



CTI/16
RS422/BBV Coax Telemetry Interface 16 channel



Installation Guide



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PRE-INSTALLATION CHECKS AND SAFETY PROCEDURES

Unpacking - Inspect the packaging for signs of damage. If damage has occurred, advise the carrier and/or the suppliers immediately. Unpack the receiver carefully and check that all the items are present and correct (see checklist on box). If any item is missing contact the supplier.

Retain packaging - The shipping carton is the safest container in which to transport the unit. Retain undamaged packaging for possible future use.

IMPORTANT SAFETY PRECAUTIONS

Read & retain instructions - All relevant safety, installation and operating instructions should be read & retained before attempting to install, connect or operate the unit.

Water and moisture - Do not expose the internal electronics of this unit to water or dampness.

Power sources - This unit should be operated only from the supplied power supply.

Servicing - Servicing of the unit should only be undertaken by qualified service personnel.

Damage requiring service - Servicing by qualified personnel should be carried out under the following conditions:

- (a) When the power supply cord or plug is damaged;
- (b) If liquid has been spilled, or objects have fallen into, the unit;
- (c) If the internal electronics of the unit have been exposed to rain or water;
- (d) If the unit does not operate normally by following the operating instructions.
- (e) If the unit has been dropped or the enclosure is damaged;

Replacement parts - If replacement parts are required, ensure that only replacement parts recommended by the product manufacturer are used.

Safety check - Upon completion of any service or repairs to the unit, safety checks should be performed to ensure that the unit is in proper operating condition.

Coax grounding - If an outside cable system is connected to the unit, be sure the cable system is grounded.

Pre-installation checks - It is recommended that the unit be bench-tested prior to installation on the site.

Adhere to Safety Standards - All normal safety precautions as laid down by British Standards and the Health and Safety at Work Act should be observed.

WARNING

TO PREVENT DANGER OF FIRE OR SHOCK, DO NOT EXPOSE THE INTERNAL COMPONENTS OF THIS EQUIPMENT TO RAIN OR MOISTURE.

INTRODUCTION

GENERAL

The CTI/16 is designed to provide conversion from RS422/485 data to BBV Coax Telemetry based systems.

Up the Coax telemetry allows upgrading of static cameras to PTZ without the need for additional cabling.

One RS422/485 input that is dipswitch selectable. The Baud Rates & Parity for Pelco P/D & Vicon Protocols are variable.

Sixteen individual outputs are provided. Each output connects to a single receiver.

Each unit is supplied with a break out box and 0.5mtr Cat 6 patch cable.

Multiple CTI/16 can be cascaded together giving up to 256 camera outputs.

Please Note: Camera address will be limited to the maximum number supported by the individual protocol.

Please note: Menu Access commands of cameras can vary between control equipment even if using the same protocol.

For Example: In Pelco D protocol - dome menu access commands can be either Goto Preset 95 or Save Preset 95. Enter = Goto Preset 1 or Iris Open / Close

Protocols currently supported are: BBV, Pelco P/D, Pelco P DM, VCL, Dennard, Philips, Sensormatic RS422, Molynx & Vicon.

The CTI/16 has been tested with the BBV FBM/256 Matrix & Starcard Converter, BBV TX1500/96 Matrix & Starcard Converter, Pelco KBD300, DM DS2, VCL VCTM16 Matrix & Maxcom 8 Matrix & Keyboard, Philips Allegiant 32 Camera Matrix LTC8301/50 & Bi – Phase to RS232 Converter LTC8780/50, American Dynamics Intellex LT V4 Software, Molynx TTX600 Keyboard & TTX6164T Matrix and Vicon VI411-DVC Keyboard

Unpacking

Inspect the packaging for signs of damage. If damage has occurred, advise the carriers and/or the suppliers immediately. Unpack the interface carefully and check all the items are included:

CTI/16 RS422/BBV Coax Telemetry Interface 16 channel	X
CAT6 patch cable	X
Break out box	X
Mounting brackets	X
9V dc PSU	X
Manual	X
Warranty card	X

Technical Specification

Power Requirements	9Vdc 500mA
Inputs	2 Wire RS485, 2 Wire RS422 Simplex and 4 Wire Full Duplex (switch selectable input protocol) Maximum Cable Distance Belden 8723 = 1200m
Outputs	16 x BBV Coax Telemetry Maximum Cable Distance RG59 = 250m CT125 = 500m
Facilities	LED as power indication
Boxed Dimensions	Supplied in 19" 1 U rack mountable case Length 425mm Depth 110mm Height 43mm
Installation	The unit is designed to either be fitted into a 19" rack or wall mounted via the fixing brackets supplied

CTI/16 Manual & Software Version History

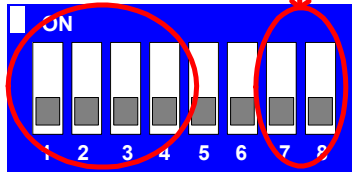
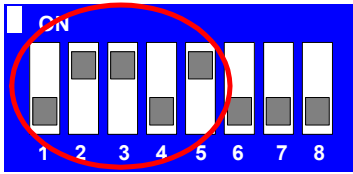
Version 15.2 June 2010	-1. Change to the Test mode page
Version 15A June 2010	-1. Change to the Sensormatic commands on page 9
Version 15 11 December 2009	-1. Added Test feature. Pan Left & Right via dipswitches
Version 1 8 May 2008	- 1. CTI/8 Released
Version 13 15 October 2007	-1. Bug fix for address 27 in Dennard RS485 Protocol
Version 12 10 October 2007	-1. Bug fix for address 2 & 3 in Dennard RS485 Protocol
Version 11 3 September 2007	-1. Updated Support of VCL Telemetry from Maxcom 8 Matrix -2. Manual Update
Version 10 15 August 2007	-1. Bug fix of VCL Telemetry from Maxcom 8 Matrix
Version 9 10 July 2007	-1. Updated Support of VCL Telemetry from Maxcom 8 Matrix
Version 8 17 March 2007	-1. Updated support of Hash Command release time -2. Manual update.
Version 7 13 February 2007	-1. Added continuous sending of telemetry for legacy coax receivers
Version 6 8 January 2007	- 1. Molynx Protocol Speed table recalibration
Version 5 11 December 2006	- 1. Bug fix for Accumulative Delays in Pelco P & D and Dennard RS485 Routines - 2. Updated watchdog routine - 3. Added support for Sensormatic RS422 Protocol - 4. Added support for Molynx RS485 Protocol - 5. Added support for Vicon RS485 Protocol variable Baud Rate
Version 4 18 November 2005	- 1. Added support for Pelco P/D Protocol variable Baud Rate & Parity settings. - 2. Added support for Pelco P DM Auxiliary outputs.
Version 3 27 June 2005	- 1. Added support for Dennard 2050 Protocol.
Version 2 25 May 2005	- 1. Added support for Philips RS485 Protocol.
Version 1 11 November 2005	- 1. CTI/16 Released Support of BBV, Dennard, Philips, Pelco P & D and VCL RS485 input protocols converting to BBV Coax output protocol.

