



Sensys Networks VDS240 Wireless Vehicle Detection System

CTS CC Card



Guide

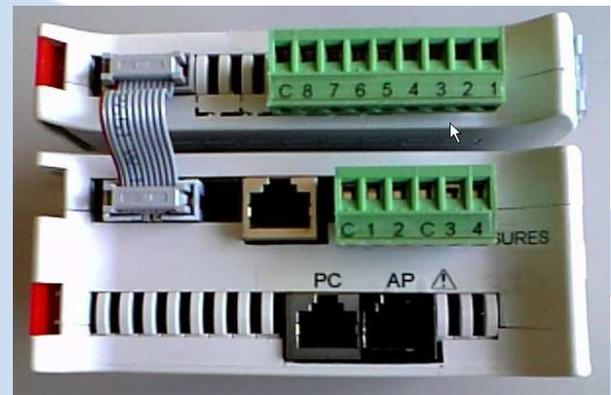
Version 1.0

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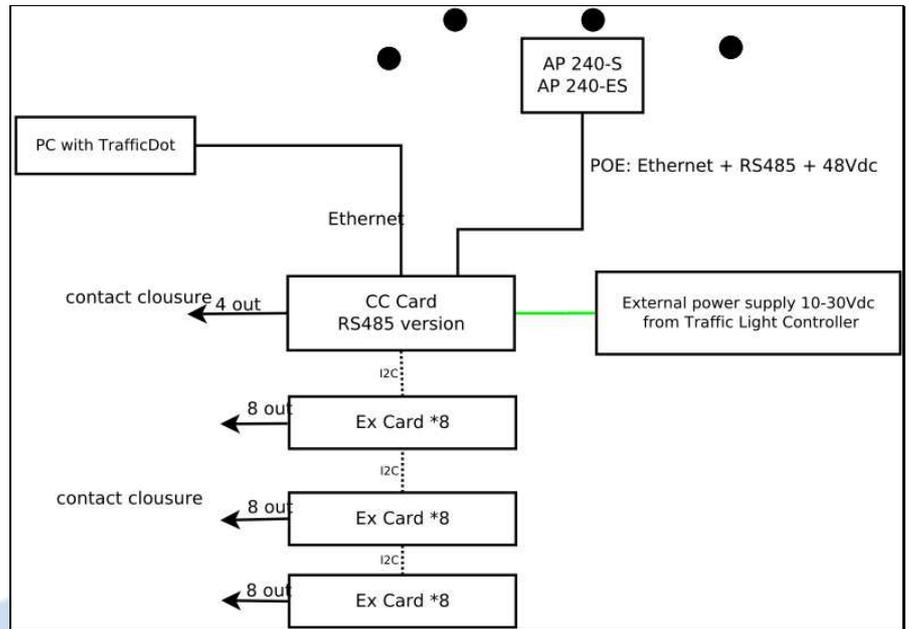
CC Card specifications

The new CTS-CC Contact Closure Card is designed to interface to Sensys Networks AP240-S, AP240-ES with 48V power supply, and provides four optically isolated contact closure relays. Up to 16 EX cards (8 channels each) can be daisy-chained via the I2C bus.

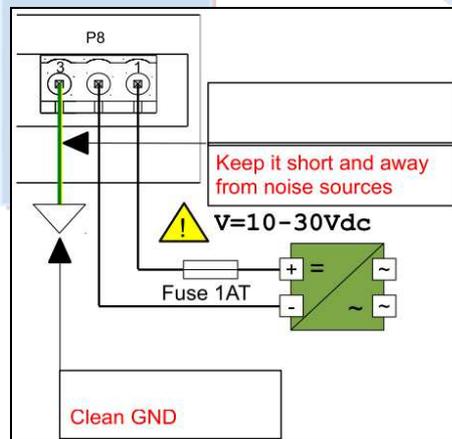
The CC Card communicates with the AP via an RS485 bidirectional connection.



