emutel™ | Duo

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Basic Rate and Primary Rate ISDN Emulator

emutel™ | Duo is a convenient and flexible basic rate and primary rate ISDN network simulator. With 3 software selectable S/U interfaces and an optional 2 E1/T1 interfaces you can test and develop a full range of ISDN equipment.

emutel™ | Duo comes with a comprehensive protocol analyser that allows you to decode and analyse layers 1, 2 and 3 of the D channel to varying levels of detail. Develop for other countries' networks using the range of support cards. One card is included in the package - choose from either Euro-ISDN, North American, NTT, VN3, 1TR6 or BTNR191.

emutel™ | Duo can be managed/configured remotely using the optional internal modem for dial up management. Attach to the unit from any PC via the LAN or through the terminal connection locally to configure
and monitor the system.

Simulate different country's networks -
Euro-ISDN, North American, NTT, VN3, BTNR191
or 1TR6

Simple configuration / management using Windows application or ANSI based terminal

Configuration and analysis over LAN or serial port

Remote configuration and control using optional modem or LAN

Parallel monitoring allows you to connect to a regular ISDN line and monitor its operation using the protocol analyser

Two external X.21 ports provide connections to external test equipment e.g. BERT testers

Helpful LEDs show the status of each interface at a glance

Semi-permanent/nailed-up connection for testing leased line operation

X.25 for testing and demonstrating packet switching equipment

Power feeding supported on BRI interfaces

Flash memory for easy software upgrades

By simulating the operation of a Central Office Switch, **emutel™ | Duo** provides 3 Basic Rate ISDN (S [4 wire] or U [2 wire] selectable in software menu) and optional 2 Primary Rate ISDN (E1/T1 software selectable) connections which may be used just like regular ISDN lines or employed to carry out equipment testing. There is a separate connector for S and U interface on each BRI.

Almost every feature of **emutel™ | Duo** can be customised, for example, the entire directory numbering structure can be changed. Special numbers activate network conditions such as User Busy or Call Rejected and line power can be switched on or off.
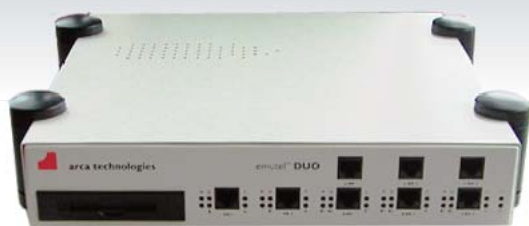
emutel™ | Duo is supplied with protocol analysis and one network personality card as standard. **emutel™ | Duo** can be managed/configured locally or remotely with an option of an internal modem for dial up management. Attach to the LAN and configuration and analysis can be done from a remote PC in the network. This allows you to operate **emutel™ | Duo** in another building but configure and monitor the unit from another location.

emutel™ | Duo is extremely easy to use with indicator LEDs showing at a glance what each terminal is doing and a windows application program displaying protocol analyser information and allowing extensive device configuration.

emutel™ | Duo is a truly international product. By plugging in personality cards the system can emulate ISDN variants in a whole range of different countries. Cards are available for BTNR 191 (UK), VN3 (France), Euro-ISDN (Europe), ITR6 (Germany), NTT (Japan) and AT&T 5ESS, National-ISDN and Nortel DMS100 (North America). Network dependent supplementary services are also supported.

At just 2.5 Kg **emutel™ | Duo** is easily portable and, since terminals can be powered directly from the interfaces, it really is the ideal system for use at demonstrations, presentations and exhibitions. In addition, **emutel™ | Duo**'s universal power supply, which automatically switches between 240V and 110V, ensures that the system is transferable between the US and Europe without any adaptations.

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Basic Rate and Primary Rate ISDN Emulator

BRI Interfaces	3 (S and U [2BIQ] selectable in software menu)
PRI Interfaces	2 (E1/T1 software selectable)
BRI Interface Power	40V, 1W Normal and Restricted on S; 88V, 5W Normal and Sealing on U
LAN	Ethernet 10BaseT, RJ45
Internal Modem	V.34 modem (optional), RJ11
Parallel Monitoring	Available on BRI S interfaces
X.21 Data Port	2 64K-1920K DCE for external equipment access to B channels
Semi-Permanent Connection	Semi-permanent/nailed-up connection on BRI/PRI B channels
B Channels	2 per BRI, 6-30 per PRI E1 and 6-23 per PRI T1
Clock Synchronisation	1 master emutel™	Duo can drive up to 3 slave emutel™	Duo's to lock ISDN clocks
Protocol analyser	Layer 1, 2, and 3 can be analysed for both ISDN and X.25: Configuration for all networks irrespective of networks simulated
Network Variants	ITU, BTNR191 (UK), VN2/3 (France), ITR6 (Germany), Euro-ISDN (Europe), NAT-1/DMS100/5ESS (North America), and NTT (Japan)
D Channel Packet	X.25 on BRI1/BRI2, 100 logical calls in DCE mode
User Interface	Windows application or VT100 Terminal (V.24 Interface DB9 connection)
Directory Numbering BRI	Two numbers per interface normal, ten numbers per interface if using DDI/MSN and one number per interface for auxiliary working
Supplementary Service Support	Various depending on network simulated **Euro-ISDN** - Caller Line Identification, Multi Sub Numbering, Subaddressing, User to User Signalling, Terminal portability, Connected Party Number, Advice of Charge/Billing, Call Waiting, Call Hold, Explicit Call Transfer, Call Diversion, Malicious Call Identification, Three Party Calling **Nat-1** - Caller Line Identification, Subaddressing, User to User Signalling, Flexible Calling, EKTS Call Appearance Call Handling, Hold Conference Drop Transfer **AT&T 5ESS** - Caller Line Identification, User to User Signalling, EKTS Call Appearance Call Handling, Hold Conference Drop Transfer **DMS 100** - Caller Line Identification, Subaddressing, User to User Signalling **NTT** - Caller Line Identification, Multi Sub Numbering, Subaddressing, User to User Signalling, Advice of Charge/Billing **1TR6** - Caller Line Identification, Multi Sub Numbering, Subaddressing, User to User SignallingVN3 - Caller Line Identification, Multi Sub Numbering, Subaddressing, User to User Signalling, Terminal portability **BTNR191** - Caller Line Identification, Multi Sub Numbering, Subaddressing, User to User Signalling, Terminal portability
Test Tones	Dial, Busy, Error, Ringing and Selected Tones 300Hz-3400Hz, +3dBm to -26dBm
Power Requirements	80-260 Vac, 40W
Environmental	0-50oC, 10-80% Humidity (Non Condensing)
Weight	2.5 Kg
Size	8cm(h) x 36cm(w) x 32cm(d)
Warranty	emutel™	Duo is supplied with one year's product warranty and free technical support