Test Mode

This feature enables the Camera to be driven left or right from the Coax Telemetry Interface directly

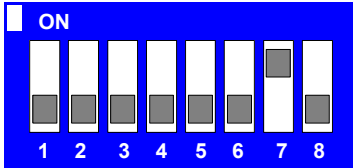
SW2 Sets Test Mode

SW1 Sets Camera Number & Direction

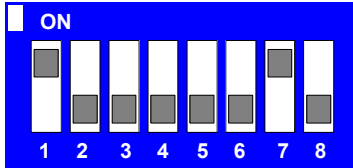


7 ON = Pan Left
8 ON = Pan Right

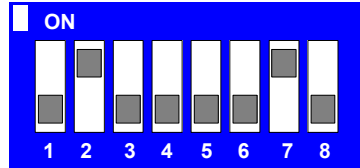
SW1 Cam 1 Pan Left



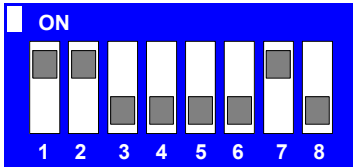
SW1 Cam 2 Pan Left



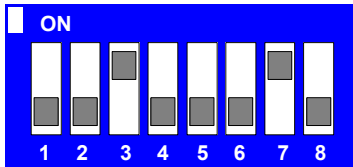
SW1 Cam 3 Pan Left



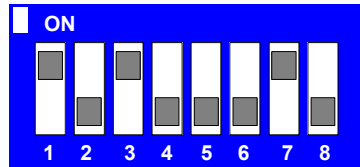
SW1 Cam 4 Pan Left



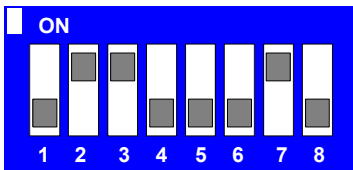
SW1 Cam 5 Pan Left



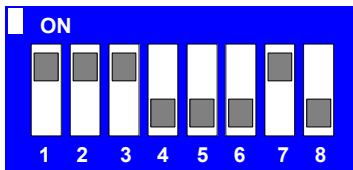
SW1 Cam 6 Pan Left



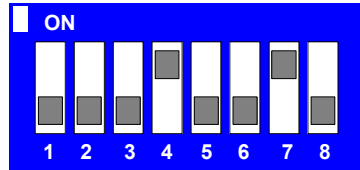
SW1 Cam 7 Pan Left



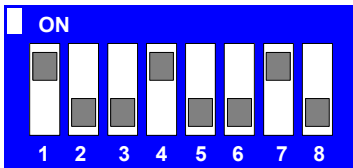
SW1 Cam 8 Pan Left



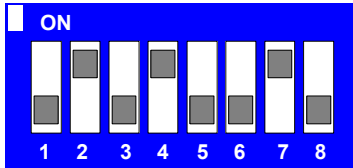
SW1 Cam 9 Pan Left



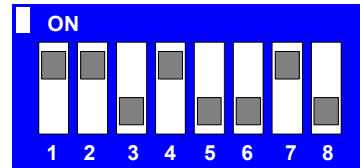
SW1 Cam 10 Pan Left



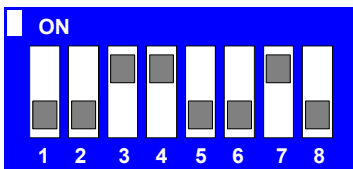
SW1 Cam 11 Pan Left



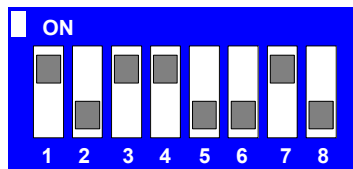
SW1 Cam 12 Pan Left



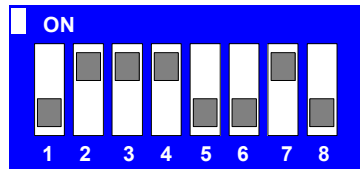
SW1 Cam 13 Pan Left



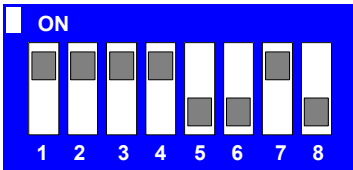
SW1 Cam 14 Pan Left



SW1 Cam 15 Pan Left



SW1 Cam 16 Pan Left



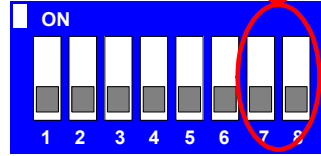
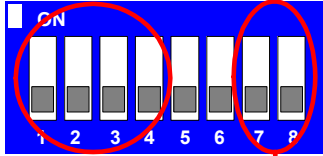
Setting the Protocol and baud rate

