

TELDAT C/S/G ROUTERS FAMILY

Installation Manual

Doc. Dm274-I Rev. 5.0 September, 2003

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The manufacturer reserves the right to make changes and improvements in the appropriate features in either software or hardware of this product, modifying the specifications of this manual without prior notice.

The images presented on the front and back panels of the devices are provided as an information guideline. Some small modification can exist in the actual device.

I - Chapter.Router Installation

I - 1. Introduction

The *TELDAT C/S/G* routers family is composed of a range of IP routers for general purposes with a wide application area: personal environments, SOHO/SME and corporative; they are perfectly adaptable to a wide variety of IP scenarios: from providing simultaneous access to Internet for private LAN users to the adaptation of teleprocess networks and SNA support and the support of POS (Point of Sale terminals – dataphones).

The *TELDAT C/S/G* family covers the access needs for ADSL (both over PSTN and ISDN), SHDSL, GSM/GPRS, ISDN and serial line (connection to an external telephone modem, Frame Relay, X.25 etc.).

This manual is the installation and device connection guide.



Illustration 1.1: External aspect for the Teldat C/S/G routers (excepting C6)





Illustration 1.2: External aspect for the Teldat C6 routers (with rack adaptors)

1-2. Connections

BEFORE INSTALLING THE ROUTER PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

Workplace Conditions. Main Characteristics

- Excessive cold and heat should be avoided, as should humidity and dust.
- Direct exposure to sunlight should be avoided as well as other heat sources. The
 device should not be placed amongst papers, magazines or other elements that
 could hinder natural air circulation.
- The device should not be placed very close to strong electromagnetic fields such as speakers, engines, etc.
- Knocks and/or strong vibrations should be avoided during transport, operation and storage.

WARNING: Electric supply current, telephone and communication cables are dangerous. To prevent electric shock while installing, moving or opening the device covers, cables should be disconnected and connected as follows:

To Connect	To Disconnect
Turn the device's power supply OFF	Turn the switch OFF
Check that the power supply is not connected to either the main electricity supply or the device	Disconnect the power supply from the main electricity supply
Connect all data cables	Disconnect the power supply from the device
Connect the power supply to the device	Disconnect the data cables
Connect the power supply to the main electricity	
supply	
Turn the switch ON	



NOTE: In cases of devices with internal power supply sources, these are permanently connected to the devices and therefore the steps relative to the said connection should be omitted, as they are impossible to carry out.

I - 2.1. Power Source Connection

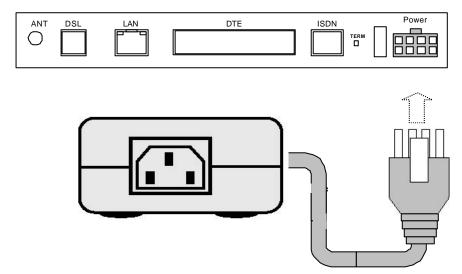


Illustration 1.3: Connection to the power supply

The **TELDAT C/S/G** routers family (except for the Teldat C6 model) is powered with an external AC/DC source. (For details, consult the appendix).

To connect the power source to the device, follow the steps listed in the earlier table: ensure that the switch is OFF (0) and the power supply is not connected to the main electricity supply; find the POWER plug, located on the rear panel of the device and plug it into the power source. You must take care that the grooves of the plug are correctly plugged in to the POWER source. These grooves on the plug prevent the incorrect insertion of this plug.

For subsequent connection of the power source to the main electricity supply, use the grounded cable provided for this purpose.

I - 2.1.1. <u>Devices with internal power supply sources</u>

To connect the power source to the device: check that the power switch in the OFF position (0) and that the device is not connected to the main electricity supply; locate the power connector situated on the rear of the device and insert the power cable with the ground provided for this (the shape of the connector prevents incorrect insertion).



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Illustration 1.4: Connecting the power with the internal source

To avoid electric shocks, residual current circulation and other unwanted effects, also affecting communications, the following is recommended:

- It is highly recommended that all interconnected communication devices are plugged to THE SAME GROUNDED POWER OUTLET, which should at the same time be of good quality (lower than 10ohms).
- Whether the workplace is provided with an uninterrupted power supply system (UPS), regulated supply or it is independent from the rest (such as lighting, etc.); it is highly recommended that all data devices should be connected to the same power source. This will avoid operating and premature aging problems of drivers and other components.

