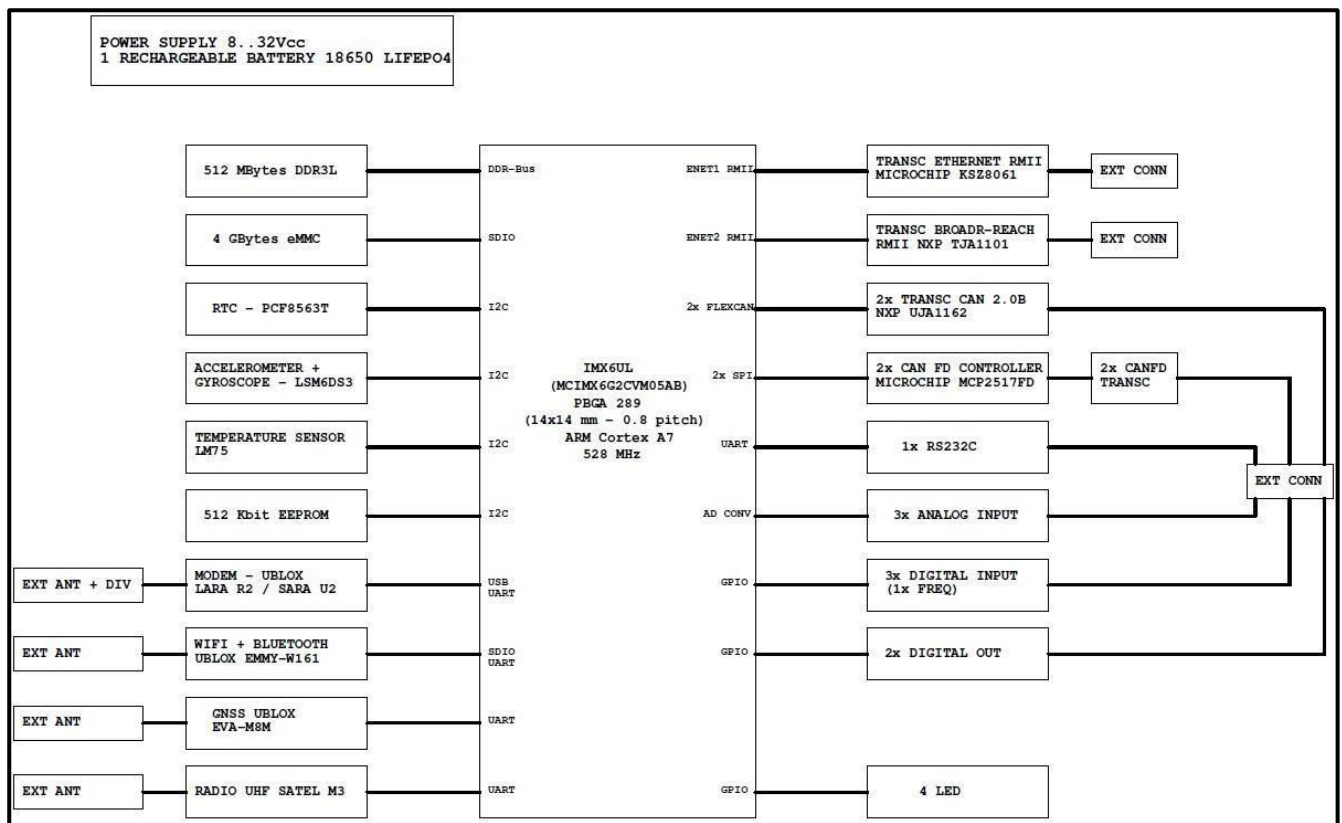


TABLE 2 – Functional blocks

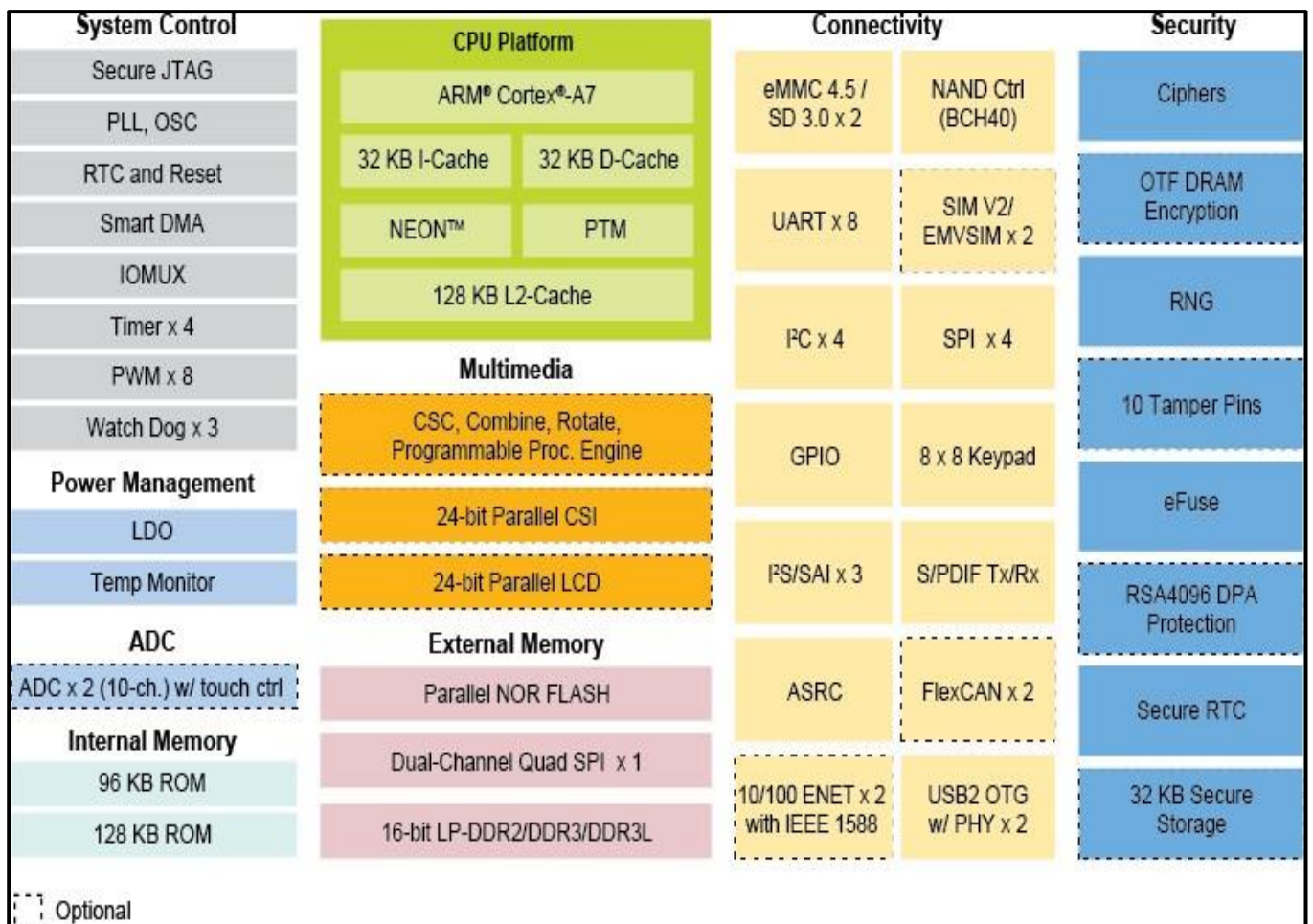


TABLE 3 – Processor functional blocks

Supply voltage

Vehicle battery supply

The CL-55, properly connected, will be able to operate in accordance with the specification when the supply voltage will be in the range of 8 - 36 Vdc.

The nominal supply voltage will be 13,6 and 27,2 Vdc (standard +30 automotive range for 12 V and 24 V plant).

The CL-55 is not intended for use during the cranking phase. The I/O lines compliance matches the supply voltage range.

The power supply interface will be compliant with ISO7637-0-1-2 (design goal). The power lines are protected against the polarity inversion.

Refer to para 3.4.7 for the power lines pin assignment.

Installation – setup

CL-55 installation

1. Plug the CL-55 into the ethernet port on the rear of the console.



Figure 7

2. Secure the CL-55 in a location in the cab that will prevent damage to the unit and will not cause a trip hazard (for example; under the seat).
3. **WARNING: an external 2A automotive fuse must be used. Do not power CL-55 directly from battery without a fuse for any reason.**