Power Supply	10-30Vdc 6W (with Chard + 1*EXT + AP connected)
Processor	NXP LPC2387 (ARM7TDMI)
Digital Outputs	4 Relay, 5A@250Vac, max. (1 common every 2 out)
Status indicators	Power, RUN, READY, USB activity, Output Status
USB I/F	On mini-USB B connectors (device mode)
RS232 I/F	1 * DTE on RJ45 connector
AP Ethernet connection	4PIN Ethernet + 2PIN RS485 + 2PIN 48V POE
Operating temperature	from -20 to +70°C
Storage temperature	from -40° to +80°C
Relative Humidity	Max. 90%
Dimensions	119 mm L x 101 mm W x 45 mm H
Approvals	CEI EN50081-1, CEI EN50082-2
Warranty	2 Years



1.1 Power supply



1.2 CPU STATUS

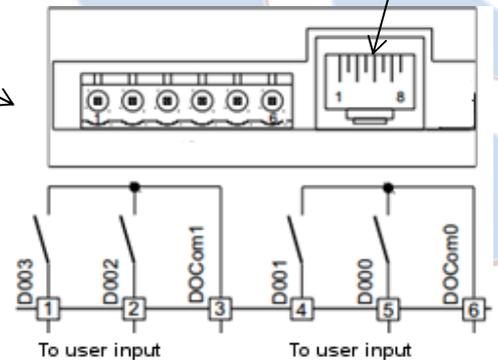
CPU Status	
LED	Function
PWR (Green)	ON=Power OK
	OFF= Power fault
RUN (Yellow)	Regular Blink = System OK
RDY (Green)	ON=System Ready
	OFF=System Stopped

1.3 CPU Digital Outputs

The CTS-CC module has 4 digital outputs, relay or open collector (depending on version), optically isolated.