The CTI/16 will only output BBV Coax Telemetry on the 16 Coax output channels

The CTI/16 supports various RS422/485 input Protocols

SW2 Sets Protocol & Baud Rate

SW1 Sets Address & Parity



7 & 8 OFF = None Parity
 7 & 8 ON = Odd Parity
 7 OFF & 8 ON = Even Parity

Input Termination

SW2 BBV 9600 N 8 1 	SW2 Pelco P 9600 N 8 1 	SW2 Pelco P 4800 N 8 1
SW2 Pelco P 2400 N 8 1 	SW2 Pelco P DM 9600 N 8 1 	SW2 Pelco P DM 4800 N 8 1
SW2 Pelco P DM 2400 N 8 1 	SW2 Pelco D 9600 N 8 1 	SW2 Pelco D 4800 N 8 1
SW2 Pelco D 2400 N 8 1 	SW2 VCL 9600 N 8 1 	SW2 Dennard 9600 N 8 1
SW2 Philips 9600 N 8 1 	SW2 Sensormatic 4800 N 8 2 	SW2 Molyntx 9600 E 8 1
SW2 Vicon 19200 N 8 1 	SW2 Vicon 9600 N 8 1 	SW2 Vicon 4800 N 8 1

Address Settings

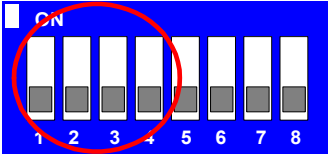
The CTI/16 supports a maximum of 256 addresses

A maximum of 16 x CTI/16 can be cascaded together

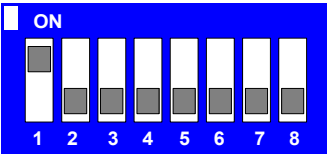
N.B. Refer to input Protocol documents for maximum address supported
i.e. Pelco P max addr = 32