I - 2.2. Data Connections

The *TELDAT C/S/G* router family has the following connectors available. Some of these connectors may not be available depending on the model:

LAN:

Ethernet Interface 10BaseT for LAN connection; a LED (LNK) is provided indicating the establishment of the physical level and an RxD LED indicating frame reception (excepting Teldat C6).

Available in all models (excepting models with switch).

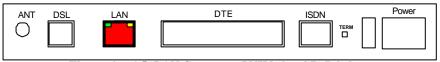


Illustration 1.5: LAN Connector, LNK led and RxD led



Illustration 1.6: LED LINK and LAN connector in the Teldat C6 model SWITCH:

4 port switch 10/100BaseT with automatic MDI/MDIX for local area network (LAN) connection: this has a 100 LED indicating connection at 100 Mbps, and a 10 LED indicating connection at 10 Mbps.

Please pay close attention to the labeling. This is important in order to avoid confusing the switch with the four asynchronous ports.



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Available depending on model.



Illustration 1.7: Switch LAN Connector, LEDs 100 and LEDs 10

DTE / DCE:

Multistandard serial interface for connection to an external modem, POS or for connection to an X.25 type WAN, Frame Relay, PPP, etc. (among other functions).

Requires an insertable driver (V.24, V.35, V.36, X.21) and software license for operating purposes.



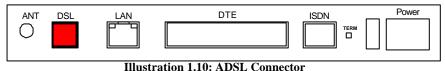


Illustration 1.9: DTE/DCE Connector in the Teldat C6 model

DSL:

xDSL interface (ADSL over PSTN, ADSL over ISDN, SHDSL, etc.) In cases of model C6, only ADSL over PSTN.

Requires an xDSL plug-in card and software license for operating purposes.



(w)Testa

Illustration 1.11: ADSL Connector in the Teldat C6 model



ISDN:

Basic ISDN 2B+D interface; a switch (TERM) is available in order to introduce the S bus termination load.

Requires a software license for operating purposes.

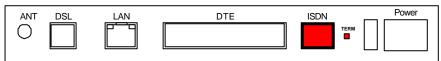


Illustration 1.12: ISDN Connector and TERM pushbutton



Illustration 1.13: ISDN Connector and TERM pushbutton in the Teldat C6 model

ANT.:

RF antenna connector.

Requires an xDSL plug-in card and software license for operating purposes.

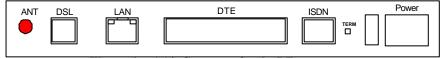


Illustration 1.14: Connector for the RF antenna

ASYNCHRONOUS SERIAL INTERFACES:

Asynchronous serial interfaces for connecting modems -point of sale terminals (POS), etc.

Available depending on model.



Illustration 1.15: Specific asynchronous POS connectors



I - 2.2.1. ADSL Connection

The ADSL interface has a female RJ11 connector with 4 wires of which the **central pair is used** for data transmission/reception.

In order for connection you can use the telephone cable with male RJ11connectors that are provided with the device.

The splitter

The Full Rate ADSL (ITU G.dmt or G.922.1) operating mode uses a higher transmission capacity which does not allow the use of telephones directly connected to the same line; it is necessary to use a mechanism known as "splitter" in charge of separating the band frequencies for voice telephony from those used for the ADSL connection for transmission of data, in this way avoiding interferences between the telephone service and ADSL service and vice-versa.

A typical installation with a splitter is shown in Illustration 1.16.

The micro-filter

The G. Lite (ITU G.922.2) operating mode uses reduced transmission power which permits the use of telephones directly connected to the same line by using a device known as a "micro-filter". This device ensures that the ADSL signal does not reach the telephone and that undesired signals generated by the telephone do not interfere with the ADSL signal.

A typical installation with a splitter is shown in Illustration 1.17.