Digital outputs

RS232

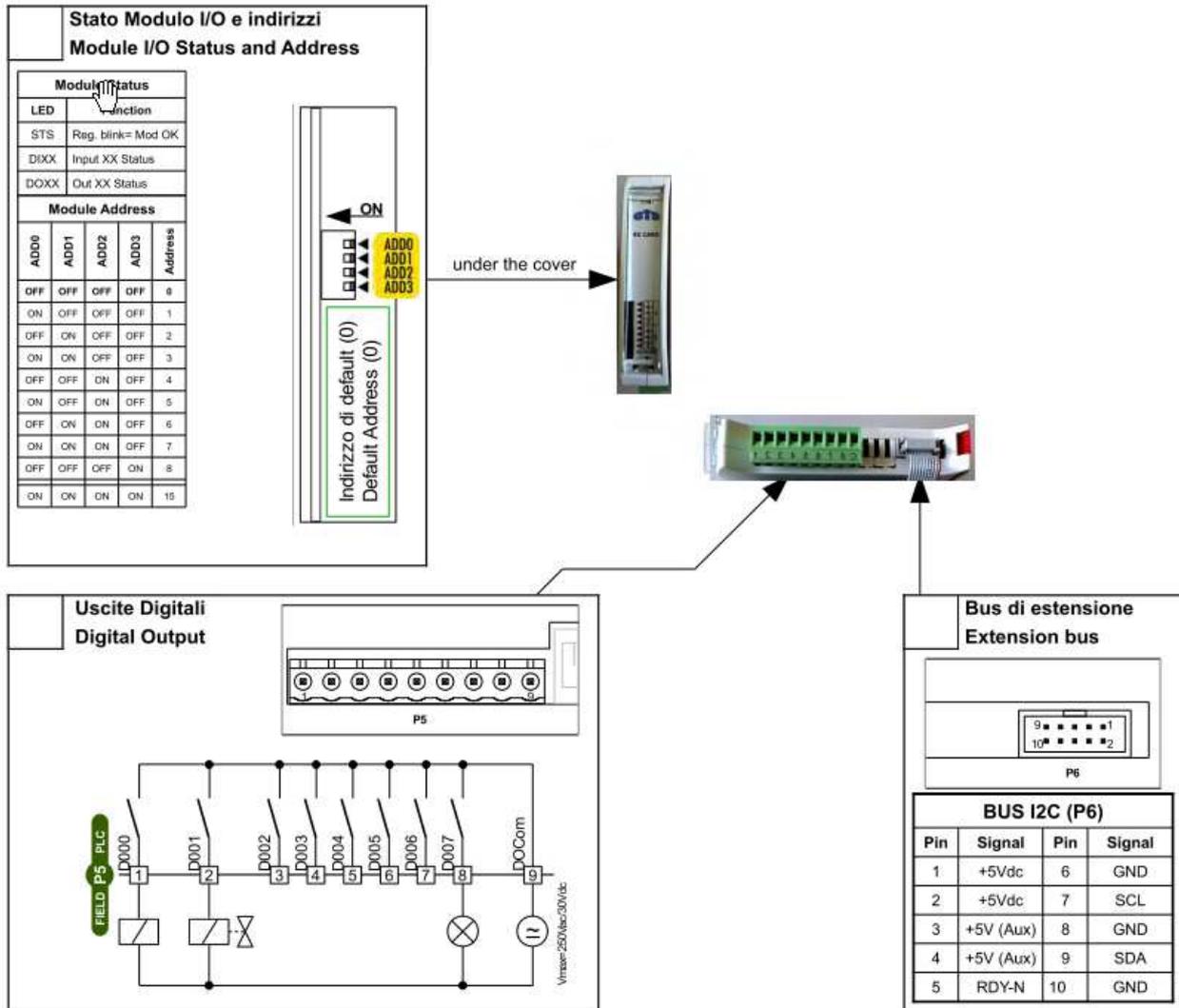


1.4 RS232 / USB

RS232			
Pin	Signal	Pin	Signal
1	Not connected	6	TX
2	Not connected	7	CTS
3	DTR	8	RTS
4	GND		
5	RX		

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EX Card



If the Ready LED blinks then the EX Card works properly.

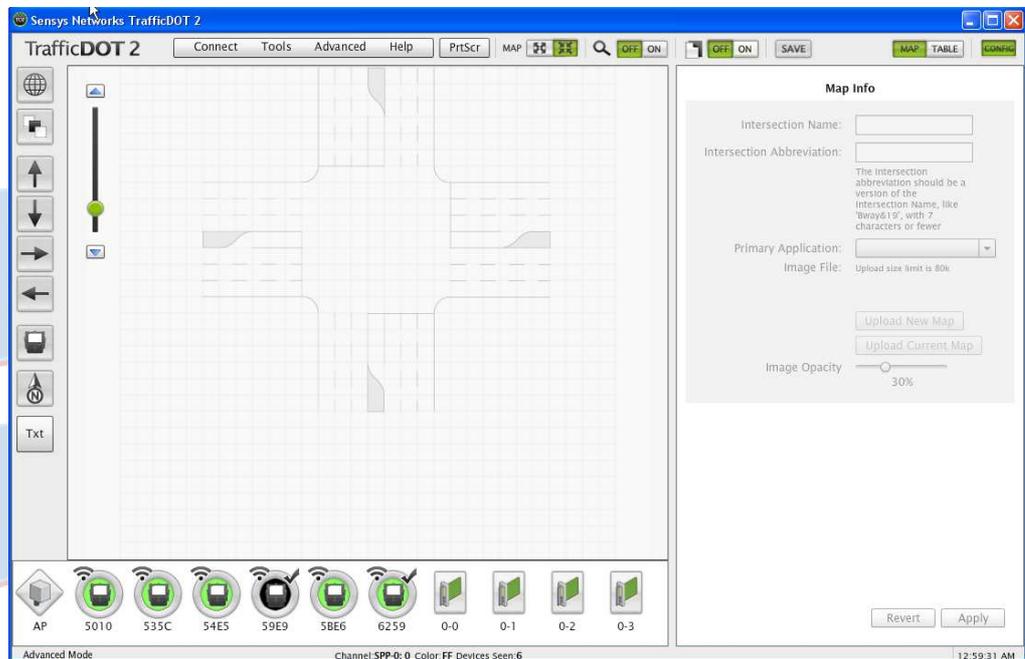
3 Using TrafficDOT2

CTS-CC + EX appears in TrafficDot2 as a standard CC card + EX.

When a CTS-CC is connected to AP the TD2 shows the card icon and its extensions (with address in the range 0-0 a 0-3) on the device bar¹.

The channel's properties can be set by clicking on the card icon, and then the Channels tab.

Currently only 'ENABLE CHANNEL' is supported. The setting is permanently stored on CTS-CC.



¹ CTS-CC emulates a card with its expansions up to a maximum of 64 outputs

Controller Card 0-0

Card Info Channels Card Commands

Ch 1 Ch 2 Ch 3 Ch 4

Enable Channel:

Pulse/Presence Mode: Pulse
 Presence

Delay/Extension Mode:
Mode:
Time Value (secs):

Channel Holdover Setting
Presence Extension
Time Value (secs):

Watchdog Failmode Setting
When the system loses communication with sensors mapped to this channel, set channel LED state to:
State:

Revert Apply

Extension e Delay are also supported.
The value of shelf must be set to 0.