Layout diagrams

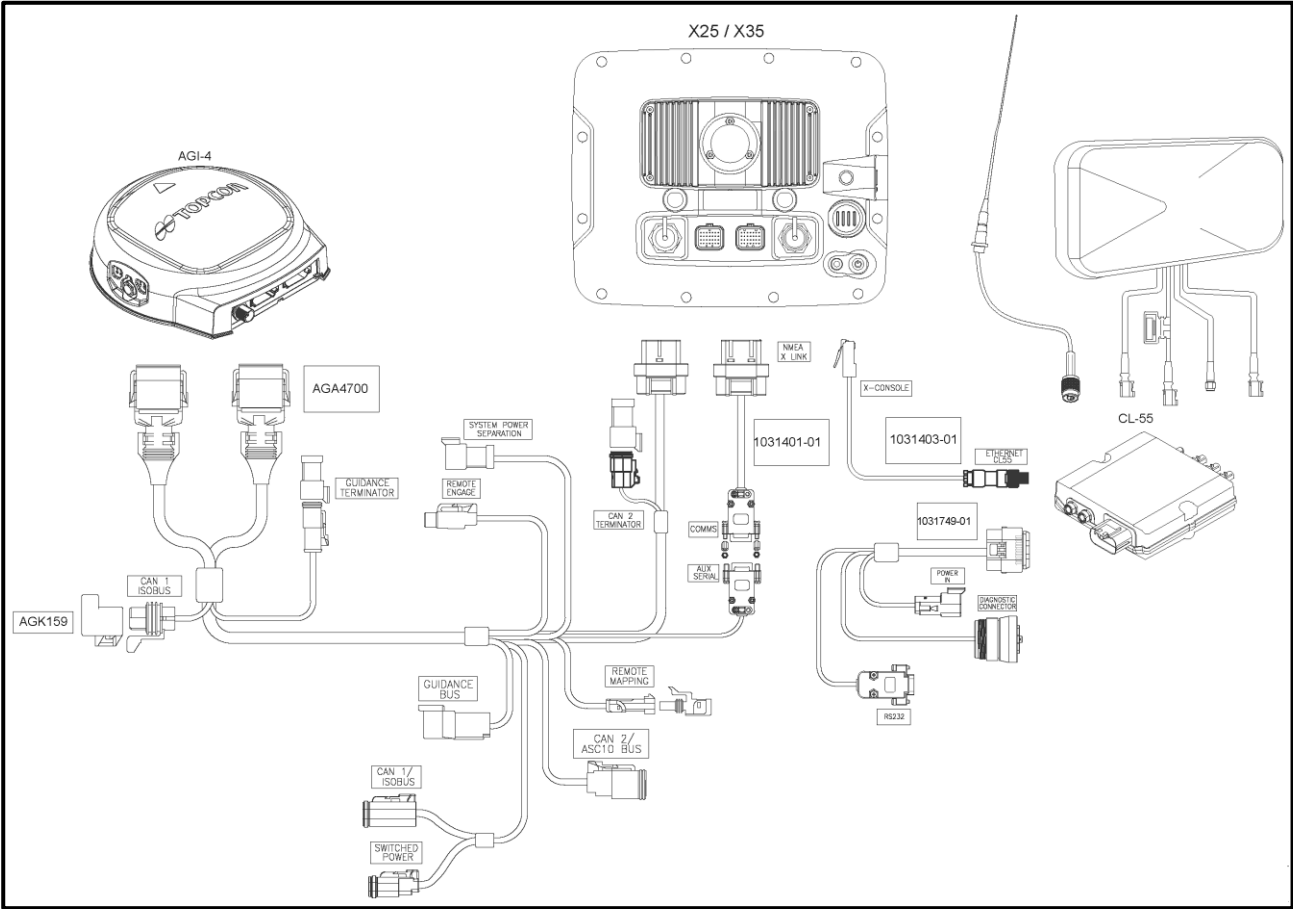


Figure 8

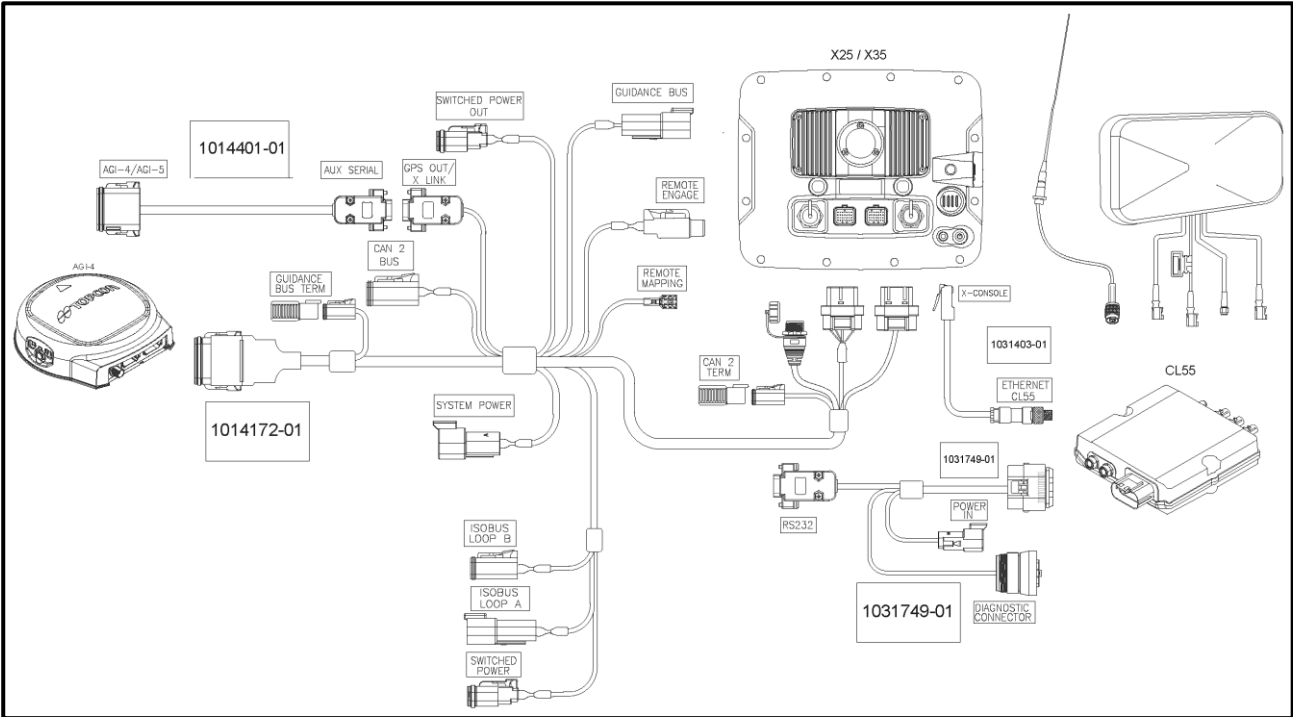


