



Digital Link E1 G.703 - 2 Mbit/s

MAIN APPLICATIONS:

The nowadays leading application of E1 connections is dedicated to the base radio stations of the cellular phone networks. Typically, there is one BTS every 250 cellular phones, and one RNC every 20 BTSs. Several E1 connections are used to connect each BTS to the nearest RNC and very often to connect the RNC to the Mobile Switching Center (MSC). Other typical telecom applications are point-to-point links in subscriber distribution networks, in networks pertaining to firms and in emergency or provisional links.

Another application of E1 connections, very useful for radio broadcaster, is the transport of digital hi-fi radio signals (CD quality or better).

Typically, an E1 connection allows to carry up to twelve mono audio signals or six stereo signals by using proper digital encoders which convert and compress the analogue musical signals. Equivalently, six AES-EBU channels can be carried on an E1 stream by means of a dedicated interface. Usually the E1 channel can carry also auxiliary service data along with the audio information.

Another typical application of DIGITAL LINK E1 is the ETI Transport for DAB (Digital Audio Broadcasting) Ensemble Transport Networks.

FRONT-PANEL LED INDICATORS:

- WNL Warning: Near Local Loop
- WNA Warning: Near AOS
- FNL Alarm: FAW unlock
- ANI Alarm: Near INLOS
- HBR Alarm: High BER
- AFI Alarm: Far INLOS

FRONT-PANEL SWITCHES:

- FL Far Local Loop Test Mode
- FA Far AOS Test Mode
- NR Near Remote Loop Test Mode
- TS Test Switch (maintenance only)

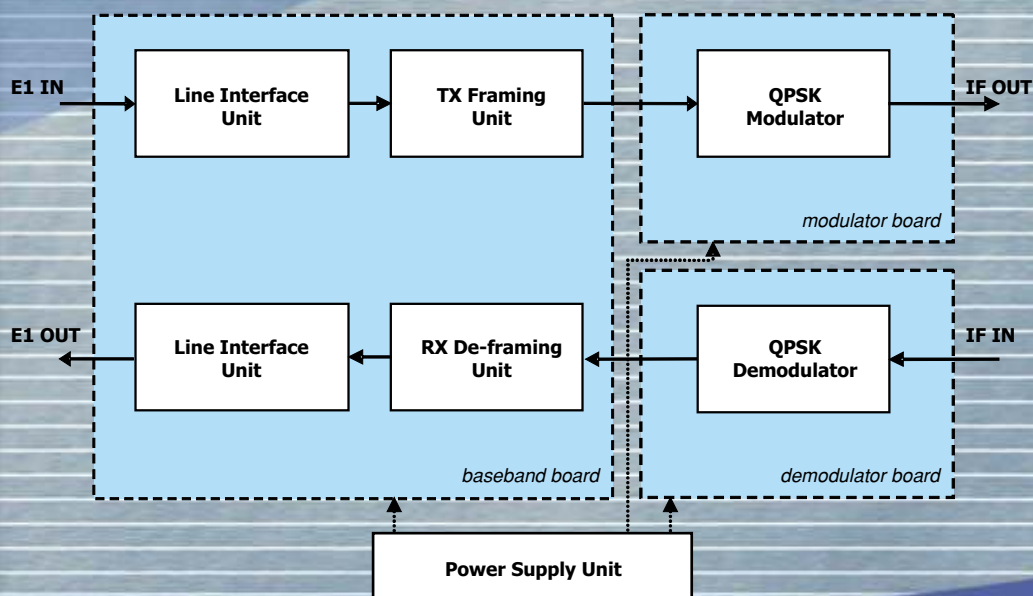
The DIGITAL LINK E1 is a G.703-compliant IF modulator and demodulator for E1 telecom streams which provides a compact, highly reliable and cost-effective solution for many point-to-point links in fixed and wireless digital networks. The highly robust QPSK modulation scheme makes it a perfect solution for telecom and digital broadcasting wireless links located in noisy environment. The small 1U rack enables easy and cheap integration into more complex systems together with frequency conversion and amplification external equipment. The DIGITAL LINK E1 directly receives from the network an E1 standard stream and outputs a 70MHz QPSK modulated carrier to be connected to frequency converter for a correct RF channel selection. On the receiving section it receives a -10dBm IF QPSK carrier (AGC regulated) and directly outputs the E1 stream towards the network.

MONITORING:

Six LED indicators located on the front panel enable monitoring of the main operating parameters of both the "near" side and the "far" side of the link. Alarms signalling of more parameters is also available as open-closed relay contacts on-panel 25-poles connector.

TEST MODES:

Using front-panel switches it is possible to generate three test modes which enable to check for RF path impairments and to generate AOS and loop conditions.





DIGITAL LINK E1

Technical characteristics

DIGITAL INTERFACES

Bit-Rate	2 Mbit/s - Full Duplex
Tributary I/Os	BNC 75 unbalanced
Line Coding	HDB3
Line Interface	Compliant to ITU-T G.703
Jitter	Compliant to ITU-T G.823

ANALOG INTERFACES

IF Frequency	70MHz
IF Connectors	SMB
Modulation	QPSK
IF Output Level	0dBm
IF Input Level	-10dBm
Tributary I/Os	BNC 75 unbalanced

GENERAL

Power Supply	220V _{AC}
Dimensions	Rack 19"-1U
Weight	4.4kg
Operating Temperature	0 - 50°C
Power Consumption	15W

OPTIONS

Optional Power Supply	48V _{DC}
Optional IF Frequency	7.5MHz

These specifications are subject to change without notice

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