Address Range 1 - 16

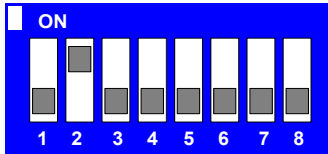
SW1 Sets Address →



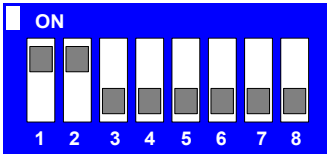
Address Range 17 - 32



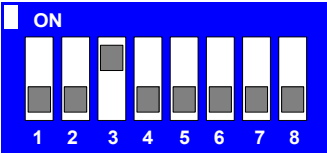
Address Range 33 - 48



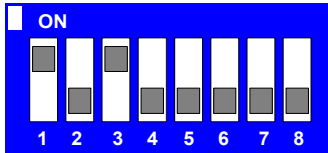
Address Range 49 - 64



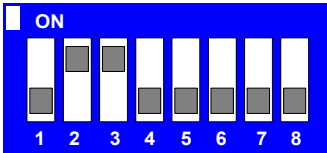
Address Range 65 - 80



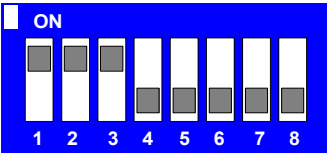
Address Range 81 - 96



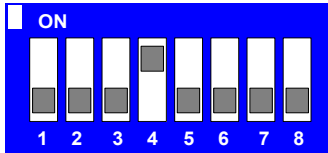
Address Range 97 - 112



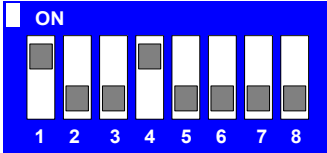
Address Range 113 - 128



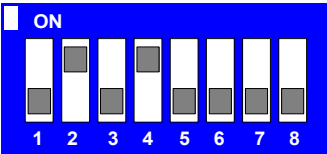
Address Range 129 - 144



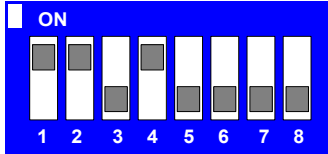
Address Range 145 - 160



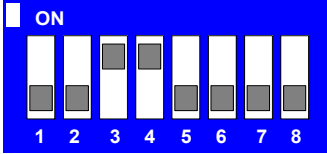
Address Range 161 - 176



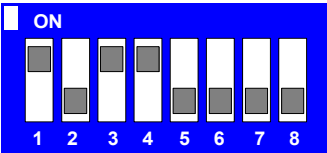
Address Range 177 - 192



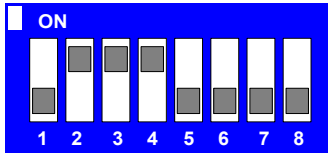
Address Range 193 - 208



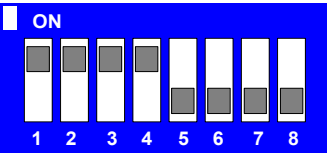
Address Range 209 - 224



Address Range 225 - 241



Address Range 242 - 256



Advanced Features Table

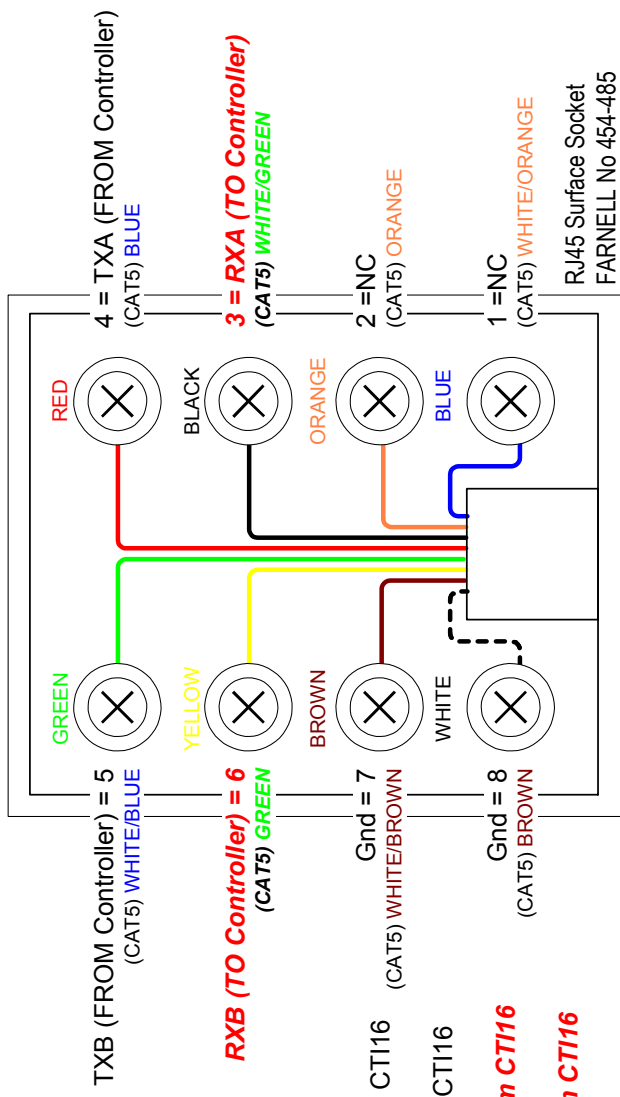
	1#	2#	3#	4#	START 1 PATROL	START 2 PATROL	START AUTOPAN
BBV COAX OUTPUT					1 PATROL	2 PATROL	AUTOPAN
BBV Tx1500	1#	2#	3#	4#	1 PATROL	2 PATROL	AUTOPAN
PELCO	SAVE PRESET 95 OR GOTO PRESET 61	GOTO PRESET 33 OR GOTO PRESET 62	GOTO PRESET 94 OR GOTO PRESET 63	GOTO PRESET 64	GOTO PRESET 66	GOTO PRESET 67	GOTO PRESET 68
VCL	GOTO PRESET 95 OR GOTO PRESET 61	GOTO PRESET 62	GOTO PRESET 63	GOTO PRESET 64	GOTO PRESET 66	GOTO PRESET 67	GOTO PRESET 67
DENNARD	SAVE PRESET 95 OR GOTO PRESET 61	GOTO PRESET 33 OR GOTO PRESET 62	GOTO PRESET 94 OR GOTO PRESET 63	GOTO PRESET 64	GOTO PRESET 66	GOTO PRESET 67	GOTO PRESET 67
PHILIPS	AUX 46 ON OR GOTO PRESET 61	AUX 63 ON OR GOTO PRESET 62	AUX 100 ON/OFF OR GOTO PRESET 63	SET 899 OR GOTO PRESET 64	GOTO PRESET 66	GOTO PRESET 67	GOTO PRESET 67
SENSORMATIC	START PATTERN 3 REPEATED 5 TIMES FOLLOWED BY SAVE PRESET 1 OR GOTO PRESET 61 <i>SEE note 1</i>	START PATTERN 3 REPEATED 5 TIMES FOLLOWED BY SAVE PRESET 1 OR GOTO PRESET 62 <i>SEE note 1</i>	START PATTERN 3 REPEATED 5 TIMES FOLLOWED BY SAVE PRESET 1 OR GOTO PRESET 63 <i>SEE note 1</i>	START PATTERN 3 REPEATED 5 TIMES FOLLOWED BY SAVE PRESET 2 OR GOTO PRESET 64 <i>SEE note 1</i>	GOTO PRESET 71	GOTO PRESET 72	GOTO PRESET 73
MOLYNX	AUX 1 OR GOTO PRESET 61	AUX 2 OR GOTO PRESET 62	HOME OR GOTO PRESET 63	CAMERA On/Off OR GOTO PRESET 64	GOTO PRESET 66	GOTO PRESET 67	GOTO PRESET 67
VICON	SAVE PRESET 94 OR 95 OR GOTO PRESET 61	GOTO PRESET 62	GOTO PRESET 63	GOTO PRESET 64	GOTO PRESET 66	GOTO PRESET 67	GOTO PRESET 67

NOTE1. 5min time out / Goto Preset 6 to Cancel/

**When using BBV422 & Pelco P you can toggle wash, wipe & lights with Goto Preset commands:
Preset 81 Wash on, Preset 82 Wash off, Preset 83 Wipe on, Preset 84 Wipe off, Preset 85 Lights on & Preset 86 Lights off.**

CTI/16 Connection Details

The CTI/16 unit is supplied with a Cat 6 Patch cable and a Break Out Box.