Figure 9

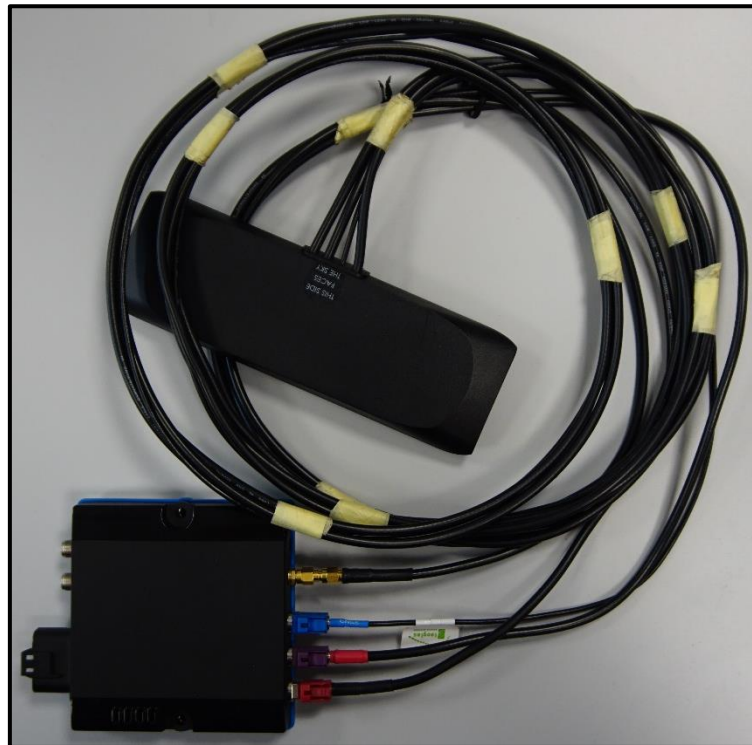
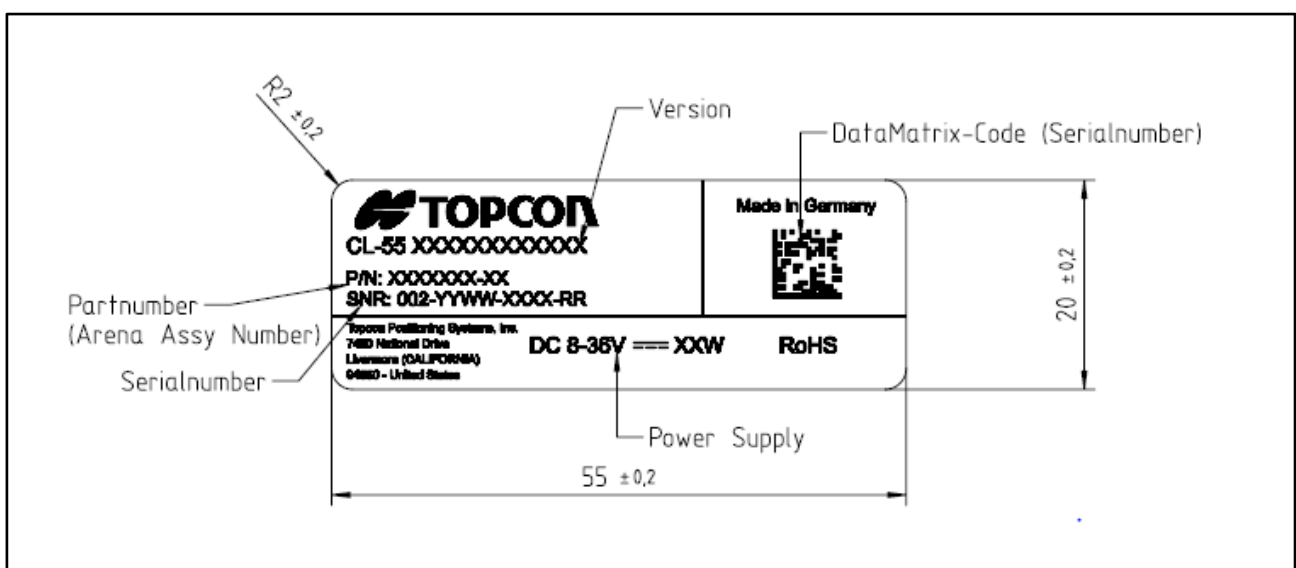
