



BB128k and BB256k Baseband Modems

The Nokia BB128k and Nokia BB256k baseband modems provide efficient and cost-effective digital subscriber transport at up to 128 and respectively up to 256 kbit/s data rate using standard unconditioned copper-wire local loop facilities

Product Concept

The Nokia BB128k and Nokia BB256k are 128/256 kbit/s high-speed, 2-wire baseband modems using one twisted copper pair. They provide data rates from 2.4 kbit/s to 256 kbit/s for full- and half-duplex applications. The BB128k and BB256k are versatile with their various alternatives for data interfaces and straightforward to install with its comprehensive test facilities.

With their outstanding performance the modems offer ideal subscriber connections to digital networks and are highly suited for connections inside one copper distribution area. They fulfill all applicable specifications for safety and ECM disturbances.

The BB128k and BB256k can be used in the following applications:

- links between workstations
- LAN interconnections
- composite links between multiplexers
- links between X.25 nodes
- access connections to X.25 networks
- access connections to digital networks

Modem-to-Modem Management

The modems perform an automatic power-up self test when they are switched on. The test is used to check the most vital operational functions of the modems, and the results are displayed on the front panel display.

Display-driven, real-time measuring monitors line signal quality. Remote modem power-off state as well as power-off in the remote DTE are shown on the modem's front panel.

Line quality and modem operation tests can be performed by the modem's own test generator or, alternatively, by external test generators.

Test loops can be started manually with the front panel controls or automatically using the ITU-T specified interface signals.

Automatic Data Rate Adaptation

Automatic data rate adaptation provides the possibility to adjust the line speed according to

- the DTE clock rate at the master modem
- the incoming line rate at the slave modem

The automatic data rate controlling minimizes the need for installation personnel on modem sites.

Interchangeable DTE Interface Adapters

V-series, X-series, G.703, G.704/2M and EIA-530 series DTE adapters can be selected as the cost-effective interface for application needs. The modem can be equipped with the V.110 rate adaptation capability to allow operation at 2.4-56 kbit/s.

Technical Highlights

- *2-wire baseband modem for full-duplex transmission on local loop*
- *2B1Q line coding*
- *Up to 128 and 256 kbit/s line rates*
- *Interchangeable port adapters*
- *V.110 adaptation*
- *Adaptive line rate for range extension*
- *ITU-T V.54/V.52 line testing by display controls*
- *Automatic remote controlling*

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Product Code	<i>BB128k</i>	<i>BB256k</i>
Stand-alone	DS62580	T67100
Rack-mounted		T67105
Additional V.110 option	E62583	E67103.01
Interfaces		
<i>Line interfaces</i>		
• Line code	2B1Q	2B1Q
• Line rate	128, 64, 56 and 48 kbit/s	256, 192, 128 and 64 kbit/s
• Line interface	2-wire	2-wire
• Line impedance	120, 135 or 150 ohm	120, 135 or 150 ohm
• Transmit level	+12, +6,0 or -6 dBm	+12, +6,0 or -6 dBm
<i>Data rate</i>		
• synchronous with V.110 option	128, 64, 56, 48 kbit/s	256, 192, 128 and 64 kbit/s
• synchronous	56, 48, 38.4, 19.2, 9.6, 4.2, 2.4 kbit/s	56, 48, 38.4, 19.2, 9.6, 4.2, 2.4 kbit/s
• asynchronous	38.4, 19.2, 9.6, 4.8, 2.4 kbit/s	38.4, 19.2, 9.6, 4.8, 2.4 kbit/s
• Data format	8, 9, 10, 11 bits including start and stop bits	8, 9, 10, 11 bits including start and stop bits
<i>DTE interfaces</i>	V.28/V.24/ISO2110, V.11/V.36/ISO4902, V.11/ X.21/ISO4903, V.35/ISO2593, EIA-530-A, G.703/64k	V.28/V.24/ISO2110, V.11/V.36/ISO4902, V.11/ X.21/ISO4903, V.35/ISO2593, EIA-530-A, G.703/64k, G.704/2M fractional 4 time slots
Transmission Performance	At line rate 128 kbit/s At line rate 256 kbit/s	5 km/0.4 mm, 7 km/0.5 mm, 15 km/0.8 mm 3.5 km/0.4 mm, 5 km/o.5 mm, 10 km, 0.8 mm
Diagnostics	ITU-T V.54/V.52, Local Loop, Digital Loop, Remote Loop, Test Pattern Generator	
Display	Configuration via front panel menu display	
Data Rate Adaptation	Automatic from line or from DTE interface	
Power	<i>Supply</i>	<i>Consumption</i>
Stand-alone	90 - 264V (AC),	max 10 W
Rack-mounted	20 - 72V (DC) as option	max 5.5 W
	<i>Supply</i>	<i>Consumption</i>
	90 - 264V (AC),	max 10.5 W
	20 - 72V (DC) as option	+5V, -12V and +12V
MTBF		
Stand-alone	27 yrs	27 yrs
Rack-mounted		46 yrs
Mechanical Specifications		
Stand-alone	210 x 356 x 54 mm (W x D x H), weight 2.3 kg	
Rack-mounted	30.5 x 165 x 262 mm (W x D x H), weight 0.4 kg	
Environmental Specifications	Transportation	ETSI ETS 300019-1-2 class 2.3
	Storage	ETSI ETS 300019-1-1 class 1.2
	Operation	ETSI ETS 300019-1-3 class 3.2
Electromagnetic Compatibility	EN55022 & EN50082-1	

All Nokia products are subject to continuous research and development; we therefore reserve the right to alter technical specifications without prior notice.



Nokia Telecommunications. P.O.Box 12, FIN-02611 Espoo, Finland. Phone: +358-0-51121, fax: +358-0-5112 7502