Connection information

TXA (FROM Controller) DATA + from the DVR/ MATRIX to CTI16

TXB (FROM Controller) DATA - from the DVR/ MATRIX to CTI16

RXA (TO Controller) DATA + to the DVR/ MATRIX from CTI16

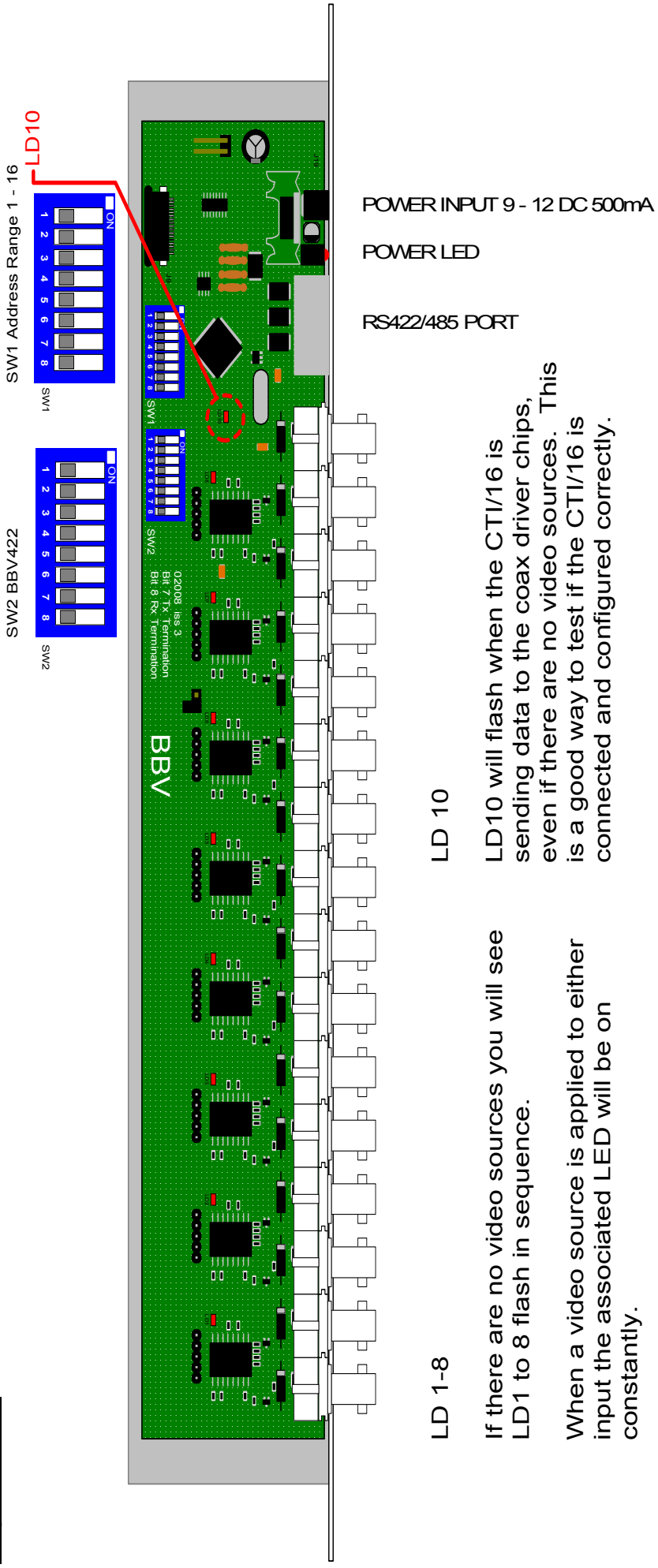
RXB (TO Controller) DATA - to the DVR/ MATRIX from CTI16

see RS422 NOTE

RS422 NOTE

Some systems require RS422 FULL DUPLEX before they will work. Some Sensormatic systems require a 4 Wire connection.

Diagnostic LEDs



LD 1-8

If there are no video sources you will see LD1 to 8 flash in sequence.

When a video source is applied to either input the associated LED will be on constantly.

LD 10

LD10 will flash when the CTI/16 is sending data to the coax driver chips, even if there are no video sources. This is a good way to test if the CTI/16 is connected and configured correctly.