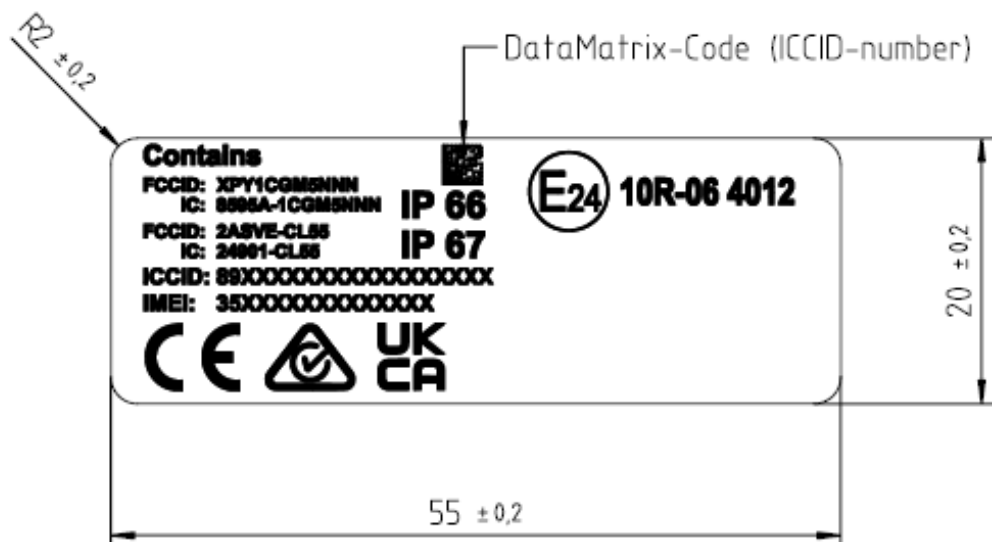
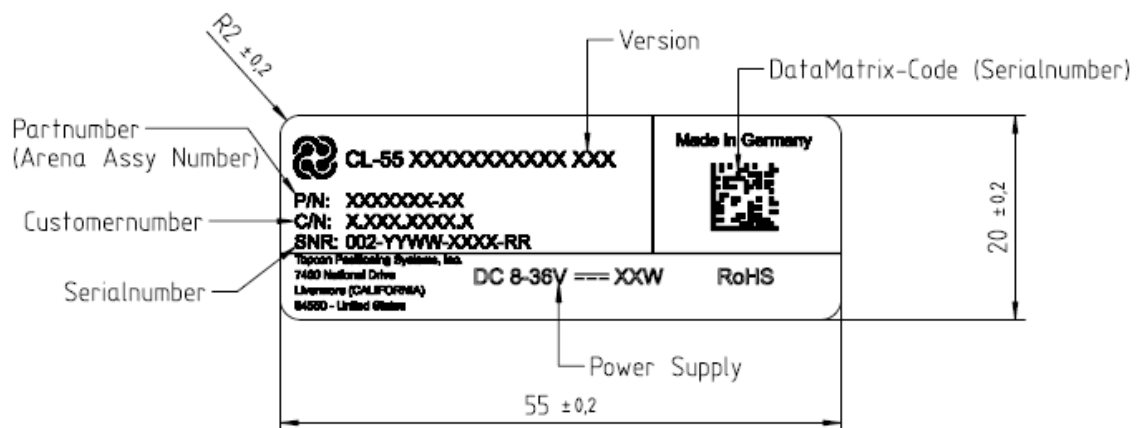