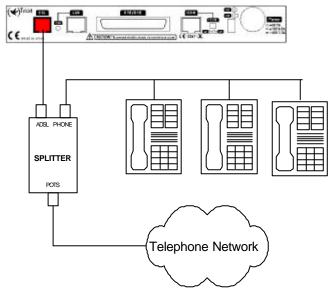


Illustration 1.16: ADSL installation with a splitter

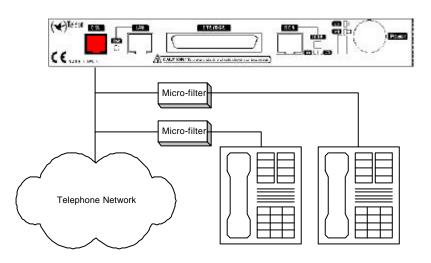


Illustration 1.17: ADSL installation with splitter

In cases of ADSL over ISDN, the above information for operations over PSTN is applicable. However you must bear in mind that the frequency bands used are



different and therefore you must use splitters and microfilters specifically for ADSL over ISDN.

I - 2.2.2. ISDN Connection

The ISDN interface has a female RJ45 connector in order to connect to the S bus with 4 wires that arrives from the ISDN (NT1 or TR1) network terminator.

For this connection you can use the cable with male RJ45 connectors, provided with the device.

Passive-Bus termination resistors

The *TELDAT C/S/G* has a pushbutton (labeled TERM.) permitting you to connect the BUS-S termination resistors. It is very important that the placement of the termination resistors is correct. If the location is not correct, this can cause errors in data (or voice), especially if the bus "S" is long.

• Single or last terminal in the ISDN "S" bus

The TERM. pushbutton must be in the ON position if the router is the only element connected to the network (NT1, TR1, etc.) terminator or it is the last in the ISDN "S" bus. By default, the device is configured in this position.

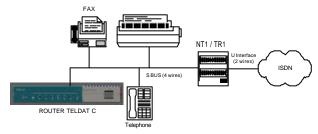


Illustration 1.18: Single or last terminal

• Intermediate position in the ISDN "S" bus

The TERM pushbutton must be in the OFF position if the router occupies an intermediate position in the ISDN "S" bus.

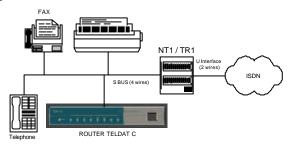


Illustration 1.19. Intermediate position in the bus



I - 2.2.3. Antenna connection

The **TELDAT G** routers have a connector to connect an external antenna which will improve the quality of the signal received and transmitted by the GSM/GPRS module.

I - 2.2.4. POS Specific Interface Connections

In order to connect a POS to the router (in general, although this depends on the type of POS connector) you must use a male-male pin-to-pin RJ45 to RJ45 cable.

The router interfaces behave in DCE mode.

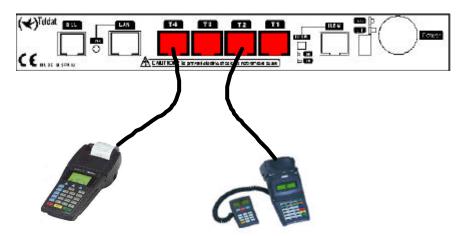


Illustration 1.20: POSs Installation

Depending on the manufacturer of the sale terminals, you may need specific cables or use the internal jumpers which permit you to short circuit the appropriate DSR and DTR signals, when the DTR flow control signal is not provided by the terminal.

The jumpers are located next to the POS connectors (you will need to open the device's chassis in order to access the mentioned jumpers) and these are labeled as P16, P15, P14 and P13, corresponding respectively to the T1, T2, T3 and T4 connectors.



I - 2.2.5. Configuration connection

The **TELDAT C/S/G** routers have a female RJ45 connector in the front panel referred to as "**Conf**." which provides access to the device's local console. For configuration, you must connect to the "**Conf**." port to an asynchronous terminal (or to a PC with terminal emulation).



Illustration 1.21: Configuration connector



Illustration 1.22: Configuration connector in the Teldat C6 model

The configuration of the terminal must be:

- Speed: 9600 bps

- Eight data bits

- One stop bit

- No bit parity

- No type of flow control

The connection to the configuration port can be carried out with RJ45 cable connectors provided with the device together with the Female RJ45-Female DB9 adapter, also provided with the device or with the serial cable with DB9 male/DB9 female connectors in the case of the Teldat C6 model. In cases where the terminal has DB25 connectors, you must use an additional adapter.