Intellex DVR controlling domes UP-THE-COAX via CTI16 Telemetry interface



ADT Fire and Security

- 

Sensormatic
- 

Mark Mercer
- 

JVC TK - C676
- 

Pelco Domes
- 

Pelco Esprit
- 

Bosch Domes
- 

All Dennard Domes
- 

Panasonic
- 

Aritech
- 

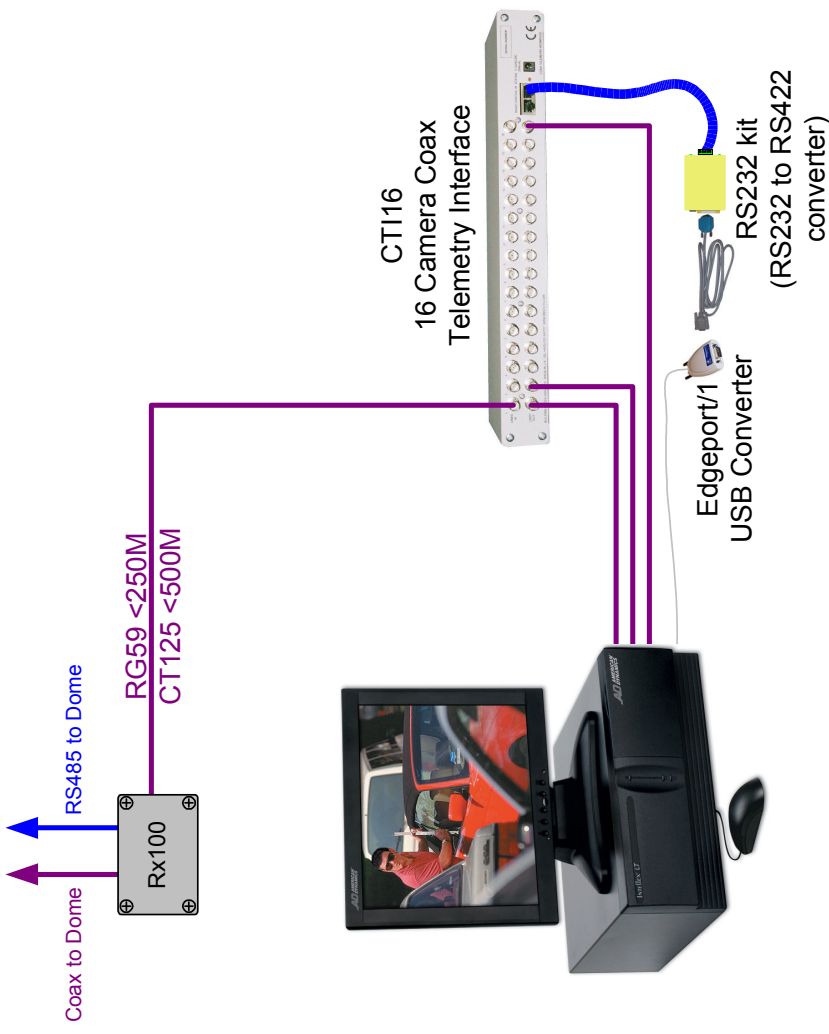
LG Domes
- 

VCL Honeywell
- 

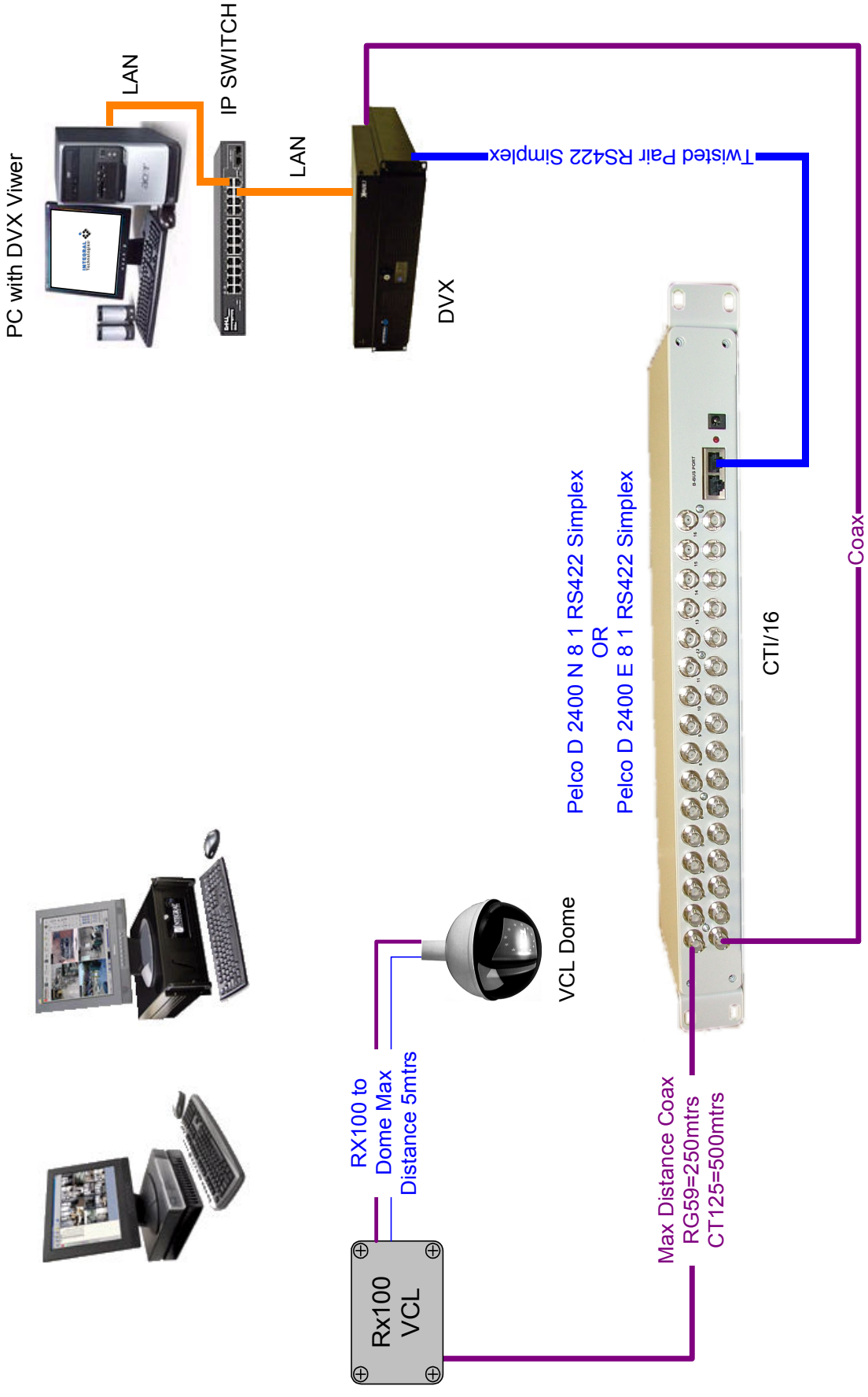
Forward Vision

Please note this is a small selection of the domes that can be controlled by the RX100. For a full list of domes please refer to the BBV website www.bbvctv.com.