Figure 10

Topcon Positioning Systems declines any liability for damages caused by inappropriate installation, misuse or maintenance of the device, including but not limited to damages, losses and expenses due to failure to observe the instructions contained in the present manual, or caused or due to products of other manufacturers.

Label Product





Label position:



Figure 11

User interface

The LED's meaning is configurable and default implementation is:

- Green is ON for Key-on Status and OFF in Key off
- Blue is ON for connectivity (MODEM/Wi-Fi/BT)
- Yellow is ON for GPS fix
- Red is ON for a general error to be investigated

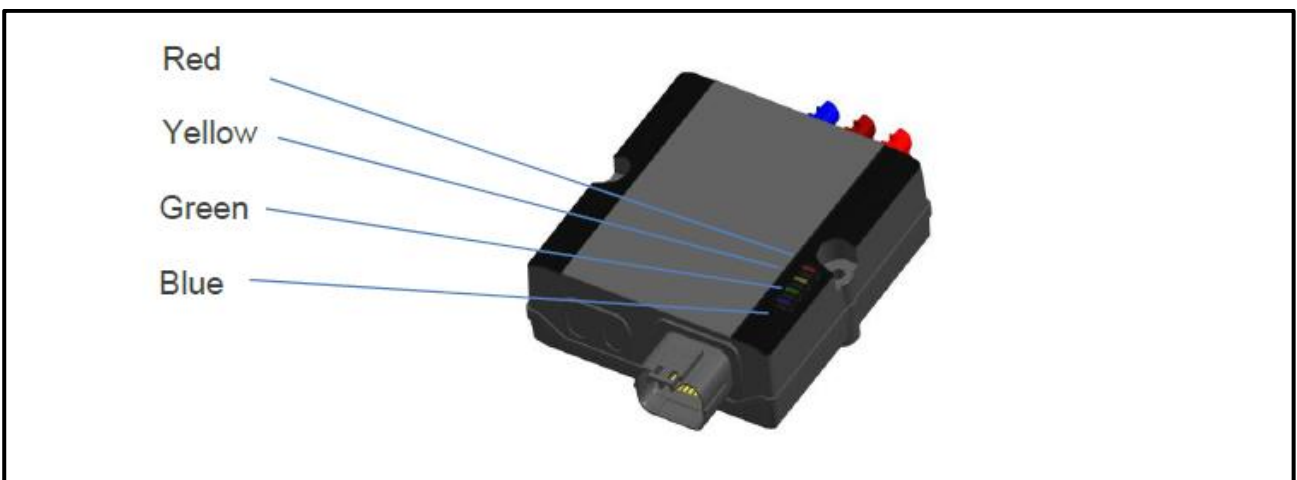


Figure 12

Product warranty

Topcon Positioning Systems warrants that the electronic components shall be free of defects in materials and workmanship for a period of two years from the original date of shipment to the dealer. Warranty does not cover damages due to an improper use of the device and/or to the non-compliance with the indications contained in this document.

Assistance and repair

For assistance and repair please contact:

Topcon Precision Agriculture Europe S.L., Avenida de la Industria, 35, 28760 - Tres Cantos, Madrid, Spain

Email: tasupportemea@topcon.com

Use restrictions and warnings (RED)

The exposure limit set by the standard is respected for distances ≥ 30 cm from the device. The antenna should be installed and operated with minimum distance of 30 cm between the radiator and your body.

As for the 5 GHz WIFI interface: EMMY-W161-00B is limited to use only 5470 ÷ 5725 MHz band, as for the bands that can be used for outdoor applications. Devices capable of operating only in the band 5470 - 5725 MHz are Class 1 devices.

Restrictions for +RADIO models:

The radio transceiver module SATEL TR49 is only to be operated at frequencies allocated by local authorities, and without exceeding the given maximum allowed output power ratings. TOPCON Positioning Systems and its distributors are not responsible if +RADIO models are used in unlawful ways.