Sensor 6259

Position Card Addresses Adv Cmds Pairing

Extension (milliseconds):
Delay (milliseconds):
Extension and Delay cannot be set to non-zero time values simultaneously

Card Address 1:
Shelf: Slot: Channel:

Card Address 2:
Shelf: Slot: Channel:

Card Address 3:
Shelf: Slot: Channel:

Card Address 4:
Shelf: Slot: Channel:

Under **CARD COMMANDS** it's possible to:

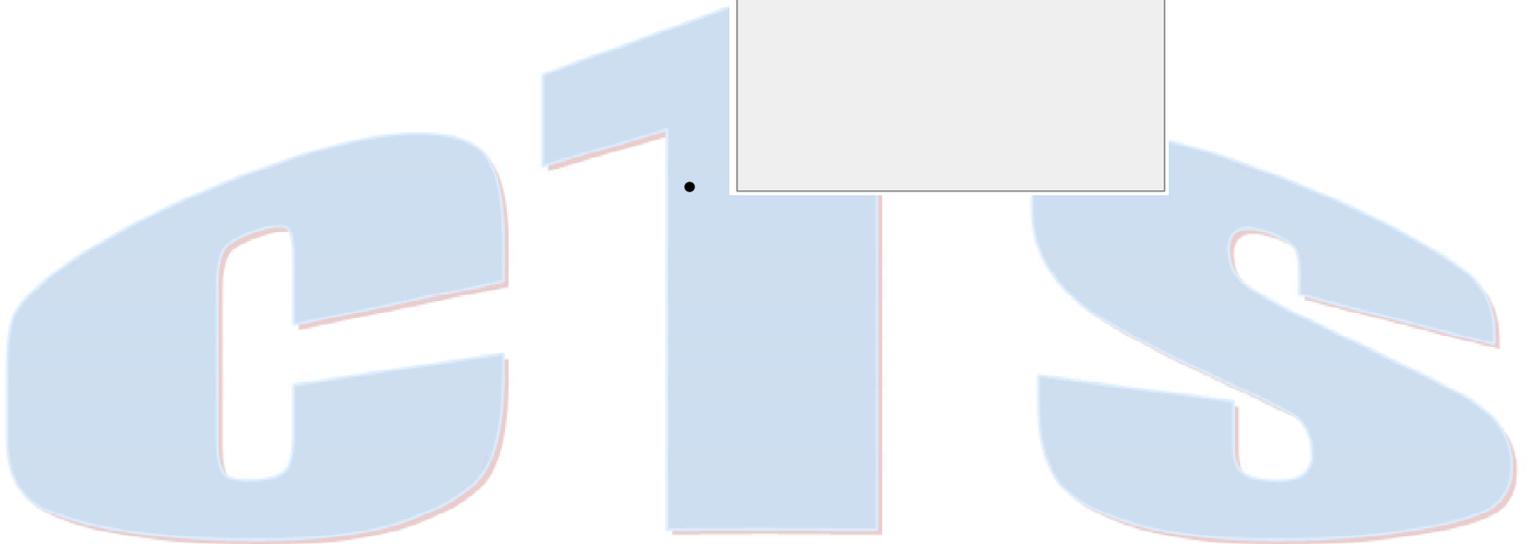
- Reset Card
- Reset checksum failures count
- Reset card to factory settings
- Refresh

Controller Card 0-0

Card Info Channels Card Commands

Commands to Controller Card:

- Reset Card
- Reset CF Count
- Reset Card to Default
- Identify Card
- Refresh



4 WEB Interface

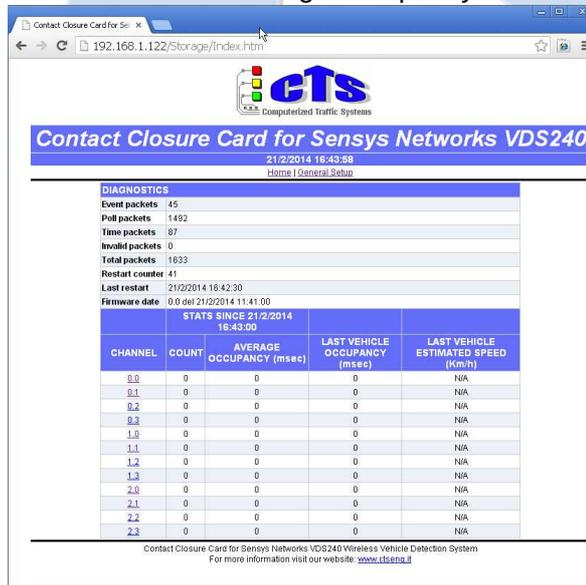
You can connect CTS-CC to a Windows XP/7 PC (USB A to mini B cable) running RNDIS-Remote Network Driver Interface Specification protocol².

