

# MODU/7002

## Xtra module Technical Guide



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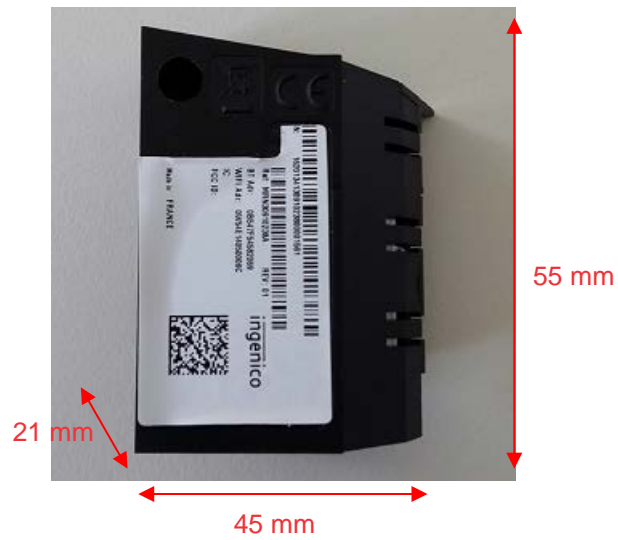
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# 1\_Introduction

This technical guide is a document that describes the features of the terminal.

## 2\_Xtra module general information

### 2\_1 Physical dimensions



<b>Mechanical characteristics</b>	<b>External dimensions</b>	55 (L) x 45 (W) x 21 (H) mm
	<b>Weight</b>	15g (full options)
	<b>Casing material</b>	ABS-PC + TPU



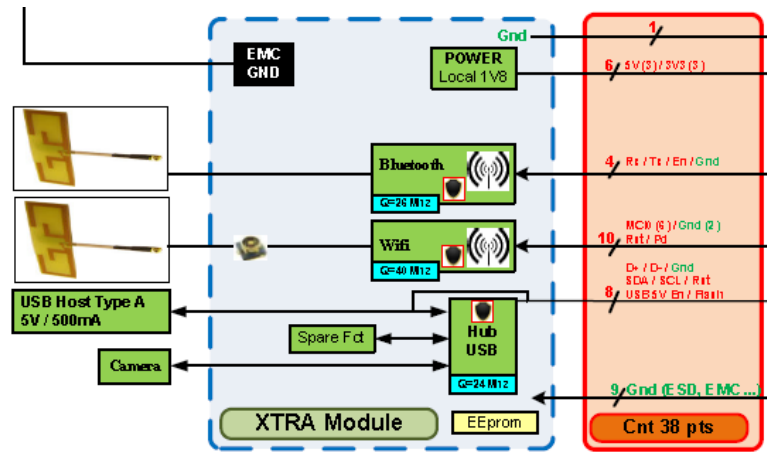
## 2\_2 Xtra module Features

- Wireless connectivity
  - Wifi
  - Bluetooth

## 3\_Xtra module Technical information

Name			Xtra module
Environment	Operating temperature	0°C to +40°C (32°F to 104°F)	●
	Storage temperature	-20°C to +55°C (-4°F to 131°F)	●
	Operating humidity	85% non-condensing at +40°C (104°F)	●