Local spectrum authority should be contacted before the usage of the radio module SATEL TR49 because the operating frequency range of the device is not harmonized throughout the market area,

SATEL TR49 radio transceiver modules have been designed to operate on 410-475 MHz, the exact use of which differs from one region and/or country to another. The user of a radio transceiver module must take care that the said device is not operated without the permission of the local authorities on frequencies other than those specifically reserved and intended for use without a specific permit.

SATEL TR49 are allowed to be used in the following countries, either on license free channels or on channels where the operation requires a license. More detailed information is available at the local frequency management authority.

Countries: AT, BE, BG, CH, CY, CZ, DE, DK, EE, EL, ES, FI, FR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, UK.

The following restrictions indication is applied on package for +RADIO models:

	AT	BE	BG	CH	CY	CZ	DE
	DK	EE	EL	ES	FI	FR	HR
	HU	IE	IT	IS	LI	LT	LU
	LV	MT	NL	NO	PL	PT	RO
	SE	SI	SK	TR	UK(NI)		

Use restrictions and warnings (FCC / ISED)

1.Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2.Device model CL-55 3G:

CONTAINS FCC ID: WR4-CL-55 IC: 6050B-CL55

CONTAINS: FCC ID: XPY1CGM5NNN IC: 8595A-1CGM5NNN

CONTAINS: FCC ID: MRBSATEL-TA37 IC: 2422A-SATELTA37 (+RADIO)

Device model CL-55 LTE VZW:

CONTAINS FCC ID: WR4-CL-55 IC: 6050B-CL55

CONTAINS: FCC ID: XPY1EIQN2NN IC: 8595A-1EIQN2NN

CONTAINS: FCC ID: MRBSATEL-TA37 IC: 2422A-SATELTA37 (+RADIO)

Device model CL-55 GLOBAL:

CONTAINS FCC ID: WR4-CL-55 IC: 6050B-CL55

CONTAINS: FCC ID: XPYUBX21BE01 IC: 8595A-UBX21BE01

CONTAINS: FCC ID: MRBSATEL-TA37 IC: 2422A-SATELTA37 (+RADIO)

3.Responsible party's contact located in the United States:

Company: Topcon Positioning Systems, Inc.

Address: 7400 NATIONAL DRIVE, LIVERMORE, CA, USA 94551

Contact Name: Ferdinand Riodique

Contact' s email: friodique@topcon.com

Phone #: 925-245-8300

4. 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.

5. 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 or more 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.

6. Responsible party's contact located in Canada:

Company: Topcon Positioning Systems, Inc.

Address: 855- 2 Street SW, Suite 3500, Calgary AB T2P 4J8, Canada

Contact Name: Stephen Rosenegger

Contact's email: srosenegger@topcon.com

Phone #: +1 403 450 4262

7. This device contains license-exempt transmitter(s)/receiver(s) that comply 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. (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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; (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement du dispositif.

8. ICES-003 Class B Notice -Avis NMB-003 Classe B :

This Class B digital device complies with Canadian ICES-003

Cet appareil numérique classe B est conforme à la norme Canadienne NMB-003.

CAN ICES-3(B) /NMB-3(B)

RF Radiation Exposure statement

This product complies with FCC and SED radiation exposure limits set forth for an uncontrolled environment. The antenna should be installed and operated with minimum distance of 30 cm between the radiator and your body.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with ISED multi-transmitter product procedures.

Cet appareil est conforme aux limites d'exposition aux rayonnements FCC et ISED pour un environnement non contrôlé. L'antenne doit être installée de façon à garder une distance minimale de 30 centimètres entre la source de rayonnements et votre corps.

Cet appareil et son (ses) antenne(s) ne doivent pas être co-localisés ou utilisés en conjonction avec une autre antenne ou un autre émetteur, sauf en conformité avec les procédures du produit multi-émetteur de la ISED.

This device complies with Health Canada's Safety Code. The installer of this device should ensure that RF radiation is not emitted in excess of the Health Canada's requirement.

Cet appareil est conforme avec Santé Canada Code de sécurité 6. Le programme d'installation de cet appareil doit s'assurer que les rayonnements RF n'est pas émis au-delà de l'exigence de Santé Canada.

Use restrictions and warnings (Anatel)

This equipment is not entitled to protection against interference harmful and may not interfere with properly authorized systems. For more information, consult the ANATEL website – (www.anatel.gov.br).

‘Este produto não é apropriado para uso em ambientes domésticos, pois poderá causar interferências eletromagnéticas que obrigam o usuário a tomar medidas necessárias para minimizar estas interferências’

CL-55 +RADIO GLOBAL, CL-55 GLOBAL



XXXXXX-XX-XXXXXX

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

Para maiores informações, consulte o site da ANATEL www.anatel.gov.br

Use restrictions and warnings (Australia/New Zealand)

The radio transceiver module SATEL TR49 is only to be operated at frequencies allocated by local authorities, and without exceeding the given maximum allowed output power ratings. TOPCON Positioning Systems and its distributors are not responsible if +RADIO models are used in unlawful ways.