Once RNDIS drivers have been installed, the *Network and Sharing Center* window³ will show the new virtual network card. Now you can set the IP address of the card (CTS-CC has the default address 192.168.1.122, then a valid address could be 192.168.1.10) and reach CTS-CC via TCP/IP as any other module connected on the network. Entering the CTS-CC address 192.168.1.122 in a browser you will access its home page.

4.1 Home page

The Home page is composed of two sections:

- a diagnostic section, where the exchanged packets counts are shown.
- a statistic section, where, for each channel, are shown:
 - the occupancy of the last vehicle with its estimated speed
 - the total count and the average occupancy of the last period⁴



DIAGNOSTICS				
Event packets	45			
Poll packets	1402			
Time packets	87			
Invalid packets	0			
Total packets	1633			
Restart counter	41			
Last restart	21/2/2014 16:42:30			
Firmware date	0.0 del 21/2/2014 11:41:00			
STATS SINCE 21/2/2014 16:43:00				
CHANNEL	COUNT	AVERAGE OCCUPANCY (msec)	LAST VEHICLE OCCUPANCY (msec)	LAST VEHICLE ESTIMATED SPEED (Km/h)
0.0	0	0	0	N/A
0.1	0	0	0	N/A
0.2	0	0	0	N/A
0.3	0	0	0	N/A
1.0	0	0	0	N/A
1.1	0	0	0	N/A
1.2	0	0	0	N/A
1.3	0	0	0	N/A
2.0	0	0	0	N/A
2.1	0	0	0	N/A
2.2	0	0	0	N/A
2.3	0	0	0	N/A

² The Remote Network Driver Interface Specification (RNDIS) is a Microsoft proprietary protocol used mostly on top of USB. It provides a virtual Ethernet link to most versions of the Windows operating system. Windows 7 support natively RNDIS but XP/Vista needs to install the drivers.

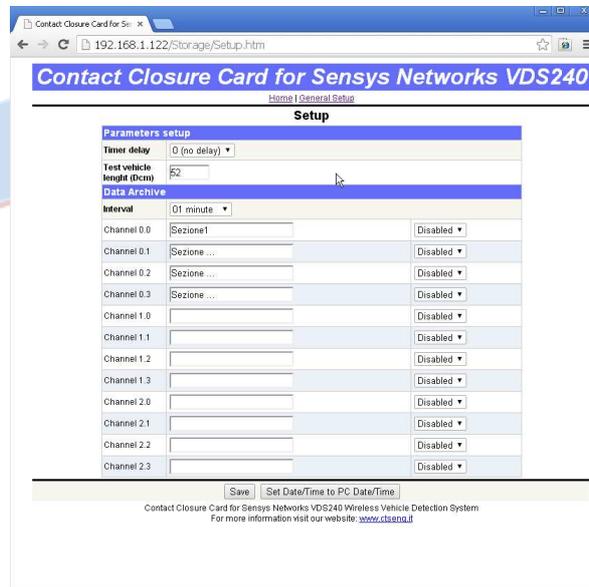
³ To display the Network and Sharing Center window from the Control Panel Home, select View Network Status and Tasks from beneath the Network and Internet heading. From the Control Panel Classic View, open the Network and Sharing Center icon.

⁴ See parag. 4.2

4.2 Setup page

The setup page allows to set:

- CTS-CC's internal clock delay (referred to AP Reference Time). Default value=0.)
- Length of test vehicle length (dm) used to estimate the speed
- Count period (minutes)
- Name of the channel and its data archive enable in CTS-CC's flash disk (function currently not operating).
- Synchronize the Real Time Clock of CTS-CC with PC's clock.



Setup

Parameters setup

Timer delay: 0 (no delay) ▼

Test vehicle length (Dcm): 52

Data Archive

Interval: 01 minute ▼

Channel	Section	Status
Channel 0.0	Sezione1	Disabled ▼
Channel 0.1	Sezione ...	Disabled ▼
Channel 0.2	Sezione ...	Disabled ▼
Channel 0.3	Sezione ...	Disabled ▼
Channel 1.0		Disabled ▼
Channel 1.1		Disabled ▼
Channel 1.2		Disabled ▼
Channel 1.3		Disabled ▼
Channel 2.0		Disabled ▼
Channel 2.1		Disabled ▼
Channel 2.2		Disabled ▼
Channel 2.3		Disabled ▼

Save Set Date/Time to PC Date/Time

Contact Closure Card for Sensys Networks VDS240 Wireless Vehicle Detection System
For more information visit our website: www.ctsnet.it