![Tantalus logo]

Tantalus Utility Network™

TUNet® TC-11/1210 and TC-11/1210-RD Quick Reference

The TC-11/1210 and TC-11/1210-RD are two-way 900 MHz LAN smart meter communication modules that are integrated into the GE I-210 ® and I-210+ ® family of electrical watthour meters. The GE I-210 metrology unit sends digital pulses to the communication module that represents the energy delivered or received to/from the service. The GE I-210+ metrology unit has 2-way communication to the Tantalus smart communication using the ANSI C12.18 protocol to convey energy consumption and it also allows the communication module to activate the service disconnect switch where applicable. The Tantalus LAN communication module delivers meter readings on request or on a programmed schedule for Time-of-Use and interval data applications. The LAN communication module also reports power outages and monitors power quality including voltage (plus sag/swell alarms) and momentary outages (blinks).

⚠ **Warning**	Energized meters, meter sockets and distribution lines present the risk of electrical shock. All work on this equipment should be performed by qualified metering specialists or industrial electricians.
	Personnel working with this equipment should follow all utility company established operation and safety procedures.

Installation Instructions

1. Remove the existing meter from the meter socket and record the final reading per utility standard practice.

2. Inspect the meter socket jaws to ensure that they are in good condition.

3. Perform voltage checks, line-to-line and line-to-neutral, to ensure the voltage is at proper levels.

4. Visually inspect the meter. Ensure that the optical interface is secured in place on the meter base.

5. Install the meter and observe the Network Status LED to verify that a valid association candidate is found per the table on the reverse page.

6. Install the meter ring and seal.

7. Record the new meter number and initial reading per utility standard practice.

TUNet® LAN Module Network Status LED (Red)	
Start-up/Power-up	Solid ON (Fast flashing indicates module is not programmed)
Unassociated/Re-associating	Solid ON
Valid association candidate found	Flashing
Full network association confirmed	OFF
TUNet® LAN Module Message Status LED (Green)	
Start-up/Power-up	OFF
Message queued for transmission	Long flash
Valid message received (addressed to this device)	Short flash
TUNet® LAN Module Transceiver (XVR) LED (Amber)	
Start-up/Power-up	OFF
RF packet transmitted	Long flash
RF packet received (LAN activity)	Short flash

Specifications	
Frequency Range: 902-928 MHz frequency hopping, license exempt	Operating Temperature: -22 to 140°F (-30 to +60°C)
Modulation: FSK	Operating Humidity: 5 to 95% non-condensing
Antenna: under the glass	Standards:
Power supply: 120V/240VAC	FCC CFR Title 47 Part 15b (unintentional radiators)
Power consumption: Quiescent 0.75 watts typical	ANSI C12.1:2001 Sections: 4.7.3.1 Insulation, 4.7.3.11 EFT/Burst 4.7.3.3.1 Surge Immunity, 4.7.3.3.2 Ring Wave Immunity

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. Changes or modifications to this device not expressly approved by Tantalus Systems Corp. could void the user's authority to operate the equipment.

Contact Tantalus

Address all comments to:

Technical Support
Tantalus Systems Corp.
301 – 3480 Gilmore Way
Burnaby, B.C. V5G 4Y1

Telephone:	604-299-0458
Fax:	604-451-4111
Web	http://www.tantalus.com
Email:	techsupport@tantalus.com