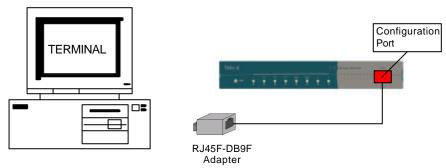


Illustration 1.23: Connection for Configuration

I - 3. Installing the SIM card

The **TELDAT G** models have a GSM/GPRS interface which requires a SIM card to be inserted in order to function.

Please see the plug-in cards installation manual for Teldat Compact Modular routers for further instructions on how to insert the SIM.

I - 4. Installation in rack

In order to install the **TELDAT** C C6 model router in a 19-inch rack, you require two plastic strips as can be seen in the figure. The strips and the associated screws are not included in the basic packet and need to be acquired separately.

Both strips are attached to the device through four screws, two at each side as shown in the Illustration 1.24.



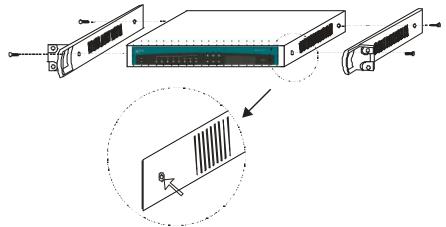


Illustration 1.24: Rack adaptation

The spaces for the screws leave the factory protected by covers. These can be removed by using a sharp tool (such as a small flat screwdriver). We recommend removing the upper cover in order to carry this out more easily.

I - 5. Meaning of the LEDs

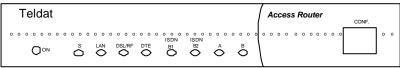


Illustration 1.25. Front panel of the Teldat C routers (without specific POS asynchronous interfaces or switch)

ON	POWER-ON INDICA	TOR, It lights when connected to the power.			
S	Router operation				
	OFF:	System off.			
	GREEN:	System initialized and operating.			
	YELLOW:	System with established Telnet session.			
	Ethernet LAN Interface	ce:			
LAN	OFF:	LAN interface does not send data.			
	RED:	ERROR: Interface not available either because it is not enabled or has failed			
		test.			
	YELLOW:	Interface initialization in progress.			
	GREEN:	Interface available.			
		Flashing: "heartbeat".			
	DSL or RF Interface				
DSL / RF	OFF:	Interface not available (not support).			
	RED:	Interface is not established, without data connection.			
	YELLOW:	xDSL or RF connecting.			
	GREEN:	xDSL / RF communication established.			
		Flashing : Traffic through the interface.			
	Multistandard serial interface				
DTF	OFF:	Port not initialized.			
	RED:	Port initialized.			
	YELLOW:	In process of establishing link.			
	GREEN:	Communication established.			
ISDN	ISDN Interface Chan	nel B1:			
B1	OFF: Physical level unavailable.				
	RED: ERROR: Line errors (physical level) or call in progress.				
	YELLOW: Physical level established.				
	GREEN: Call established through B1 channel (B1 channel from the network).				
	Light flashing green / off: Switched channel.				
	Light flashing green / yellow: Permanent channel.				
ISDN	ISDN Interface Channel B2:				
B2	OFF: Physical level unavailable.				
_	RED: ERROR: Line errors (physical level) or call in progress.				
	YELLOW: Physical level established.				
	GREEN: Call established through B2 channel (B2 channel from the network				
	Light flashing green / off: Switched channel.				
	Light flashing green / yellow: Permanent channel.				
Α	Reserved				
В	Reserved				



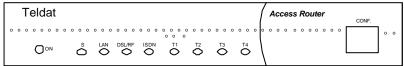


Illustration 1.26 Front panel of the Teldat C/S/G routers (with specific POS asynchronous interfaces)