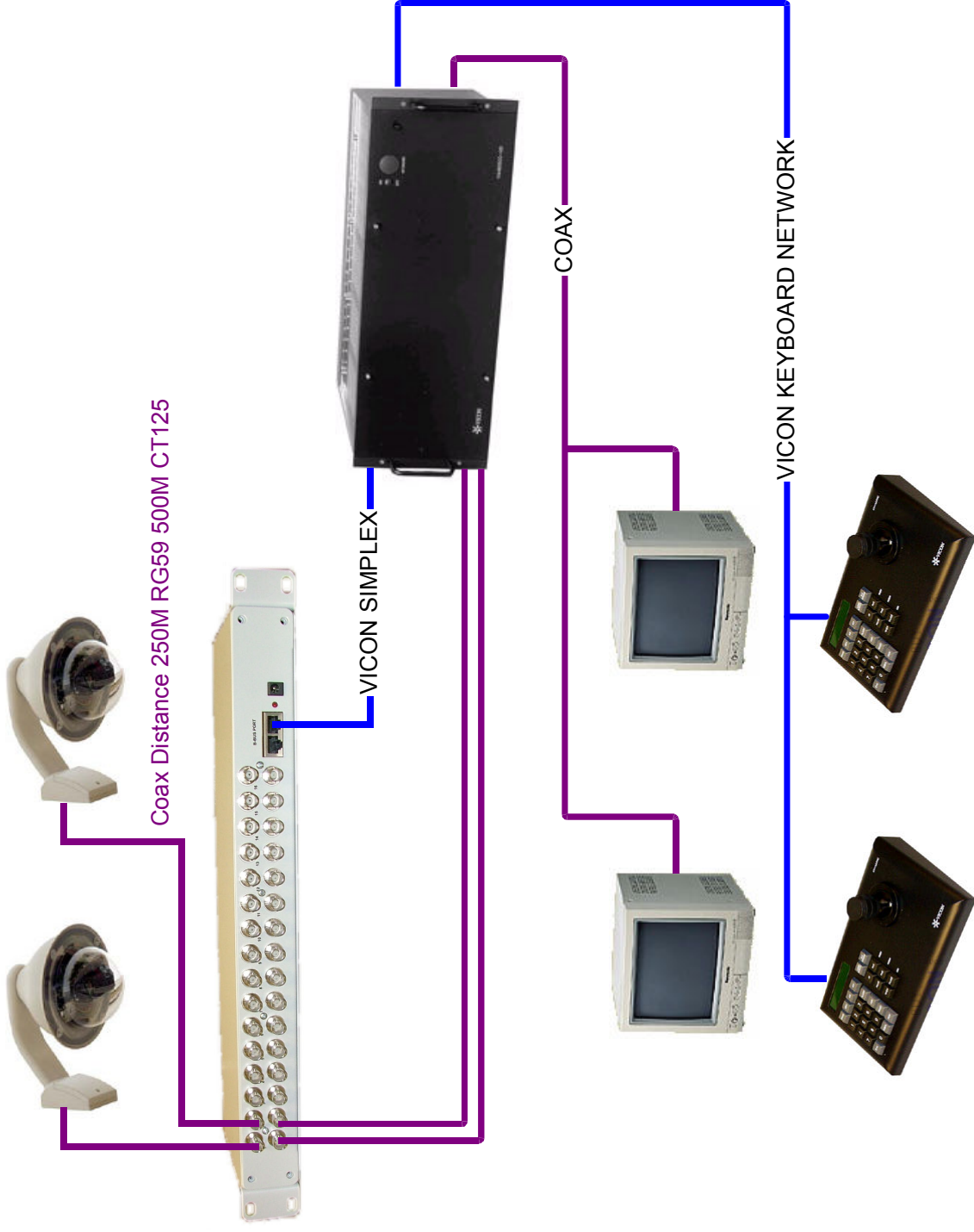
The CTI can control the full range of BBV Receivers



