# PacketBand®-ISDN-4x-x

The PacketBand-ISDN-4x-x delivers transparent switched ISDN data services across packet networks. All ports are synchronized with central, or network clocks, providing a fully clock-locked environment across asynchronous packet networks - no there is no data loss due to free-running and slipping clocks. This system provides ISDN over Ethernet/IP networks for both voice and, more critically, data applications.

(For single-port BRI unit see the PacketBand-ISDN-1B) (For PRI units see the PacketBand-ISDN-P range) (For non-switched TDM services see PacketBand-TDM.)

## Features

- Product supports 4 x ISDN BRIs
- 4-wire "S" interface (NT or TE)
- 2-wire "U" interface (NT-User presentation)
- US-ANSI and Euro-ETSI ISDN available
- > 2 x 10/100/1000 Base Ethernet ports
- ▶ 1 x 1GE SFP cage
- AC power only
- Transmits all/any data and voice protocols over packet networks
- Totally transparent to all data formats
- All PacketBands and interfaces locked to the same clocks
- Various clocking options with high quality clock recovery
- Any "B" channel can dial any other on the packet network, or "break-out/in" to the PSTN via a PRI/BRI "gateway"

Support for A BPIs order as A wire

# Specifications

RDI Interfaces

- Provides low-cost migration to IP networks for legacy equipment
- Low data overheads
- Configurable packet size
- Compensates for "jitter" or packet delay variation
- Re-orders packets
- Very low latency or processing delay
- Local Ethernets support Rate Limiting
- Quality of Service (QoS) options
- VLAN and Double VLAN tagging
- Full cross-connectivity

DDI Intorface

- a-Law to µ-Law conversion
- Support for contention or over-booking
- Call Progress Tone generation
- Number manipulation/conversion/LCR
- Automatic Primary/Secondary/Tertiary routes

# **Ordering Information**

## PB-ISDN-4B-B-SW

Quad BRI port unit. 4-wire "S" interface Switchable NT/TE in 2 port blocks/increments. Internal AC Power supply. 1 Gigabit SFP port for fiber connectivity.

### PB-ISDN-4U-NT

Quad BRI port unit. 2-wire BRI NT interface. Internal AC Power supply. 1 Gigabit SFP port for fiber connectivity.

Optional Accessories (sold separately)

#### PB/cont

Replacement serial controller cable

PB/RMK/W/1 Wall mount kit

## PB/RMK/2

19" rack mount kit for PB-ISDN-4B models

- Routing profiles can be scheduled at different times of the day/week
- ISDN Layer 2 and Layer 3 message capture and log for analysis
- Easy and intuitive to configure via GUI management package
- Compact table-top with optional rack-mount extenders