ON	POWER-ON INDICATOR. It lights up when connected to the power.			
S	Router operations			
	OFF:	System off.		
	GREEN:	System initialized and operating.		
	YELLOW:	System with established Telnet session.		
	Ethernet LAN Interfa	ace:		
LAN	OFF:	LAN interface does not send data.		
	RED:	ERROR: Interface not available either because it is not enabled or has failed test.		
	YELLOW:	Interface initialization in process.		
	GREEN:	Interface available.		
	Flashing: Maintenance frame.			
	ADSL Interface:			
DSL / RF OFF: Interface not available (not suppo		Interface not available (not support).		
	RED:	Interface is not established, without data connection.		
	YELLOW:	xDSL / RF Connecting.		
	GREEN: xDSL / RF communication established.			
	Flashing: Traffic through the interface.			
ISDN	ISDN Interface:			
	Off:	Physical level unavailable.		
	RED:	ERROR: Errors in line (physical level) or call in progress.		
	YELLOW: Physical level established.			
	GREEN: Call established.			
	POS Interfaces:			
T1, T2	DED DOLLAR DOLLAR DE			
T3, T4				
],	YELLOW:	In process of establishing link.		
	GREEN:	Communication established.		



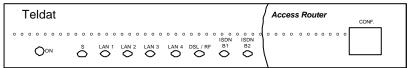


Illustration 1.27. Teldat C/S/G front panel with switch

ON	Device ON switch. This lights up on being connected to the power supply.			
S	Router operation			
	OFF:	System stopped.		
	GREEN:	System up and running.		
	YELLOW:	System with Telnet session established.		
	Ethernet LAN Interfa	ce:		
LANx	OFF:	LAN interface does not send data.		
	RED:	ERROR: Interface unavailable due to not being enabled or test failure.		
	YELLOW:	Interface initialization process.		
	GREEN:	Interface available.		
		Intermittent: "heartbeat".		
	DSL or RF Interface			
DSL / RF	OFF:	Interface unavailable (not supported).		
	RED:	Interface not established, without data connection.		
		Intermittent: in cases of xDSL, problems with the interface firmware.		
	YELLOW:	xDSL or RF is connecting.		
	GREEN:	xDSL / RF communication established.		
		Intermittent: Traffic through the interface.		
ISDN	ISDN interface B1 channel:			
B1	OFF:	Physical layer unavailable.		
	RED:	ED: ERROR: Line errors (physical layer) or call in progress.		
	YELLOW: Physical layer established.			
	GREEN: Call established through B1 channel (network B1 channel).			
		Intermittent green / off: Switch channel.		
		Intermittent green / yellow: Permanent channel.		
ISDN	ISDN interface B2 channel:			
B2	OFF:	Physical layer unavailable.		
	RED:	ERROR: Line errors (physical layer) or call in progress.		
	YELLOW:	Physical layer established.		
	GREEN:	Call established through B2 channel (network B2 channel).		
		Intermittent green / off: Switch channel.		
		Intermittent green / yellow: Permanent channel.		

In the case of the Teldat C6 model, the meaning of the LEDs coincides with that described for the Teldat C routers without specific asynchronous interfaces with the exception that this has two DSL LEDs and does not have the B LED.



I - 6. Microswitches programming

A row of microswitches that activate test, software loading functions, etc., can be found on the lower part of the *TELDAT C /S/G* routers. These should not be handled by the user unless it is necessary to re establish the default configurations.

All the microswitches must be in the OFF position to ensure it is functioning correctly.

I - 6.1.1. Procedure for ignoring the configuration

This procedure is applied if you have to reject the whole configuration of the device, for example, you cannot remember the password for it.

The procedure is as follows:

- Turn off the device through the ON/OFF switch.
- Using a screwdriver move the microswitch (number 5) to the ON position.
- Turn the device on with the ON/OFF switch.

When the device is switched, on a message similar to the one shown below will appear on the configuration console:



```
______
    ROUTER TELDAT C
                                    (c)Teldat
_____
Bios's version: 1.1.0B
CPU: MPC860 CLK=49152 KHz BUSCLK=49152 KHz
Date: 29/02/00, Wednesday
                         Time: 15:34:34
SDRAM size: 16 Megabytes
  SIMM 0: 16 Megabytes (detected)
Caches: ON
          Write-Back
FLASH: 8 Mb.
NVRAM: 128 Kb.
EEPROM: 2048 Bytes.
WAN: DTE
ADST
UTOPIA
LAN SCC1
Current production date: 00 06
Current software license: 20 4
Current serial number: 359/00011
TRYING APP CODE DUMP
  (CONFIGURED)
B0080000....
APP DATA DUMP.....
Running application
Default configuration used
Initializing
Teldat
                (c)1996-2000
Modem model TELDAT C 20 4 CPU M80860
                                S/N: 359/00011
1 LAN, 1 WAN Line , 0 ISDN Lines, 1 ADSL Line
```

On reaching this point, you can set microswitch 5 in the OFF position (it is not necessary to turn off the device), in this way, the next time you restart the device, the saved configuration is respected.