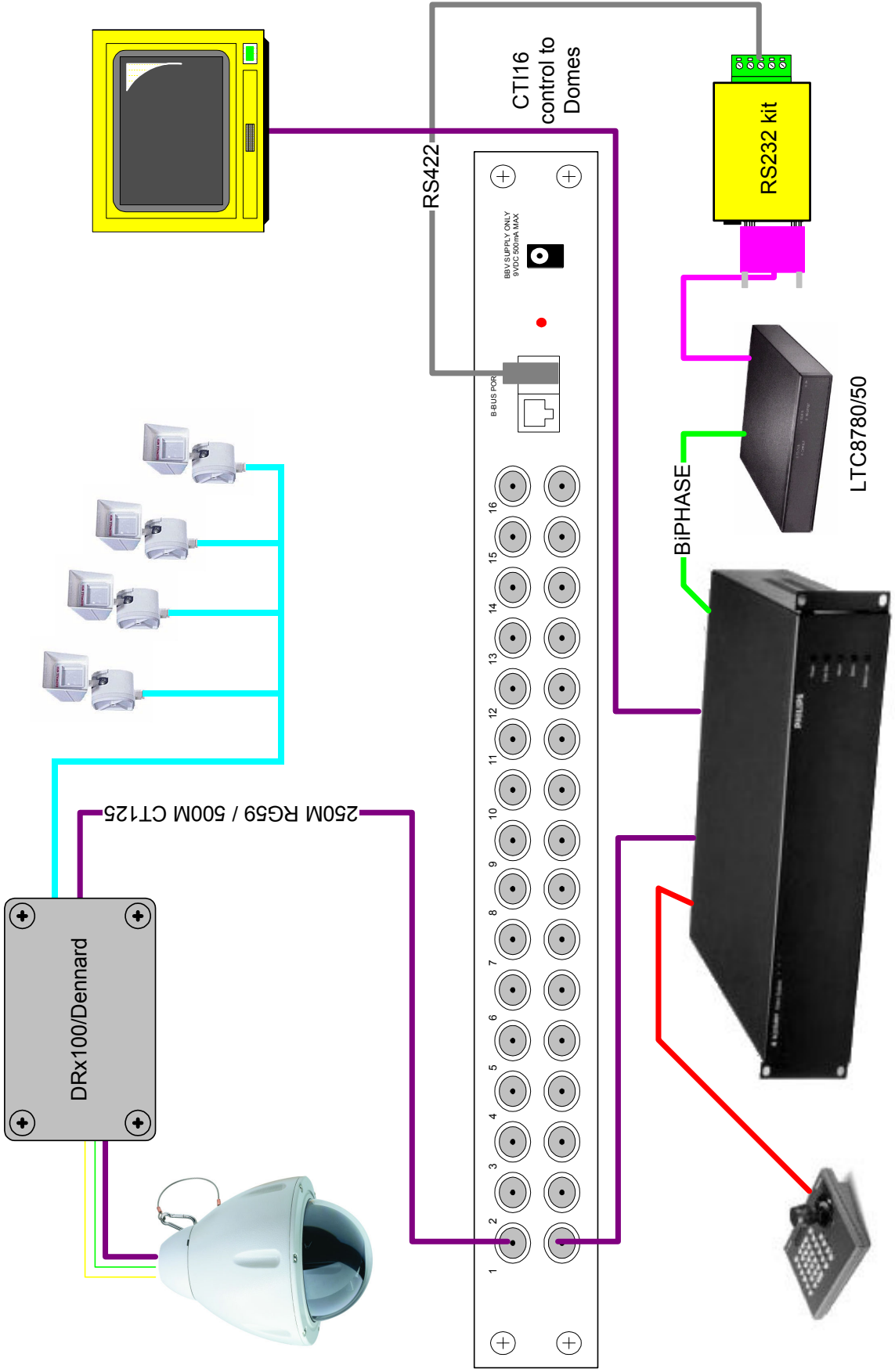
DVX to CTI/16 driving RX100/VCL



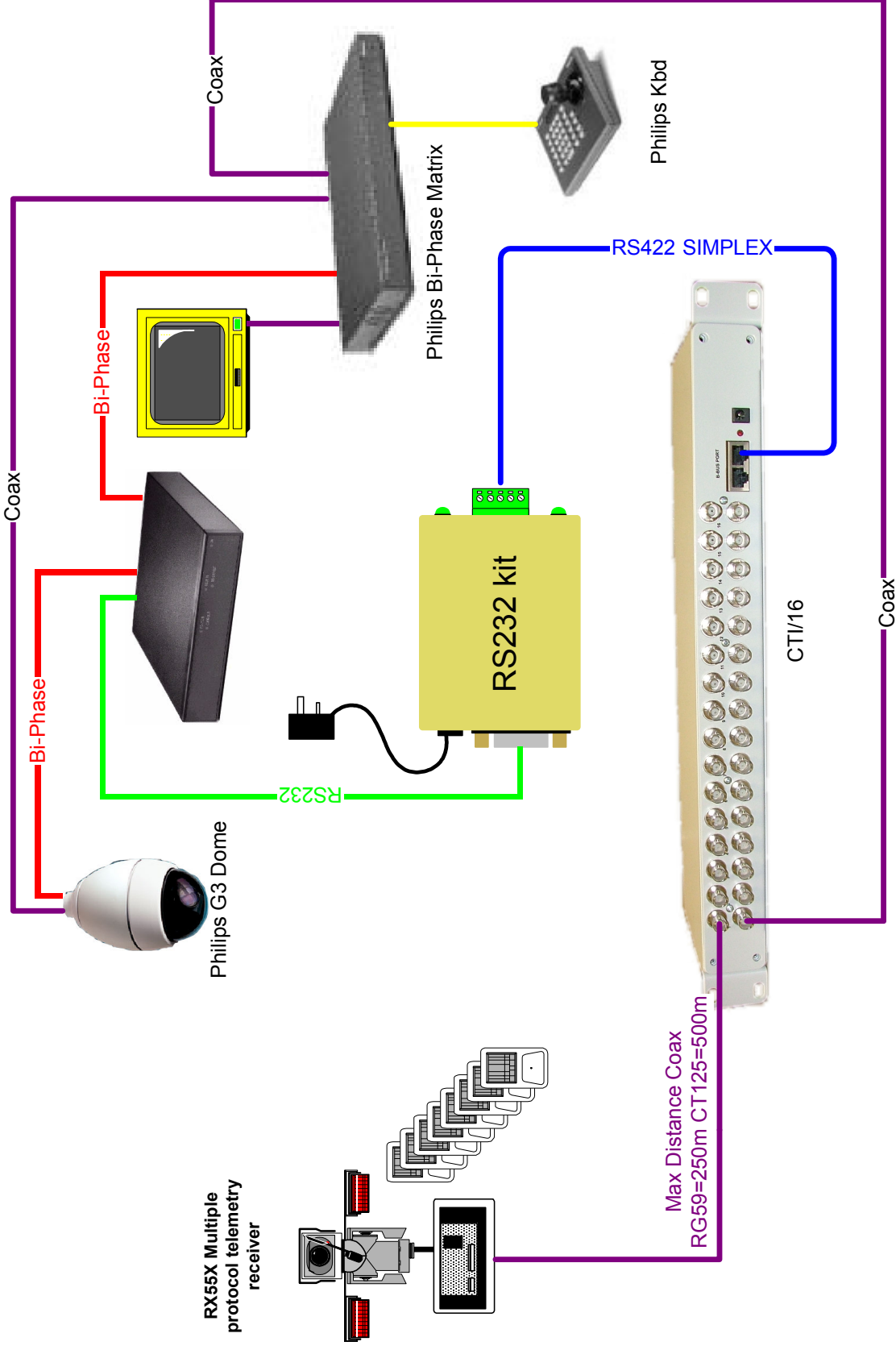
VICON MATRIX CONTROLLING CT116 WITH 360 VISION DOMES



2060 Dennard Domes with up the coax control and 4 local alarms



Philips Bi-Phase Matrix to CTI/16 driving RX55X



- Blank for your notes -

- Blank for your notes -

- Blank for your notes -

Extend your BBV Warranty from 12 months to 3 years

As of the 1st September 2008 BBV have offered our customers the opportunity to extend the standard 12 month warranty to 3 years.

You must register for the extended warranty within 12 months of the date of manufacture.

How to register for the 3 year warranty

Registering for the new, longer 3 year warranty term is quick and easy.

Either:


Complete the warranty application card that comes in the box with your BBV product, and return it FREEPOST to BBV:

BBV 3 Year Warranty

If this card is returned with the serial number of the product and the installation company details BBV will extend the warranty period from 12 Months to 36 Months.

Number of Units, Start Serial No. Final Serial No.

Company Name: _____ Please send me information especially on:
Phone Number: _____ Rx100s
Site Name: _____ Rx45x & Rx55x
Address 1: _____ FBM Video Matrices
Address 2: _____ Tx1500 Video Matrices
Address 3: _____ Starcard & Starcard Converters
Post Code: _____ BBV Cloud
e-mail address: _____ Pick A Point

Do you read:  PSI MAGAZINE SC

I do not require any other further product information.
Please refer to WWW.BBV/CCTV.COM for further details, conditions & exclusions.
VAT Reg. No. 92778454 Registered in England No. 2852921 Registered office: 17, Aylea Park, Spence Way, Halesham East, Sussex, UK BN27 3JU

Or alternatively:

Register online at: www.bbvctv.com

Simply enter your details on the 'Warranty Cover' page.