(1) Internal AC DOLL

BRI Interfaces Support for 4 BRIs – order as 4-wire	PRI Interface		Power	(1) Internal AC PSU
4-wire "S" interfaces       Switchable NT/TE in pairs of ports. Crossed cable required for TE mode (can be supplied by TN) Typical driving distance – 500m (de- pending on attached devices). Support for a-Law to μ-Law conversion and a-Law and μ-Law tones (ring/ busy etc)         0verlap to En-Bloc conversion Support for Dual TEIs ETSI (Euro-ISDN) ANSI (US-ISDN) Point-to-Point and Point-to-Multipoint ETSI 0.931/921         ETSI 300-011 (Layer 1) ETSI 300-112 (layer 2) ETSI 300-102 (layer 3)* Support for SPIDs and Auto-SPID NI-1 North American National DMS-100 and 5ESS switch variants AT&T TR-62411 and ANSI T1.403	E1	RJ45 1200hm balanced G.703 HDB3 encoded ESF or D4 framing ETSI-DSS1 (Euro-ISDN) ETSI Q.931/921 ETSI 300-011 (Layer 1) ETSI 300-125 (layer 2) ETSI 300-102 (layer 3)		(1) Internal AC PSU Standard IEC connector 95-264 VAC; 15W; 47-63Hz Auto-sensing Max consumption 0.1Amps RMS @230VAC
			Mechanical	Metal chassis 292w x 200d x 44h mm-1U
	T1 RJ45 1000hm balanced B8Zs or AMI line coding NI-2 North American National DMS-100 and 5ESS switch variants AT&T TR-62411 and ANSI T1.403		Weight 1.1Kg Optional 19" rack-mount kits	
		DMS-100 and 5ESS switch variants	Environment	Temperature -20 to 55 deg C Humidity 10-90% non-condensing
	Fiber Port (x1)	Standard SFP cage Driving distance dependant upon SFP fitted Supports data rates up to 1GE full- duplex between two units	Maintenance	No user-serviceable parts
			Warranty	5 years
	Packet Ports (x2) RJ45 standard twisted-pair CAT5E cable Supports data rates up to 1GE full- duplex between two units Provides management access to all units.	cable		
2-wire "U" interfaces Available as NT (User) only Typical driving distance – 500m ETSI (Euro-ISDN) ANSI (US-ISDN) Support for SPIDs and Auto-SPID NI-1 North American National DMS-100 and 5ESS switch variants AT&T TR-62411 and ANSI T1.403				
	Serial Control Port	Local management Access password protected Asynchronous, 8 data, 1 stop bit, no parity, speed 19.2 to 115kbps		
	"S" or 2-wire "U": Switchable NT/TE in pairs of ports. Crossed cable required for TE mode (can be supplied by TN) Typical driving distance – 500m (de- pending on attached devices). Support for a-Law to µ-Law conversion and a-Law and µ-Law tones (ring/ busy etc) Overlap to En-Bloc conversion Support for Dual TEIs ETSI (Euro-ISDN) ANSI (US-ISDN) Point-to-Point and Point-to-Multipoint ETSI (Euro-ISDN) ANSI (US-ISDN) Point-to-Point and Point-to-Multipoint ETSI 300-111 (Layer 1) ETSI 300-125 (layer 2) ETSI 300-102 (layer 3)* Support for SPIDs and Auto-SPID NI-1 North American National DMS-100 and 5ESS switch variants Ataliable as NT (User) only Typical driving distance – 500m ETSI (Euro-ISDN) ANSI (US-ISDN) Support for SPIDs and Auto-SPID NI-1 North American National DMS-100 and 5ESS switch variants	<ul> <li>"S" or 2-wire "U":</li> <li>Switchable NT/TE in pairs of ports. Crossed cable required for TE mode (can be supplied by TN)</li> <li>Typical driving distance – 500m (de- pending on attached devices).</li> <li>Support for a-Law to µ-Law conversion and a-Law and µ-Law conversion</li> <li>overlap to En-Bloc conversion</li> <li>Support for Dual TEIs</li> <li>ETSI (Euro-ISDN) ANSI (US-ISDN)</li> <li>Point-to-Point and Point-to-Multipoint</li> <li>ETSI (Euro-ISDN) ANSI (US-ISDN)</li> <li>Point-to-Point (Layer 1)</li> <li>ETSI 300-112 (Layer 1)</li> <li>ETSI 300-102 (Layer 2)</li> <li>ETSI 300-102 (Layer 2)</li> <li>ETSI 300-102 (Layer 3)*</li> <li>Support for SPIDs and Auto-SPID</li> <li>NI-1 North American National</li> <li>DMS-100 and 5ESS switch variants</li> <li>Available as NT (User) only</li> <li>Typical driving distance – 500m</li> <li>ETSI (Euro-ISDN) ANSI (US-ISDN)</li> <li>Support for SPIDs and Auto-SPID</li> <li>NI-1 North American National</li> <li>DMS-100 and 5ESS switch variants</li> <li>Available as NT (User) only</li> <li>Typical driving distance – 500m</li> <li>ETSI (Euro-ISDN) ANSI (US-ISDN)</li> <li>Support for SPIDs and Auto-SPID</li> <li>NI-1 North American National</li> <li>DMS-100 and 5ESS switch variants</li> </ul>	<ul> <li>"S<sup>n</sup> or 2-wire "U":</li> <li>Switchable NT/TE in pairs of ports. Crossed cable required for TE mode (can be supplied by TN)</li> <li>Typical driving distance – 500m (de- pending on attached devices).</li> <li>Support for a-Law to µ-Law conversion and a-Law and µ-Law tones (ring/ busy etc)</li> <li>Overlap to En-Bloc conversion</li> <li>Support for Dual TEIs</li> <li>ETSI 0.931/921</li> <li>T1</li> <li>RJ45 1200hm balanced</li> <li>BBZs or ANI line coding</li> <li>NI-1 North American National DMS-100 and 5ESS switch variants</li> <li>AT&amp;T TR-62411 and ANSI T1.403</li> <li>Fiel Port (x2)</li> <li>Fiel Control Port</li> <li>Serial Control Port</li> <li>Serial Control Port</li> <li>Local management Access password protected Asynchronous, 8 data, 1 stop bit, no</li> </ul>	"S" or 2-wire "U":       E1       RJ45 1200hm balanced         Switchable NT/TE in pairs of ports. Crossed cable required for TE mode (can be supplied by TN)       E1       RJ45 1200hm balanced         Typical driving distance – 500m (de- pending on attached devices).       ETSI-DSS1 (Euro-ISDN)       ETSI-DSS1 (Euro-ISDN)         Support for a-Law to µ-Law conversion and a-Law and µ-Law tones (ring/ busy etc)       ETSI 300-112 (layer 3)       Mechanical         Overlap to En-Bloc conversion Support for Dual TEIs ETSI (Euro-ISDN) ANSI (US-ISDN)       T1       RJ45 1000hm balanced B8Zs or AMI line coding NI-2 North American National DMS-100 and 5ESS switch variants AT&TTR-62411 and ANSI T1.403       Fiber Port (x1)       Standard SFP cage Driving distance dependant upon SFP fitted       Maintenance         ETSI 300-120 (layer 3)*       Fiber Port (x1)       Standard SFP cage Driving distance dependant upon SFP fitted       Maintenance         Available as NT (User) only Typical driving distance – 500m H-1 North American National DMS-100 and 5ESS switch variants AT&TTR-62411 and ANSI T1.403       Packet Ports (x2)       RJ45 standard twisted-pair CAT5E cable       Maintenance         Available as NT (User) only Typical driving distance – 500m H-1 North American National DMS-100 and 5ESS switch variants AT&TTR-62411 and ANSI T1.403       Serial Control Port       Local management Access password protected Asynchronous, 8 data, 1 stop bit, no