II - Chapter.Appendix

II - 1. Trouble shooting

Below, you will find a table that will aid you in solving problems during the installation of the device. If you cannot resolve the problem, consult your distributor for additional information.

Problem	Solution
None of the LEDs lights up on the device.	Check the power supply to the device (power source, ON/OFF switch, main power outlet).
The S LED does not light up.	Check that all the microswitches are in the OFF position.
The LAN LED never lights up in green.	Check that the LED following the LINK is ON; if this is not the case, check the Ethernet cable and the connection to the network (you may need a crossover cable).
The DSL LED never lights up in green.	If the device has an xDSL interface available, check the connection to the telephone network or to the splitter and make sure that the telephone line you are connected to supports xDSL service.
The DSL LED persistently flashes in red.	If your device has an xDSL interface, check that the necessary firmware has been loaded for the said interface.
The DTE LED never lights up green.	If the device has a DTE/DCE interface available, make sure the cable being used is the correct one, the driver is inserted correctly (DTE or DCE), and the configuration is correct (speed, protocol, etc).
The ISDN LEDS never light up in yellow or green.	If the device has an ISDN interface available, check that the connection to the bus is correct and the termination switch from the S bus is in the correct position.



Problem	Solution
The LEDS indicate the interfaces are established but there is no connectivity at the data levels.	Check the configuration (routes, IP addresses, ATM VPIs/VCIs, encapsulated ATM, serial interface speed, etc).
The "Ti" LED is red after trying to make a transaction.	The device is not receiving data from the POS connected to the i port. Check the speed configured in the interface and the cable connecting the device to the POS.
The "Ti" LED is yellow after trying to make a transaction and does not pass to green.	IP connectivity has not been achieved between the router and the host. Check the configuration and if the problem persists consult your supplier.

II - 2. Software updating

The **TELDAT** C/S/G routers can be updated to the new releases. Please consult your distributor for new releases.

There are various ways to update a Teldat router: please see the software upgrading manual for further information.

The software required to update the Teldat routers is provided in a format known as **distribution**. This consists of a single file containing all the necessary files to update your device as well as detailed information on the content.



II - 3. Connectors

II - 3.1. LAN Connector



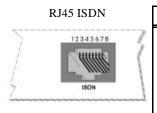
RJ45 PIN	LAN
1	Tx+(input)
2	Tx -(input)
3	Rx+(output)
4	
5	
6	Rx -(output)
7	
8	

II - 3.2. DSL Connector



RJ11 PIN	DSL
1	Joined to 2
2	Line
3	Line
4	Joined to 3

II - 3.3. ISDN Connector

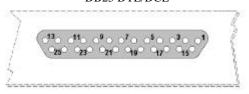


RJ45 PIN	ISDN
1	
2	
3	Tx+ (output)
4	Rx+(input)
5	Rx -(input)
6	Tx -(output)
7	
8	



II - 3.4. DTE/DCE Connector

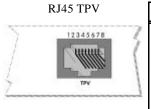
DB25 DTE/DCE



	STANDARD					
DB25	V.24		V.35		X.21	
Connector						
Pin	Signal	ITU	Signal	V.35	Signal	DB15
1	Ground	101	Ground	Α	Ground	1
2	TxD	103	TxD (A)	Р	TxD (A)	2
3	RxD	104	RxD (A)	R	RxD (A)	4
4	RTS	105	RTS	С	CONT(B)	10
5	CTS	106	CTS	D		
6	DSR	107	DSR	E		
7	GND	102	GND	В	GND	8
8	DCD	109	DCD	F		
9			ExTxC (B)	W		
14			TxD (B)	S	TxD (B)	9
15	TxC	114	TxC (A)	Υ	IND(A)	5
16			RxD (B)	T	RxD (B)	11
17	RxC	115	RxC (A)	V	CLK(A)	6
18			TxC (B)	AA	IND(B)	12
19			RxC (B)	Χ	CLK(B)	13
20	DTR	108	DTR	Н	CONT(A)	3
24	ExTxC	113	ExTxC (A)	U		