### 3\_1\_1 Hardware architecture:

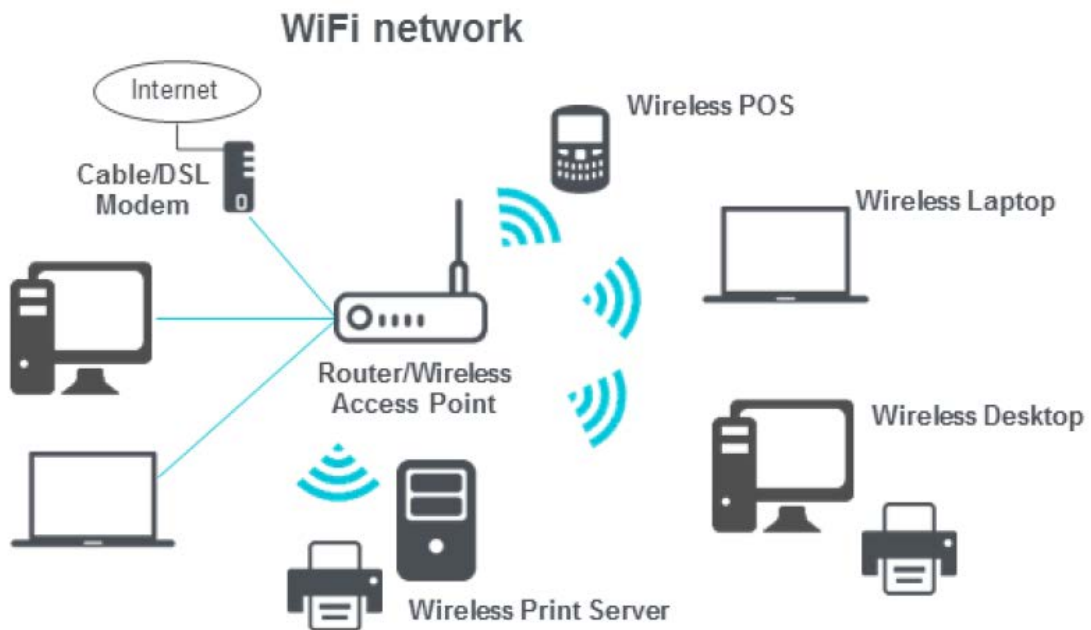


### 3\_1\_2 Wireless Connectivity

#### / Wi-Fi

WiFi connection is optional in Lane/7000 or Lane/8000.

This feature is useful to wirelessly connect your terminal to the IP network avoiding the cabling task:



<b>Feature</b>	<b>Dualband :2.4 GHz and 5 GHz Wi-Fi</b>
<b>Chipset</b>	Marvell 88W8782
<b>Standard compliance</b>	802.11 a/b/g/n, SISO, 2.4Ghz and 5Ghz, HT20&HT40
<b>Frequency band</b>	20Mhz Channel : 2412-2472 Ghz / 5180-5320 Ghz / 5500-5700 Ghz / 5700 Ghz / 5745-5805 Ghz 40Mhz Channel : 2442-2452 Ghz / 5190-5310 Ghz / 5510-5670 Ghz / 5755-5795 Ghz



<b>Radio transfer rate</b>	From 1 Mbit/s to 135 Mbit/s
<b>Distance</b>	Indoor: 70m typical, mini 100m in free sight
<b>Max output power</b>	2.4Ghz : 23dBm 5Ghz : 13 dBm
<b>Home security</b>	WPA, WPA2
<b>Enterprise security</b>	EAP-MD5, EAP-TLS, EAP-TTLS, EAP-PEAPv0, EAP-SIM

## / Bluetooth

<b>Feature</b>	<b>Bluetooth V2.0</b>
<b>Chipset</b>	BC08, CSR8811: <a href="http://www.csr.com/sites/default/files/csr8811.pdf">http://www.csr.com/sites/default/files/csr8811.pdf</a>
<b>Standard compliance</b>	Bluetooth 4.0 (Frequency : 2.4Ghz) Bluetooth 4.2 planned on roadmap (Frequency: 2.4Gz)
<b>Profile</b>	SPP A2DP Other profile to be analyzed on request
<b>Radio transfer rate</b>	1 Mbit/s 3Mbit/s (EDR)
<b>Number of supported links on SPP</b>	1 open link to PCL 4 reserved for peripherals (barcode, printer, ...)
<b>Range</b>	Bluetooth Class 2 – max 10m in free sight
<b>Maximum output power</b>	GFSK : 1.5 dBm Pi/4 DQPSK : 1.8 dBm 8 DPSK : 2.1 dBm

### 3\_1\_3 Internal Frequencies

- Bluetooth :
  - Quartz = 26Mhz
- Wifi :
  - Quartz = 40Mhz

## 4\_Norms&Marking

### 4\_1 1 Federal Communications Commission (FCC) Statement & Industry Canada (IC) Statement

#### Modular transmitter 15.212

Changes or modifications made to the equipment not expressly approved by INGENICO may void the FCC / IC authorization to operate this equipment.

The use of the transceiver module is authorized in mobile or fixed host devices taking into account the conditions listed below:

- OEM Integrator must ensure that the end user manual may not contain any information about the way to install or remove the module from the final product.
- Depending on the final host device additional authorization requirements for the non-transmitter functions of the transmitter module may be required (i.e., Verification, or Declaration of Conformity) The OEM integrator is responsible for ensuring that after the module is installed and operational the host continues to be compliant with the Part 15B unintentional radiator requirements.
- The information on the label and in the user manual is required to be incorporated in the user manual of the final host. see 47 CFR15 requirements for more details (e.g. 15.19 / 15.21 / 15.101 / 15.105 / RSS-GEN / ICES)
- Additional label with the words 'Contains FCC ID: XKB-M7002WIBT' and 'Contains IC: 2586D-M7002WIBT' shall be applied and visible from the outside of the host product.
- The module must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the module.
- The end user manual for the final host product operating with this transmitter must include operating instructions to satisfy RF exposure compliance requirements.

#### Radiofrequency radiation exposure Information :

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

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

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

- The antenna of the module may not be removed, replaced nor modified. The antenna must not be co-located or operating in conjunction with any other antenna or transmitter. No additional antenna must be used.

- When the final host product operating with this transmitter deviate from above, installation of this module into specific final hosts may require the submission of a Class II permissive change application containing data pertinent to RF Exposure, spurious emissions, ERP/EIRP, and host/module authentication, or new application if appropriate.  
Feel free to contact us if additional guidance is required.