Versions for Australia, hop frequency restrictions:

In this version the frequency range must be limited to 915.3792-927.8208 MHz (55 hop channels).

Hop Table Version

Number	Frequency Band	Status	Comments
0	902-928 MHz	DISABLED	Outside allowed band
1	915-928 MHz	ENABLED	Zone feature disabled
2	903.744-926.3232 MHz	DISABLED	Outside allowed band
3	916-920 MHz	DISABLED	Less than 20 channels
4	921-928 MHz	DISABLED	-
5	902-928 MHz but 911-919 MHz notched out	DISABLED	Outside allowed band
6	902-915 MHz	DISABLED	Outside allowed band

Use restrictions and warnings UK (UKCA)

LH Agro (UK) Ltd
56 Edison Road
St. Ives (Cambs)
PE27 3LF

United Kingdom

The antenna should be installed and operated with minimum distance of 30 cm between the radiator and your body.

For frequency bands and RF power transmitted please see TABLE 1.

Declaration of conformity



EU Declaration of Conformity

We,

Company Name: Topcon Positioning Systems, Inc.
Headquarter address: 7400 National Drive, Livermore (CA), 94550 - USA
Telephone: +1 925-245-8300
E-Mail Address: tasupportemea@topcon.com

declare under our sole responsibility that the products:

Type: Telecommunication device
Basic Models: CL-55 3G +RADIO, CL-55 LTE EU +RADIO
CL-55 +RADIO GLOBAL

Derived Models: CL-55 3G, CL-55 LTE EU
CL-55 LITE 3G, CL-55 LITE LTE EU
CL-55 3G SDF, CL-55 3G +RADIO SDF
CL-55 LTE EU SDF, CL-55 LTE EU SDF +RADIO
CL-55 3G BG
CL-55 GLOBAL, CL-55 GLOABL SDF, CL-55 +RADIO GLOBAL SDF

Intended use: General purpose IOT device

are in conformity with the relevant European Union Directives:

Directive RoHS: 2015/863/EU
Directive RED: 2014/53/EU

The following harmonized standards were applied:

Safety & Health (Art. 3.1a Directive 2014/53/EU):
EN 62368-1:2014 + A11:2017
EN IEC 62368-1:2020 + A11:2020 excluding Annex M.4 (GLOBAL variants only)
EN 62311:2008
EN IEC 62311:2020 (GLOBAL variants only)

EMC (Art. 3.1b Directive 2014/53/EU):
ETSI EN 301 489-1 V2.2.3:2019
ETSI EN 301 489-5 V2.2.1:2019
ETSI EN 301 489-17 V3.2.4:2020
ETSI EN 301 489-19 V2.2.0:2020
ETSI EN 301 489-52 V1.2.1:2021

Radio (Art.3.2 Directive 2014/53/EU):
ETSI EN 300 113 V2.2.1:2016
ETSI EN 300 328 V2.2.2:2019

Topcon
Positioning
Systems, Inc.
7400 National Drive
Livermore, CA 94550
Phone: 925-245-8300



ETSI EN 301 893 V2.1.1:2017
ETSI EN 301 511 V12.5.1:2017
ETSI EN 301 908-1 V13.1.1:2019
ETSI EN 301 908-1 V15.1.1:2021 (GLOBAL variants only)

ETSI EN 301 908-2 V13.1.1:2020
ETSI EN 301 908-13 V13.1.1:2019
ETSI EN 301 908-13 V13.2.1:2022 (GLOBAL variants only)
ETSI EN 303 413 V1.1.1:2017

RoHS (Art. 4 Directive 2015/863/EU):
EN 63000:2018

The Notified Body Nemko S.p.A. performed the conformity assessment of the technical documentation according to the procedure of Annex III (Module B) of the Directive 2014/53/EU and issued the EU-type examination certificate no. 2051-RED-230602.

EU Representative:

Name: Topcon Precision Agriculture Europe S.L.
Address: Avenida de la Industria, 35, 28760 - Tres Cantos, Madrid, Spain
Tel: +34 - 91 - 804 92 31

Livermore (CA), February 9th, 2023

Salvatore Iacono
Vice President Engineering

Topcon
Positioning
Systems, Inc.
7400 National Drive
Livermore, CA 94550
Phone: 925-245-8300