II - 3.5. POS Connector



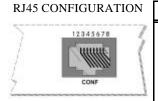
RJ45 PIN	POS DCE
1	TxD (input)
2	CTS (output)
3	RTS(input)
4	GNĎ
5	DTR (input)
6	DSR (output)
7	
8	RxD (output)

II - 3.6. ANT Connector



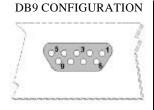
ANT
RF in/out GND

II - 3.7. Configuration Connector



RJ45 PIN	CONF
1	
2	RxD
3	
4 5	GND
5	
6	GND
7	TxD
8	





RJ45 PIN	CONF
1	 DvD
2 3	RxD TxD
4	
5	GND
6 7	
8	

II - 4. Technical Specifications

Hardware Architecture

PROCESSORS Motorola MPC8xx (Different versions: SAR, T, EN...) 50 MHz
MEMORY 32/64 Mbytes in SDRAM.
STORAGE UNIT FLASH Memory (4 Mbytes / 8 Mbytes)

EEPROM 2 Kbytes, NVRAM 128 Kbytes.

LAN Interface

PROTOCOLS Ethernet (802.3).

SPEED 10 Mbps (10BaseT) or SWITCH* 10/100 Mbps (BaseT).

CONNECTOR RJ45 female.

DTE/DCE* Interface

PROTOCOLS

FRAME RELAY, X.25, PPP, SDLC, X.28, POS-DATAPHONE
INTERFACES
Insertable drivers V.24 / V.35 / V.36 / X.21 DTE/DCE.

SPEED
200 to 2048 Kbps.

CONNECTOR

DB25 Female

DSL* Interface

STANDARDS Please see our manual on plug-in cards.

SPEED Please see our manual on plug-in cards.

CONNECTOR RJ11 female.



RF Interface*

STANDARDS	Please see our manual on plug-in cards
SPEED	Please see our manual on plug-in cards
CONECTOR	Please see our manual on plug-in cards

ISDN* Interface

ACCESS	Basic 2B+D
SPEED	2 x 64 Kbps (B channels)
CONNECTOR	RJ45 female

POS* Interface

CONNECTOR	RJ45 female
INTERFACES	V.24 (RS232-C) DCE
SPEED	300 to 64000 bps
PROTOCOLS	Dataphone DOV, PPP

^{*} According to the version

Config Interface

LOCAL TERMINAL	V.24 9.600-8-N-1- without flow control.
CONNECTOR	RJ45 female, located on the front panel of the device.
	DB9 female on the rear part of the C6 model.

Power Source

INPUT VOLTAGE	+5V,+15V,-15V DC.
OUTPUT VOLTAGE	2000 mA (to +5V DC) and 200 mA (to +15V, -15V DC).
MAXIMUM POWER	20 W.

External power supply

INPUT VOLTAGE	100-240V AC
INPUT CURRENT	600 mA
INPUT FREQUENCY	50-60 Hz
MAXIMUM POWER	45 VA



Teldat C6 model Power Source

INPUT VOLTAGE
INPUT CURRENT
INPUT FREQUENCY
MAXIMUM POWER

100-240V AC	
1400 mA	
47-63 Hz	
45 W	

Dimensions and weight

TYPE

LENGTH x WIDTH x HEIGHT WEIGHT

Desktop	
220 x 220 x 30 mm.	
0.9 Kg.	

Teldat C6 model dimensions and weight

TYPF

LENGTH x WIDTH x HEIGHT WEIGHT

Desktop box.
310 x 415 x 43 mm
3.25 Kg.

Environmental Specifications

AMBIENT TEMPERATURE RELATIVE HUMDITY

On: 5° to 45°C.	Off: -20° to 60°C.
On: 8% to 85%.	Off: 5% to 90%.

